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RECENT ECONOMIC CRISIS AND FUTURE DEVELOPMENT TENDENCIES

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The conference was aimed to encourage development, cooperation and mutual assistance among the countries, industries and companies of South and East Europe and Black Sea Region. Papers and presentations at the Conference were dedicated to the issues of development of different SEE states in post-crisis conditions, finance and service sectors in the countries of the region, current practices of corporate governance and competitiveness improvement of countries, regions, industries and firms.

Conference Proceedings are oriented on the wide audience of academics and specialists.

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РОСТОВСКИЙ ГОСУДАРСТВЕННЫЙ ЭКОНОМИЧЕСКИЙ УНИВЕРСИТЕТ (РИНХ)

ПРОШЕДШИЙ ЭКОНОМИЧЕСКИЙ КРИЗИС И ТЕНДЕНЦИИ БУДУЩЕГО РАЗВИТИЯ

МАТЕРИАЛЫ
7-й МЕЖДУНАРОДНОЙ НАУЧНО-ПРАКТИЧЕСКОЙ КОНФЕРЕНЦИИ АССОЦИАЦИИ ЭКОНОМИЧЕСКИХ УНИВЕРСИТЕТОВ ЮЖНОЙ И ВОСТОЧНОЙ ЕВРОПЫ И РЕГИОНА ЧЕРНОГО МОРЯ (ASECU)

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Сборник материалов конференции включает статьи, в которых были обобщены результаты теоретических и научно-практических исследований работников высших учебных заведений, академических и отраслевых научных организаций и ведущих банковских и корпоративных структур стран Юго-Восточной Европы.

В рамках конференции, которая была направлена на стимулирование развития, сотрудничества и взаимопомощи стран, отраслей и компаний Центрально-Восточной Европы и Черноморского региона, были представлены доклады и презентации, раскрывающие различные аспекты развития экономик отдельных стран региона ЦВЕ в посткризисный период, особенности функционирования финансового сектора и сектора услуг ряда Восточно-Европейских стран, текущие практики корпоративного управления и повышения конкурентоспособности стран, регионов, отраслей и фирм.

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FOREWORD

World financial and economic crisis is stably the most current issue for economists, politicians, academics, business, and even ordinary citizens during the last 3 years. When first signs of the crisis arose somewhere in 2006 in the USA one could hardly foretell what impact it will have within the next few years. And when in 2008 at the ASECU General Meeting was discussed the topic of the Conference in Rostov-on-Don in 2011, it was obvious that the whole economic system will still suffer crisis effects but no one could imagine how influential and severe they will be.

Crisis of 2008 provoked aggravation of the main economic indicators almost in all the countries of the world. Pretty soon it became obvious that all the hopes for prompt recovery are vague, that in turn made countries to get themselves prepared for lingering recession in trade, investment activity and employment.

Today, 3 years after the beginning of negative changes, participants of the 7th International ASECU Conference “Recent Economic Crisis and Future Development Tendencies” were trying to give their assessment and interpretation of what was the influence of the crisis on the development of world economy in a whole and countries, regions, firms, etc. in particular.

The Conference included Plenary Session and two-days work within three Sections: “Finance sector and services sector in conditions of world post-crisis development: experience of Russia, EU and South-Eastern states”, “Trade and development: international and national cooperation experience”, and “Competitiveness management: response of national entities to economic downturn”. In total 55 papers were presented coming from authors representing 11 countries.

Presentations and discussions revealed the following:
- inconsistent and badly coordinated macroeconomic policy and insufficient structure reforms as well as lack of financial regulation and control over financial sector were among the main factors of crisis formation. Current experience of majority states shows shortage of trust to financial institutes and limited access to credit financing both for population and for business;
- problems in financial sphere had great impact on trade and development of industrial and developing countries. Growth of budget deficit, shortage of tax proceeds, problems of balance of payments in majority states of South and Eastern Europe as well as the other regions led to stagnation of world economic growth and demanded search for new economic order, coordinated by mutual efforts of the whole world;
- changes of export and import policies in all countries and in inner market and business environment required rethinking of corporate strategies. Moreover, the crisis has transformed the concept of “business social responsibility”. If earlier it was viewed as extra obligations for business, its social commitment, now it includes partner relationships of business and government for further social and economic development.

Urgency of discussed problems and sometimes controversy in the approaches to their solution were a good stimulus for debates and exchange of opinions between the Conference participants, and will surely become a solid basis for further investigations.
WELCOME ADDRESS

by the President of ASECU,
Professor Yannis Tsekouras

Dear President of Rostov State University of Economics, Prof. Zolotarev,
Dear Rector of the University, Prof. Kuznetsov,
Dear Senior Pro-Rector, Prof. Albekov,
Dear Pro-Rectors,
Dear Vice President of ASECU, Prof. Damyanov,
Dear General Secretary of ASECU, Prof. Cerović,
Members of the Conference Organizing Committee,
Fellow delegates,
Students,
Ladies and Gentlemen!

It gives me great pleasure to inaugurate the proceedings of the 7th International Conference of ASECU, organized by the Rostov State University of Economics.
I must thank the Rector of the University, Prof. Kuznetsov, the Senior Pro-Rector Prof. Albekov and, of course, all the members of the Conference Organizing Committee.
Particular thanks we owe at the Rectorate as well as to the whole University of Rostov, because they rendered possible the organization of ASECU-Youth, which we want to believe that it will be the good future of ASECU.

May I take this opportunity to extend my best wishes to the University of Rostov on this eightieth anniversary of its foundation. I wish it to continue successfully its dedication to research and the cultivation of new knowledge and in shaping new scientists – inspired by moral values and commitment to the general good.

Ladies and gentlemen,

Please permit me to say a few words about ASECU, mostly for the participants who are not informed about it.

The Association this year celebrates its fifteenth birthday and amounts 46 Universities-members.

It is possible that the membership will continue to grow, but, what matters most, is not the quantity of institutions that join our ranks, but the quality; in other words, that good universities should want to become members. And that will depend on the quality of the work our Association does.

To date this work has been in two areas: the organization of our annual International Conferences, and the publication and circulation of our own academic journal, SEEJE. I think we can lay claim to satisfactory performance in both these areas: the conferences have demonstrated a certain breadth and level of quality in the presentations given, while the journal is steadily improving – as we see from the stature of the academics and authors now submitting their work.

Naturally, the Association wishes to see the quality of both, conference and journal, steadily improve. I should take this opportunity to inform you that the journal is issued only electronically and can be read online, not only at our own ASECU website, but also on the

Two years ago we announced our intent to expand the journal (which already includes a serious country review with each issue), publishing another special issue dedicated to presentations of the economies of at least two reference countries in the ASECU region. An essential precondition for this initiative is the existence of a team of scholars and specialists, combining theoretical knowledge and experience, who can put together a full and detailed account of the economy of their respective countries, valuable not only to the academic community but also to government departments, businessmen, trade unions, educational and research agencies in the country in question, as well as international organizations and potential foreign investors.

Unfortunately we were not able to realize this project at present, because of our inability to fund an extra issue of the journal. Our intention now is not to withdraw, but to reformulate, this proposal, in the form of a question to the national branches of the Association in their various countries. Would any of these branches be interested in, and capable of, presenting a full and detailed presentation of the economy of its country, while finding the funds to pay for an extra issue of the SEEJE?

Ladies and gentlemen,

After fifteen years dealing with the problems faced by an association of universities and academics in their endeavour to work together to achieve shared objectives and implement decisions, I am well aware of how much more difficult it must be for the countries of South and eastern Europe to cooperate harmoniously.

But, we can draw comfort from the fact that all the countries in our region share a common objective, namely their accession to the European Union once they have assimilated the Acquis Communautaire.

I say all the countries, because, recently I read, that a Russian politician, chairman of a relatively small political party, suggest Russia to become a member of EU, replacing the Rubble by Euro.

This proposal, which resembles enough with the place of De Gaulle, who wanted United Europe from the English Channel up to Urals, and would deserve to be examined by the persons in charge of all the Europe.

We must all wish that this process will not be too protracted, and that the continuing suspicions and tensions in our region will give way to a permanent and peaceful cooperation and a friendly rivalry, accelerating the socio-economic development of all the peoples of South and Eastern Europe.

And so, I have arrived at the topic to which our conference is dedicated, and I take great pleasure in declaring the inauguration of the 7th ASECU International Conference. My best wishes to you all for a successful conference.

Thank you.

Professor Yannis Tsekouras,
President of ASECU
PAPERS
PLENARY SESSION
BUILDING BRIDGES IN GLOBAL EDUCATION AREA:  
ESG, UNIQUe, WICHE, ACE and ISO

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ABSTRACT

Information-communication technologies (ICT) is the quickest changing sphere of business. They support the innovation development of the markets. With the help of these technologies emerged the new sphere of education called e-learning. As this sphere is quite new the questions of standards for e-learning and the e-learning quality issues are widely discussed all over the world. The aim of this study is to compare the ESG for university internal quality assurance with the existing standards for measurement of the e-learning, namely with University Quality in E-learning (UNIQUe) program in terms of self-evaluation report. Then we will analyse the results of this comparison and the Western Interstate Commission for Higher Education (WICHE) principles, American Council on Education (ACE) principles, standard ISO 19796-1.

Key words: e-learning, standards, quality assurance, comparison

Signing of the Bologna declaration made Russia one of the countries where all the unified European principles of education and quality assurance are to be implemented. The State Management Bodies started with the change the education system from 5-year to 4-year one. Not all the educational programs will be changed. For Russia it is a very difficult question. It was from my point of view one of the prerequisites, but not the only one, for creation in the year 2005 Agency for Higher Education Quality Assurance and Career Development (AKKORK). Its task is to find a balance in the stakeholders interest, create procedures and criteria, which can reflect the interests of employers, the State starting from the content of the education programs, didactical units, ending with management issues, effective management technologies and the economic stability of the University (that is traditionally called conditions for the education program realization). Now Agency is uniting a range of the civil society institutions,
accumulating the approaches from the world practice. AKKORK have many national and international partners. For instance in Russia it collaborates with the Associations of Universities, Rectors Councils, Russian Academy of Education (well-known scientific research body, with AKKORK has the joint accreditation of the pedagogy education programs). At the international arena AKKORK is a full member of such well known QA networks as International Network for Quality Assurance in Higher Education (INQAAHE), Asia-Pacific Quality Network (APQN), European Foundation for Quality in E-learning (EFQUEL), and associate member of the European Association for Quality Assurance in Higher Education (ENQA). Also together with EFQUEL AKKORK is realizing on the territory of Russia the program of accreditation named University Quality in E-learning (UNIQue). It is used for the Universities which are using e-learning in their educational programs.

E-learning or electronic learning is nowadays one of the most active developing spheres of education. The confirmation for this could be the International Conference Moscow Education Online, which for the third time was held in 2009 in the President Hotel (Moscow, Russia). The participants of the conference are the representatives of the above stated organizations and the IT companies staff from Europe and CIS countries. This conference is held in Moscow and this facilitates the participation of the persons from the RF regions in it. The participation gives them the opportunity to get acquainted with the technological innovations, new projects, practical usage of new and existing technologies and the results of the researches which exist on the e-learning market. In the plenary sessions and parallel discussions took part the also the representatives of the education management bodies, what makes possible the constructive discussion on problems existing in the e-learning.

Today e-learning becomes one of the priority activity lines of the organizations in the sphere of education. This determines the fact that the educational institutions and training companies are becoming more and more active users of the IT-consulting services.

On the e-learning market there exist the following types of organizations offering the learning with the usage of information – communication technologies. (e-learning):
- higher educational institutions;
- training companies, offering courses on certain themes;
- companies, which develop courses for education of their own staff in the e-learning environment.

Electronic learning represents itself from our point of view not the set of defined technological solutions for educational processes but the new form of the educational process which is formed with the usage of Hi-Tech technologies in education. For instance, when professor is teaching the course on management he should possess not only the technologies he uses in teaching but also he should know the teaching methodic based these technologies\(^1\).

UNIQue is the first EFQUEL program aimed at Western Europe countries. The goal of this program is to help the reforms in the European Higher Education Area (EHEA) by means of creating the quality assurance systems for the e-learning universities, and the main task is to create the European accreditation system for the universities which use e-learning instruments in their educational activity. Russia needs to enter in this process. For the time being only one Russian university – Moscow University of Industry and Finance – which as experiment

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undergone the accreditation according to the UNIQUe program received the European Quality Mark but we are planning to disseminate this experience on all Russian universities.

In terms of e-learning quality standards EFQUEL offers different indices which correspond to all the components of education process. First of all is evaluated the educational context. It includes the e-learning development strategy, the openness of the university to the public and its innovation policy.

Apart from this are evaluated the educational resources which has the university, namely the level of students’ preparation, qualification characteristics of the teaching staff and the material and technical facilities of the university.

Then the university education process is evaluated. It includes: educational services quality, the level of intellectual property protection and the existence and quality of the education and advanced training programs for teaching and administrative staff.

If we consider the European Standards and Guidelines (ESG) developed by ENQA, we will see the completely different system with different purposes.

1. Policy and procedures for quality assurance
   STANDARD: Institutions should have a policy and associated procedures for the assurance of the quality and standards of their programmes and awards.

2. Approval, monitoring and periodic review of programmes and awards
   STANDARD: Institutions should have formal mechanisms for the approval, periodic review and monitoring of their programmes and awards.

3. Assessment of students
   STANDARD: Students should be assessed using published criteria, regulations and procedures which are applied consistently.

4. Quality assurance of teaching staff
   STANDARD: Institutions should have ways of satisfying themselves that staff involved with the teaching of students are qualified and competent to do so. They should be available to those undertaking external reviews, and commented upon in reports.

5. Learning resources and student support
   STANDARD: Institutions should ensure that the resources available for the support of student learning are adequate and appropriate for each programme offered.

6. Information systems
   STANDARD: Institutions should ensure that they collect, analyze and use relevant information for the effective management of their programmes of study and other activities.

7. Public information
   STANDARD: Institutions should regularly publish up to date, impartial and objective information, both quantitative and qualitative, about the programmes and awards they are offering.

We can see that ENQA has developed the concrete set of standards and UNIQUe has the criteria that help to evaluate the university. ENQA standards are most common and vague ones, whereas the UNIQUe program evaluates the concrete sphere of the university i.e. e-learning activities applied to different fields of the university work. ENQA standards are for quality assurance whereas the UNIQUe criteria does not use this expression but the fulfillment of this criteria guarantees quality.
Western Interstate Commission for Higher Education (WICHE) principles were developed especially for online education programs\(^1\). They include:

**Principles**

**Curriculum and Instruction**
1. Each electronically offered program of study results in learning outcomes appropriate to the rigor and breadth of the degree or certificate awarded.
2. An electronically offered degree or certificate program is coherent and complete.
3. The program provides for appropriate real-time or delayed interaction between faculty and students and among students.
4. Qualified faculty provide appropriate oversight of the program electronically offered.

**Institutional Context and Commitment to Role and Mission**
5. The program is consistent with the institution’s role and mission.
6. Review and approval processes ensure the appropriateness of the technology being used to meet the program’s objectives.

**Faculty Support**
7. The program provides faculty support services specifically related to teaching via an electronic system.
8. The program provides training for faculty who teach via the use of technology.

**Resources for Learning**
9. The program ensures appropriate learning resources are available to students.

**Students and Student Services**
10. The program provides students with clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interaction, assumptions about technological competence and skills, technical equipment requirements, availability of academic support services and financial aid resources, and costs and payment policies.
11. The enrolled students have reasonable and adequate access to the range of student services appropriate to support their learning. That accepted students have the background, knowledge, and technical skills needed to undertake the program.
12. Advertising, recruiting, and admissions materials clearly and accurately represent the program and services available.

**Commitment to Support**
13. Policies for faculty evaluation include appropriate consideration of teaching and scholarly activities related to electronically offered programs.
14. The institution demonstrates a commitment to ongoing support, both financial and technical, and to continuation of the program for a period sufficient to enable students to complete a degree / certificate.

**Evaluation and Assessment**
15. The institution evaluates the program’s educational effectiveness, including assessments of student learning outcomes, student retention, and student and faculty satisfaction.
16. Students have access to such program evaluation data.
17. The institution provides for assessment and documentation of student achievement in each course and at completion of the program.

American Council on Education (ACE) principles include¹:

1. **Distance learning activities are designed to fit the specific context for learning.**
   a. Learning opportunities include a clear statement of intended learning outcomes, learning content that is appropriate to those outcomes, clear expectations of learner activities, flexible opportunities for interactions, and assessment methods appropriate to the activities and technologies.
   b. Elements of a learning event – the learning content, instructional methods, technologies, and context – complement each other.
   c. The selection and application of technologies for a specific learning opportunity are appropriate for the intended learning outcomes, subject matter content, relevant characteristics and circumstances of the learner, and cost range.
   d. Learning activities and modes of assessment are responsible to the learning needs of individual learners.
   e. The learning experience is organized to increase learner control over the time, place and pace of instruction.
   f. Learning outcomes address both content mastery and increased learning skills.
   g. Individuals with specialized skills in content, instructional methods, or technologies work collaboratively as a design team to create learning opportunities.
   h. The learning design is evaluated on a regular basis for effectiveness, with findings utilized as a basis for improvement.

2. **Distance learning opportunities are effectively supported for learners through fully accessible modes of delivery and resources.**
   a. The providing organization has a learner support system to assist the learner in effectively using the resources provided. This system includes technology and technical support, site facilitation, library and information services, advising, counseling, and problem-solving assistance.
   b. The provider considers the needs for learner support in relation to the distance learning mode(s) used and makes provision for delivery of appropriate resources based on the design of the learning activities, the technology involved, and the needs of the learner.
   c. Access to support services – such as scheduling, registration, and record keeping – is convenient, efficient, and responsive to diverse learners as well as consistent with other elements of the delivery system.
   d. Support systems are accessible to and usable by the learners and are sufficiently flexible to accommodate different learning styles.
   e. The provider discloses to the learner all information pertinent to the learning opportunity – such as course prerequisites, modes of study, evaluation criteria, and technical needs – and provides some form of orientation for those desiring it.
   f. Support systems for learning opportunity are reviewed regularly to ensure their currency and effectiveness.

3. **Distance learning initiatives must be backed by an organizational commitment to quality and effectiveness in all aspects of the learning environment.**

a. Involvement in distance learning is consistent with the overall mission of the provider; policies regarding distance learning are integrated into the provider’s overall policy framework.

b. The providing organization makes a financial and administrative commitment to maintain distance learning programs through completion and to support faculty and learner services needed to ensure an effective learning environment.

c. Administrative and support systems (registration, advising, assessment, etc.) are compatible with the learning delivery system to ensure a coherent learning environment.

d. The organization’s curricular and administrative policies incorporate the needs of distance learning as well as traditional learning activities.

e. The provider makes a commitment to research and development of distance learning, maintaining a systematic evaluation of the content, processes, and support systems involved in its distance learning activities.

f. The provider makes a concomitant investment of resources and effort in professional development and support of both faculty and staff involved in distance learning.

g. The providing organization recognizes effective participation in distance learning in its promotion and reward system for faculty and staff and ensures that its policies regarding promotion, tenure (if applicable), and departmental / program funding reflect the integration of distance learning into the organization’s mission.

h. The policies, management practices, learning design process, and operational procedures for distance learning are regularly evaluated to ensure effectiveness and currency.

i. The provider does not distinguish between learning accomplished at a distance and learning accomplished through other means in recognizing learner achievement.

4. Distance education programs organize learning activities around demonstrable learning outcomes, assist the learner to achieve these outcomes, and assess learner progress by reference to these outcomes.

a. When possible, individual learners help shape the learning outcomes and how they are achieved.

b. Intended learning outcomes are described in observable, measurable, and achievable terms.

c. The learning design is consistent with and shaped to achieve the intended learning outcomes.

d. Distance education media and delivery systems are used in a way that facilitates achievement of intended learning outcomes.

e. Learning outcomes are assessed in a way relevant to the content, the learner’s situation, and the distance education delivery system.

f. Assessment of learning is timely, appropriate, and responsive to the needs of the learner.

g. Intended learning outcomes are reviewed regularly to assure their clarity, utility, and appropriateness for the learners.

5. The provider has a plan and infrastructure for using technology that support its learning goals and activities.

a. The technology plan defines the technical requirement and compatibility needed to support the learning activity.

b. The technology plan addresses system security to assure the integrity and validity of information shared in the learning activities.
c. The technology facilitates interactivity among all elements of a learning environment and places a high value on ease of use by learners.

d. The technology selected for distance learning is fully accessible and understandable to learners and has the power necessary to support its intended use.

e. Providers communicate the purpose of the technologies used for learning and, through training, assist learner, faculty, and staff to understand its etiquette, acquire the knowledge and skills to manipulate and interact with it, and understand the objectives and outcomes that the technologies are intended to support.

f. The technology infrastructure meets the needs of both learners and learning facilitators for presenting information, interacting within the learning community, and gaining access to learning resources.

Standard ISO/IEC 19796-1 represents the basic scheme for description of the approaches to quality in the organization. It consists of two parts:
- Scheme-description of the approaches to quality;
- Process model, used as a basic classification.

All these standards and principles are completely different. As the e-learning becomes more and more popular there would appear much more standards. From our point of view in order to lessen the number of standards and unify them one of the international associations (preferably ENQA as it has such experience) in collaboration with ISO and EFQUEL should develop some unified standards. We think that ISO and UNIQLe program are the most representative practices in the sphere of e-learning and they are by the way somehow alike ESG.

**LIST OF LITERATURE:**

CULTURE INTELLIGENCE: ANTECEDENTS AND PROPENSITY TO ACCEPT A FOREIGN JOB

Engle, Robert  
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ABSTRACT

This study proposes a model and examines the relationships of personality, multicultural behavior, and cultural intelligence and their impact on the likelihood of an individual accepting a foreign job in a country with a very different culture. The proposed model is examined using 279 university business students in France and the United States. This is the first study to examine the role of multicultural behavior in such a model and the likelihood of a job acceptance outcome. The results suggest that while a significant variance in the likelihood of job acceptance was explained by these variables, the relationships of the variables differed between the two countries with multicultural behavior having a significant impact in both countries and cultural intelligence being significant in only the United States. In addition personality tended to play a more central role in France than in the U.S. and the results also found mean scores to be higher in France than in the U.S. in all variables except the personality factor of openness to experience. Results are discussed as well as limitations and suggestions for future research.

INTRODUCTION

With the ever increasing presence of globalization, and especially the rise of foreign direct investment from developed and developing countries alike, the role of the expatriate has never been as important as it is today. It has been argued that the expatriate plays an especially important role in a corporation’s competitiveness (Takeuchi et al., 2005) with estimates of as high as 80% of middle and large companies sending their professionals abroad (Black & Gregersen, 1999). The cost of an overseas assignment is typically very high with estimates of 150% to 200% of salaries being required per year to maintain an expatriate (Downes, Varner & Hemmasi, 2010) and when seen from the perspective of a 4 year assignment estimates of costs can be as high as US$2 million (Klaff, 2002). Of course given the importance of the job and the institutional knowledge gained by such assignments companies often see such assignments as
essential to their business, and the importance of getting the best qualified employees to fill such positions may be seen as critical. However, what if your best employees do not want a foreign job assignment? What are the things that increase the likelihood of their accepting such a position if offered? It has been argued that cultural intelligence and relevant previous experience leads to successful expatriate performance, retention, and overall career success (Shaffer and Miller, 2008). Given their importance for expatriate success, could it be that these factors also can make a person more likely to accept a position overseas in the first place? While this area of research can be seen as relatively recent having been introduced by Earley and Ang (2003) less than 10 years ago, to our knowledge no research as examined these potential antecedents of an employee’s decision to accept a job in a foreign country.

This study proposes a specific model (Figure 1) and uses university business students in the United States and France to examine the model relationships. The objectives of this study are to examine whether or not personality has an impact on cultural intelligence and multicultural behavior, as well as whether or not cultural intelligence and multicultural experiences can predict the propensity of a subject to accept an offer for a foreign job in a country with a very different culture. The specific variables examined in this study include: openness to experience (openness); multicultural behavior; cultural intelligence; and likelihood of accepting a foreign job in a country with a very different culture. The implications from such research may give companies further insight into how to develop and select expatriates as well as assist teachers and researchers in the building of expatriate developmental models.

We will begin with a brief review of cultural intelligence and what we suggest may be key antecedents and then introduce a model from which research hypotheses are developed. We then review the sample and methodology used in testing the research followed by the presentation of results and discussion of these results as well as study limitations and suggestions for future research.

**CULTURAL INTELLIGENCE**

Cultural intelligence (CQ) is defined as an individual’s capability to function and manage effectively in culturally diverse settings (Early & Ang, 2003). This definition can be seen to be consistent with Schmidt and Hunter’s (2000) definition of general intelligence “the ability to grasp and reason correctly with abstractions (concepts) and solve problems” (3). It also can be seen as fitting the more global approach to intelligence as suggested by theories of practical and multiple intelligences (Sternberg & Wagner, 1986; Sternberg & Detterman, 1986). Cultural intelligence is not only seen as one of these “multiple intelligences”, it is also seen as conceptually and measurably distinct from others such as general or analytical intelligence (IQ), social intelligence (SI), and emotional intelligence (EQ) (Elenkov and Pimentel, 2008) with a distinguishing characteristic that cultural intelligence applies to multiple cultural settings while social and emotional intelligence may not apply in another cultural setting (Thomas, 2006).

As conceived by Earley and Ang (2003) and developed by Van Dyne, Ang, and Koh (2008), the factors that make up the discrete construct of the broad measure of cultural intelligence (Total Cultural Intelligence or TCQ) include: Metacognitive CQ; Cognitive CQ; Motivational CQ; and Behavioral CQ. Metacognitive CQ refers to the conscious awareness which an individual has regarding cultural interactions. Cognitive CQ is seen to reflect the knowledge of a group’s values, beliefs, and norms. Motivational CQ reflects the capability to direct energy to learning about cultural differences. Finally, behavioral CQ reflects the
capability to choose appropriate verbal and physical actions when interacting with people of different cultures.

In order to measure these factors a 20 item instrument was developed and extensively tested for reliability and validity (see Van Dyne, Ang, & Koh, 2008). The results indicated a robust instrument with a high degree of validity and reliability. Additional research (Shannon & Begley, 2008) confirmed this instrument to have “strong psychometric characteristics with a stable factor structure” (51). This construct and instrument was used in this study.

Research has suggested that CQ has an impact on cross-cultural adaptation (Ward & Fischer, 2008), on trust (Rockstuhl & Ng, 2008), on group performance (Huber & Lewis, 2010), expatriate performance (Lee & Sukoco, 2010), and global leadership skills (Ng, VanDyne & Ang, 2009). There are also a number of antecedents of CQ that have been identified and/or proposed. These include international travel, work experience, study abroad, and perceived self-efficacy (MacNab, B. & Worthley, 2011; Crowne, K. 2008), language skills, living in diverse cultural settings, cross-cultural work experience (Triandis, 2008) parental and educational experiences (Shannon & Begley, 2008), and personality (Ang & Van Dyne, 2008; Shaffer & Miller, 2008).

Given that CQ has been found to be positively associated with cross-cultural adaptation and expatriate performance we suggest the following hypothesis:

H1: The level of cultural intelligence (TCQ) of university business students will have a significant positive relationship with the likelihood a subject would accept a foreign job assignment.

ROLE OF PERSONALITY AND MULTICULTURAL BEHAVIOR

It is well known in the Western-based literature that personality can predict behavior and performance (Barrick & Mount, 1991). While there is little agreement among psychologists as to the definition of personality, within the area of industrial and organizational psychology personality descriptions tend to focus on personality traits and the generally agreed upon structure of personality traits known as the “Big Five” (Heggestad, 2007). The Big Five framework has considerable support among a wide range of psychologists and has become the most widely used and extensively researched model of personality (Gosling, Rentfrow, & Swann, 2003). McCrae and Costa (1987) labeled the five trait dimensions as: neuroticism versus emotional stability; extraversion or surgency; openness to experience; agreeableness versus antagonism; and conscientiousness versus undirectedness.

It has been suggested that some of these personality dimensions could be antecedents of cultural intelligence (Ang & Van Dyne, 2008) and researchers have also concluded that the relationship between CQ and personality is a key issue for the theoretical and empirical precision of CQ research (Ward & Fischer, 2008). Triandis (2008) suggested one personality dimension in particular, openness to experience (referred to in this paper as “openness”), may reduce the negative effects of an individual’s interaction with different cultures and thus contribute to a higher CQ. According to McCrae and Costa (1987) and Oolders, Chernyshenko, and Stark (2008) openness to experience (openness) includes traits such as curious, imaginative, excitable, wide interests, artistic, and being unconventional as well as high levels of intellectual efficiency, tolerance, flexibility, depth, and ingenuity. While Ang, Van Dyne, and Koh (2006) found that of
all five dimensions, openness had the strongest connection with CQ. Dowes and Varner (2008) found no significant connection between openness and expatriate performance suggesting perhaps that openness would impact CQ which in turn would have an impact on expatriate performance. While openness is found to impact CQ, Ward and Fischer (2008) found of the four factors consisting of TCQ, openness specifically impacted the motivational CQ factor. This would seem to make sense since motivational CQ addresses the strength of the orientation one has to learning about other cultures, something an individual who is very tolerant, curious and has wide interests (openness) would seem likely to be willing to do.

It would seem likely that a person with a high degree of openness would also tend to behave in such a way as to expose themselves to situations that would allow them to satisfy their curiosity and interests. Motivational CQ is defined by Ang and Van Dyne (2008) as the capability to direct energy to learning about cultural differences. This “capability” would suggest specific behavior and experience which would lead an individual to develop their ability – a position taken by Ang and Van Dyne (2008). It appears that such behavior or experience also need not be work-related as Tarique and Takeuchi (2008) found culturally-related non-work experiences to influence all four facets of cultural intelligence. So, what specific behaviors can lead to and/or reinforce such a capability? We decided to conduct pilot studies to help us better address this aspect in our study.

Pilot studies to frame the concept of multicultural behavior

As part of a pilot study 102 university business students in the United States were administered the Ang and Van Dyne (2008) CQ instrument to assess their overall cultural intelligence (TCQ). The 15 students with the highest CQ scores and the 15 students with the lowest CQ scores were personally interviewed with the intent of identifying potential behavior or experiences that might contribute to their comparatively high or low score. The interviews suggested that the degree they socialized with people from cultures different from their own might constitute a differentiating behavior as 13 of 15 subjects with high scores indicated such behavior and only 5 of 15 students that represented the bottom 15 indicated such behavior. As a result we decided to add the question: “To what extent do you interact socially with people from different countries?” with a scale of “1” (very little extent) to “6” (very great extent).

A second pilot was then conducted using 88 university business students in the United States who were again administered the Ang and Van Dyne instrument with the above multicultural behavior question added. Results of a simple linear regression indicated that the question explained 27% of the variance in TCQ with an F-score of 44.1 (p<.000).

Given a number of researchers with the position that various behavior and experience does appear to influence TCQ, and that the multicultural behavior question used in the pilots appears to capture at least some part of the behavior in question, we decided to allow the above question to represent the multicultural behavior (MCB) construct.

$H2a$: Multicultural behavior (MCB) of university business students will have a significant impact on their cultural intelligence (TCQ).

$H2b$: Multicultural behavior (MCB) of the university business students will have a significant impact on their likelihood to accept a foreign job assignment.

$H3a$: The higher the level of openness of university business students, the higher the level of cultural intelligence (TCQ).
**H3b:** The higher the level of openness of university business students, the higher the level of multicultural behavior (MCB).

**CULTURE**

Hofstede (2001) views cultural differences as resulting from the “mental programs” people carry around that were developed in family, school, and organizational environments. As a result, he defines culture as “the collective programming of the mind that distinguishes the members of one group or category of people from another” (p. 9). His studies found four dimensions on which the two countries in this study may be compared. These included:

1. **Power distance,** which is described as “the extent to which the less powerful members of organizations and institutions accept and expect that power is distributed unequally.”

2. **Uncertainty avoidance,** which is described as “the extent to which a culture programs its members to feel either uncomfortable or comfortable in unstructured situations. Unstructured situations are novel, unknown, surprising, different from usual.”

3. **Individualism-Collectivism,** which is described as “the degree to which individuals are supposed to look after themselves or remain integrated into groups.”

4. **Masculinity-Femininity,** which is described as “the distribution of emotional roles between genders.” (pp. xix-xx)

These cultural dimension differences between the United States and France may be seen as low to moderate with the mean overall “cultural distance” score of countries compared to the U.S. using Hofstede’s data on 67 countries (www.geert-hofstede.com) being 17 and the France score being 14. Of the above four cultural dimensions the one with the greatest difference is uncertainty avoidance with the U.S. score of 86 and the French score of 46. Typically one might expect to see a difference in the impact of variables given these scores. However, when it comes to multi-cultural orientation it may be argued that the French would not necessarily see exposure to multicultural activity as “uncertain”. According to the World Tourism and Travel Council (2010), France has one of the highest rates of tourism in the world with nearly 70 million visitors per year, about 20 million more than the second ranked United States. In addition, the French being a European country and a relatively rich member of the European Union have the ability to easily access other countries and their cultures which together with the cultural exposure from tourism may greatly reduce any feeling of uncertainty resulting from multicultural exposure and activity. Given the subject population of this study, university business students, any such uncertainty may well be considered to be even less than with an older French population who may be somewhat more comfortable in a local home environment.

**H4:** French university business students will have a higher level of openness than the U.S. subjects.

**H5:** French university business students will have a higher level of multicultural behavior (MCB) than will the U.S. subjects.

**H6:** French university business students will have a higher level of cultural intelligence (TCQ) than will the U.S. subjects.

**H7:** French university business students will have a greater likelihood of accepting a foreign job in a country with a very different culture than will U.S. subjects.
Thus, as can be seen in Figure 1 the four model elements consist of openness, multicultural behavior (MCB), cultural intelligence (TCQ), and the likelihood of accepting a foreign job offer in a very different culture.

**Figure 1**
Propensity to Accept a Foreign Job Offer

![Diagram](image)

**METHODOLOGY**

France and the United States were chosen for an initial analysis. Both countries are part of distinctly different regional cultural clusters; Latin European cluster and Anglo cluster (House et al., 2004). They were also chosen due to ability of the same researcher to gather data, thus helping to assure a common method which was classroom administered and required a non-specific introduction to the subjects suggesting a general cross-country study that is examining various individual characteristics of university business students. While participation in the survey was voluntary, all subjects present chose to participate. One university in each country was used in this study with the target population being senior undergraduate and first or second year graduate students in both universities. Only country citizens’ data were used in the study which resulted in 7 questionnaires not being used from the U.S. collected data and 41 not being used from the French collected data. When answering the biographical question regarding year in university, the year of university question options in France included the two years of post high school university preparation as taken by the subjects (thus the French student was expected to be a little older than the U.S. student). The result was a sample of 166 subjects from the U.S. and 113 from France (see Table 1 for details).

Cultural intelligence was measured using the self-report instrument developed and validated by Van Dyne, Ang, and Koh (2008). During their validation process they identified the 20 items with the strongest psychometric properties with a Chi-square of 822.26 (164 df), CFI of 0.92, and RMESA of 0.08. Nested model comparisons demonstrated the superiority of the hypothesized four-factor CQ model. The instrument was then tested for generalizability
across samples and analysis using structured equation modeling (SEM) demonstrated good fit also finding acceptable Cronbach alphas along with Chi-Square of 381.28, CFI of .96, and RMSEA of .05. They also completed an analysis of generalizability across time, generalizability across countries, generalizability across methods (observer report and self-report), as well as discriminant validity, incremental validity, and predictive validity (with cultural decision-making, interactional adjustment, and mental well-being as dependent variables). The study concludes that the construct appears to have a clear, robust, and meaningful structure. Shannon and Begley (2008) confirmed the psychometric properties of the Van Dyne, Ang, and Koh (2008) model to be stable.

Openness was measured using a Big Five personality scale developed by Gosling, Rentfrow, and Swan (2003) who point out, the Big Five structure enjoys considerable support among international psychologists whose research has resulted in a range of instruments with as many as 240 item scales to as few as 5 item scales that can be used depending on a number of factors including the purpose or objective of administering the instrument (diagnoses of a suspected psychological illness or general employment selection process), and the need for very high levels of psychometric preciseness, and the concern of the researcher over the length of the questionnaire being administered and possible subject concentration and fatigue given a large number of questions. Gosling et al. (2003) developed and tested the 10 item measurement used in this study and found satisfactory convergence validity with the often used and highly regarded Big Five Inventory (BFI) of John and Srivastava (1999). They point out the BFI in-turn shows high convergent validity with other self-report scales and peer rating scales of the Big Five. They also found the 10-item scale (TIPI) to have test-retest reliability, satisfactory patterns of predicted external correlations, and convergence between self-rated and observer ratings.

Since pilot tests of the instrument in this current study was taking subjects between 25 and 30 minutes to complete we were concerned about subject fatigue and did take Gosling et al.’s (2003) recommendation to use this instrument (TIPI) in such a situation. Thus two items were used to measure openness and were based on the extent to which the pair of traits is seen to apply to the subject (1 = strongly disagree to 7=strongly agree). The two items were: Question 5. Open to new experiences, complex; Question 10. Conventional, uncreative (reverse scored).

Multicultural behavior and the likelihood of a subject’s accepting a foreign job offer were both measured by a single question, “To what extent do you interact socially with people from different countries and cultures?” , and “To what extent would you be willing to accept a job requiring you to work in a foreign country with a very different culture?” These questions were derived by researchers from several countries including the two countries used in this study and pilot tested as described above.

In addition, several other constructs not included in this study and biographical questions were also included resulting in a survey containing 61 questions and requiring approximately 25-30 minutes to complete.

**RESULTS**

As can be seen in Table 1 there were a total of 279 subjects with 113 from France and 166 from the United States. There were an equal number of women represented in each country with fewer men in France than in the U.S. The average age was 23.5 for France and 21.7 for the U.S. Since the France sample was from a private university many students completed two year
university preparatory program after high school and for the purposes of this study these two years were considered university experience and thus the French subjects were not only a little older than the U.S. their average number of years at “university” was somewhat higher at 4.0 years for France and 3.6 for the U.S.

<table>
<thead>
<tr>
<th>Men</th>
<th>France</th>
<th>USA</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>95</td>
<td>137</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Women</th>
<th>France</th>
<th>USA</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>71</td>
<td>71</td>
<td>142</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total</th>
<th>France</th>
<th>USA</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>113</td>
<td>166</td>
<td>279</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>France</th>
<th>USA</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.5</td>
<td>21.7</td>
<td>22.8</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Univ. yrs.</th>
<th>France</th>
<th>USA</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>3.6</td>
<td>3.8</td>
<td></td>
</tr>
</tbody>
</table>

Descriptive statistics (Table 2) suggest that there were significant correlations between job acceptance and all variables (including control variables) except for gender (control).

<table>
<thead>
<tr>
<th>Job</th>
<th>TCQ</th>
<th>Open</th>
<th>MCB</th>
<th>Gender</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.12</td>
<td>1.57</td>
<td>1</td>
<td></td>
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<tr>
<td>4.50</td>
<td>0.75</td>
<td>0.44</td>
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<tr>
<td>5.46</td>
<td>1.04</td>
<td>0.16</td>
<td>0.24</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>20.63</td>
<td>9.75</td>
<td>0.52</td>
<td>0.45</td>
<td>0.20</td>
<td>1</td>
</tr>
<tr>
<td>0.51</td>
<td>0.51</td>
<td>0.04</td>
<td>0.01</td>
<td>0.09</td>
<td>0.05</td>
</tr>
<tr>
<td>0.41</td>
<td>0.49</td>
<td>0.33</td>
<td>0.17</td>
<td>-0.01</td>
<td>0.37</td>
</tr>
</tbody>
</table>

Gender: 1= female; 0= male; Country: 1= France; 0= USA; **Bold** p<.01

Using hierarchical regression the first part of the model (Table 3) examined the relationships between control variables, openness, and multicultural behavior (MCB). As can be seen country (but not gender) had a significant positive impact on MCB as did openness when added, resulting in a significant Adjusted R-square of .172 for the impact of all three variables on MCB, thus supporting H3b.
Table 3
Openness-Multicultural Behavior (MCB)

<table>
<thead>
<tr>
<th></th>
<th>Model 1 Beta</th>
<th>Model 2 Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-.022</td>
<td>-.041</td>
</tr>
<tr>
<td>Country</td>
<td>.374***</td>
<td>.381***</td>
</tr>
<tr>
<td>Openness</td>
<td></td>
<td>.210***</td>
</tr>
<tr>
<td>MCB</td>
<td>Dep</td>
<td>Dep</td>
</tr>
<tr>
<td>F-score</td>
<td>21.9</td>
<td>20.2</td>
</tr>
<tr>
<td>R-sq</td>
<td>.137</td>
<td>.181</td>
</tr>
<tr>
<td>Adj. R-sq</td>
<td>.131</td>
<td>.172</td>
</tr>
<tr>
<td>Δ Adj. R²</td>
<td></td>
<td>.041***</td>
</tr>
</tbody>
</table>

*** p = .000

The second part of the model (Table 4) examined the relationships of the control variables, openness, MCB, and cultural intelligence (TCQ). The results indicate that when all variables are added the controls were not significant but both openness and MCB both had a significant positive impact on TCQ (Adj. R-sq = .220), thus supporting hypotheses H2a and H3a.

Table 4
Openness, MCB & TCQ

<table>
<thead>
<tr>
<th></th>
<th>Model 1 Beta</th>
<th>Model 2 Beta</th>
<th>Model 3 Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-.03</td>
<td>-.02</td>
<td>-.05</td>
</tr>
<tr>
<td>Country</td>
<td>.174**</td>
<td>.172**</td>
<td>.04</td>
</tr>
<tr>
<td>Openness</td>
<td></td>
<td>.243***</td>
<td>.12**</td>
</tr>
<tr>
<td>MCB</td>
<td></td>
<td></td>
<td>.23***</td>
</tr>
<tr>
<td>TCQ</td>
<td>Dep</td>
<td>Dep</td>
<td>Dep</td>
</tr>
<tr>
<td>F-score</td>
<td>4.1</td>
<td>13.0</td>
<td>20.6</td>
</tr>
<tr>
<td>R-sq</td>
<td>.029</td>
<td>.081</td>
<td>.231</td>
</tr>
<tr>
<td>Adj. R-sq</td>
<td>.022</td>
<td>.079</td>
<td>.220</td>
</tr>
<tr>
<td>Δ Adj. R²</td>
<td></td>
<td>.052***</td>
<td>.141***</td>
</tr>
</tbody>
</table>

*p<.05; **p<.01; ***p<.001

The next step (Table 5) examined the relationships of the control variables, openness, MCB, TCQ, and likelihood of foreign job acceptance (Job). Results indicate country (control), MCB, and TCQ all have a significant positive relationship (Adj. R-sq = .341), thus supporting hypotheses H1 and H2b. In addition, variance inflationary factor (VIF) analysis was completed.
with no factor being greater than 1.6 suggesting that collinearity of variables used in this model were not significant (figures less than 10 not significant (Levine et al., 2005).

### Table 5

<table>
<thead>
<tr>
<th></th>
<th>Model 1 Beta</th>
<th>Model 2 Beta</th>
<th>Model 3 Beta</th>
<th>Model 4 Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-.08</td>
<td>-.04</td>
<td>-.02</td>
<td>-.01</td>
</tr>
<tr>
<td>Country</td>
<td>.340***</td>
<td>.346***</td>
<td>.177**</td>
<td>.164**</td>
</tr>
<tr>
<td>Openness</td>
<td>.172**</td>
<td>.079</td>
<td>.037</td>
<td></td>
</tr>
<tr>
<td>MCB</td>
<td>.514***</td>
<td>.347***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TCQ</td>
<td></td>
<td></td>
<td></td>
<td>.255***</td>
</tr>
<tr>
<td>Job</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-score</td>
<td>17.6</td>
<td>15.2</td>
<td>29.8</td>
<td>29.4</td>
</tr>
<tr>
<td>R-sq</td>
<td>.113</td>
<td>.142</td>
<td>.303</td>
<td>.350</td>
</tr>
<tr>
<td>Adj.R-sq</td>
<td>.107</td>
<td>.133</td>
<td>.293</td>
<td>.341</td>
</tr>
<tr>
<td>Δ Adj. R²</td>
<td></td>
<td>.026***</td>
<td>.160***</td>
<td>.048***</td>
</tr>
</tbody>
</table>

*p<.05; **p<.01; ***p<.001

Using t-tests (assuming unequal variance) country-level means were compared (Table 6) indicating that MCB, TCQ, and Job means were higher for the French university business students tested than the means for the U.S. university business students. There was no significant difference in the French and U.S. means for openness. Thus, H5, H6, and H7 were supported and H4 was not supported.

### Table 6

<table>
<thead>
<tr>
<th></th>
<th>Openness</th>
<th>MCB</th>
<th>TCQ</th>
<th>Job</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US</td>
<td>FR</td>
<td>US</td>
<td>FR</td>
</tr>
<tr>
<td>Mean</td>
<td>5.47</td>
<td>5.44</td>
<td>3.6</td>
<td>4.7</td>
</tr>
<tr>
<td>Variance</td>
<td>1.01</td>
<td>1.22</td>
<td>0.91</td>
<td>2.04</td>
</tr>
<tr>
<td>t-Stat</td>
<td>0.23</td>
<td>7.12</td>
<td>-2.89</td>
<td>-6.37</td>
</tr>
<tr>
<td>Prob.</td>
<td>0.41</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td># Subjects</td>
<td>166</td>
<td>113</td>
<td>166</td>
<td>113</td>
</tr>
</tbody>
</table>

Finally, we examined the model in each country independently to determine if there were any significant variations. For the U.S. sample the model relationships were as indicated in the above with 31.3% of the variance in likelihood of foreign job acceptance being explained by MCB (p>.001) and TCQ (p>.001) but not openness (p=.45). Openness however did, as
suggested by the model (Figure 1), explain 8% of the variance in TCQ (p<.001) and 7% of the variance in MCB (p<.001).

The results for France however did not support the proposed model (Figure 1) as suggested by the all subject sample. For the French sample 18% of the variance in the likelihood of foreign job acceptance was explained by MCB (p<.001) but not by TCQ (p=.44). However, openness did have a direct impact on job acceptance (p=.02). In addition, openness did as suggested in the model explain low but significant amounts of the variance in MCB (3.4%, p=.05) and in TCB (4%, p=.02). MCB also explained 6% of the variance in TCQ (p=.006). Thus the model for France as suggested by these data are as seen in Figure 2.

**Figure 2**

Propensity to Accept a Foreign Job Offer - France

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**DISCUSSION**

The objectives of this study are to examine whether or not personality has an impact on cultural intelligence and multicultural behavior, as well as whether or not cultural intelligence and multicultural experiences can predict the propensity of a subject to accept an offer for a foreign job. Our results indicate that for the total sample the suggested model relationships are supported as proposed with approximately 34% of the variance in the likelihood of accepting a foreign job in a country with a very different culture being explained by these variables. However, potentially important variations in this model were found between countries.

For the United States these data suggest personality, multicultural behavior, and cultural intelligence play significant roles in this model. As seen in Figure 1, the impact of the personality factor of openness on the likelihood of job acceptance (Job) is mediated by multicultural behavior (MCB) and also mediated by cultural intelligence (TCQ). MCB has a direct impact on TCQ, and also TCQ mediates in part MCB’s impact on Job. In addition, MCB also has a direct influence on Job. Research has suggested that CQ has an impact on cross-
cultural adaptation (Ward & Fischer, 2008), on trust (Rockstuhl & Ng, 2008), on group performance (Huber & Lewis, 2010), expatriate performance (Lee & Sukoco, 2010), and global leadership skills (Ng, VanDyne & Ang, 2009). Now to these findings we can add that in the United States TCQ also contributes as an antecedent of job acceptance in a country with a very different culture. Companies need a cadre of qualified employees that not only can, but also be willing to, take a foreign assignment in a very different culture. Cultural intelligence does appear to contribute to such a person in the U.S.

Another important contribution of this research is that contributing to both TCQ and to the likelihood of foreign job acceptance, in the overall sample and in both the U.S. and in France, is multicultural behavior (see Figures 1 & 2). Individuals who socially interact with individuals who are culturally different appear to explain a significant part of the variance in both TCQ and Job characteristics. Such behavior is possible to assess and observe in existing employees and can therefore be a useful selection tool when hiring or promoting individuals. The results in France suggest that MCB in some countries may explain more of the variance in the likelihood to accept a foreign job assignment than does TCQ (which in this study does not have a significant impact on Job using the French sample). One possible explanation of this that since France is a central part of the European Union currently consisting of 27 very different countries, the French students have much more opportunity to interact socially with people with cultures that are very different from theirs resulting in such multicultural behavior. Openness also has a direct impact on Job as well as a mediated impact through MCB. Thus for the French sample the individuals who have the personality factor of openness to experience and who socially interact with other cultures would appear to have the greater likelihood to accept a foreign job offer in country with a very different culture. In such situations perhaps TCQ may just not be as an important determinant of job acceptance as is MCB. This would reinforce the need for companies to assess MCB and for teachers as well as companies to encourage and nurture multicultural behavior, especially if a goal is to increase the chances of a student/employee one day taking the developmental opportunity of a foreign job in a country with a very different culture.

Of course one has to be careful when trying to generalize from this study due to a number of limitations. The samples consisted of one university in each country and the number of French subjects was relatively small. In addition, due to the length of the questionnaire a brief personality instrument was used which could have reduced the psychometric properties of the measurements. Only two countries were used in this study and especially given the suggested finding that the U.S. and French model have variations not only should an attempt be made to duplicate these results in the U.S. and France, but additional countries need to be examined to help determine the degree to which there may be a pattern of differences. In addition to addressing these limitations, future research should examine and expand on the nature and types of multicultural behavior as well as its impact on a full range of potential outcomes.

REFERENCES


The subject of our conference, although chosen some two years ago, could hardly be more timely. On the one hand it covers the recent financial crisis, which – as you are all aware – made its first appearance in the United States in 2008, with the snapping of the weak link in the housing market, sub-prime mortgages. This brought to light the weaknesses and contradictions in the current neo-liberal economic model, which, counter to the philosophy of the father of neo-liberalism, Frederick Hayek, and the main advocate of monetarism, Milton Friedman, abused the freedom of the market, promoted the widespread affluence based on credit and led to the recent major crisis in public finances, the debt and credit crisis which now affects many EU and other countries, not least the United States itself, with appalling consequences for the real economy and for society as a whole.

On the other hand, the title of our conference urges us to look forward to future development trends. I myself would like to pursue, along very general lines, the course over the last three decades of the neo-liberal model as applied in practice, with reference to the view taken in international political economy.

First of all, let us turn to the trend of the long-term emerging global order of hegemonic centres. After the appearance of neo-liberalism (in the guise of Reganomics in the USA and Thatcherism in the UK), the commencement of economic globalization, the collapse of socialism and the polarized power system there followed a monopolistic system dominated by the USA. The polarized system, which lasted until the late 1980’s, paralleling the economic duopoly, was in some ways more balanced, even if this was known as the “balance of terror”; than the monopolistic system which succeeded it and which, like all monopolies, tended to act without restraint or control.

With the passage of time, as the process of economic globalization advanced and extended across the planet, the monopolistic system began to show signs of retreating in the face of the new centres of power, such as the European Union, but also China, Russia, India, Brazil and S. Africa (BRICS); we now began to speak of a multi-polar, or rather an oligopolistic system of power. This new system, like an oligopoly or perhaps an economic system involving a multiplicity of vendors like a polypoly, if we take into account the G8 or G20, may have manifested less centralization of power than the monopolistic system or the system with two centres of power, but was less stable, more susceptible to imbalances and to the re-emergence, here and there, of economically nationalistic tendencies. We should refer here to a survey conducted of 80 bankers around the world, managing between them no less than 8 trillion
dollars; 60% of the bankers forecast a world with many economic power centres, in which the new reserve currency, superseding the US dollar, will be a basket of different currencies. 37% of them also predicted that the main danger we face over the next quarter century will be competition for control of basic commodities; the second most serious risk, foreseen by 23% of the bankers, is posed by the demographic problem.¹

The various scenarios for structures of global power and order are numerous. With Cox, we see two most likely candidates: that of a global order of ‘conflicting centres of power’², structured around leading powers or groups of states, and that of a ‘post-hegemonic order’³, in which states will agree on legally enshrined rules and principles of peaceful, multilateral—not purely economic—cooperation, with mechanisms for the resolution of disputes operating to the advantage of all parties.

This scenario appears to be gaining in likelihood, given the cooperation in the context, initially, of the G8 and then the G20, as well as other global organizations—the WTO for example. Naturally the desire of intermediate-sized states to develop into regional economic and military powers will disturb the delicate balance of the ‘post-hegemonic order, operating, in some cases, as a cartel at the expense of those who refuse to play by the rules.

In respect of the “global system”, we should refer briefly to the neo-Marxist approach of two analysts, Emmanuel Wallerstein⁴ and K.N. Waltz⁵. The former describes the contemporary global economy as a capitalist system with a hierarchical structure, the powerful states at the top or in the centre, the semi-powerful in the middle or on the semi-periphery, and the weak states at the bottom or on the periphery. He maintains that the economy plays the leading role in developments, with politics playing only a secondary part. Waltz, on the other hand, while agreeing with Wallerstein on the hierarchical structure of the global system, with the powerful states at the top and the weak states at the bottom, begins his analysis of the international balance of power in the 20th century with policies of power, only then moving on to consider the economy.

In the Marxist view, then, international political economy is the history of global capitalist development and expansion, the class struggle and the conflicts between states which it has caused, and continues to cause⁶.

Let us now move on to a brief account of the key differences and contrasts between the three main theories of international political economy, namely mercantilism, neo-liberalism and Marxism (Table 1).

<table>
<thead>
<tr>
<th>Theory</th>
<th>Mercantilism</th>
<th>Neo-liberalism</th>
<th>Marxism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Origin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Characteristics</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Given that the theory enjoying almost universal application—with a greater or lesser degree of differentiation—is that of liberalism or neo-liberalism we need to remind ourselves that in its implementation *grosso modo* it has set limits to the welfare state, as well as the power of

¹ See the newspaper *To Vima–Anaptyksi*, 3.7.2011.
the state itself, has in practical terms eliminated all obstacles to the movement of capital, especially finance and investment capital, has given an enormous boost to international and global trade, stimulating the growth of many economies, and thereby improving the living standards of millions of the poor.

Table 1. The three theories of international political economy

<table>
<thead>
<tr>
<th>Relationship between economy and politics</th>
<th>Mercantilism</th>
<th>Neo-liberalism</th>
<th>Marxism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key factors / objects of analysis</td>
<td>Politics first</td>
<td>Autonomy of economy</td>
<td>Decisive role of economy</td>
</tr>
<tr>
<td>Nature of economic relations</td>
<td>Confrontational, zero-sum game</td>
<td>Cooperation, positive-sum game</td>
<td>Confrontational, zero-sum game</td>
</tr>
<tr>
<td>Economic objectives</td>
<td>State power (priority to security)</td>
<td>Maximization of individual (and social) prosperity</td>
<td>Class interests</td>
</tr>
</tbody>
</table>


However, in many states, including some developed and semi-developed countries, it has led to increased unemployment, greater public finance deficits and national debt and, in particular, unequal distribution of the wealth/income generated. And all these, of course, in the context of unequal competition, based in some cases on low labor costs, low tax rates for businesses and/or the manipulation of exchange rates, and in others on economic-technological superiority.

A commentator on Deutsche Welle\(^1\) is reported as saying that by the end of 2010 the global debt of nation states had exceeded 50 trillion dollars. Never in times of peace, or rather in the absence of major conflict, has national debt been so high. There are now nations like Greece which face the spectre of debt restructuring, no one knowing the consequences for the country itself or for the entire banking system of the European Union and for the Euro currency itself. And if any serious doubt arose as to the creditworthiness of the United States, the world’s leading economy, the consequences would be incalculable.

We see, then, that economic neo-liberalism -in which equity capital has taken the upper hand in contrast to industrial/productive capital and, more generally, the real economy- is directing capital towards the most lucrative investments (usually short-term investments in stocks), but is far less stable than, for example, the Keynesian model, creating unemployment, insecurity, poverty (for individuals, society and the state) as well as massively unequal distribution of wealth, the fruits of the system being enjoyed only by a very small percentage of the population in each country.

It is interesting to note the findings of a survey conducted by Knight Frank and Citi Private Bank\(^2\), although its results are qualified by the fact that many of the wealthy (and others)

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\(^{1}\) See *Eleftherotypia* newspaper, 26.4.2011  
conceal their real incomes. The study estimates that by the end of 2011 the world’s millionaires will number 15.8m persons, with a fortune (end of 2010) of around 43 trillion dollars.

The system of unregulated (or, as some claim, self-regulating) capitalist neo-liberalist globalization is, then, unjust to the many, extremely unstable and dangerous. Dangerous because the wealthy, in order to preserve their wealth and their control of the sources of that wealth, will resort to any means necessary, legitimate or illegitimate – including war.

In his book Justice. What’s the Right Thing to Do? (Farrar, Straus & Giroux, 2009), Harvard Professor of Political Philosophy Michael J. Sandel examines the philosophy of the free market. On the one hand, he opposes the commodification of certain goods, such as human organs for transplant, military service, education and health care, fearing that if this trend continues we will see a shift from the market economy to a market society, which he condemns as immoral. On the other hand, he asks whether it is fair that the chief executives of major businesses should be earning 344 times the average income in the US. In 1980 their earnings were a mere 42 times greater than those of the average worker. Do these differences really reflect greater efforts, harder work and more intelligence on the part of the executives? Are they really working 8 times as hard, or are they 8 times as smart, as in 1980? The major question of the fair distribution of income, wealth and goods in society remains as urgently as ever in need of an answer¹.

In his work The rise and fall of the American dream (see Oikonomikos Tachydromos, 2.11.2002), Paul Krugman notes that ‘The average annual income in the USA, expressed in dollars at their 1998 value (i.e. adjusted for inflation), increased from $32,522 in 1970 to $35,864 in 1999. This is an increase of around 10% in 29 years–progress, but not a substantial advance. Over the same period, however, according to Fortune magazine, the average annual remuneration of the 100 top executives rose from $1.3m –39 times greater than the average pay of a worker in 1970– to $37.5m, i.e. 1,000 times greater than the current income of the average worker’. Elsewhere in the same article he observes that between 1979 and 1997 incomes of the wealthiest 1% of US families increased by 157%, while those of the average family rose by a paltry 10%!

Having experienced and appreciated, then, the dire consequences of unregulated neo-liberal globalization, it is up to the leaders of society –politicians, economists, businessmen– to adopt rules which will direct the process of globalization towards producing benefits for all men and all nation states.

Of all the economic models we have cited –the mercantilist, the neo-liberal and the Marxist – no single system can provide a socially just and economically effective solution. The Marxist model, in any case, is a substitute for, not a complement to, the other two models of capitalism, and the collapse of socialism has demonstrated its flaws. The other two, capitalist, systems, characterized by private ownership of the means of production, the pursuit of maximum profit and utility, and the operation of the market and of prices as a means of coordinating economic activity, may achieve synergies with a positive impact for economic growth and social prosperity. We are reminded of the ‘golden age’ of 1950-1970, when Keynesian theory ruled, but voices were already being heard rejecting the infamous neo-liberal myth of TINA (There is no Alternative).

¹ See To Vima newspaper, 17.07.2011.
So, Amartya Sen speaks of a “new world” in the place of a “new capitalism”, one that will rest on social values and can be defended on moral grounds\textsuperscript{1}.

Bill Gates has spoken of creative capitalism\textsuperscript{2}, and others of ‘capitalism with a social conscience’, while the G20, at its meeting in London (2009), attended by communist China, admits that the basis for growing prosperity is ‘an open global economy, resting on market principles but with effective regulation and robust global institutions’.

Jeffrey D. Sacks recommends the model of the Scandinavian countries, whose economies, despite their various differences, have all managed to combine a good welfare state with high levels of income, steady economic growth, macroeconomic stability and low levels of corruption, and, when compared with the more liberal economy of the US, perform better in real terms when measured by all economic and social indicators\textsuperscript{3}.

I myself would express a preference for the term ‘social market economy’, attributed historically to the German model but near enough to that of Scandinavia, but which can be significantly modified if the neo-liberal system endures for any length of time. This is why, in the now globalized economy, we need to turn to a ‘global neo-neoKeynesianism’ (a New ‘Green’ Deal), which, with the “economics of effective demand”, and with the emphasis on productive investment rather than consumption, might balance the internationalized “economics of supply”, given that the old and familiar Keynesianism can no longer be applied solely on the national scale, in conjunction with a new Bretton Woods, and accompanied by an adoption of a “globalization of responsibility”, not only in economic matters, but also in questions of international solidarity, combined with the promotion of peace and disarmament.

The European Union might – in collaboration with other OECD countries, or, if they proved reluctant, alone - have the courage to create a “European eco-social territory”, because only on such a broad scale will it be possible for competition and the logic of commerce to be subjected to acceptable (mainly in terms of the non-impeding of technical progress) constraints.

If the leaders of Europe and other major states continue along the path of the so-called self-regulating globalization, still voicing the notorious mantra that “There is no alternative”, then the myth of Sisyphus, the ultimate example of futile effort, will become a global reality.

\textsuperscript{2} World Economic Forum, 2008.
\textsuperscript{3} Jeffrey D. Sachs: Lessons from the North, Project Syndicate, April 2006.
THE BUSINESS CHALLENGES OF THE ECONOMIC DOWNTURN

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INTRODUCTION

The economic downturn impacts global and national economies, financial and stock exchanges as well as businesses. There is a need to construct a response on all of these levels. Global and national level decisions are dependent on many and are complex in their nature. Business level decisions are easier to make. The issue is what decisions should be made? The first issue relates to the type of response. Inaction is regarded as a risky response but a scattershot act could be as ineffective response as inaction. Thus is doing something, regardless what, or doing nothing are dangerous responses? Obviously doing nothing is inappropriate and undertaking hasty inept actions targeting wrong issues is unsuitable. The first response, inaction, is guided by inertia, the second, scattershot acts, are caused by panics.

History of world economic downturns brings evidence that responses to such situations must be both self-protective and offensive.

When economic downturn produces its negative impact on a business there is a need for two key groups of actions. First and foremost the business must become steady protecting it from downward trends and guaranteeing its continuous liquidity. Afterwards, attention should be paid on possible capitalization from the economic downturn in short-, medium-, and long-term perspective.

The perspectives that will work and create opportunities for good outcomes will translate into tactical or strategic changes and will be relatively easy to implement or be associated with painful realization.

WHAT IS THE IMPACT OF THE ECONOMIC DOWNTURN ON THE BUSINESS?

A firm initially has to assess the degree of its susceptibility. This is a challenging task. The immediate impacts of the downturn are felt, but the ones in the future need analysis. For this purpose the firm needs to develop a number of scenarios. Each of them must cover a continuum between a relatively mild impact of the downturn on the business to a severe and devastating impact. The scenario planning has to be followed by an evaluation of the degree to which the business will be affected. Then the most vulnerable areas will be identified (e.g., conditions for credit extension, job insecurity, significant fluctuations in firm supply and market demand.
The most important aspect is to enumerate the impact of the economic downturn on your business. For this purpose there is a need to run simulations for every scenario on the basis of forecast sales, price fluctuations, etc. This can be what impacts will a certain percentage of declines in sales and price of offerings to the marketplace on the general financial indicators of the business. Identification of loss generating conditions will be alarming and require responses.

To make sure that your business will be with liquidity quantification of the impact of the economic downturn on the balance sheet of your business should be made.

You should not forget that competition is also affected by the economic downturn. That is why you should make an evaluation of the susceptibilities of the direct competitors of your business. Compare the impact of the downturn on your business and the businesses of the rivals.

**Lessening of Business Exposure and Vulnerability**

The key question is – how can a business diminish the negative impact of economic downturn and maximize its performance during the downturn.

Firstly the business can guarantee permanent liquidity by adequate financial management aiming at both pushing back and reducing payments. Managing the credit risk will add to securing business liquidity. Another good way to do so is to reduce the business working capital or the overall level of the variable cost.

The position and working conditions of the business should be protected. Following the financial viability of the business, the next task is to safeguard the viability of the business. This can be done via moves towards cost reduction and efficiency increase. Most importantly there is the challenge of deciding on the right approach to cost cutting. To ensure such an effect the overall business must be streamlined causing the lowering of the breakeven points. The most common ways for lowering cost are reduce material supply chain costs. Once all of these opportunities are existed marketing costs can be also considered for reduction.

Furthermore, the reconsideration of the offerings to the marketplace may mean restricting of the marketing mix and the foundation of the marketing strategies (putting the cost plus fundament as a basis in price determination). Another good approach is the implementation of result-base pricing. Being capable of identification and satisfaction of new customer needs in the new realities of the economic downturn is of significant importance.

In a large complex business a good approach is to divest all non-profit under the new realities’ businesses.

A good strategic approach means make your business stronger and more valuable than those of your rivals.

**Sustain Your Competitive Advantages in the Long Run**

If the business can transform its way of going through an economic downturn from surviving it into prospering throughout it this will be most appropriate. This development can be secured in several ways:

- Provide sources for future development of market offerings, technological upgrading done appropriately will pay off in the short to long term future. If financiers are scares prioritizing of and estimating the amount of investments for future development are crucial.

- Upgrading soft skills as management skills will pay off in the future as top quality people will bring better development opportunities.
- Augment your core business via transformative mergers and acquisitions as in an economic downturn business consolidation will safeguard several businesses via uniting efforts, resources and capabilities
- Constantly reconfigure the business models applied by your firm. Successful businesses will always anticipate the changes in the marketplace and rethink the business models that they have applied in the past and changes them with new ones more viable for the future.

**CONCLUSION**

There are no panacea or good-for-all recipes that can be applied by businesses in the times of economic downturn. However, there are general considerations and guidelines, common wisdom, that can be put into consideration and operation, which if applied appropriately could bring better chances form a more successful going through the hardships of economic downturns.
SECTION 1.

Finance Sector and Services Sector in Conditions of World Post-Crisis Development: Experience of Russia, EU and South-Eastern States
MODERN WORLD FINANCIAL ARCHITECTURE DEVELOPMENT IMPERATIVES
IN GLOBAL FINANCIAL CRISIS’S OVERCOMING ASPECT

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Rostov-on-Don, Russia

ABSTRACT

Article is devoted to an estimation of influence of recurrence of world economy and financial globalization on world financial architecture, and also to revealing of modern trends of its development. The author investigates new aspect of world economy recurrence taking into account activation of processes of financial globalization which form contours of new world economy. The scientific research has allowed to reveal cyclic character of financial globalization organizational parameters. Author comes to a conclusion, that to lower dependence of financial institutions regulation standards and activity supervision on recurrence of world economy is possible by working out international standards considering change of risks levels on various phases of a business cycle. Thus the standardization future – not only in revision of financial institutions activity standards timely and adequate to the validity, but also in working out of the mechanisms, allowing to distinguish standard and non-standard situations.

Key words: world financial architecture, institutional development, the world financial crisis

INTRODUCTION

Innovative character of Russia’s economic development in conditions of globalization suggests the changes in the institutional space, which determines the range of the (formal and informal) possible choice of economic subjects’ objectives as well as ways and costs of these objectives. Meeting these objectives economic subjects set new rules of play to be recognized formally and used informally. It should be mentioned that introduced rules can create opportunities for some subjects and block them for the others.

Russia’s economic development is interconnected with the rest of the world, borrowing various institutional innovations. Post-crisis situation provides the opportunities for applying the most successful and efficient institutional solutions. Application of these innovations is imperative to conduct reforms and transformations. Transformational potential of the development of the national economies in the context of the globalization brings about qualitative changes of their elements.
The present world financial crisis has manifested the significance and size of mistakes in economic policy, disproportions in the economic structure, imperfection of institutional structure of Russian economic system. The period of 2006-2008 showed that Russia did not use efficiently the opportunities created by the growth of the oil and gas prices to intensify the processes of structural reconstruction of the economy, to complete institutional reforms and to adjust national financial system to new challenges of globalization.

All these facts determined the necessity of setting new strategic tasks of the development of Russia. Thus, the main strategic task is turning Russia into an international financial centre to modernize financial infrastructure of the country, turn Russian market into a universal financial ground of the region able to compete at the global level in the future, to raise the level of integration with the CIS and other countries as well as turn rouble into regional reserve currency as institutional basis for developing the efficient system to provide economic security.

The elements of institutional structure of the world financial system are included to a certain extend in the institutional matrix which is its basis. Thus, the main object of the regulation is an institutional matrix: its structure, character and quality of its elements. The solution of the theoretical problems of the research of the institutional peculiarities of the modern financial system development allows using the institutional dynamics and its management to forecast the dominants the World Financial Architecture development (WFA) as the most changeable part of the institutional matrix of the world financial system.

Global economy and markets are living through unusual times. Repeated deep financial and currency crises; weak financial sectors in countries with developing markets; growing number of offshore financial centers; limited opportunities of international institutions to give financial support to the developing countries in comparison with the size of private capital; emerging of the new class international investors; growing number of investment institutions and volume of operations predetermined the necessity of world financial system reforming.

World financial architecture is under the influence of structural shifts, which are not only important in themselves but in their interaction as well. This fact determines the necessity of reconsideration of the principles of its functioning. The following principles of WFA functioning can be defined according to process-oriented approach to institutional development management as endogenous process which makes economic entities understand the processes they are involved:

1. Involvement of all participants of the institutional development of WFA into the defining the problem. In case this principle is not observed the solution which is not based on this principle can be blocked at any stage of the institutional process.
2. Interest of all participants of the institutional development of WFA in its changing.
3. Transparency of the institutional development of WFA including the rules and procedures of decision making.
4. Protection of the main values and key interests of the participants of the institutional development of WFA.
5. Variety of the forms of coordination the activities of the participants of the institutional development of WFA.

The analysis of the modern stage of the world financial architecture development characterized with qualitative changes of its outlines, intuitions and mechanisms of its
functioning as well as corresponding processes of the World financial architecture forming enables to single out three main characteristics of the modern stage of the World financial architecture development: 1) strengthening interaction and interdependence of national financial systems (financial globalization); 2) national and supranational regulation as well as deregulation and overcorrection of financial sectors; 3) financial crises [2].

Institutional approach allowed in the framework of the given research to reveal the following dominants of World financial architecture development.

1. Stability of the world financial system, protection from World financial crises and prevention from their growth

As the world has reached the high level of integration and a lot of major system-forming countries with forming market economy have become more open for capital flows, susceptibility of global financial system has increased. The new wave of the financial globalization has prolonged quite destructive variant of currency and financial crises.

Taking into consideration the fact that the developing countries are playing more and more important role in the global economic processes there is a risk that their economic and financial problems will be having negative consequences for the global economy in whole.

In this connection the major participants of the international currency-credit and financial relations have to take measures to prevent monetary and financial crises and/or stop their horizontal (from country to country, from region to region) and vertical spreading (from some elements of World financial architecture to others.

Thus, at the present stage of development of the World financial architecture, there is a need to create new institutional mechanisms to ensure stability.

2. Adaptation and protection of the institutional innovations of the global financial system arising in the process of convergence and transplantation

At present the significance of the assessment of how international rules, standards and codes are observed at the level of the national financial systems as well as the assessment of their convergence with national standards and possibilities of transplantation (borrowing) of the most successful institutional patterns is increasing. The tasks of this assessment are the following: to reveal the weaknesses in the sphere of financial regulation; to systemize the results of the financial sector valuation; to support the state financial structures to evaluate the national financial development using the international standards. In this context the role of the international financial organizations which unify and systemize the best practices of functioning of the financial systems is increasing.

Applying specific documents and programms designed by the international financial organizations, national financial institutions give new impetus to forming institutional mechanisms for global management of the World financial architecture. New structure of supranational interests, new standards and regulations do not mean that national interests are ignored. But without the interaction with global financial organizations national financial systems will fail to fit new forms and mechanisms of the international cooperation.

3. Harmonization of international financial institutions' activities

Harmonization of international financial institutions’ activities is manifested through coordinated goals and tasks of functioning of these organizations under enhancing integration processes. This process is essentially a reaction to the interlocking areas of responsibility of international financial and lending institutions, resulting in an active search for new institutional forms of organization of financial market regulation at the international level.

Currently the global community is considering two options to institutionalize the process
of global management of the global financial system: 1) creation a global regulatory body; 2) international coordination of international institutions of the financial market regulation. In our opinion there are objective reasons why it is impossible to design a global regulatory body. The main reason is the existing differences in the development of national financial systems of different countries. Thus, the development of international cooperation among supranational financial organizations seems to be promising and the harmonization of their activities becomes more significant.

The ongoing reforms of the IMF and the World Bank Group in terms of the increasing influence of globalization processes should cover the following joint areas of regulation:

- Strengthening of the national financial sectors. It is necessary to enhance efficiency of interaction with the Basel Committee on Banking Supervision to improve regulatory standards.
- Internationally accepted standards and code of good practice: the work of the IMF is to be supplemented with the work the Bank of International Settlements, the World Bank and other institutions which set the norms and work at international standards in such spheres as accounting and auditing, bankruptcy, corporate management, stock market regulation and payment and settlement system.
- Encouraging openness and publishing data, transparency and accountability of the IMF.
- Private sector involvement into prevention and overcoming of crises.

The most important objectives these global financial institutions are to meet in controversial economic situation resulted from financial globalization impact are revealed:

- Providing equal accessibility to private capital;
- Continuous adaptation to changes in the World financial architecture;
- Development of new approaches to more efficient risk management;
- Assistance to development of regulations, institutions and markets able to give opportunities for trade and developing countries financing.

4. Regulation and forecasting of impact of integration processes on development of institutional structure of global financial system.

In terms of financial integration administrative and economic barriers disappear, cross-country diffusion of financial and information technologies takes place. However despite the fact, that financial integration is a process controlled by the market, there is indisputable need for effective combination of market forces and government regulation.

The creation of optimal regional monetary system and efficient payment and settlement mechanism is an institutional basis for effective financial integration which allows ensuring economic and political interests and raise financial security of the country.

Many national currencies are more and more successful at competing with stronger foreign currencies both in foreign markets and in domestic circulation. Since Jamaican currency system is becoming less efficient its constructive elements do not cope with growing load. It is quite possible that not wars and financial disasters, but actively integrating information technologies which allow reducing costs of exchange rate losses can trigger the necessity for transition to a new global currency.

This research is an attempt to distinguish the preconditions of transition to a new global currency system and to predict its distinctive characteristics. The new paradigm of global currency system, in our view, is based on a number of reserve currencies, because modern global financial crisis has showed the danger of the unipolar development of world currency system.
Finally the main factors determining the value of a currency in the world are as follows:

1. Security of currency with real resources. If in earlier times it used to be gold now it is the total amount of controlled raw materials and commodity stock resulted from direct force control and presence in the key regions of the world.

2. Political and economic stability and predictability of prospects on the territory emitting the currency;

3. Strong and stable financial institutions providing technically free currency convertibility worldwide and presence at international market.

4. Monitoring and formation of a complex of measures directed to adjust national financial systems to financial globalization processes.

Despite the integration processes each state strives to retain its sovereignty and specific development of financial systems. Consequently it is becoming more urgent to adapt national financial systems to financial globalization processes and to ensure national and global financial security for World financial architecture. The main task of the financial system adaptation is to develop a protection mechanism (“immunity”) of institutional transformation caused by the financial globalization processes.

An effective system for ensuring the country's national interests in finance requires taking into account modern trends in threats to the national interests of the state, society and every individual.

The reform of the World Financial Architecture was ripening under the influence of the unwinding of the spiral of globalization processes but its necessity became obvious for the international financial organizations and governments of the developed countries after the Asian crisis. The analysis of the variety of publications by the researchers of the International Monetary Fund, World Bank and other organizations devoted to this problem allows us allocate three key features of the modern stage of the development of World Financial Architecture:

1) reinforcement of the interconnection and interdependence of national financial systems (financial globalization) 2) national and subnational regulation, and also deregulation and overregulation of financial sectors 3) the nature of financial crises.

Relying on the underlined features of the modern stage of the development of the World Financial Architecture, let us build up the conceptual layout of its transformation. The causes, objectives and directions of the reforms are stated in the research «Reforms of international financial system» made by the Russian fund «Economic Analysis Bureau». Implemented measures have been arranged and complemented by the author Evaluation of the concept of transformation by WFA in the period of 1998-2008 from the up-to-date point of view leads to the conclusion on the urgency of the causes and objectives of the reforms identified in 2000 and also for 2008 and consequently testifies inefficiency of the suggested directions of reforming and of the measures taken in this respect or of their appropriateness.

The contemporary stage of development of the world financial system is characterized by the active qualitative changes of its contours, institutions and mechanisms of functioning, and also appropriate processes of reforming of the World Financial Architecture. Analysis of number of publications by the researchers of International Monetary Fund, World Bank and other bodies, devoted to the problem, give way to the assertion on the emergence in the considered period of the global financial misbalance, showing itself in aggregate with current operations account deficit in the USA and huge surplus in the countries-exporters of oil, China and Japan. Current operations account deficit in the USA in the period of 1998-2008 had been constantly growing (Fig.1).
Table 1. U.S. International Transactions

<table>
<thead>
<tr>
<th>Line</th>
<th>Description</th>
<th>1960</th>
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<tr>
<td>1</td>
<td>Exports of goods and services and income receipts</td>
<td>30556</td>
<td>31402</td>
</tr>
<tr>
<td>2</td>
<td>Exports of goods and services</td>
<td>25940</td>
<td>26403</td>
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<tr>
<td>3</td>
<td>Goods, balance of payments basis</td>
<td>19650</td>
<td>20108</td>
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<tr>
<td>4</td>
<td>Services/3/</td>
<td>6290</td>
<td>6295</td>
</tr>
<tr>
<td>5</td>
<td>Transfers under U.S. military agency sales contracts/4/</td>
<td>2030</td>
<td>1867</td>
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<tr>
<td>6</td>
<td>Travel</td>
<td>919</td>
<td>947</td>
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Fig.1. Deficit of the current account in $ mln

However the proportion of the current account deficit to GDP in the USA was relatively stable in the period of 1998-2008 – within 15-18%, in spite of over three times constant increase of current balance deficit in absolute figures (в абсолютном выражении) (Fig. 2). Although the two features – current account deficit and GDP of the USA – rose rapidly in 1998-2008, the growth rate of the current account deficit increased that of the GDP. Thus in relation to 1998 the current account deficit in 2008 increased by 92.14%, and the USA GDP – by 64.77% accordingly.

Fig.2. Proportion of the current balance deficit to the USA GDP during 1998-2008, %

In these circumstances the USA consumption of commodities and services in 1998-2008 considerably exceeded its production. Cumulative expenses of household and public sectors of economy 10 times exceed their current incomes. Thus expenses of household sector of economy have sharply increased against high availability of consumer and hypothecary credits (Fig. 3).
On the other hand, the explanation of why the USA could finance record-breaking high
deficiency of the account of current operations with low interest rates is given by Ben Bernanke,
the head of the USA Federal Reserve System, and involves the fact of “global surplus” of
savings. However, this surplus of savings is created artificially at the expense of insufficient
volume of expenses, government and private investments in the countries – donors of the USA.
In turn lack of expenses is explained by some economists by impossibility for the countries-
exporters of oil to adapt to sharply increased stream of income.

The other reason is the remaining great demand for dollar assets which does not allow the
market mechanisms to constrain the development of global misbalance by means of adaptation
of exchange rates and prices. Investors are attracted by considerable reliability of American
government bonds, and also high liquidity and capacity of American financial market.

More detailed explanation of this point of view is given by A. Greenspen, the former head
of Federal Reserve System who considers the key factor of growth of the USA current balance
deficiency (and accordingly the cause of the global financial misbalance) to be the reduction of
investors’ commitment to domestic market. Investors’ commitment to domestic market or the
phenomenon of "home displacement" reveals itself by the fact that contrary to theoretical
concepts on the benefits of international diversification of investment portfolios, they are
characterized by considerable displacement towards internal assets. There are various opinions
concerning the causes of the given phenomena, such as: institutional barriers of capital
movement, the level of regular risk and concentration of capitalization of the world stock market
in respect to the three basic developed markets, and also high costs of transactions dealing with
low level of institutional development of emerging markets.

A. Greenspen specifies that since early 1990s commitment to domestic market started to
weaken considerably as a result of elimination of restrictions on capital circulation through
borders, and also as a result of basic changes in the field of information and telecommunication
technologies, winding up of the system of centralized planning and penetration of the institution
of private property in the new regions. It is confirmed by such an indicator of commitment to
domestic market as weighed correlation of national level of savings and national level of
investments which has reduced from 0.95 in 1992 to 0.74 in 2005. The additional illustration of the global financial misbalance is the rate of escalation of gold and
foreign currency reserves in various countries, especially in the countries of Asia. Let’s notice
that in the end of 2004 Russia ranked the 8th (100 billion dollars), i.e. for over three years the
gold and foreign currency reserves of Russia have grown over 5 times.

Fig.3. Volume of consumer crediting in the USA in 1998-2008 $ mln
Prices for exchange goods, first of all energy carriers’ and basic metals prices are closely interconnected with the global financial misbalance. The essential part of “global surplus of savings” was not completely utilized by US and European countries monetary authorities, and were invested in exchange goods, encouraging the growth of prices on raw materials. The research made by the International Monetary Fund, on the reasons of boom on the raw goods market and its prospective macroeconomic consequences, showed the following. Besides the factors, characteristic for the exchange goods (geopolitical risks, weather conditions and others), the boom was caused by forces of supply and demand.

First, the demand for various exchange goods was defined by the countries with developing markets by a complex of reasons: steady growth of income per capita, fast industrialization, increase of raw component of economic growth and rapid swell in population. Secondly, the demand for definite agricultural crops is defined by the developed countries in connection with distribution of biofuel owing to high oil prices and political support of the given projects in the USA and EU. And finally, definite contribution to the growth of prices for exchange goods was made by slow reaction of supply.

**CONCLUSIONS**

Thus, the priorities and determinants of fundamental transformation of institutional structure of Russian financial system under globalization are defined and grounded in this research:

1. Growing adaptability of Russia’s financial system to institutional innovations and optimal government policy for strengthening national currency
2. Ensuring national financial security of Russia.
3. Increasing of competitiveness of Russian economy and changing the role of Russia in modern global financial architecture.

Taking into consideration both positive and negative aspects of globalization it should be recognized that forming a new paradigm of the global financial architecture is an irrevocable process. Globalization is a multiplicity of ties among states, economic and political systems, communities and cultures which form the modern world. At the same time the formation of the global financial architecture is historically conditioned and constantly constructing/reconstructing dialectical process.

The structure and form of global economy organization and international economic relation are changing. This process is accompanied with growing dynamics and interconnection, new patterns appear which are to be studied and used. Therefore, globalization should be seen as a process that contributes to the new requirements into the world economy, requiring the creation of new norms, rules and institutions to establish more effective cooperation and development.

The given article reveals the complex of causes of global misbalance: global surplus of savings in the countries-donors of the USA, great demand on dollar assets, and reduction of investors’ commitment to domestic market. As a result of the analysis of the influence of global financial misbalance on stock quotes for the key commodities it is defined that the price level on energy carriers in a greater degree develops the demand of developing countries, and those on agricultural crops – of the developed countries, asymmetric nature of interrelations of prices on energy carriers and food is noted.
REFERENCES


2. Among the characteristics of the modern stage of development of the global financial system is financial integration. However, because of interconnectedness and interdependence of the process of financial globalization, we believe it is indispensable characteristic of globalization processes.


ABSTRACT

In Russia there is a variety of types of financial institutions which have different level of financial transparency. According to the author, the financial transparency of financial institutions – one of tools of attraction of investments into this or that type of financial institutions. One of priority problems for financial institutions is how to increase the level of a financial transparency. One of the factors negatively influencing to the level of a financial transparency of financial institutions, is existence of offshore zones which have specific demands to disclosing of the financial information by financial institutions. The author offers new elements of system of maintenance the financial transparency of financial institutions taking into account functioning of offshore zones.

Key words: financial institutions offshore zones transparency elements of system of maintenance the financial transparency

ACCOUNT

Stability of a financial system – a key direction of financial regulation during the post-crisis period for Russia. The economy develops cyclically, that is why, crises are inevitable.

One of the first who gets under blow of crisis processes, financial institutions are. Financial institutions – key elements of a financial system that is presented in picture 1.

In Russia it is necessary for financial institutions to be in a greater degree ready to negative influences of crisis processes to have ability not only to survive in uneasy conditions of crisis and during the post-crisis period, but also to develop. In this connection it is necessary to develop new elements of system of maintenance of a transparency, considering a number of conditions. One of such conditions can name existence of offshore zones.
In the given research we suggest to consider:
- institutional structure of system of maintenance of a transparency of financial institutions in Russia;
- ways and features of interaction of the Russian financial institutions with the financial structures registered in offshore zones;
- new elements of system of maintenance of a transparency, taking into account existence of offshore zones.

As a theoretical basis of research the institutional theory and modern researches of institutional structure of the national and global financial market is used.
To consider elements of institutional structure of maintenance of a transparency, and also that how is carried out interaction between them.
In institutional structure, it is possible to allocate its basic elements such, as:
- the financial institutions;
- financial institutions - the regulators which are carrying out supervision and control over activity of financial institutions;
- the international financial institutions;
- the self-adjustable organizations of professional participants of a securities market;
- rating agencies;
- standard legal certificates, which are regulating activity of financial institutions.

Financial institutions of Russia are presented by bank and not bank structures.
Financial institutions – to regulators of the financial market in Russia concern:
- The central Bank of the Russian Federation;
- Federal Agency of the financial markets of the Russian Federation;
- The Ministry of Finance of the Russian Federation.

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The bank of Russia carries out control and supervision of activity of banks. For the purpose of increase of an information transparency in functioning of payment system by Bank of Russia the reporting of the credit organizations and territorial establishments of Bank on payments which considered the international experience, methodology and practice of supervision over payment systems has been entered.¹

The Federal Agency of the financial markets is federal enforcement authority on acceptance of standard legal certificates, control and supervision in the financial markets, in sphere of formation and investment of means of pension accumulation and activity of stock exchanges. ²And also since the recent moment carries out functions on control and supervision in sphere of insurance activity.

The Ministry of Finance of the Russian Federation coordinates and supervises activity of financial institutions in Russia.

Regulation of activity of financial institutions of Russia is carried out also by the self-adjustable organizations of professional participants of a securities market is called as the self-adjustable organization of professional participants of a securities market voluntary association of professional participants of the securities market, operating according to as the present Federal law and functioning on principles of the noncommercial organization.

The self-adjustable organization is established by professional participants of a securities market for maintenance of conditions of professional work of participants of a securities market, observance of standards of professional etiquette on a securities market, protection of interests of owners of securities and other clients of professional participants of a securities market who are members of the self-adjustable organization, an establishment of rules and standards of carrying out of operations with the securities, providing effective activity on a securities market.³

Besides the regulators listed above financial institutions, special influences on activity of the Russian financial institutions render the international financial institutions. It is possible to carry to the basic international financial institutions:

- International Monetary Fund, IMF fund (IMF);
- International bank of reconstruction and development and three its branches International Development Association, International Finance Corporation Multilateral Investment and Guarantee agency;
- Non-governmental the organization - the Parisian club;
- Non-governmental the organization - the London club.

Interaction of the international and Russian financial institutions and Russian occurs basically in such directions, as:

- cooperation development between financial institutions;
- unification of activity of financial institutions, regarding conformity to standards of the best world practice;
- stabilization of process of functioning of financial institutions.

The considerable role in institutional structure of system of maintenance of a transparency is played by rating agencies. In the Russian market many Russian and foreign rating agencies which purpose of activity is finishing to data of participants of the market and

¹http://www.cbr.ru
²http://www.fcsm.ru
³The federal law from 22.04.1996 №39 «About a securities market» (with changes and additions)
regulating bodies of the fair, objective and independent information on characteristics of this or that economic subject or a financial active successfully function.¹

There is a number of regulatory legal acts which regulate maintenance of system of a transparency of financial institutions of Russia, the cores from them are:

- The federal law from 22.04.1996 №39 «About a securities market» (with changes and additions);
- The federal law from 02.12.1990 №395-1 (edition from 15.11.2010 from amendment 07.02.2011) «About banks and bank activity»
  - The federal law from 29.01.2001 №156 «About investment funds»;
  - The federal law from 07.05.1998 №75 (edition from 27.0.2010) «About nonstate pension funds»;
- The federal law from 07.08.2001 №115 (edition from 27.07.2010) «About counteraction to legalization (washing up) of the incomes received by a criminal way, and terrorism financing» (with changes and additions);
  - The order of the government from 17.11.2008г. №1662-r (edition from 08.08.2009) «About the concept of long-term social and economic development of the Russian Federation till 2020».

Thus, the system of maintenance of a transparency of activity of financial institutions of Russia is many-sided, and also plays a weighty part in functioning of financial institutions in Russia.

Considering the basic questions connected with system of maintenance of a transparency of financial institutions, it is necessary to pay attention to such sphere of business, as realization of financial operations through offshore financial institutions. For today the considerable part of financial institutions of Russia on the one hand realizes necessity to correspond to standards of the best world practice regarding high level of a financial transparency, and on the other hand there are financial institutions which search for ways to reduce information disclosing to a minimum.

Offshore zones is an independent state or territory of other state with some degree of an autonomy, whose legislation allows existence of the legal person with considerable tax privileges.² The term "offshore" has appeared for the first time in one of newspapers at east coast USA in the late fifties of XX century, It was a question of the financial organization which have moved the activity which the government of the USA wished to supervise and regulate, on territory with a favorable tax climate.³

Offshore zones is an economic event which renders both positive, and negative influence on functioning of financial institutions.

Let's consider the basic features of interaction of the Russian financial institutions with the offshore companies.

First of all, it is necessary to notice, that in Russia there are some lists of offshore zones. For today exist the Letter of the Ministry of Taxes and Duties of the Russian Federation from March, 27th and Instruction of Bank of Russia from August, 7th, 2003 which comprise lists of

1 http://www.rusrating.ru
3 P.Revenkov, A.Voronin. Offshore zones: appeal laws// The international bank operations.-2010.-№1
the basic offshore zones. At this list in the given documents are excellent from each other. Leaning against the given documents, it is possible to allocate following offshore zones: the Bahamas, Belize, the British Verginsky islands, Great Britain, Gibraltar, Cyprus, Liberia, Liechtenstein, the Netherlands, Niue, island Guernsey, the Jersey Skeleton, the Skeleton Maine, Turks and Caicos Islands, Panama, Seychelles, Sent-Vinset and Grediny, Sent - Kitts and Nevis, the USA, Uruguay, Switzerland.1

Offshore zones are attractive to the Russian financial institutions, for some reasons, such as:
- Possibility of structurization of business by the Russian financial institutions for reduction of tax burden;
- Possibility of placing of money resources of the Russian financial institutions in offshore banks;
- Possibility to open the information in the minimum volume.

In our opinion, information, which is closed in the minimum volume including financial information, negatively influences into activity of financial institutions, regarding conformity to standards of world practice of closing the information. That is, offshore zones is not only original tax mechanism, but also the mechanism, allowing to open the information on this or that type of financial institutions not in full or not to open at all. This mechanism is favourable for some financial institutions, but sometimes is not good for Russian economy. The financial institution at a certain stage of the functioning faces a choice: either to correspond to the best standards of world practice as a whole, and including regarding information disclosing, and accordingly to spend considerable money resources for this purpose, or to work with offshore structure which loyally enough concerns level of a transparency of financial institution with which it cooperates.

It is necessary to notice, that for an offshore zone attraction of a great number of financial institutions always favourably, as it is investments allowing that state (more often this small island state) which is an offshore zone to develop in many directions.

In each offshore zone the companies of certain type are created. The general for all zones are following features:
- The offshore companies aren't limited in the activity, and some types of financial institutions should be are licensed by the government;
- Limited liability;
- The company has the right to open accounts.2

Besides practically each offshore zone have the developed specialization in kinds of financial operations carried out by them. We will consider specializations of the basic offshore zones in kinds of financial operations:
- The British Virgin Islands specializes on registration of the international business corporations, and also creation of mutual funds and the insurance companies. Thus there it is registered it is registered any offshore bank. It is possible to carry to the basic features of the given offshore zone: absence of currency control, and also absence of taxes for the financial structures registered in a given offshore zone:
- The Cayman Islands specialize on registration of financial institutions of bank type.
- Bermuds specialize on registration of such financial institutions as the insurance companies.

1 http://www.roche-duffay.ru
2 F.Fituni. Financial Monitoring.-Moscow:IIUEPS Publisher.2002.-233p
The Bahamas specialize on registration of mutual funds and trust companies. Considering the offshore zones listed above, and also other offshore zones and their specializations it is possible to allocate their features:

- Absence of currency control;
- Full or partial absence of taxes for the financial structures registered in this or that offshore zone;
- Not disclosure of the financial information.

Listed above feature negatively influence degree of a transparency of financial institutions. Considering the given features and a number of other factors connected with offshore zones, almost all developed countries try to constrain aspiration of the financial institutions to cooperate with the offshore companies. In this connection there are "black" and "white" lists of offshore zones which can be both national and international. Such lists can be divided on:

- lists FATF;
- lists OECD;
- lists national.

FATF is an Intergovernmental commission on struggle against washing up of criminal capitals (Financial Action Task Force on Money Laundering - FATF). It has been created at the summit of the Big seven in Paris in 1989 Secretary FATF is located in headquarters OESR in Paris, but the organization is absolutely independent, instead of division OESR. \(^1\) In FATF the largest developed states enter. Russia has been accepted in FATF in 2003. FATF the list of those offshore zones with which costs has been made will evade from cooperation, that is «the black list» of offshore zones. It is possible to carry to such zones: Guatemala, Egypt, Indonesia, Nauru, Nigeria, Cook islands, Philippines, etc.\(^2\)

OECD is the Organization of economic cooperation and development (Organisation for Economic Cooperation and Development - OECD). Now in 30 countries don't enter. Russia in OECD doesn't enter.\(^3\) Black list OECD consists of such offshore zones, as: Andorra, Liberia, Liechtenstein, Monaco, Marshall Islands, Nauru.\(^4\)

Apparently «black lists» FATF and OECD are various, only one state is present at both lists – Nauru. Lists FATF and OECD are made on the different bases. But one of the drawing up purposes the given organizations of such lists is increase of level of a transparency of financial institutions.

National «black lists», are based on list National «black lists», are based on list FATF more often. Proceeding from institutional structure of maintenance of a transparency of the financial institutions, one of its elements is the Federal law from August, 7th, 2001 N 115"About counteraction to legalization (washing up) of the incomes received by a criminal way, and terrorism financing" (with changes and additions). The given law regulates activity of financial institutions, regarding transparency maintenance. The list of the "suspicious" countries and territories is defined in an order established by the government, on a basis of "the lists confirmed by the international organizations", and is subject to publication." Obligatory control "means gathering and granting by information banks on the given operations in" the authorized body ", that is Federal Agency of financial monitoring, for its further processing and possible acceptance

\(^1\)http://www.roche-duffay.ru
\(^2\)http://www.fatf-gafi.org
\(^3\)http://www.roche-duffay.ru
\(^4\)http://www.oecdru.org
of measures. Under" the international organizations "means FATF. For all time of action of the law and on the present in the law and there was no «black list »offshore zones. But there are Instructions of the Central Bank of Russia from February, 12th, 1999 N 500" About strengthening of currency control from the authorized banks behind legitimacy of realization by their clients of currency transactions and about an order of application of measures of influence to the authorized banks for infringements of the currency legislation "which includes« the black list »offshore zones. The list of the Central Bank of Russia practically the general has no anything with list FATF.

Besides «the black list» Central Bank of Russia, there is «a black list» the Ministries of Taxes and Tax Collection which contains in the Letter of the Ministry of Taxes and Tax Collection of the Russian Federation from March, 27th, 2002 N6-26/360 "Information interchange". The list of offshore zones under the version of the Ministry of Taxes and Tax Collection differs from the list of the Central Bank of Russia.

To notice that as well as in a case with the list of the Central bank of Russia, and in a case with the list of the Ministry of Taxes and Tax Collection, the sanction for operations with residents of the countries consisting in «the black list» aren't provided. That is, considered by us «black» lists of offshore zones» have only recommendatory character and provide only more attentive relation of the state to corresponding transactions, but not their interdiction or the discrimination taxation.2

With a view of definition of elements of system of maintenance of a transparency of financial institutions, we will consider the most widespread scheme of work of the Russian financial institutions with the offshore companies.

As a rule, residents of the Russian Federation create financial institution of bank type (bank) in that state which is an offshore zone. To the basic features of the given type of financial institutions it is possible to carry:3

- Has no right to work with residents of the country of registration of bank;
- The demanded size of the paid authorized capital stock is less, than in the developed countries of the West, and also in the majority of other countries;
- The bank in an offshore zone can receive outright release from taxes;
- usually laws on obligatory reserves, rules of crediting and realization of investments less strict, than in the developed countries;
- time necessary for creation of offshore bank is rather insignificant;
- currency control on operations out of the country of registration of bank almost always is absent.

The whole system of the financial structures which are carrying out any financial operations in interests of the clients is usually created. And the offshore bank is one of system elements. Into such system of financial structures enter more often:

- offshore bank;
- the investment company;
- the insurance company;
- the trust company;
- the foreign trade firm.

1 http://www.roche-duffay.ru
2 http://www.roche-duffay.ru
3 P.Revenkov, A.Voronin. Offshore zones: appeal laws// The international bank operations.2010.-№1
This system of financial structures forms holding or financial and industrial group.
To the basic to problems of the offshore bank entering into such holding or financial and industrial group, it is possible to carry:
- Financial maintenance;
- Bank service of the financial structures.
At realization listed above problems the financial structures working with offshore bank and, directly offshore bank open the information not in full. We will present indicators of a transparency of the Russian financial institutions in the form of blocks, and the criteria forming each block of indicators of maintenance of a transparency we will group, that then to reveal those criteria indicators on which don't reveal.

Table 1. Classification of blocks of indicators of a transparency of financial institutions

<table>
<thead>
<tr>
<th>The name of the block of indicators of a transparency</th>
<th>The name of group of criteria of a transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>The financial information</td>
<td>the financial reporting</td>
</tr>
<tr>
<td></td>
<td>auditor activity and its results</td>
</tr>
<tr>
<td></td>
<td>concerning the financial reporting</td>
</tr>
<tr>
<td></td>
<td>Transactions with the connected parties</td>
</tr>
<tr>
<td></td>
<td>Incomes and expenses</td>
</tr>
<tr>
<td>The operational information</td>
<td>activity</td>
</tr>
<tr>
<td></td>
<td>the indicators characterizing financial</td>
</tr>
<tr>
<td></td>
<td>and economic activity</td>
</tr>
<tr>
<td></td>
<td>forecasts and plans</td>
</tr>
<tr>
<td>Property structure</td>
<td>actions let out and unissued</td>
</tr>
<tr>
<td></td>
<td>structure of shareholders</td>
</tr>
<tr>
<td>The rights of shareholders</td>
<td>Internal documents regulating activity</td>
</tr>
<tr>
<td></td>
<td>dividends</td>
</tr>
<tr>
<td>The information on Board of directors and management</td>
<td>data about Board of directors</td>
</tr>
</tbody>
</table>

Source: made by the author according to a site www.standardandpoors.ru

From the table it is visible, the maintenance of blocks of indicators of a transparency, and also it is possible to reveal the basic least opened groups of criteria of a transparency. Offshore bank, it is possible to name the least opened groups of criteria indicators on which don't reveal the financial structures cooperating with offshore bank, and also:
- auditor activity and its results concerning the financial reporting;
- transactions with the connected parties;
- incomes and expenses;
- the indicators characterizing financial and economic activity;
- forecasts and plans;
- the internal documents regulating activity;
- the data about Board of directors
It is possible to carry to such elements:
- Working out of the financial market of the list of offshore zones coordinated by regulators;
- Inclusion of "the black list» the offshore zones, made on the basis of list FATF, in the Federal law from 8/7/2001 №115 (edition From 7/27/2010) «About counteraction to legalization (washing up) of the incomes received by a criminal way, and terrorism financing»;
- To consider the basic recommendations OECD, concerning the internal legislation, tax contracts, the international cooperation;
- To consider the basic recommendations FATF, concerning a financial system and financial regulation;
- Struggle against already existing schemes of optimization of the taxation which provoke low level of a transparency of financial institutions of Russia;
- With a view of tracing of communications of the Russian financial institutions and offshore structures, it is necessary for tax departments to have sufficient and trustworthy information;
- To adopt practice of tax laws of EU and the USA on struggle against negative influence of the offshore;
- To improve ways of an exchange of the necessary financial information with the European countries with a view of perfection of system of maintenance of a transparency of financial institutions.

THE BIBLIOGRAPHIC LIST:

1. The federal law from 22.04.1996 №39 «About a securities market» (with changes and additions)
A SENSE OF FINANCIAL DERIVATIVES MARKETS
FOR THE ECONOMIC VITALITY AND STABILITY IN RUSSIA

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Professor, Ph.D

Simeonov, Stefan*
Associated professor, Ph.D

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Svishtov, Bulgaria

ABSTRACT

The markets of financial derivatives are the most active, dynamic and susceptible. Derivatives focused not less problems in the beginning of financial crisis. But they are not simple reflection and result from the economic activity. More interesting for us is the reverse influence to the underlying assets, capital market and investment activity. The particular countries have different level of development of derivatives markets and their own specifics. With this paper we aim to examine the relation between the derivatives markets and general economic activity. We will search for an influence on main economic indicators in different countries before and in the course of the economic recession.

Key words: Financial derivatives, options, futures, open interest, open contracts, market capitalization, economic indicators.

Abbreviations:
RTS – Russian Trade System
RTSI – Russian Trade System Index
FORTS - Futures and Options on RTS

This paper is part of study which have the aim to test (prove) the working thesis for relationship between the derivatives as one of the instruments for securitization the capital of the investing economic agents, looking at the macroeconomic indicators. The current paper particularly is focused over the Russian Federation, which has well developed and working both capital and derivatives market.

The focus of this paper don’t include the credit derivatives, but generalized option and futures markets. And also here we do not examine the direction of influence between the derivatives markets and market of underlying assets, which is very interesting and need a special attention.
Excepting the controversial opinions about this influence from side of not professionals, there is also fully professional debate. Contemporaneous scientist also don’t keep away from the effect of derivatives.

Here we use the main stock index of Russian sock exchange - RTSI and Futures and Options on RTS as indicators of the capital market, respectively derivatives market, activity. And seeking for relation of them behavior.

In next step we use the main stock index - RTSI. For this purpose, we examine the correlation between RTSI with eight of main macroeconomic indicators. Similarly we examine the same correlation with RTS Market Capitalization.

After this we look for relation between derivatives and economic activity. In this case we use Futures and options on RTS (FORTS) toward the same eight macroeconomic indicators. Used data and indicators span the last nine years period.

### Table 1.

**GDP, RTS Market Capitalization and FORT Open Interest**  
(billion USD)

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP</th>
<th>RTS - Market Capitalization</th>
<th>FORT Open Interest^3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>259</td>
<td>61.411</td>
<td>44</td>
</tr>
<tr>
<td>2003</td>
<td>345</td>
<td>63.189</td>
<td>11</td>
</tr>
<tr>
<td>2004</td>
<td>430</td>
<td>112.595</td>
<td>90</td>
</tr>
<tr>
<td>2005</td>
<td>591</td>
<td>35.907</td>
<td>410</td>
</tr>
<tr>
<td>2006</td>
<td>764</td>
<td>56.740</td>
<td>2.743</td>
</tr>
<tr>
<td>2007</td>
<td>990</td>
<td>144.886</td>
<td>5.441</td>
</tr>
<tr>
<td>2008</td>
<td>1,300</td>
<td>192.774</td>
<td>8.138</td>
</tr>
<tr>
<td>2009</td>
<td>1,660</td>
<td>177.028</td>
<td>35.342</td>
</tr>
<tr>
<td>2010</td>
<td>1,222</td>
<td>229.296</td>
<td>20.560</td>
</tr>
</tbody>
</table>

By data from Russian Trading System^4 and International Monetary Fund^5

In table-1 we see the movement of the three main indicators. Here we have to remind that open interest is daily indicator, the used values are averaged for a year period. Nevertheless open interest shoes an every day activity, compared to all year figures of other indicators. In table-1 open interest is given in Russian rubles – in original value, in exchange rate 22 RUR/1USD.

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^3 Daily open interest, annually averaged values.


The figures and graphic allow as to presume that the low fall of capital market capitalization of RTS, especially compared with US and European markets, in the period of world crisis, benefits of derivatives market. First the process of closing short positions in derivatives market give to investors gains in lowering capital market. In the same time lowering open interest frees capitals from generally risky derivative market, which capitals is logical to be redirected to more tranquil capital market. The prove of the point for this capital relocation needs some additional observations. We also find an argument in correlations shown in table 2 and the differences during the hole period, and then both subperiods. Taking this in mind, we accept at least part of the capitals move in this direction.

**Table 2.**

**RTS Market capitalization & FORT Open interest in USD**

<table>
<thead>
<tr>
<th>Period</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002 - 2010</td>
<td>0.8722***</td>
</tr>
<tr>
<td>2002 - 2007</td>
<td>0.5710</td>
</tr>
<tr>
<td>2008 - 2010</td>
<td>0.3580</td>
</tr>
</tbody>
</table>

*** - significance at 99% confidence interval

The correlation for the hall period is very strong – close to 90 %, which significance give us confidence at 99 percentage. It is not surprising behavior between derivatives and underlying asset market. Here interesting is relation for the crisis period after 2008. We may resume, that the
lowering value of open interest at FORT, appears as outflow of derivative market which compensate the lowering in conventional capital market. This supposition allow us to look for additional fundamental and factorial evidences.

**Table 3.**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RTS-MAR. CAP / Inflation, average consumer prices</td>
<td>-0.640</td>
<td>-0.579</td>
<td>-0.804**</td>
</tr>
<tr>
<td>RTS-MAR. CAP / GDP</td>
<td>0.814***</td>
<td>0.503</td>
<td>0.353</td>
</tr>
<tr>
<td>RTS-MAR. CAP / Investments</td>
<td>0.144</td>
<td>0.809**</td>
<td>0.190</td>
</tr>
<tr>
<td>RTS-MAR. CAP / General government net</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lending/borrowing</td>
<td>-0.550</td>
<td>0.049</td>
<td>0.012</td>
</tr>
<tr>
<td>RTS-MAR. CAP / General government total expenditures</td>
<td>0.568*</td>
<td>-0.186</td>
<td>-0.128</td>
</tr>
<tr>
<td>RTS-MAR. CAP / General government revenues</td>
<td>-0.428</td>
<td>-0.102</td>
<td>-0.166</td>
</tr>
<tr>
<td>RTS-MAR. CAP / Unemployment rate</td>
<td>-0.310</td>
<td>-0.511</td>
<td>-0.238</td>
</tr>
<tr>
<td>RTS-MAR. CAP / General government gross debt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.533</td>
<td>-0.273</td>
<td>-0.131</td>
</tr>
</tbody>
</table>

* - significance at 90% confidence interval
** - significance at 95% confidence interval
*** - significance at 99% confidence interval

By data from Russian Trading System¹ and International Monetary Fund²

When we choose a market capitalization as an criterion for our study, we had two main reasons: first - as important indicator for investment activity; and in the same time - as underlying instrument for options and futures, which are the main object of the study.

RTS-Market Capitalization shoes a strongest correlation with Investments for the period before the crisis.

For the crisis period, the inflation has the strongest correlation, but with opposite sign – respectively direction in movement. The inflation appears significant by this way also in the period before the crisis and for the hole period.

For the whole period RTS-Market Capitalization moves closest with GDP. In the second place are government total expenditures.

The main index of Russian stock exchange gives as one more point of view for market activity and investors expectations. Here we see the same and stronger opposite relation with inflation in the tree studied periods.

GDP stays with the first close relation, with a biggest significance, for the hole longest period and before crisis period.

In the crisis and after period shoes do not indicates ferry strong positive relations with studied macroeconomic indicators.

Table 4.
RTSI & Macroeconomic indicators

<table>
<thead>
<tr>
<th>Capital market and macroeconomic indicators</th>
<th>Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002-2010</td>
</tr>
<tr>
<td>RTSI / Inflation, average consumer prices</td>
<td>-0,5912*</td>
</tr>
<tr>
<td>RTSI / GDP</td>
<td>0,9194***</td>
</tr>
<tr>
<td>RTSI / Investments</td>
<td>0,0860</td>
</tr>
<tr>
<td>RTSI / General government net lending/borrowing</td>
<td>-0,4675</td>
</tr>
<tr>
<td>RTSI / General government total expenditures</td>
<td>0,5513</td>
</tr>
<tr>
<td>RTSI / General government revenues</td>
<td>-0,2566</td>
</tr>
<tr>
<td>RTSI / Unemployment rate</td>
<td>-0,3897</td>
</tr>
<tr>
<td>RTSI / General government gross debt</td>
<td>-0,7544**</td>
</tr>
</tbody>
</table>

* - significance at 90% confidence interval
** - significance at 95% confidence interval
*** - significance at 99% confidence interval

By data from Russian Trading System ¹ and International Monetary Fund ²

We have to mark in all the results, valid are also the inverse relations. As the commented relations from tables 3 and 4 show, the behavior of Russian capital market relates categorically with: GDP and investments. With negative direction become important inflation.

The general indicator for derivatives market activity – open interest, which presents the money value of all open positions, is the most dynamic indicator. Let we remind that this indicator changes momentary its value, and we use annually averaged closing daily values, which enable to compare with annual value of all macroeconomic indicators.

Here, on table 5, we see one total relation with practically 100 % significance. The open interests, we may understand – activity on derivative market, is moving together with GDP in all three periods – before the crisis, from the crisis and the hole period.

In second range in significance appear investments for the pre and post crisis period. With also very high significance, but negative sign acts unemployment rate.

Based on this figures and correlation, we can not affirm that rising open interest on option and future markets will directly enhance employment. But we may expound this high correlation significance in follow way: rising open interest reflect activity which further capitals transfers; this helps companies to organize capitals and rise them activity in real sectors; finally, this engenders more demand of labour resources.

For the hole period with very high significance, and negative sign acts government debt.

### Table 5.
**FORT Open interest & Macroeconomic indicators**

<table>
<thead>
<tr>
<th>Derivatives and macroeconomic indicators</th>
<th>Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002-2010</td>
</tr>
<tr>
<td>FORT Open interest / Inflation, average consumer prices</td>
<td>- 0,4355</td>
</tr>
<tr>
<td>FORT Open interest / GDP</td>
<td>0,9874***</td>
</tr>
<tr>
<td>FORT Open interest / Investments</td>
<td>0,3122</td>
</tr>
<tr>
<td>FORT Open interest / General government net lending/borrowing</td>
<td>- 0,2625</td>
</tr>
<tr>
<td>FORT Open interest / General government total expenditures</td>
<td>0,3909</td>
</tr>
<tr>
<td>FORT Open interest / General government revenues</td>
<td>- 0,0155</td>
</tr>
<tr>
<td>FORT Open interest / Unemployment rate</td>
<td>- 0,5966**</td>
</tr>
<tr>
<td>FORT Open interest / General government gross debt</td>
<td>- 0,7975***</td>
</tr>
</tbody>
</table>

* - significance at 90% confidence interval  
** - significance at 95% confidence interval  
*** - significance at 99% confidence interval  

*By data from Russian Trading System*1 and *International Monetary Found*2

### Table 6.
**FORT Open contracts & Macroeconomic indicators**

<table>
<thead>
<tr>
<th>Derivatives and macroeconomic indicators</th>
<th>Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002-2010</td>
</tr>
<tr>
<td>FORT Open contracts / Inflation, average consumer prices</td>
<td>- 0,6168**</td>
</tr>
<tr>
<td>FORT Open contracts / GDP</td>
<td>0,9165***</td>
</tr>
<tr>
<td>FORT Open contracts / Investments</td>
<td>0,1847</td>
</tr>
<tr>
<td>FORT Open contracts / General government net lending/borrowing</td>
<td>- 0,1272</td>
</tr>
<tr>
<td>FORT Open contracts / General government total expenditures</td>
<td>0,2145</td>
</tr>
<tr>
<td>FORT Open contracts / General government revenues</td>
<td>0,0322</td>
</tr>
<tr>
<td>FORT Open contracts / Unemployment rate</td>
<td>- 0,5166*</td>
</tr>
<tr>
<td>FORT Open contracts / General government gross debt</td>
<td>- 0,8668***</td>
</tr>
</tbody>
</table>

* - significance at 90% confidence interval  
** - significance at 95% confidence interval  
*** - significance at 99% confidence interval  

*By data from Russian Trading System*3 and *International Monetary Found*4

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Criteria “Open contracts” give as an additional point of view on derivative markets activity. We may comment the investors behavior in periods with higher uncertainty, there is tree main reactions: first reduction of amount invested in one position - indicator open interest; further – abasement number of contracts - indicator open contracts; and finally to lower both together. These shades of investors behavior in changing uncertainty is object of special study.

Here – in table 6 we see a strongest relation in the tree periods with GDP. In under period before crisis the strongest relation evinces indicator government spending and borrowing.

The inflation appears again a negative factor for investments in derivatives, despite of lower significance.

In all this study It is important to be outlined also the primary and secondary effects. In mentioned in the beginning debate, Richard Berner comment the result of leveraging, concerning the volatility and liquidity of underlying asset markets. He defiantly outlines the “These innovations have important market efficiency and financial stability.” 1

In this survey over Russian derivatives market we examined options and futures based on capital market instruments. By this way we remain beside of credit derivatives and the risk influence related whit them. Some other studies - Ciolpan and Firtat, focused over the derivatives reflection to economy scrutinize critically the leverage effect and general uncertainty of derivatives. 2 The risk of derivatives, and specially systematic one produced of credit derivatives became actual since 2007 year. The Committee of European Securities Regulators, the Securities and Exchange Commission in United States and Investment Backs made e few steps in solving this systematic susceptibleness. We considered these problems in your former paper. 3

**SUMMARY**

Displayed correlations between market capitalization and the main stock index on RTS and derivatives open interest and open contracts - on one side, and in other macroeconomic – GDP and investments, appear generally positive. There is also negative relationship between inflation and unemployment. In comments above we mark some admissions for bilateral positive relation between derivatives trading and capital markets and macroeconomic activity. The study continues with quest of additional and more concrete arguments about derivatives influence.

**SOURCES:**


GLOBAL NETWORK OF FINANCIAL MARKETS
REGULATION INSTITUTES FORMATION

Alifanova, Elena N.*
Dr., Professor

Evlahova Yulia S.*
PhD, Assoc. Professor

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Rostov-on-Don, Russia

ABSTRACT

After passage of crisis’ sharp phase compensated by the governmental programs of economies anti-recessionary support, the problem of developing of preventive measures that reflect reconsideration of the global financial crisis reasons and mean financial markets regulation system reforms in the majority of the countries has become aggravated.

Research aims to analyze transformation of national financial markets regulation systems in postcrisis conditions; and to reveal national financial regulation priorities shifts. To achieve this purpose research solves a number of problems: 1) study of reforms of national financial markets regulation systems in the postcrisis conditions, spent or planned in the main developed countries – USA, Great Britain, Germany, France; 2) analysis of changes of national financial markets regulation systems in the postcrisis conditions spent or planned in Brazil, Russia, India and China; 3) revealing of national financial regulation priorities shifts; 4) revealing of tendencies forming an objective basis for formation of financial markets global regulation network.

Key words: financial markets, financial regulation, financial crisis

EXTENT OF A PROBLEM READINESS

Theoretical and methodological basis of the research is the institutional economic paradigm which is based on a modern general scientific paradigm – systems’ theories. The institutional approach forms a special foreshortening of scientific knowledge. It comes in place of neoclassical direction, at new level incorporating and generalizing its achievements keeping in the light of an institutional paradigm productive scopes. Structurization of institutional development process is presented in works of D. Nort, O. Williamson and other scientists.

Within the limits of a neoclassical paradigm and on a basis of institutionalism considerable number of works is devoted to research of various aspects of financial market
regulation, it is especially necessary to note among them works of J. Benston, S. Vitols, S. Jordan, M. Dgiovanoli, A. Kein, J. Madgnoni, S. Pelttsman, J. Stigler and other scientists.

Problems of world financial market development and its regulation system, and also the comparative analysis of national financial markets dynamics have found reflection in S.V. Matrosova’s, D.M. Mihajlova's, B.B. Rubtsova’s researches. Papers of O.V. Vjugin, I.V. Kostikov, R.H. Mordanov, J.M. Mirkin and other scientists are devoted to development of the Russian financial regulation system.

Research represents theoretical paper executed on the following information base: analytical materials and publications of national bodies of financial markets regulation and supervision, analytical materials and publications of the international financial organizations, materials of researches published in the periodic literatures and studies.

Authors widely use the paper general scientific methods and tool technologies of scientific knowledge in, including: methods of tabular and graphic interpretation, economical and mathematical methods. Calculations on the basis of statistical and technical analysis methods are made in “Meta-stock. Professional 8.0”.

The attempts to analyze the given data domain have been made by many researchers. The most complete compilation of the problems revealed at the stages of inflation "bubble" on the markets of different assets, and of the combat with the effects of the crisis, as well as the measures to reform financial regulation suggested by the G-20, has been made by the Centre for Macroeconomic Research at Sberbank of Russia, "Global financial reforms." The comparison of the problems that caused the global financial crisis and of the measures to reform financial regulation is presented in Table 1.

### Table 1

<table>
<thead>
<tr>
<th>Problems Having Caused the Global Financial Crisis</th>
<th>G-20 countries Measures of financial regulation reform</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regulation and Supervision on Financial Markets</strong></td>
<td></td>
</tr>
<tr>
<td>1. Lack of regulations and standards of trade in new financial instruments</td>
<td>Improving the market of derivatives trading</td>
</tr>
<tr>
<td>2. Lack of monitoring and control of the risks associated with the operation of hedge funds, private equity, off-balance companies for special purpose, and others.</td>
<td>Registration and collection of information on the activities of hedge funds</td>
</tr>
<tr>
<td>3. Fragmented system of control of financial institutions, especially lack of monitoring and control of systemic risks.</td>
<td>Development of principles and methods of macro-prudential regulation, improving accounting system and increasing companies’ transparency.</td>
</tr>
<tr>
<td>4. Pro-cyclical nature of many existing regulations</td>
<td>Change in the standards of capital adequacy and liquidity for banks</td>
</tr>
</tbody>
</table>

| Practice Of Financial Institutions Functioning |
|-----------------------------------------------|------------------------------------------------|
| 1. Possibility for reducing the total risk taken by bank holding companies by asset securitization and new financial instruments | Improvement of asset securitization management |
Problems Having Caused the Global Financial Crisis | G-20 countries Measures of financial regulation reform
---|---
2. High dependence of financial markets on the actions of rating agencies, making the assessments used by regulators as well | Tightening of rating agencies’ activities regulation
3. Inadequacy of the incentives for managers in financial sector | Changing the practice of encouraging managers of financial institutions

Dealing With The Consequences Of Financial Crisis

1. No special arrangements for bankruptcy of systemic financial institutions (the bankruptcy according to a standard procedure leads to the collapse of the financial sector, whereas the infusion of public money destroys the incentives for rational behavior of systemic financial institutions.) | Improvement of the management of systemic financial companies and mechanisms of reorganization of companies operating in several countries
2. Contradictions between the national character of financial regulation and the global nature of the leading financial institutions | Development of principles and methods of macro-prudential regulation

Source: Systematized and mapped by the authors according to the review of the Center for Macroeconomic Research at Sberbank of Russia "Global Financial Reform" (June 2010)//www.cbr.ru

REFORMING OF FINANCIAL REGULATION IN THE DEVELOPED COUNTRIES

The most of the given above measures on reforming financial regulation was developed and adopted in the United States. In July 2010 the Law “On reforming Wall Street and Consumer Protection» was passed (*Dodd-Frank Wall Street Reform and Consumer Protection Act*). The targets laid down in the reform of financial market regulation: 1) strengthening of consolidated supervision of systemically important financial institutions, 2) expansion of state tools to curtail the process of bankruptcies of financial institutions, 3) creation of an interagency council to identify and contain the emerging threats in the financial system, 4) improvement of the transparency of Federal Reserve System, as preservation of political independence is a key factor of effective monetary policy.1

The distinction between the regulation of market stability to maintain the overall financial market stability, prudential regulation and protection of consumers of financial services is placed in the basis of the updated structure of financial market regulation. This is a distinction on the objectives of regulation is known in economic literature as institutional structure of regulation Twin Peaks, which previously existed only in Australia and the Netherlands.

The implementation of the Act and, accordingly, the effective reform of financial market regulation are imposed on Federal Reserve System, whose powers include conducting corrective actions to maintain financial stability. The Fed also carries out fundamental changes in the oversight of large bank holding companies with complex organizational structure to improve the

1 About Regulatory Reform // http://www.federalreserve.gov/newsevents/reform_about.htm
effectiveness of consolidated supervision and to incorporate macroprudential aspect, which will go beyond the traditional control of the safety and soundness of individual institutions.\(^1\)

In addition, new regulatory institutions are created in the U.S., such as: the Office for Protection of Consumers of Financial Services, the Council for Supervision of Financial Stability, the Committee of Investment Advisers, the Office of Credit Ratings, the Office of Financial Literacy, the Office of Financial Studies, the Office of Adolescents and Women Involvement\(^2\).

The authors have compiled and systematized the main provisions of the reform of financial market regulation in the U.S., which are as follows:\(^3\)

1) Prohibition for banks to undertake certain activities, namely: the purchase and sale of securities, derivatives and other financial instruments on their own account (it is possible to do it at the expense of the client), as well as the acquisition of shares in hedge funds or private equity funds. In addition, financial institutions, which work with the deposits have to allocate the departments performing their own operations on the financial market, as individual legal entities, to sell the stakes in hedge funds and private investment funds.

2) Transfer of the responsibilities for the functions of regulation and supervision of savings and loan holding companies previously fulfilled by the subdivision of the Monetary Controller Office of Thrift Supervision from the Currency Controller (the Controller of the Currency) to Federal Reserve Board.

3) Registration of investment advisers. Prior to the adoption of the Act investment advisers, who had fewer than 15 clients were not subject to registration. On the adoption of the Act investment advisers of private funds, regardless of the number of their clients, should be registered by the Securities and Exchange.

4) Reforming of the insurance system in the states, in particular, the reinsurance system and the regulation of so-called "unrecognized" insurers, i.e., not licensed to operate in any particular state of the U.S.

5) Regulation of OTC derivatives, primarily to the whole swaps market (ban on public financial support for the companies operating in the swap market, separation of activities related to the swaps, from general banking activity, passage of central clearing by OTC swaps).

6) Establishing of the standards for systemically important market participants, whose activities are connected with payment, clearing and settlement activity.

7) Strengthening of investors protection, primarily due to stricter enforcement of the regulations, and rules.

8) Control of the activities of rating agencies, in particular, increased requirements for accountability and transparency of national rating agencies, tightening corporate control. Certain changes in connection with the monitoring of rating agencies are made into the activities of the Commission on Securities and Exchange into the regulation of circulation of municipal securities in the process of asset securitization.

9) Protection of consumers of financial services - creation of the Bureau (Bureau of Consumer Financial Protection). Its major objectives are: a) to ensure that consumers have full information, they can use to make responsible financial decisions, and b) to protect the

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2\(^{\text{About Regulatory Reform // http://www.federalreserve.gov/newsevents/reform_about.htm}}\)

consumers from abuse, injustice, fraud and discrimination, and c) to ensure that financial products work fairly and efficiently, and the financial market is ready for innovation, and d) to ensure that there is sufficient access to financial services;

10) Reform of mortgage lending, including establishing the minimum standards of issuance and securitization of mortgage loans, mortgage servicing requirements, etc.

The global financial crisis made the most negative impact on the UK. According to the outcomes of the crisis the Government made a decision on the construction by 2012 of a new structure of financial regulation, which will not have the Financial Services Authority (FSA) in its previous format. The former three-tier regulatory structure (the Bank of England, the Treasury, and the Financial Services Authority) led to the division of responsibility for financial stability and prevented its maintenance. The new structure of financial regulation will create three new bodies:

- Committee on Financial Policies (Financial Policy Committee), formed in the structure of the Bank of England. Its objective is identification and management of macroeconomic and other risks threatening the financial sector stability. To successfully achieve this task, the Committee will be endowed with specific macroprudential tools.
- The authority for prudential regulation (Prudential Regulation Authority), formed as a subsidiary of the Bank of England. Its objective is daily prudential regulation of financial institutions;
- The body for financial conduct (Financial Conduct Authority), endowed with wide powers to ensure the transparency of financial services and strengthen the protection of consumers of financial services.

Particular attention is paid to the mechanisms for coordination between the created agencies: a) the built into the Charter obligation to coordinate their functions, and b) the obligation to prepare the Memorandum of Understanding, and c) cross-representation on the boards, and d) the mechanism of veto for the Authority's prudential regulation (Prudential Regulation Authority) in order to reduce the risk of reduction of actions threatening financial stability.

The Government has also recognized the increasing concentration in the banking sector of the UK. To monitor the structure of the banking sector and to evaluate the competition a new Independent Commission on Banking (Independent Commission on Banking) has already been established.

It should be noted that unlike the one in the U.S. the financial regulatory reform in the UK is limited by the institutional changes and is not accompanied by the revision of the rules and regulations of financial institutions activities.

In France the objectives, organization, resources and methods of operation of control and regulation of financial market have also been revised. The existing since 2001 division of supervisory responsibilities between the Bank of France (the object of surveillance - commercial banks) and the special regulator AMF (the object of supervision - non-bank financial institutions)

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1 Summary of Administration-Drafted “Consumer Financial Protection Agency Act”, 07.07.09//www.cfpa.org
2 According to the opinion of Russian researchers such mega regulator as FSA is operating in the UK. However the three-part structure of financial regulation is shown in the documents of UK Treasury. It may be caused by evident interconnections of FSA, the Bank of England and the Treasury.
3 A new approach to financial regulation: building a stronger system. February 2011 // www.hm-treasury.org.uk
5 A new approach to financial regulation: building a stronger system. February 2011 // www.hm-treasury.org.uk
which is accountable to the Ministry of Economy and Finance of France is being preserved. In addition to the existing system of financial regulation the Office for Prudential Supervision (ACP) was established.

The objectives of the Office for Prudential Supervision are: 1) the safety of users of financial services, 2) financial stability, and 3) the growing influence of France in international negotiations on the reform of financial regulation. To achieve these objectives, the Office performs a number of tasks: a) the supervision of financial institutions interaction with clients, and b) strengthen cooperation with AMF, including the conditions of the sale of financial products and services and implementation of obligations to clients, and c) oversight of risk management in the banking, insurance segments and the segment of common trust-funds, and d) representation of France on the international arena, cooperation with foreign regulators, protection of French position in financial regulation.¹

The analysis of changes in the regulation of the financial market in France indicates that the protection of consumers of financial services and financial stability is seen as closely interrelated and their monitoring is transferred to one body, rather than to different ones, as it is in other countries. This view is due, to our opinion, to the fact that for the consumers of financial services and financial stability there is a common source of threats - risks of financial intermediaries.

In Germany, the reform of financial regulation has not concern the organizational structure and has focussed on areas such as risk management and investor protection.²

According to the Federal Office for Supervision of Financial Services (BaFin) in 2009 there were developed the minimum requirements for risk management of financial institutions (Minimum Requirements for Risk management) and during 2009-2010 their improvement continued based on the Guidelines on Risk Management Committee of European banking regulators (Guidelines on Risk Management, Committee of European Banking Supervisors). In addition, in April 2011 the Law "On strengthening the protection of investors and improve the functioning of capital markets” was adopted. It covers the key issues such as: a) increase of the transparency of financial instruments, and b) the mandatory provision of a client by investment adviser of the information in writing on a purchased financial instrument, and c) training of investment advisers and sales managers of financial products.

Thus, in the German system of financial regulation the changes didn’t concern the organizational structure, but were aimed at removal of the conditions causing the crisis by introducing new norms and rules of regulating the activities of financial institutions.

**REFORMS OF FINANCIAL REGULATION IN DEVELOPING COUNTRIES**

The imperative of financial development in developing countries remains the qualitative and quantitative development of banking systems, particularly scaling up of official (non-shadow) banking system, rather than creation of complex financial instruments and innovations, as in the developed countries. The emerging markets face special difficulties caused by their level of development. Many of them are at the stage of stable development of banking systems, creating and developing the financial market segments (eg, corporate bond market and base currency derivatives). Therefore, the regulatory standards should be directed to the risks arising

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¹ New Body of Prudential Supervision in France//Banks: World Experience. 2010. №2
² BaFin Quaterly. Q1/11 // www.bafin.de
as a result of underdeveloped financial markets, rather than the risks associated with complex financial innovation.\textsuperscript{1}

In this regard, the institutional and economic changes in regulation, adopted in the developed countries, are not applicable for the developing countries, since they are not adequate to the level of financial markets development in those countries. Despite this, the development of financial regulation in the emerging economies faces certain problems, among which:

A) The problem of interrelation and interdependence of the measures on financial and regulatory development;

B) The problem of compatibility of expanding the access to formal financial system of large groups of people (so-called financial inclusion), with the measures to ensure financial stability;

C) The problem of effective regulation of foreign financial institutions conducting operations in developing countries, because in times of crisis they can also serve as agents for the crisis.

\textbf{SHIFTS IN PRIORITIES OF NATIONAL FINANCIAL REGULATION}

The analysis of changes in the regulatory systems of the developed and developing countries in the post-crisis period revealed the shift in the regulation of financial markets:

1. Economic:
   - Tightening of the requirements for capital adequacy of financial institutions, taking into consideration the cyclical economic development in the methodology of formation the capital of financial institutions (Basel III);
   - Introduction of the restrictions on the use of borrowed funds;
   - Introduction of the requirements for systemically important international institutions, including those on the development of action plans in case of emergencies;
   - Regulation of rating agencies.

2. Institutional:
   - A change in the national systems of regulation in organizational, structural and functional aspects, and especially transition to management by objectives, strengthening the role of central banks;
   - Transition from micro-prudential character of the regulatory and supervisory practices to macro-prudential measures, including developing the methodology for monitoring of systemic risks and the requirements for operation of systemically important financial institutions, the establishment of bodies responsible for monitoring and ensuring financial stability.
   - Introduction of the mechanism of central counterpart for OTC derivatives markets.

\textbf{PREREQUISITES FOR FORMATION OF THE GLOBAL NETWORK OF FINANCIAL MARKET REGULATION}

The carried out research determined that the priority of financial market regulation in post-crisis conditions are systemic risks in general and maintenance of systemic stability at the national financial market. From organizational point of view, there was a shift from the trends of integration of financial market regulation to the development of cross-sectoral co-operation of

\textsuperscript{1} Eswar S. Prasad. Financial Sector Regulation and Reforms in Emerging Markets: an Overview // NBER Working paper 16428. October 2010 // www.nber.org/papers/w16428
regulators and restructuring of the regulatory system not by the functions and types of regulated institutions, but by the purposes of regulation. The differences in the priorities of management between the developed and developing countries due to the differences in the level of financial market development have been also revealed. The choice of regulatory measures adequate for the levels of financial market development contributes to the stability of financial system.

These trends create the objective basis for the formation of the global network of financial market regulation, which, according to the authors, includes two levels. The first level comprises the general, common to all priorities in the regulation of financial markets and corresponding tools. These shared priorities are, for example, ensuring financial stability, which follows from the given above analysis. The second level comprises specific priorities for the regulation of financial markets and corresponding tools depending on the level of financial market development, that is, different for the developed and emerging markets.

The authors have also formulated the principles that underlie the formation of the global network of financial market regulation:
- Organization of financial market regulation by objectives;
- Domination of coordination mechanisms at both national and international levels, in contrast to the pre-existing priority of management integration;
- Applying of the tools and methods of regulation, depending on the level of financial market development.

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MECHANISMS OF EASTERN EUROPE COUNTRIES’
INVESTMENT PROCESS REGULATION

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Ukraine

ABSTRACT

Investment potential in most countries of Eastern Europe is estimated by many economists as a significant, which nevertheless does not lead to the desired economic growth. The existing parity of economic development for the benefit of the area of economic infrastructure is not conducive to attracting investors to implement long-term mutually beneficial projects in agriculture, manufacturing high-tech products, etc. On the other hand, the investment market in Eastern Europe, being undisbursed by foreign investors demonstrates the need for the establishment of true matched controls to stabilize the business environment and to attract new financial flows. Thus, in the structure of capital investments in Ukraine, Russia, Belarus, the share of foreign investment is no more than 3-5%. In addition, the investment process in these countries is based on the funds of domestic entities (about 60% of the total investments are formed in Ukraine, Russia, Belarus, Bulgaria by businesses themselves). Mechanisms of market development and stabilization of the investment complex in Eastern and Central Europe are also needed because of the presence of a low investment base. For example, in Ukraine actually mastered the annual market volume of capital investment is about 19 billion US dollars, in the Russian Federation - 283 billion US dollars, in Belarus - 17 billion U.S. dollars despite the fact that only a comprehensive stabilization of the economy of Ukraine and its transition to the path of progressive development requires about 2000 billion US dollars. Undeveloped investment infrastructure of Eastern European countries doesn’t attract foreign investors and also leads to a significant outflow of financial capital abroad.

Key words: investment process regulation, improvement of investment climate, reduction of ineffective capital outflow, investment complex transformation
INTRODUCTION

The main purpose of this paper is to develop the basic mechanisms and ways to enhance the investment process in Eastern Europe in the current crisis. Investment issues in the European countries are relevant and are considered by economists from different countries (Gabor Hunya 2002), (B.Burkinskiy 2003), but the problem of having investment barriers, insufficient investment, high risk of investing in Eastern Europe remain outstanding and require specific applications and recommendations for ways out of crisis. In this paper, we propose based on the analysis of the structure and evolution of the complex features of the formation of an investment in some European countries, ways of investment activity regulation and of the business climate improvement through public policy instruments in these countries. Many literary sources are dedicated to the problem of inadequate investment activity in Eastern Europe, of undeveloped investment market in these countries and the problem of foreign investors’ low activity, to the presence of the phenomenon of unproductive capital outflow abroad, but to solve these problems is proposed by the various methods of administrative influence, through the creation of various integration of international structures, the use of tax incentives. In our opinion, the problem should contribute to the formation of a full-fledged economic systems of these countries on a path of market development. The basis for finding ways of effective development of economic system and its investment complex should be grounded on the sectoral analysis of individual markets for goods, works and services. Unlike existing marketing approaches to the analysis of markets, sectoral analysis, the methodological foundations of which were developed and are being actively studied by researchers of the Institute of Market Problems and Economic-Ecological Research of NASU (Burkinskiy 2002), (Lisyuk 2007), allows us to analyze the chain of pricing, destination and distribution of goods and financial flows between producers, distributors and final consumers. That sectoral approach to the market analysis will allow us to propose ways to increase investment attractiveness for the representatives of the manufacturing sector markets strategically important goods and services in Eastern Europe. Also a selective approach makes it possible to establish cost-effective regulatory environment in those areas, in those markets and in the sectors of commodity markets, where it is needed in terms of providing long-term prospects for development through cooperation with domestic and foreign investors. Market-oriented management of the investment process can also update the structure of economic systems, and avoid crisis situations.

MAIN IDEAS

In most countries of Eastern Europe there are very attractive conditions for investments such as relatively cheap labor, high rates of profitability of the business and the large number of objects for investment. Many scholars and analysts argue that European countries have significant investment potential, but significant development does not occur. So we can assume that the real investment potential of these countries is not so great as their high resource security. The smooth functioning of the investment process requires not only investment resources, objects and subjects of investment process, necessary institutional and infrastructural provision of the process, but the forming of a coherent investment complex must also being provided.
Figure 1. Organizational chart of Investment complex

Institutional basis of the investment process
(creates investment)

Institutions of the investment process
(execute binding, providing and regulatory functions)

- Governmental bodies
- Non-governmental infrastructure organizations

Sphere of direct investment process
(circumstances between investors and receivers)

- Recipients of investments
- Investors

Objects of the investments
- Investment managers
- Investment resources

Profit reinvestment

direct financial investment flows

reverse financial-investment flows (feedback)
That is why we argue that it is necessary to introduce the concept of investment as a complex system of interaction between investors and recipients of the resource component, the government and other institutions operating in an institutional environment, and entering into the investment process. In our opinion the investment complex exists in all countries where the investment process functions, but the degree of completeness of its formation, and the complexity and integrity of its structure suggest that there fundamental differences between the investment units of different countries.

Different components of the investment complex provide their own specific functions: resource-providing function, cohesivefunction, regulation function and the efficiency of their interaction defines the effectiveness of the country's investment process identifies opportunities for future macroeconomic development.

In this regard it is very important and decisive to consider the conditions under which high-investment complex country. In Eastern Europe, investment complex stages of education was a bit messy and too quickly. The impact is especially strong on infrastructure provision, which is almost absent in the post-Soviet countries, the nature of the investment and the overall activity and stability of the investment process.

The revealed features of the initial formation and functioning of a modern investment complex transition economies and developed countries are given in Table 1.

Table 1. Features of formation and functioning investment complex of Eastern-and Central European countries and of the developed countries

<table>
<thead>
<tr>
<th>Eastern-and Central European countries</th>
<th>The Developed countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>The harmony of distribution</td>
<td>The system of capital allocation, which provides stability and uninterrupted gradual economic development investment, and economic systems of countries of origin of capital</td>
</tr>
<tr>
<td>The uneven distribution of investment capital - the attraction to areas of quick returns at the lowest possible risk, the presence of inter-regional and inter-distorting capital allocation.</td>
<td></td>
</tr>
<tr>
<td>The time period of formation</td>
<td>Long time by the formation of evolutionary change</td>
</tr>
<tr>
<td>Short period of formation and rapid evolution (18-20 years).</td>
<td>Formed by years of consolidation and to run a stable system of care of the investment process with a mixed nature of regulation</td>
</tr>
<tr>
<td>Availability of investment infrastructure</td>
<td></td>
</tr>
<tr>
<td>Weak investment infrastructure</td>
<td>Integrated proven over the years the system of legal regulation of the investment process with timely corrections caused by the latest demands of the investment market</td>
</tr>
<tr>
<td>Legislative support</td>
<td></td>
</tr>
<tr>
<td>Part adjustability does not cover all areas of investment activity, which is an additional factor of investment progress inhibition</td>
<td>Consistency of the interests of different sectors of society</td>
</tr>
<tr>
<td>Capital cycle without a clear protection of different sectors of society and lack of full legal protection.</td>
<td>System of possible taking into account of the interests of different sectors of society, legally controlled by the principle of</td>
</tr>
</tbody>
</table>
It’s especially liked that the question the nature of the investment process, the maturity of the investment process is to be considered. Thus the investments are to be distinguished into different types, such as: situational investing, stabilization investing, and strategic investing.

E.g. in Ukraine and in the most of Eastern Europe countries, the investment process has not yet reached a strategic phase, and the stabilization of the economic system it should not be fully up to as long as investors do not receive guarantees of the immutability of the business regulators. Most investments are still made in the short-term projects in which payback occurs as quickly as possible.

Table 2. Structure of resources for capital investments in the some Eastern- and Central European countries on 2009

<table>
<thead>
<tr>
<th>Countries</th>
<th>Ukraine</th>
<th>Russia</th>
<th>Belarus</th>
<th>Bulgaria</th>
<th>Moldova</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>bln.$</td>
<td>%</td>
<td>bln.$</td>
<td>%</td>
<td>bln.$</td>
</tr>
<tr>
<td>Resources of businesses</td>
<td>12.1</td>
<td>63.3</td>
<td>105.0</td>
<td>37.1</td>
<td>7.9</td>
</tr>
<tr>
<td>and organizations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resources of state and</td>
<td>1.4</td>
<td>7.1</td>
<td>61.7</td>
<td>21.8</td>
<td>2.4</td>
</tr>
<tr>
<td>local budgets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resources of financial</td>
<td>2.7</td>
<td>14.2</td>
<td>29.1</td>
<td>10.3</td>
<td>1.7</td>
</tr>
<tr>
<td>institutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resources of individuals</td>
<td>1.3</td>
<td>6.8</td>
<td>20.9</td>
<td>7.4</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resources of foreign</td>
<td>0.9</td>
<td>4.5</td>
<td>9.1</td>
<td>3.2</td>
<td>0.2</td>
</tr>
<tr>
<td>investors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other resources</td>
<td>0.7</td>
<td>4.1</td>
<td>57.2</td>
<td>20.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Total</td>
<td>19.1</td>
<td>100.0</td>
<td>283.0</td>
<td>100.0</td>
<td>14.1</td>
</tr>
</tbody>
</table>

Source: Own calculations based on the data of State statistics comities of Ukraine, Russia, Belarus, Bulgaria and Moldova, the 2009 Investments according to the sources.
As can be seen from the table, the majority of investments in Ukraine, Russia and other countries is carried out by the business entities and more than 90% of investments is made at the expense of domestic investment resources. This structure of the investment process is caused by underdeveloped Investment infrastructure of the Eastern European countries and is an indicator of major problems:

- Lack of confidence of foreign investors;
- Underdevelopment of financial institutions and their minor role in the investment process;
- Financing of the investment process at the expense of profits and depreciation of the enterprises themselves as the only way the renewal of fixed capital;
- Lack of investment processes, structural renovation, there is only a small increase in the volume of investment.

The type of investments and insufficient levels of investment indicate the need for the restructuring of the investment complex Eastern European countries, tell us about the necessity of transformation.

For the mechanisms development to enhance the playback of the investment potential it is necessary to provide certain information about the distribution of resources, including investment by markets’ sectors. Analysis of investments in fixed assets by economic activity can draw conclusions about the relative immutability of the structure of investment in the accommodation. Present statistical methodology, in our opinion, can not fully analyze the structure of investment in the modern market economy. After the breakdown of the economic system into separate markets for goods, services, and not on the field, which is responsible for the distribution patterns of statistical methodology and economic activities is an important feature of a market economy. We believe that the method of management of the investment process should be based on the principles of sector analysis of markets in the economy, because it is the only way to determine the effectiveness of investment location and to determine return on invested capital in the form of profits earned in market sectors, providing strategic and long-term development of the country.

Most countries in Eastern Europe switched to the path of market-based economy a bit messy. As a result, the maximum area of economic development was received with high profitability, rapid return on investment and low risk business that, in our opinion, holds back the economic development and it is a limiting factor in the reproduction process of capital invested.

Development of infrastructure sector is important, but in our opinion, it should not be excessive, should not be an end in itself. Thus, additional cycles of treatment of financial flows in the financial or trading areas distract them from circulation in the manufacturing sector. This leads to a lack of financial support of manufacturers and, in our opinion, has become one of the causes of the financial crisis in Eastern Europe.

Data on the proportion of the economies of the world's agriculture, mining, processing industry and services provided in their annual reports the World Bank.

Existing investment process in Ukraine assisting reproduction economic complex, but assists the renewal and improvement of its structure.

We should consider the structure of economic systems of different countries in the context of their division into sectors. Thus, the technique of the World Bank carried out a breakdown of the GDP of the world on sectors. Namely:

- Commodities (agriculture and mining);
- Industrial (manufacturing industry);
- The service sector (infrastructure sector).

![Diagram showing the scheme of formation and refunding of value-added costs in the market's sectors.]

Direct goods or services flows
Rear financial flows (financial feedback for investments renewal).

Figure 2. Scheme of formation and of value-added cost’s refunding in the market’s sectors

Table 3. Sectoral structure of economic systems of some countries in the World on 2009

<table>
<thead>
<tr>
<th>Countries</th>
<th>GDP 2009p., blns. US $</th>
<th>Value added per GDP, %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Industrial sector</td>
<td>Mining</td>
</tr>
<tr>
<td></td>
<td>Agricultural sector</td>
<td>Mining</td>
</tr>
<tr>
<td>Ukraine</td>
<td>180355</td>
<td>11</td>
</tr>
<tr>
<td>Russia</td>
<td>1607816</td>
<td>5</td>
</tr>
<tr>
<td>USA</td>
<td>14204322</td>
<td>1</td>
</tr>
<tr>
<td>Great Britain</td>
<td>2645593</td>
<td>1</td>
</tr>
<tr>
<td>Canada</td>
<td>1400091</td>
<td>8</td>
</tr>
<tr>
<td>China</td>
<td>4326187</td>
<td>11</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>215355</td>
<td>0</td>
</tr>
<tr>
<td>Japan</td>
<td>4909272</td>
<td>1</td>
</tr>
<tr>
<td>Germany</td>
<td>3652824</td>
<td>1</td>
</tr>
<tr>
<td>France</td>
<td>2853062</td>
<td>2</td>
</tr>
<tr>
<td>Turkey</td>
<td>794228</td>
<td>10</td>
</tr>
<tr>
<td>The World</td>
<td>60587016</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Calculated according to the World Bank data. Annual report 2010.

In addition, there is a question about the effectiveness of most investment in Ukrainian economy. Thus, the annual "record" compared with developed countries, growth rates of investment in fixed assets are not provided with the corresponding absolute values of the indices. High 29-percent increase investment in Ukraine in recent years, not taking into account the crisis
2009goda, a 49-billion-dollar increase is provided gross savings (in dollars), at the same time, the index of 1.349 in Russia were attracted 367.6 billion U.S. dollars of capital. Investment in Germany, 12% increase corresponds to an amount of 702.5 billion dollars in China and the U.S. despite the relative decline in investment 81.3% and 94.9% respectively, were additionally consumpted in these economies 6168.8 blns. US$ and 2,414.46 blns. US$, respectively.

For the modern economic system availability progressive investment process without qualitative change little. So, for the economy of Ukraine and some regions inherent positive dynamics of investment in fixed capital, but along with this there are a number of issues of qualitative character:

- Inefficient capital structure (emphasis on sphere of raw materials and infrastructural orientation);
- Low efficiency (return) of investments for the development of the country, the problem of flow of financial capital abroad. Financial flows to nourish the development of overseas foreign economies at the expense of consumers, created in the national economy. In fact, the creation of value-added foreign manufacturer and all the intermediaries financed by national resources and there is an outflow of financial capital abroad.

In our research also addresses the issue of unproductive outflow of capital - is not legally banned the export of legally earned by the country's capital to other countries in order to convenient and secure their place in the absence of incentives in the national economy, and economic benefits for the country of origin of capital from such removal or missing or do not cover financial resources expended. Study of the phenomenon of non-productive flow of financial capital we have carried out the example of Ukraine.

Amounts of capital outflows are significant and that is why there is a need for intervention by the state to the investment process. At the heart of the regulatory impact of the state must be based on the concept of transformation of the investment complex region. In the process of transition to market conditions, investment complex actually formed randomly and unbalanced. The market structure of the economy no longer complies with vertically-built governance arrangements, including the investment process.

Mechanism of activation of the playback of investment potential, in our opinion, consists of a comprehensive regulatory influence of state bodies at the stage of the process of social production. A key element in ensuring the reproduction of the investment potential consider the role of commodity markets. It is an integrated commodity markets a full cycle of strategically important products through its own mechanisms of self-replication can ensure development of the investment sector and increase investment potential.

For example, in Ukraine, where most of the available conditions for the revival and development of a powerful agricultural complex, is necessary to create a favorable environment for productive development of commodity markets as a source of added value and increase the funds invested. Development of infrastructure investment should be based on the principles of preferential treatment of domestic productive capital in the regulatory policy of the state.

The efficiency increasing in the allocation of financial sources for renewal of resources and economic activities must be economically justified and appropriate in terms of socio-economic development.
Figure 3. Financial capital ineffective outflow from Ukraine

One of the main ways to control the efficiency of financial flows, which we propose are:
- depreciation deductions. Providing them with the lost function is reproduced by the revision of the principles of accrual accounting and depreciation irreversible assets. To do this, there is a difference of depreciation write-off the cost of goods produced and at the same time, its accumulation in a special active account with a further cover the balance of the account of its revenues from product sales. Depreciation of production assets, we propose to define not as a systematic transfer of value, which is amortized cost, as well as the systematic loss of compensation cost that is amortized in the revenue from selling products and services. Reimbursement of depreciation expense can occur by transfer of the proceeds from the sale of goods (services) to a special bank account. An additional advantage when creating a monetary fund compensation for the irreversible deterioration of assets is possible fiscal impact on it, and thus, the regulation of the priority areas of management;
- provide a convenient environment for the creation of industrial subdivisions to large retailers. Create a favorable tax conditions for the implementation in retail chains own production. This will help address the problem of employment, lower prices and costs, create interest representatives developed an infrastructure business in developing its own manufacturing sector. Diversification of applications for infrastructure capital through the tax effect of the possibility of providing a number of companies a complete cycle of production and sale of commercial products;

- cost-objective differentiation of tax rates to income tax from different parts of the financial and supply chain in the commodity markets, in accordance with the level of profitability of their activities;

- modification of accounting and fiscal processes of enterprises and making their statements on the accrual basis of "cash" method, which not only make the recording and reporting information more transparent, but also provide great opportunities to business entities, together with increased financial discipline.

Table 4. Investment component in the GDP of the Eastern and Central European countries 2010

<table>
<thead>
<tr>
<th>Countries</th>
<th>GDP</th>
<th>Investments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>bln. US $</td>
<td>Per capita, $</td>
</tr>
<tr>
<td>World average</td>
<td>341.78</td>
<td>13802.45</td>
</tr>
<tr>
<td>Albania</td>
<td>11.77</td>
<td>3676.95</td>
</tr>
<tr>
<td>Belarus</td>
<td>54.71</td>
<td>5800.43</td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>16.83</td>
<td>4138.68</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>47.70</td>
<td>6334.34</td>
</tr>
<tr>
<td>Cyprus</td>
<td>23.17</td>
<td>28236.97</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>192.15</td>
<td>18288.28</td>
</tr>
<tr>
<td>Greece</td>
<td>305.42</td>
<td>27301.54</td>
</tr>
<tr>
<td>Hungary</td>
<td>128.96</td>
<td>12879.3</td>
</tr>
<tr>
<td>Moldova</td>
<td>5.81</td>
<td>1630.41</td>
</tr>
<tr>
<td>Poland</td>
<td>468.5</td>
<td>12300.13</td>
</tr>
<tr>
<td>Romania</td>
<td>161.6</td>
<td>7542.3</td>
</tr>
<tr>
<td>Russia</td>
<td>1465.1</td>
<td>10437.5</td>
</tr>
<tr>
<td>Slovakia</td>
<td>87.45</td>
<td>16103.9</td>
</tr>
<tr>
<td>Slovenia</td>
<td>47.9</td>
<td>23705.7</td>
</tr>
<tr>
<td>Ukraine</td>
<td>136.42</td>
<td>2999.63</td>
</tr>
</tbody>
</table>


CONCLUSIONS

The main purpose of regulating the investment activity of the camps in Eastern Europe believe the achievement of quantitative growth and qualitative improvement in the investment industry. Development of infrastructure component of investment complex of European countries and bringing it in line to the structure of the market economy will attract foreign investors and create conditions for development of domestic business. The main task in ensuring
the development of real sector of the domestic economy is creating conditions for effective and more rapid circulation of capital in this area. Sound and economically viable distribution of profitability among different sectors of the commodity market will facilitate improvement of reproduction of capital, primarily in the industrial sphere. An additional effect can be considered to prevent overcharging in the infrastructure sector.

Investigation of sector-oriented structure of product markets of Ukraine and some regions will be continued in the department of market mechanisms and structures of the Institute of Market Problems and Economical & Ecological Researches of NAS of Ukraine.

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EUROPEANIZATION AND EURO ADOPTION IN ROMANIA

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ABSTRACT

The paper focuses on one of the most important steps Romania is going to take in the future: the Euro adoption. The process is long and complex and was preceded by Europeanization. In our paper we focus both on the stage of Europeanization and on the future steps in the process of Euro adoption: entrance in the ERM II, fulfilling of the Maastricht criteria, etc. The conclusion is that, because of the financial crisis, the initial deadline cannot be respected.

Key words: Europeanization, monetary integration, Romania, euro adoption

INTRODUCTION

Recent Europeanization studies have focused on a complex set of relations in a regional background, defining structure and competitiveness within the European area.

When trying to define Europeanization, most of the studies relate to the European Union, even though in Europe there are several other sub-regional integrative structures, such as CEFTA, AELS, EES and states not belonging to any integrative structures, but under the process of Europeanization. There is often confusion between Europeanization as a developing process and Europeanization as the state of art, both from a spatial-temporal and a systemic perspective.

Our paper tries to give a definition of this concept from a different perspective, coming from the experience of a new member state of the European Union. It also takes into consideration a specific part of the process, monetary integration and Euro adoption.

Monetary integration within the European Union is one of the most severe forms of Europeanization, as it is the result of a bottom-up transfer of sovereignty based on the delegation of power of decision both for the monetary and the real economy field.

The analogy between globalization and Europeanization in the general sense can be transposed into monetary policy, as well.
Creating and maintaining economic stability can be achieved through economic policies that target the real economy either directly, or indirectly through monetary flows which affect the structures of the real economy. It is known that in any economy, real economy flows (goods, services and factors of production) are accompanied by monetary flows. Between the two types of flows there is a relatively steady state with correlations between aggregate supply and demand, which allow the control of the degree of labour employment and price stability.

When this balance breaks, on the market appear the two classical types of disequilibrium: inflation and unemployment.

To maintain equilibrium, governments use two types of measures. The first category includes measures that intervene directly in the economy, either through a system of administered prices or through market intervention as a seller or buyer, influencing supply and demand and therefore prices. The second category is through a number fiscal measures meant to stimulate production and supply for a given product (in the case of inflation), such as by creating new jobs, which involves the creation of state-owned companies, thus extending the State's participation as an economic player on the market, or by providing incentives to attract domestic or foreign investment, which would indirectly entail creating new jobs.

In both cases, direct intervention of the state in the economy mechanism is complex and long-lasting and in some cases, such as administered prices or the creation of state companies, it is undesirable, given that in developed market economies, pricing and competition limits are best determined mainly by the market mechanism.

After more than half a century since the beginning of the integrative structures in Europe, the literature dealing with European studies opened a new field of research on Europeanization. Recent Europeanization studies have focused on a complex set of relations in a regional background, defining structure and competitiveness within the European area. Most of the research in this field has been dedicated either to defining the place and role of Europeanization within globalization, or to describing the relation between Europeanization and European integration.

The development of studies linked to Europeanization was dictated by a number of changes in the post-war period at the global level. Increasing interdependencies as a result of the imposition by international institutions of liberalisation of the flows of factors and products globally were accompanied by the ongoing trend of grouping and regrouping of important economic players around the newly formed power.

The world developed, from an economic point of view, in a mix of liberalization and protectionism, generating regional reactions.

Bulmer and Radaelli (2004) identified four factors stimulating research on Europeanization, especially in the last decades, closely related to the European integrative structures:

1. Institutionalization of the Internal Market, which determined changes in the national markets as a result of European directives, regulations and jurisprudence, starting with the entering into force of the provisions of the Single European Act;

2. Transformation of the European Community in the Economic and Monetary Union, requiring a common currency, a common interest rate system and, by this, increasing the interdependencies between other policies;
3. Ruling competition from the point of view of a process in which the national policies adjust, searching for competitive advantage;

4. The enlargement process, which implied negotiations with the candidate states asking for a huge exercise in policy transfer.

There are, of course, a lot of other factors which influenced the increasing interest for Europeanization studies. The position of the European Union within the global space, new integrative structures at regional and sub-regional levels, both economic (NAFTA, ASEAN, B.R.I.C.) and political (the Arabian League, CSI), the changes in the competitiveness paradigms at the global level, the increasing role of multi-national companies and of their capacity to influence competitiveness on a global scale, must also be numbered among the factors that have stimulated increasing attention to Europeanization studies.

I would mention here the fact that these Europeanization studies describe and explain phenomena and processes of the real world based on empirical observations. Only at a small scale has research done so far attempted forecasting and modelling these phenomena and processes.

DEFINITIONS OF EUROPEANIZATION

Some general considerations:

First: When trying to define Europeanization, most of the studies relate to the European Union, even though in Europe there are several other sub-regional integrative structures, such as CEFTA, AELS, EES and states not belonging to any integrative structures, but under the process of Europeanization.

Second: There is often confusion between Europeanization as a developing process and Europeanization as a state, both from a spatial-temporal and a systemic perspective.

Third: Europeanization is identified by the transfer of ideas, models, policies and regulations through the European integration process, within the Community.

Fourth: Europeanization is analysed either as a subcategory of globalization or as an alternative to it.

DEFINING EUROPEANIZATION FROM A GLOBAL ECONOMIC PERSPECTIVE

Several studies explain Europeanization through globalization: Europeanization as a form of globalization, Europeanization in symbiosis with globalization (globalization is often considered to be Americanization), Europeanization as a reaction to globalization, or Europeanization as an independent process.

If globalization may be defined, in the simplest way, as a set of economic, institutional and ideological international forces affecting national practices, politics and policies, then Europeanization might be simply defined as a set of economic, institutional and ideological regional forces affecting national practices, politics and policies (Schmidt, 2002).

Some researchers are tempted to define Europeanization as a regional alternative to globalization, but simplifying this relationship is counter-productive. In spite of the fact that some of the features of globalization may be identified in Europeanization as well, some researchers, like Vivien Schmidt, consider that the aim and objectives of Europeanization are a lot more precise, wider and easier to identify than those of globalization: if globalization assumes
strictly opening boundaries and markets to capital and products, Europeanization assumes regional dynamics and development as a result of common policies and instruments (Schmidt, 2002).

Schmidt’s point of view is sustained by those considering Europeanization as applicable mostly to integrative structures in Europe, especially to those of the European Union, and accepting the idea that Europeanization may generate effects only as a result of positive integration (Pinder, 1968).

Starting from this assertion, Schmidt considers Europeanization symbiotic to globalization and determining of the increasing competitiveness of certain segments of the global market, such as the Internal Market or the Euro Land, by reducing the exposure of the Member States to the fluctuations of financial markets, along with advantages resulting from increasing discipline and economies of scale (Schmidt, 2002).

A particular aspect of the relationship between economic Europeanization and globalization is given by the different reaction of economies to the two phenomena. We have to notice that Europeanization and globalization operate with the same type of players (political and economic institutions, at national and international levels, multi-national companies and structures), but their role is totally different within each of the two processes and determines a different response. In both situations it is difficult to draw a clear line between causes and effects because the boundary between dependent and independent variables fluctuates significantly (Borzel, 2001).

The way economies respond to the stimuli coming from the two processes is influenced by a number of factors, some endogenous, such as labour market flexibility, institutional and political fragility or non-fragility, stability of the market and its degree of consolidation (such as in emergent economies versus functional market economies) and others exogenous, such as the vulnerability of those economies to global and European forces.

In globalization states are secondary economic players, the important role belonging to the multi-national companies and international institutions which open the gate to free movement of factors and products and by this, consolidate the position of the multi-national companies in the national economy.

In Europeanization, economies adapt structures, values, norms, legislation and institutions to the requirements of a regional structure which was created through bottom-up sovereignty transfer and by this they represent a regional synthesis of structures, values, beliefs and national models.

EUROPEANIZATION AND EUROPEAN INTEGRATION

If the relationship between Europeanization and globalization is complex and comprises of different levels of societal organization within the process of restructuring the centres of power in the post-war period, the one between Europeanization and European Integration is even more confusing. Of course, the complexity of the Europeanization relative to European integration should not be demonstrated in spite of the fact that there are divergent points of view on it.

Almost all definitions consider Europeanization a two-way transfer between structures belonging to the same whole which, in some situations might be Europe, in others the European Union, in others other integrative structures in the European area.
Some specialists consider Europeanization similar to European Integration and define it as the formation of some specific government structures at the European level (Kostandinova, 2007, apud Risse, Cowles and Caporaso, 2001). For Bulmer and Radaelli, Europeanization is a complex process dealing with two levels: a supra-national one, in which common policies are elaborated and managed and a national level for incorporating them at the level of the member states (Bulmer and Radaelli, 2004).

Furthermore, Bulmer and Radaelli elaborated one of the most comprehensive definitions of Europeanization. According to them, Europeanization is “the process of construction, diffusion and institutionalisation of formal and informal rules, procedures, policy paradigms, styles, ‘ways of doing things’ and shared beliefs and norms which are first defined and consolidated in the EU policy process and then incorporated in the logic of domestic (national and sub national) discourse, political structures and public policies” (Bulmer and Radaelli, 2004, p 4).

Ladrech considers Europeanization an incremental process of reorientation of direction and political forms so that the political and economic dynamics of the European Union become part the European policies’ logics (Ladrech, 1994). For Olsen, Europeanization is a project of political unification through the export of some forms of political organization as a consequence of European integration (Olsen, 2002).

We have to mention within this context the position of Alistair Cole for whom Europeanization represents a transfer of the preferences of member states towards the European Union (Cole, 2001), and also the one of Schmidt, according to which European integration is the process of forming integrative structures and formulation of policies by a number of important players, governmental or non-governmental entities, while Europeanization represents the decision-making process at community level and their application within member states (Schmidt, 2002).

It is also important to notice that when defining Europeanization, researchers link it to positive integration (Tinbergen, 1965), whose instruments are common policies and their applicability at the level of member states.

At the same time, negative integration is defined by the Community legislation which enables the efficient functioning of markets and comprises of instruments of competition, fiscal and commercial policy.

For Borzel and Risse (2003), the effects of Europeanization on member states are reflected in changes of:

a) Policies, defined by standards, instruments, problem-solving approaches and political discourse
b) Politics which comprise processes of formation, aggregation and representation of public interest
c) Polity which comprises public institutions, inter-governmental relations, legislative structures, public administration, national tradition in state organization, economic institutions, state-society relations and collective identities.

EUROPEANIZATION OF MONETARY POLICY

Monetary integration within the European Union is one of the most severe forms of Europeanization, as it is the result of a bottom-up transfer of sovereignty based on the delegation of power of decision both for the monetary and the real economy field.
The analogy between globalization and Europeanization in the general sense can be transposed into monetary policy, as well.

In time, monetary integration has had different forms and intensities, both at global and regional level. The use of the first type of currency within the gold system facilitated the monetary integration, accompanied by political and military events and developments which imposed the circulation and use of the same currency on large territories and economic areas. The introduction of banknotes fragmented this market and the international monetary system set up at Bretton Woods contributed to the global monetary integration at a smaller scale than expected. The Bretton Woods institution contributed to the liberalisation of the financial flows, but monetary integration is more than that.

In Europe, the formation of some common monetary structures entered into the field of interest of the supra-national structures mostly after the WW II, even though some earlier attempts to create common monetary areas can be identified in the history of Europe.

The failure of forming some common monetary structures has its cause in the features of an optimum currency area. According to Mundell, a common space may use a common currency only when the degree of market integration is high enough to offer protection against exogenous and endogenous asymmetric shocks.

Mundell considers an optimum currency area a space in which there is a high degree of openness in the economy, the ratio of trade between the components of the area is high, there is free movement of factors of production, and high flexibility of prices and salaries. Put another way, an optimum currency area assumes that there are no major disparities to disrupt the functioning of the area as a whole or of its components, thereby increasing its competitiveness.

The existence of such a space is created, according to the above mentioned theory, through liberalization of factors and goods (free movement of factors and goods) (in the situation of the European Union this is also known as the form of positive integration), with the market itself accomplishing the most efficient allocation of resources and distribution of incomes, after lifting the barriers to free movement.

A relatively homogenous market allows the use of a common currency, because each of its components and the market as a whole react in the same way to monetary stimuli. This is the case when negative integration is followed by the process of positive integration, which assumes the construction of institutions, policies and common instruments.

Monetary integration and the formation of a supranational monetary area involves the use of a single currency, of a common monetary policy, a close coordination of economic policies of the components of that area and the existence of a common institutional system to coordinate and manage monetary policy (Lutas, 2004).

These are also the features of the Economic and Monetary Union, which according to Mundell’s model, is not an optimal monetary area. However, political considerations, the single currency, common monetary policy, the European Central Bank and European System of Central Banks work, are reshaping Europe. This is Europeanization applied to the most complex form of integration, namely the one of Economic and Monetary Union. How does this complex form of integration work?

Starting from the definitions of Europeanization in the sense of creating the structures, institutions, instruments, policies, beliefs and common rules, the Economic and Monetary Union area is the result and, simultaneously, a factor of Europeanization, since, as noted above, the boundary between the two is extremely difficult to trace.
In this case, we talk about “hard” Europeanization, i.e. based on benchmarks, constraints and regulations to be met and applied. There are real and nominal convergence criteria, consisting of the mandatory application of regulations established by the European Central Bank and of the use of the same common monetary policy instruments and the use of a single currency. There is also “soft” Europeanization as a result of the regulations imposed by the Economic Stability and Growth Pact regarding the budgetary component of the Maastricht Criteria.

Literature defines monetary policy in a general sense, as the process by which the central bank or government manages the money supply to achieve specific objectives such as reducing or controlling inflation, maintaining the stability of the exchange rate, and increasing employment or economic growth.

Depending on the objective, monetary policy, in a general sense, can be:

- Inflation targeting, as is the case of the Euro Zone, Australia, Canada, New Zealand, Sweden, Norway and Britain, and also of other states with derogation from adopting the euro;
- Control of money aggregates, specific to monetarism, applied particularly in the United States in the 1990s;
- Fixed exchange rate, used only as an exception in market economies or in situations of deep economic crisis, as was the case of Bulgaria, when the Monetary Board was imposed, or to change the political system, as was the case of Slovenia after the dismantling of Yugoslavia;
- Policy mix, directed mainly towards inflation targeting, but also to economic growth and reducing unemployment.

The monetary policy of the European Union is included in the first category because its primary objective is that of maintaining low rates to control inflation. Moreover, the central objective of the European Union, since its formation was that of creating and maintaining stability, which translates into economic price stability (low and relatively constant rate of inflation), the stability of incomes (which means a constant high level of employment) and ensuring coverage of people’s needs to a high standard (which means economic growth).

Creating and maintaining economic stability can be achieved through economic policies that target the real economy either directly, or indirectly through monetary flows which affect the structures of the real economy. It is known that in any economy, real economy flows (goods, services and factors of production) are accompanied by monetary flows. Between the two types of flows there is a relatively steady state with correlations between aggregate supply and demand, which allow the control of the degree of labour employment and price stability.

When this balance breaks, on the market appear the two classical types of disequilibrium: inflation and unemployment.

To maintain equilibrium, governments use two types of measures. The first category includes measures that intervene directly in the economy, either through a system of administered prices or through market intervention as a seller or buyer, influencing supply and demand and therefore prices. The second category is through a number fiscal measures meant to stimulate production and supply for a given product (in the case of inflation), such as by creating new jobs, which involves the creation of state-owned companies, thus extending the State's
participation as an economic player on the market, or by providing incentives to attract domestic or foreign investment, which would indirectly entail creating new jobs.

In both cases, direct intervention of the state in the economy mechanism is complex and long-lasting and in some cases, such as administered prices or the creation of state companies, it is undesirable, given that in developed market economies, pricing and competition limits are best determined mainly by the market mechanism.

**Europeanization of Monetary Policy in Romania**

Romania, a new EU member state, is currently developing according to the coordinates imposed by the two symbiotic processes that mark the socio-economic and political developments at Macro-scale: repositioning of Romania in the global economy and integration of Romania into the European regional structures.

For Romania, Europeanization is, according to the above mentioned definitions, a process of adapting the Romanian structures and institutions to the Community ones and, at the same time, one of modernization, as stated by Dobrescu, Avram and Zamfirescu (2001), “Europeanization, in general, without analyzing its impact on each type of structure, means modernization”.

The last stage of enlargement of the European Union had a series of distinctive features, out of which, from the perspective of Europeanization, the most relevant is the fact that all new member states accessing in 2004 and 2007 belonged, in the post-war period, for more than half a century, to some totally different economic and political structures than those of the Community. That is the reason why the process of accession and, later, integration, was sustained by Europeanization, in the framework of particularities dictated by the last stage of enlargement.

The Europeanization process was marked by the fact that the accession negotiations developed under the conditions given by the strict criteria and the schedule of application and not by the content of the Acquis Communautaire, under the pressure of some supplementary conditionality and a strong asymmetry of power of the parts involved in the adhesion process (Dyson, 2006).

At the same time and in the same context, it is important to notice that for the Central and East European candidate countries; the objectives of the Europeanization process were similar to those of catching-up (i.e., modernization).

Last but not least, of major influence on economic development in the area were the stand-by agreements of the International Monetary Fund which imposed conditionality and constraints in the pre- and post-adhesion period for the Central and East European countries.

There are significant differences between accession and Europeanization. The access of a candidate state in the European Union represents a formal and legal process, while Europeanization is a process of economic, political and institutional transformations which might develop inside and outside the European Union (Coppetters and Huysseune, 2003). This means that Europeanization initially preceded accession, afterwards being symbiotic to it.

There are three mechanisms for Europeanization:

The first one is that of institutional compliance comprised of precise legislation requirements which prepare for the access to the European Union. Within this mechanism, the European policies remodel and reshape the domestic policies.

The second mechanism is linked to the changes in the domestic opportunity structures which lead to changes in the rules of the game in politics and in businesses. European policies alter the strategic position of the domestic players, offering them the possibility to change the
existing domestic arrangements. From this perspective, on the political and institutional fluid background from Central and Eastern Europe, the pressure imposed by Europeanization on the domestic opportunity structures generated different responses from different countries (Papadimitriou and Phinnemore, 2001).

The third mechanism is linked to the creation of beliefs and expectations through multi-lateral diffusion of ideas and experiences.

From the point of view of monetary policy, Europeanization involves alignment to formal and informal conditions linked to access to the Economic and Monetary Union, and thus, to participation in the Exchange Rate Mechanism II.

The entrance into this mechanism and into the Euro Zone is a long, multi-stage process. Its intensity is determined by two apparently different aspects whose reciprocal effects determine its nature. The first one is the capacity to understand conditionality and the second one is linked to the political fragmentation which may hinder structural changes.

The interaction between the two of them gives the pace and intensity of Europeanization. Particularly for Romania, this process was doubled by the conditionality imposed by the stand-by agreements concluded with the IMF, while for Bulgaria or Estonia, it was influenced by the monetary boards created for keeping under control the equilibrium between the real and monetary flows.

If the intensity of the process is different from one situation to another, what they have in common is the fact that Europeanization is most powerful in monetary policy as it assumes fulfilling the Convergence Criteria, less intense in Exchange Rate Mechanism II, still less intense in structural policies that modify competitiveness and, by far, most difficult to identify in fiscal policy (Dyson, 2006).

The reasons that make the difference within this process development are linked to the relative fragility of the political, institutional and societal structures (employers, organizations and trade unions) of the economies that had belonged, for almost half a century, to another economic system than that of the market economy.

In the monetary component, the process of Europeanization is asymmetric, in the sense that the candidate states to adopt the Euro are faced with a system already created and compulsory to be adapted, while the current states of the EMU had the capacity of negotiation within a corridor which allowed a degree of control over the macroeconomic policies in the pre-adhesion stage.

The main players of Europeanization are, from the Community’s perspective, the European Central Bank, the European Commission, and Eurostat, which set up in common the conditions to be fulfilled by the states acceding in this area. At national level, the players of Europeanization are the central banks for the monetary component and the national governments for the macroeconomic stabilization policy.

ROMANIA ON ITS WAY TO THE ECONOMIC AND MONETARY UNION

Adopting the euro was not a priority for Romania’s adhesion process (Dyson, 2006) as in 1999 the economy faced a deep recession which almost led to the government’s defaulting on its debt before starting negotiations. This problem proved the existence of serious turbulences within the national economy, including in the monetary component, showing that the Romanian economy was far from that type of organization of international structures which would allow the introduction of Euro, or even entrance into the Exchange Rate Mechanism.
Moreover, being a restructuring economy, the application of the Maastricht criteria was less urgent than investment in infra-structure, communication, education and the environment.

The status of a member state goes along with a temporary derogation from adopting the Euro which assumes the irrevocable commitment to replace the Romanian leu with the Euro conditioned by the previous participation, for at least 2 years, in the Exchange Rate Mechanism II.

Within this period, the priorities are macroeconomic stability, and attending a high level of convergence of the Romanian economy corresponding to that of the Euro zone as, according to the Optimum Currency Area Theory (Cerna, 2006), states belonging to a common structure may have a mutual benefit coming from the common currency only when they have similar economic structures and when there is no risk that asymmetric shocks should affect only one of these states.

Two of the most important aspects of the Euro’s adoption in Romania will be the moment of entrance into the Exchange Rate Mechanism II, and the effective duration of participation within it.

I consider the moment of Romania’s entry into the Exchange Rate Mechanism II to be even more important than the moment of adopting the Euro for at least the following five reasons:

1. Whereas for adopting Euro there are a number of conditions easy to quantify (the Maastricht criteria) and others less quantifiable but well defined (the real convergence criteria), for entrance in the Exchange Rate Mechanism II the only criterion is the political will of the national government;

2. The Community legislation does not stipulate a maximum limit for taking part in the Exchange Rate Mechanism II, so that an economy enters in the ERM II without fulfilling any conditionality and leaves it when it fulfils the nominal and real convergence criteria. The danger is that for different reasons, such as the gain of political capital brought by the entrance in the Exchange Rate Mechanism II, the moment of entrance will not fit the real state of the economy and by this, the economy will be part of the mechanism for a long period of time;

3. The Exchange Rate Mechanism II is a system of semi-fixed currency exchange rates with margins of fluctuation of +/- 15%. This means that an important short-run stimulating instrument of competitiveness, the exchange rate, is limited. In turn, this arrangement limits the capacity of national authorities to stimulate competitiveness. On the other hand, the semi-flexible rate diminishes the currency risk and enables a growth of predictability of firms’ behaviour.

4. Throughout the participation in the Exchange Rate Mechanism II, the national currency is allowed to fluctuate within a margin of +/- 15%, which means that it will be exchanged, when leaving the Mechanism, to an exchange rate of +/- 15% compared to the moment of entrance. During this period of time, there is the possibility for the economy to grow and ask for another exchange rate than the one permitted by the mechanism, but the conversion will be made according to the above mentioned regulation. The shorter the exchange rate mechanism stage, the closer will be the exchange rate to the one implied by the state of the real economy.

5. To sum up, an economy should enter into the mechanism when its indicators are close to the values asked by the Maastricht criteria and should leave it in the shortest legal time limit, i.e. 2 years.

For Romania, the moment of entering in the Exchange Rate Mechanism II was forecasted, before the economic crisis, for 2012, later on for 2013, in order to permit the
economy to be prepared to fulfill the nominal criteria and to achieve significant progress in the process of real convergence, so that the objective of entering the Euro zone to be attained successfully by earliest in 2015.

**NOMINAL AND REAL CONVERGENCE CRITERIA**

The transformation of a supra-national structure into an Economic and Monetary Union presumes the concurrent fulfillment of two conditions: the existence of a less heterogeneous economic space which for the current situation is the Internal Market and the existence of a monetary economy compatible with the real one, capable to sustain and enable economic and social development.

The convergence criteria quantify the degree of heterogeneity and determine, using a common unit of measure, if an economy which is willing to adopt the Euro is compatible, from macroeconomic perspective, with the Community.

The Maastricht Criteria consider as necessary and sufficient conditions to be fulfilled by a candidate state when adopting the Euro only the nominal criteria, and not the real ones. These nominal criteria include the economic stability of the state, the rate of inflation for measuring price fluctuations (with effects on the purchasing power), standard of living and competitiveness, the interest rate for financial market stability, the budgetary criteria for state involvement in the economy, and the exchange rate stability for the internal and external competitiveness.

The Maastricht Treaty does not refer to the real convergence criteria meant to ensure a high degree of homogeneity of the economies of the member states, because when concluding it, the economic structures of the member states of the EU were similar. For the new member states, the real convergence criteria were important due to the big differences of development between themselves and the Community.

For Romania, fulfilling the nominal criteria presents some particularities. The first one is given by the fact that unlike the other candidate states, it had a favourable budgetary position, but starting from 2009 the budget deficit registered high values, putting Romania on the list of countries which received recommendations from the European Commission regarding the EU Excessive Deficit Procedure.

In the case of Romania, the budget deficit was within the Maastricht criteria in the pre-accession period, when Romania, in concordance with the budget deficit criterion, was keeping its deficit below the ceiling of 3% of GDP. In recent years the deficit’s level increased in spite of changes in the tax system, including introduction of the flat tax of 16% in 2005, which led to increased tax base and new taxes. Since 2008, the budgetary and fiscal policies have undergone major changes, thus resulting in deficits substantially in excess of the 3% ceiling.

General government deficit increased between 2005 and 2009, reaching a maximum of 8.3% of GDP in 2008. The worsening of the budget situation between 2005 and 2008, when Romania reported growth rates of 6.4% of GDP, is paradoxical, and is due to expansionary fiscal policy implemented by the government during that period.

Because of its unfavourable economic situation, Romania has submitted an application to the European Commission for multilateral financial support. The conditions required for financing the deficit were related to decreasing the deficit to 5.1% of GDP in 2009, an unaccomplished indicator, with an express statement that the money would be used only for incentives to companies to overcome the crisis. These included exemption from taxation of
reinvested profits and exemption from social security contributions for the structural unemployed (European Commission, 2010).

Regarding the budgetary deficit criterion, it is important to mention the constraints of the stand-by agreements concluded by Romania with the IMF since 1989 on keeping it under control.

The second indicator of fiscal debt to GDP ratio showed a positive trend with a level of 18.7% of GDP in 2004, down to 12.6% in 2007 due to a combination of lower interest rates, high rate of economic growth, privatization of incomes and favourable exchange rates. Since 2008, this figure has risen significantly, reaching 23.7% of GDP in 2009. This figures show an increase in external debt of 236% between 2005 and 2008, mainly due to short-term component (by 543%). Growth of foreign debt in the medium and long term was caused mainly by private loans, with the private debt increase explaining 82% of the increase in total external debt in the medium and long-run between 2005 and 2008 (Georgescu, 2010).

One of the nominal convergence criteria that Romania failed to accomplish is that of price stability. In the period after 2000, monetary policy focused on ensuring a continued disinflation, but despite this approach Romania had the highest inflation rate among the candidate states.

Reduction of the annual rate of inflation (Dec. / Dec.) from 40.7% in 2000 to 30.3% in 2001, then to 17.8% in 2002 to 14.1% in 2003 to an inflation expressed in single digits in 2005 of 9.1%, and then its reduction in accordance with a trend imposed by the nominal convergence criteria were the main objectives of monetary policy, in the context in which the indirect approach in August 2005 to combat inflationary phenomenon has been replaced with the monetary policy strategy of inflation targeting.

In 2006 the annual inflation rate was 6.6%, down then in 2007 to 4.9%, below the 5% target year, to 7.9% in 2008, well above the targeted goal of 3.8%, reaching a peak of 9.1% in July 2008.

In 2009, the inflation rate based on changes in consumer price index fell to 5.6% of GDP, a poor value for inclusion in the Maastricht criteria and the forecast for 2010 inflation target is 3.5%, with a value recorded in July of that year of 7.14%.

The main causes of this unfavourable inflation situation include a combination of external factors such as the effects of high-risk mortgage crisis in the U.S. that have changed the perception of foreign investors in the economies of Central and Eastern Europe, leading to a massive withdrawal of funds, increases in food and oil prices, which were added internally by advancing the growth of labour productivity by the one of the wages, rising current account deficit and economic growth based more on consumption rather than exports led to the amplified increased of inflationary pressures (NRB, 2007, ECB, 2010).

In close connection with the criterion and the inflation rate is the interest rate on long-term government securities, which in the case of Romania, throughout the period under review, exceeded the reference value. In 2005, the interest rate was 7.49%, led by a fall to 7.2% in 2006 and 7.1% in 2007 and 2008. In this period the decreased risk premium, the leu's appreciation, and the lowering of the prime interest rate contributed to lower interest rates on long term loans. Amid the financial crisis, starting with 2008, there was an increase in this parameter, so in March 2010 the baseline was 6%, while the same for Romania was 9.4%. Given the low level of liquidity in the long-term bonds market in Romania, it is difficult to draw inferences about the prospects of fulfilling this criterion.
Also, the criterion on exchange rate stability depends essentially on the performance criterion on inflation, meaning that the real appreciation of the exchange rate helps the disinflation process, under the condition of the principle that labour productivity growth (seen as a stimulating factor of external competitiveness) should be greater or at least equal to the amount of real appreciation of domestic currency and increase in the real average wage every year (Isarescu, 2007).

Romania’s national currency is not participating in the Exchange Rate Mechanism II, but since 2004 the National Bank of Romania has adopted a regime of floating rates with a low rate of intervention in exchange rate formation. Since 2004 there was a tendency of appreciation of the leu, along with the rising volume of foreign direct investment and expectations related to accession in 2007 to the European Union. The total liberalization of capital account required before accession contributed to this process. The financial crisis determined, from mid-2008, a steady deterioration of the leu’s exchange rate against the Euro, but monetary policy measures, mainly those related to creating and maintaining a high level of currency reserves (in 2009 they accounted for approximately 120 % of short-term debt of Romania) generate optimism about meeting this indicator of convergence.

REAL CONVERGENCE CRITERIA

Although not specifically mentioned in the Treaty of Maastricht, the real convergence criteria are just as important as the nominal convergence ones, because by respecting them the Union ensures that there are no significant structural differences between the economies that make up the Euro area and the candidates for adopting that single currency. The size of those differences may represent potential sources of conflict, but also an economic factor for loss of competitiveness in this integrated space. It is important to note that these criteria can be fulfilled over a longer time than those of nominal convergence, their achievement being the result of a complex and lengthy process, especially for the countries of Central and Eastern Europe with changing economic structure from command economy to market economy.

As far as openness of the Romanian economy is concerned, it is stable, but relatively low compared with other Member States of the same size, having values between 70.7% in 2000 and 80.6% in 2004. Romania’s trade share with EU Member States in total foreign trade is at a high, recording a steady upward trend since 2000 until now (September, 2010). The main intra-community partners are Germany, Italy and France and among the extra-community ones, Russia and Turkey are on the first place for exports and China is on the first place for imports.

Romania’s foreign trade structure has registered significant changes, decreasing the share of low added value and labour intensive (from 30% in 2000 to 15% in 2008) and an increase in capital-intensive products, such as machine tools and transport equipment in total exports.

These trends can be explained by a series of internal and external factors. The declining share of high labour intensive products embodied in total exports is due to outsourcing lohn activities from Romania to states with cheaper labour (Ukraine, Moldova, Serbia, etc.) and also to the replacement of the Romanian companies that produced textiles for the international market and the European Union by Chinese and Indian companies.

The increasing share of high value added, capital intensive products is the result of increased foreign direct investment in productive areas of Romania, whose products are subject
to export. Growth of FDI stood annually at around 7% of GDP, accounting for 80% of investment from the Community, mainly from Austria, Holland and Germany.

The structure of the Romanian economy on the three main branches (agriculture, industry, services) has as a specific feature the large share of agriculture in total economic activity 12-14%, as in Bulgaria, and 3-4 times higher than other Central European countries, while the share of agricultural population in Romania is 25%. At the same time, despite the growth in importance of the service sector (a significant proportion of FDI were directed towards the services, primarily to the brokering Financials), they still remain well below all the other countries in the region.

The last real convergence criterion analyzed, which best represents the degree of structural convergence perspective is the GDP per capita, which, expressed at nominal exchange rate, was 6350 Euro in 2008 and 5500 Euro forecast for 2009, placing Romania under 25% of the Community average. The GDP per capital is more relevant if expressed by purchasing power parity which in 2008 was 11,500 Euro, placing Romania at 44% of EU average, but well behind other states from Central Europe.

CONCLUSIONS

In the past 20 years, Romania has been subject to a complex process that involves returning to the structures and values of democracy and market economy. That process involves Europeanization and modernization, development and growth, and repositioning within both regional and global structures. Along with these changes have come complex questions regarding the placement of national interest in the newly created context, and the way in which to best combine valued traditions with modernity.

The nominal and real convergence criteria set the limits and the minimum conditions that our country should fulfill before adopting the Euro. They are simultaneously marks of modernization. As a member of the European Union with derogation from adopting the euro, Romania has made major strides in modernization. For its future modernization, Romania must move to a still higher stage of integration, and gain membership in the Euro area.

For this coming stage, only a part of the convergence criteria are met (long-term debt as a percentage of GDP, enrolment within the limits imposed by membership of the Exchange Rate Mechanism II, the openness of the economy and the high percentage of trade with EU member states). Unfortunately, the inflation rate, the interest rates on long term loans, the economic structure by industry and the most relevant indicator for the degree of convergence, i.e. GDP per capita, are all far from the Community benchmarks.

In addition to the criteria considered in this study, there are a multitude of other social and economic indicators which show the degree of modernization of the economy, some of which are difficult to quantify, that complete the picture of the national structures belonging to an integrated space. Interpretation of these other factors leads to the conclusion that Romania is modernizing its structures under the impact of Europeanization and European integration, but that the pace and intensity of this process are still lower than they need to be to fulfil the expectations of the current historical moment.
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FOREIGN ECONOMIC ACTIVITY OF UKRAINE’S REGIONS IN 2009-2011: TRENDS IN POST CRISIS DYNAMICS

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ABSTRACT
In the face of increasing competition between developed and developing countries, it is important for Ukraine to maintain a balance in relations with them, which is also an additional incentive for the modernization of the economy. To do so, accelerate the expansion of exports of Ukrainian products in developing countries, because if Ukraine could not gain a foothold in these markets in the near future, it is likely that it will face stiff competition not only from the TNCs, but also from large national corporations.

Key words: foreign economic development, regional activity, Ukrainian export/import of goods and services.

Development of the units within individual regions interconnected with the development of the central formation of agglomerative (regional center). Economy suburban areas economic developed sintering centers, has a higher degree of adoptability to the negative impact of external (including international) competitive environment than the economy of areas which are concentrated around economic underdeveloped central agglomerations. This forms the idea of territorial integrity and interdependence of separate territorial entities that are focused around a regional administrative center in economic and sectoral sense, because the economy of certain regions in the historical context has always specialized in the development of specific sectors within the country, resulting from international specialization as a territorial region and country.

This allows us to consider the process of Ukraine's participation in foreign economic activities, especially in post-crisis conditions, increase its international competitiveness through research of the local competitiveness of some regional entities that form in the final dimension of the overall competitiveness of Ukraine in the world economy through the operation of regional economic complexes, and influence through its internal - and external economic activity on the formation of international competitive rating of the whole state.

Historically, the first and dominant in the long period of time by the volume of transactions, the form of international cooperation was the international trade in goods and services. In terms of individual state and its regions, such trade is implemented as exports and imports of goods and services.

Only four regions of Ukraine (Kyiv, Kyiv Oblast, Donetsk Oblast, Dnipropetrovsk Oblast) because of its international activity forming 60% of the total trade turnover between Ukraine and goods in 2008-2010 and 55% in Q1 2011, while the share of 13 territorial regions of Ukraine
(Crimea, Vinnytsia, Volyn, Dnipropetrovsk, Kirovohrad, Rivne, Sumy, Ternopil, Kherson, Khmelnytsky, Cherkasy, Chernivtsi, Chernihiv Oblasts) varies within 0.4-1.8% of the resulting rate of turnover of goods. A portion of the Transcarpathian, Zaporizhzhya, Ivano-Frankivsk, Kharkiv, Luhansk, Lviv, Mykolayiv, Odesa, Poltava Oblasts are within 2.9% [1].

Thus there is considerable inter-regional gap in the contribution of regions of Ukraine in the overall result of the turnover of goods. Clearly tracing leading regions, and the outsider, who unfortunately are the majority. In addition, the total percentages of regional leaders is gradually increasing, even in a crisis that reduces the possibility of the outsider to increase its own regional competitiveness in both domestic market and external market. However, under regional leaders observed the reduction of competitive opportunities of the Donets and Dnipropetrovsk Oblasts and increase the share of Kyiv.

Ukraine's accession to the WTO has strengthened the competitive position of Ukrainian commodity producers on foreign markets, especially EU and USA markets expanded opportunities to deepen existing expertise, especially in metallurgy and chemical industry and the global economic crisis has accelerated this process [2].

On the other hand by becoming a member of WTO, Ukraine has reduced rates of duties and quotas abolished the vast majority of goods that previously protected domestic producers from foreign competitors. Regions of Ukraine experienced a significant increase in imports, especially automobiles and agricultural products, increase in imports many researchers associated with the deficit of products in internal market of this group - meat and poultry, sugar, due to unprofitable domestic production [3, 2].

It is expected that all regions of Ukraine will exceed exports of goods in 2011 compared with 2010, although in some regions there is threatening growth dynamics at a faster rate of imports than exports, for example, Crimea, Sevastopol, Dnipropetrovsk, Zhitomir, Odessa Oblasts.

Also, the study of the export activity of certain regions of Ukraine should determine their place in the global commodity market, identifying which groups of products, the largest share of exports in the region. Conventionally, all regions of Ukraine divides into 3 groups: the first - with diversified structure of exports of goods (ie the largest share of any group of goods does not exceed 30% of total exports) - Ivano-Frankivsk, Sevastopol, Vinnytsa, Zhitomir, Kherson and other Oblasts, the second - the average degree of diversification, the proportion is within 30-60% - Odessa, Kirovograd, Kharkov region, Kyiv and the third group - almost mono-branch export specialization of the region (share of 60%), which included only three regions: Dnipropetrovsk, Zaporozhye and Donetsk. At last, the share of exports of base metals and products account for 72.1% of total exports.

The situation observed in 2010 with export specialization of regions intangible improved compared to 2009, where the observed phenomenon: the development of industrial regions of Ukraine are mainly exporting products with a low degree of processing - mainly ferrous metals and articles thereof, at the same time export of agricultural regions dominated by machinery and equipment. This situation can be explained as follows: since exports seen only for the territory of Ukraine in general, it is not considered domestic trade between the regions of Ukraine and therefore should be considered external and internal (within country) the specialization of the region separately.

The largest exporters of services among regions of Ukraine are Kyiv (19.7% of total exports of services), Odessa region (10.9%) and Donetsk (5.3%), and importers of Kyiv (28.5% of total imports of services), Dnipropetrovsk (9.6%) and Donetsk (7.6%). It should also be noted that the vast majority of regions of Ukraine will exceed the volume of services exports in 2010 compared with 2009, although some regions are characterized by faster growth in imports than exports of services,
such as the Crimea, Sevastopol, Donetsk, Dnipropetrovsk, Zaporizhzhya, Odessa, Poltava region, etc. Such trends are alarming and require compensatory measures, although there are a number of regions that are experiencing the reverse process: Kyiv, Vinnytsia, Volyn, Ivano-Frankivsk region, etc.

Considering the specialization of regions of Ukraine on trade in services, we can conclude that the export is dominated by a variety of business services, talk about the high level of diversification of exports of services (i.e., the largest share of any group of services does not exceed 30% of total exports) is not possible since only Poltava region is close to the ceiling rate.

In the import of services is different, since only 3 regions (Vinnytsia, Dnipropetrovsk, Kharkiv) have greater than 60% of the index's largest group of services in import, it indicates that their requests for services the regions of Ukraine are trying to meet the expense of national service providers and those regions which dominate the import of real estate, leasing and corporate banking and financial activities of experiencing the outflow of investments abroad.

Specialization of Zaporozhye, Sunny and Khmelnytsky Oblasts, which suggests that these areas are the leaders of tolling operations and more actively involved in international cooperative collaboration than other regions of our country.

Speaking about the dynamics of foreign trade in services and goods should be noted that during the crisis last experienced a smaller reduction than the trade in services and therefore speak of the formation of post-industrial economy at the regional level too early. It should give you an interesting fact: during more than 10 years in some regions of industrialized regions such as Donetsk, dominated by services than industrial production in total sales, although exports of the regional center dominated by iron and steel industry products.

Thus, we can conclude that the regions of Ukraine participated in the international division of labor largely arisen due to the historical aspect, trying to avoid mono-branch specialization of some regions in exports were detained global economic crisis, which led to the development of such expertise. This in turn allows us to speak about the internal imbalance of regional policy towards standardization of foreign trade within the region, creating the possibility of absolute dominance of regional leaders at the expense of the outsider in the turnover of goods.

Become widespread international cooperation in specific areas of production, socio-economic life, science and technology. Such cooperation does not necessarily take place as part of various organizational structures. It may occur during states agreed their programs, including joint projects of scientific and technological development.

Such cooperation tends to encourage a comprehensive expansion of trade, mutual investment of national industrial complexes, large-scale integration. Especially it should be noted the increase in and, sometimes, unalternativity of international cooperation in scientific and technical sphere. In the modern scientific and technological space are developed and sophisticated capital-intensive technology that even countries that are leaders in terms of industrial development and the amount of capital, unable to realize their own and integrate their efforts with other countries. Moreover, this need is experiencing Ukraine: because of objective reasons, after the collapse of the Eastern bloc and the USSR was a significant narrowing of the technological space in which there was economic activity of Ukraine.

In this connection great interest to Ukraine is detailed and extensive cooperation, which is the EU countries. In particular, such cooperation takes place within complex projects "eureka", which are the building blocks of numerous industry cooperation programs. An example of large-scale international project in which participates, our state is «Sea Launch».
In the quarter decreased compared to 2008 the total number of applications filed in foreign agencies, including the number of patent applications - by 29.1%. The largest part of requests made of industrial property (inventions, utility models, industrial designs, then - IPOs) that were filed with the Patent Office of the Russian Federation (73%) [4].

The number received in 2009 of protection of Ukraine and foreign countries to IPOs compared to 2008, decreased by 7.8%. Substantially reduced the number of patents for industrial designs (36.0%). The vast majority of foreign patents to IPOs also obtained in Rospatent (90.9%).

In recent decades the volume of movement of capital assets has been steadily growing, and this factor is important for the development of open economies. Especially it concerns the economy of Ukraine, who feels the need for significant inflow of funds from outside, and also suffer from capital flight because of the relatively worse conditions for their functioning.

Migration of capital from the perspective of a country, realized in the form of export of capital (in this case the country is a donor, exporter of capital) and capital import into the country (in this case is the recipient country, an importer of capital). Export of capital are countries with a relative (not confused with the absolute) surplus funds in a particular country and the opportunity to receive higher returns in another Member State through:

• more favorable to owners of capital ratio of inputs (which leads to more conventional cost of capital);
• Possibility of access to markets of certain economic resources (eg raw materials);
• the possibility of receiving marketing advantages in commercial activities (e.g., in the form of creating economic structures that provide sales of firm-investor, or by transfer of the production process to the target country - the country of sale in order to increase production efficiency, bringing it closer to consumers).

International capital movements caused by the difference in the saturation specific economic factors or the ratio of these factors. Despite the general tendency to increase the inflow of foreign investments into Ukraine's economy in most regions, a decrease of foreign investment inflows.

Another important problem is the inefficient structure of foreign investment, which strengthens the structural imbalances in the industry and adversely affect the international competitiveness of the regions of Ukraine. The priority for foreign investors remain the industry relating to the third (mining and oil refining, production of non-metallic mineral products) and fourth (food, chemical and petrochemical, metallurgy, paper and cellulose) technological structures. Only in the Transcarpathian region of the investment structure is dominated by investment in the industry of fifth technological structure.

Thus, for the regions critically important is a task of raising the level of innovation and research intensity of foreign investment. However, at the regional level is taking steps to improve the quality of foreign investment.

The problem of quality of foreign investment also characteristic and for special economic zones, which is to invest capital primarily in industrial production of the third and fourth technological structure. At the regional level of special zones were set can be an effective way of managing the process of attracting foreign investment, which will positively affect the region's participation in international cooperation. But the existing legal regime for foreign business entities in the SEZ can not fully use this mechanism to improve the economic situation in deprived areas. There is a tendency to reduce the share of foreign investment in total investment in SEZ and TPD of Ukraine, which is associated with changes in legislation in 2005 According to the Law of Ukraine "On amending the Law of Ukraine" On State Budget of Ukraine for 2005 " was canceled tax
exemptions and special customs regime, the state guarantees the stability of the legal regime of SEZ and TPD.

Part of the solution to attract investments in SEZs will contribute new Law of Ukraine "On general principles of creation and functioning of priority development areas, special economic zones and recreational areas," the project is submitted to Parliament in 2007. In addition to specific provisions of this Law (Article 15. Special customs and tax regimes) are intended to prevent misuse of preferential treatment in the SEZ, is positive provided special investment regime for entities that implement approved by the Board (Committee) or local government investment projects in priority kinds of economic activity on the TPD. However, the draft law, these priority economic activities are not defined and not provided for measures to increase research intensity projects that can lead to further intensification of the technological backwardness of industrial production in the SEZ and TPD.

The study showed that international cooperation in most regions of Ukraine is characterized by decreasing dynamics and inefficient structure of foreign investment. The reasons for this state feel inadequate institutional support of foreign investment, which leads to ineffectiveness of mechanisms of state investment activities of Management at the regional level. In addition to solving the problems the state level, which are typical for foreign cooperation (simplification of registration, licensing, certification, customs, reducing bureaucratic barriers) and the taxation of economic activity of foreign investors (reducing taxes and simplifying their administration, stability of tax legislation, the solution issue refunds of value added tax) should improve the mechanisms of involvement and support of foreign investors in the regions.

The first step in improving governance in investment activities at the regional level should be the development of the state investment strategy of Ukraine, which would encompass the period of not less than five years. The components of this Strategy should be investment program areas of Ukraine, worked for the same period and consistent with regional strategies of international cooperation. This multilevel approach will combine the interests of central and local governments in attracting foreign investment and increase the effectiveness of international cooperation at the regional level through a clear division of powers between the center and regions.

To increase the efficiency of foreign investment should be in the regional strategy for international cooperation to identify priority areas of investment, applying the criterion of research intensity of production. At the same time, regional investment programs that provide mechanisms to enhance the attractiveness of investment in these sectors for investors.

To enhance the innovativeness of foreign investment, attracted by industrial enterprises located in SEZ and TPD, should by legislation to provide incentives for investors that implement innovative projects in these areas and make investments in the industry five technological order. Benefits may be similar to those set forth in the draft Law of Ukraine "On general principles of creation and functioning of priority development areas, special economic zones and recreational areas" for the activity of technological parks and innovation structures of other types. To some extent, foreign investment in knowledge-based production will create a network of regional venture funds, capital of which is formed with the participation of state and market investors. State of readiness to risk investing in innovative enterprises increase the attractiveness of science-intensive projects for foreign investors and strengthen the responsibility of local authorities for the use of funding for innovative development of the region [5].

Given the geopolitical location of Ukraine, should be actively finding ways of transit cargo. We believe that for facilitation of transit, it is necessary to eliminate duplication of functions of state
control through the development of a typical flow chart points, create the necessary legal framework in this area.

Along with the trend towards trade liberalization, the current foreign trade policy of most countries can be characterized as moderate protectionist. The state has the right and should regulate economic relations in order to protect interests of domestic producers, exporters and consumers, using the whole arsenal of instruments of trade policy.

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INDEX RELATING AS A TOOL OF SEGMENTING SOCIAL INTERRELATION AREAS AMONG COUNTERPARTS

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ABSTRACT

This article focuses on index relating. It is aimed at comparing reduction and holistic approaches in attempt to find the best formula of calculating value aggregate. The study of IR nature is of great importance as business positioning allows defining market character and counterparts’ interests. As a result of suggested approach the new index providing clear economic sense is discovered.

Key words: market segment, reduction approach, holistic approach, index system.

INTRODUCTION

Nowadays in consequence of accepting Federal Target Programme “Development of State Statistics in 2007-2011” it is timely to “search absolutely new approaches … and to work out indexes and algorithms of their calculation which have not been used earlier”. [1].

The ground work “Manual on consumer price indexes: theory and practice” underlines “the aim of index is to decompose expressed in relation or percentage changes of value aggregates (I_w) into total components of price changes(I_p) and quantity changes (I_q)” [2].
In authors’ opinion this aim can be achieved with the help of two approaches defined by the authors as: 1) reduction approach based on induction method; 2) holistic approach where the main principle is to subordinate a part to the whole that is deduction method.

At the present time reduction method is prevalent in index theory where studying complex systems is just analyzing the interaction of its parts and elements.

So, numerous attempts of “aggregating” price indexes and quantity indexes on which base it is possible to work out value aggregate are going on. In our opinion examples of reduction approach are index systems of Law, Laspeyres, Paasche, Fischer, Walsch, Edgeworth - Marshall, Tornquist etc.

INVESTIGATION

As the experience demonstrates, applying such systems appeared to be unacceptable to achieve the main aim of index. In particular, the product of Laspeyres quantity index($I_q^L$) and Laspeyres price index($I_p^L$) or the product of Paasche quantity index($I_q^P$) and Paasche price index($I_p^P$) do not provide the real amount of value aggregate ($I_w$), i.e.:

$$I_q^L \times I_p^L \neq I_w; \quad I_q^P \times I_p^P \neq I_w$$  \hspace{1cm} (1)

It also concerns other mentioned index systems. These circumstances have led supporters of reduction approach to the formula of “cross”index:

$$I_q^L \times I_p^P = I_w$$ \hspace{1cm} (2)

or

$$I_q^P \times I_p^L = I_w$$ \hspace{1cm} (3)

However the problem to which formula (1) or (2) the preference should be given and why has not been solved yet.

The alternative to reduction approach is holistic approach according to which the system itself can be explained only in the aggregate.

We will try to estimate the opportunities of holistic approach on the basis of mathematic research of value aggregate space-dependent function. For this aim the index system should be presented as the function of two variables

$$I_w = F(I_q^L, I_p^P),$$ \hspace{1cm} (4)

where $I_q^L > 0, I_p^P > 0$.

Having analyzed this function with the help of plane sections the authors found out that space graph of the function(4) is hyperbolic paraboloid which projection components «$I_q^OL_p$» are hyperbolic curve and direct line.

The general view of projection components «$I_q^OL_p$» is demonstrated on Draw 1.

Draw 1 shows hyperbolic curve $I_w$ and IR direct line have only one cross-point «$I_q^OL_p$». Coordinates of this point are amounts of corresponding indexes.
Draw 1. The general view of projection components \(<I_qO_I_p>\)

So, knowing \(I_w\) and \(IR\), one can define the amounts of \(I_q\) and \(I_p\). It is necessary to decide the following system of simultaneous equations:

\[
\begin{align*}
I_w &= I_p \times I_q \\
IR &= \frac{I_p}{I_q}
\end{align*}
\]

(6)

where \(IR\) is an aggregate relation demonstrating how many times price index is higher(lower) than quantity index.

In authors’ opinion \(IR\) has clear economic sense, i.e.: according to the \(IR\) amount one can estimate exactly what increases faster and what decreases slower: price changes overcome quantity changes and vice versa. For example, the price has increased by 50%, and quantity of goods – by 40%. May we confirm that price growth overcomes quantity growth by 10%?

Obviously, we may not. It is necessary to divide price index \((I_p = 1,5)\) by quantity index \((I_q = 1,4)\) to answer this question. Having found this ratio we receives: 1,5 : 1,4 = 1,07, i.e. price growth overcomes quantity growth by 7%. The authors consider this fact as an economic sense of index ratio.

The solution of this system (6) provides the following results:

\[
\begin{align*}
I_p &= \sqrt{I_w \times IR} \\
I_q &= \frac{I_w}{\sqrt{IR}}
\end{align*}
\]

(7)

(8)

Presented forms of price indexes and quantity indexes in (7) and (8) are hyperbolic form to which most of index theorists give preference [2].

The main difference between reduction and holistic approaches is presented on Draw 2.
However, how is IR calculated if calculation \( I_w = \frac{\sum q_1 p_1}{\sum q_0 p_0} \) in (7) and (8) is an easy one?

\[
\text{IR} = \frac{I_p}{I_q}
\]

a) reduction  

b) holistic

Draw 2. Distinguishing peculiarities of two approaches

To answer the question IR content, IR structure and IR form must be common both for individual and aggregate price and quantity indexes. Only in this case one can consider as an equal and universal index constituent.

For index individual form as the simplest one there is:

\[
\text{ir} = \frac{i_p}{i_q} = \frac{p_1}{q_1} \cdot \frac{q_1}{q_0} = \frac{p_1 q_0}{q_0 q_1} \quad (9)
\]

In ratio (9) the numerator and the denominator possess a definite economic sense [3].

So, \( q_0 q_1 \) can be considered as a product value within basis period according to the prices of accounting period or as a product value in the accounting period, provided that the quantity of sold goods is equal to the quantity of the basis period.

The numerator \( p_0 q_1 \) has the same dual nature. On the one hand \( p_0 q_1 \) is a product value in the basis period provided that the quantity of sold goods corresponds to the quantity of the accounting period. On the other hand it is a product value in the accounting period at prices of the basis period.

As IR concept, IR structure and IR form must be common for both index forms, one can suppose that for aggregate index

\[
\text{IR} = \frac{\sum p_1 q_0}{\sum p_0 q_1} \quad (10)
\]

Ratio (10) is easily noticed to suit both Fischer’s tests of exchangeability and if it is not the index itself (considered by Fischer as “…index is an average” [4]), but it is likely to be an
index figure which is designed for “…pointing by its variations to decrease or increase of quantity excluding exact measurement” [5]

Substituting (10) in (7) and (8) we receive:

\[
I_p = \sqrt{I_w \times IR} = \sqrt{\frac{\sum p_1q_1}{\sum p_0q_0} \times \frac{\sum p_1q_0}{\sum p_0q_1}} = \sqrt{I_p^P \times I_p^L} = I_p^F \tag{1}
\]

\[
I_p = \sqrt{\frac{I_w}{IR}} = \sqrt{\frac{\sum p_1q_1}{\sum p_0q_0} \times \frac{\sum p_1q_0}{\sum p_0q_1}} = \sqrt{I_q^P \times I_q^L} = I_q^F \tag{1}
\]

The important conclusion can be made from (11) and (12):

\[
IR = \frac{\sum p_1q_0}{\sum p_0q_1} = \frac{I_p^P}{I_q^P} = \frac{I_p^L}{I_q^L} = \frac{I_p^F}{I_q^F} \tag{13}
\]

Ratio (13) means points \( I_w^P (I_w^L, I_p^L), \)

\( I_w^F (I_q^L, I_p^L) \) \& \( I_w^P (I_q^F, I_p^F) \) are on the IR line.

Now if we suppose \( I_p^F > I_p^L \) (covariation index (IC) is more than one) then in the diagram form the ratio (13) can be illustrated as follows (Draw 3).

Draw 3. Diagram place of IR points

Thus, IR and IC are the backbone of the same proportional index transformations, wit, if

\[
IC = \frac{I_p^P}{I_p^L} \quad \text{demonstrates that Paasche’s price index is higher (lower) than Laspeyres’s price index as many times as Paasche’s quantity index is higher (lower) than Laspeyres’s quantity}
\]
index, then \( IR = \frac{I_p}{I_q} = \frac{I_p}{I_q} \) demonstrates, that Paasche’s price index is higher (lower) than Paasche’s quantity index as many times as Laspeyres’s price index is higher (lower) than Laspeyres’s quantity index.

Thus, the correspondence of lines and columns “closes” on 2-by-2 index matrix:

\[
\begin{bmatrix}
I_p^p & I_p^q \\
I_q^p & I_q^q \\
\end{bmatrix}
\]

In this matrix \( IC = \frac{I_p}{I_q} = \frac{I_p}{I_q} \), \( IR = \frac{I_p}{I_q} = \frac{I_p}{I_q} \).

This implies IC and IR define variants of forming price indexes and quantity indexes known in modern index theory. Their multiplication presents value index, wit:

\[
I_w = \sqrt{I_w \times IR} \times \sqrt{I_w \times IR} = \sqrt{I_w \times IC} \times \sqrt{I_w \times IC} = \sqrt{I_w \times IC} \times \sqrt{I_w \times IC} (14)
\]

or in classic expression

\[
I_w = I_p^F \times I_q^F = I_p^L \times I_q^L = I_p^L \times I_q^L (15)
\]

Thus, possessing the data of total value index there is an opportunity to define factorial index(component index).

The authors reckon if \( IR > 1 \), then this suits seller’s interests as he is interested in the price growth. If \( IR < 1 \), then this suits customer’s interests as the customer is interested in price reduction.

It is known from [6], if \( IC > 1 \), then offer dominates on the market so in character of price and quantity changes there is seller’s market. If \( IC < 1 \), then demand dominates on the market so there is customer’s market.

In our opinion, positioning a business in IC and IR coordinates allows both to define market character and to understand whether counterparts’ interests are taken into account (Draw 4).

If \( IC < 1 \) and \( IR < 1 \) (see the draw), then there is the market of customer’s dictation where demand dominates and sellers’ interests are not taken into consideration. A seller is unlikely to come out to such market.

By contrast, if \( IC > 1 \) and \( IR > 1 \), then there is the market of seller’s dictation where customer’s interests are completely ignored. Such market is unlikely to have prospects of development.

If \( IC > 1 \) and \( IR < 1 \) then this is the market of such seller who works for customers and takes their interests into account, even at the expense of his own interests.

And, finally, if \( IC < 1 \), \( IR > 1 \), then there is a market dominate of a customer who understands seller’s problems and is prepared to solve them even at the expense of his own interests.
CONCLUSIONS

Two last market segments are social interrelation areas between counterparts. Exactly in these areas a compromise can be found and the presence of a business in these areas underlines social trend of its activity, it is social significance and social function.

The activity of such business suits national interests and exactly such business must be supported by the municipality, the region and the state.

Therefore the authors propose a new approach of index system research. As a result of the proposed approach and held research the new index has been discovered. This index is an internal feature of index systems and has a clear economic sense. In authors’ opinion further and much deeper research of IR nature and its place in index system allows to enrich economics with completely simply calculated index and to consolidate index theory by new knowledge and to bring index theory and basic trends of economics together.

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ABSTRACT

Article considers a standards of commercial bank activity as a tool for increase the competitiveness of the banking business. The author pays great attention to the standard of the banking deposit operations.

The analyze of the theory of such standard and present trends on the deposit market were helped to determine the advantages of using this standard for bank at present time. Also the author determines the role of standard of banking deposit operations on the basis on this analyze.

According author's point of view the standard of banking deposit operations plays a major role as one of key tools of increasing of economic activity through tougher competition in quality of banking product.

It is emphasized that banks need in the development such standards in the sphere of deposit operations as priority for them at present time.

Key words: crisis, bank, standard, competition.

INTRODUCTION

The latest financial crisis revealed some blind sides in the functioning and regulation of the financial institution activities, and first of all bank activities. Both in the international and in domestic theory and practice of banking, elaboration of mechanisms, which are able to prevent the recurrence of global crises later on, was activated. And at the present stage they are able to mitigate the impact of the crisis. One of these mechanisms are a standards of bank activities. So, an introduction to the Russian banking practice of qualitative and quantitative standards of the banks deposit operations, must be actualized.
The impact of the financial global crisis of 2008-2009 on banking sector manifested itself in different ways. On the one hand, it manifested itself in investors' panic, appreciation of banking resources, and consequently reduction of banks' liquidity. On the other hand, we suffered reduction in loan services, because of the high interest rates and abrupt decline of customers' solvency. Banks, like other financial institutions found themselves in the situation of complete uncertainty of further development during the crisis period, on the background of severe competition for the customer, predominantly the investor.

During the pre-crisis period a dynamic increase of the role of foreign liabilities in bank resources was revealed, that was due to the processes of financial globalization and lack of funds within Russia (graph 1).

Graph 1. Loans, deposits and other funds attracted from credit institutions — residents and non-resident banks

At the same time the priority of involvement of these resources was explained by accessibility of international capital markets, and also favorable conditions for attracting these resources. However one should realize that in spite of the influence of inflow of these resources on the economic rise, and also the increase of confidence in the national economy, (that positively affects the investment attractiveness of our country), the funds received from the external market are dependent on the world conjuncture, economic and political factors. The recent financial crisis confirmed this fact. The instability of this resource reveals itself in the conditions of the world financial crisis.

In the short term the abrupt capital outflow from Russia occurred, which aggravated the situation on the financial and foreign exchange markets that created a danger of instability of the whole economics.

On the background of unfavorable trends in world economy in autumn 2008 the amount of the attracted funds of the investors decreased. The reason for this was not only the reduction of inflow of new investments in the bank system, but also available outflows (graph 2.).

1hereafter Official statistics of Central Bank of Russia / /www.cbr.ru
According to the Central Bank of Russia, by the beginning of 2008 the total amount of investments in Russian banks of individuals was 5,159 trillion rubles, that was 24,4% of the total income of the population. By the 1st of September 2008 this amount grew to 5,978 trillion rubles. Besides the outflow of deposits of individuals from large banks, one could see redistribution of investments from private banks into governmental banks. During September the share of state banks in the investments increased from 77,5% to 78,8%. The peak of panic occurred in October 2008, when banks began to introduce commission and fee for early repayment of deposits, while increasing the rate. In December the inflow of funds in banks was 7,2%. The factors, which played in favor of recovery of the market, were additional measures to support economy and bank system of the Russian Federation, worked out by Russian Government and the Central Bank of Russia, including the increase of maximum amount of insurance compensation up to 700,000 rubles, and also the dynamics of exchange rates.

According to the results of 2009 the ratio of the deposits of individuals to GDP had reached its absolute maximum in the entire history of the market of the banking system – 19,2% (graph 3).
Savings activity of population in the whole period of 2009-2010 was high. (graph 4)

Graph 4. The amount of public funds in 2008 – 2011

The amount of public funds in 2010 increased to up to 31% (in 2009 it was 26.8%) in nominal terms and by the 1st of January 2011 reached almost 10 trillion rubles. The unexpected increase of liabilities resulted in the fact that the crisis of lack of bank liquidity quickly grew into a crisis of abundance of liquidity, that burst out by the end of 2010 and at the beginning of 2011 (graph 5).

Graph 5. Account balances of credit institutions on correspondent accounts with Bank of Russia, bln. rub.

While individuals´ funds were involved at a sufficiently high yield of (6-12% per annum), they were often placed in debt securities with a yield of 7-10%. Thus in many cases, the bank's profit from such transactions was zero. The reduction of interest margin made banks look for cheaper funding, while the yield rate of deposits decreased continuously (graph 6).
Graph 6. The dynamics of average interest rates on deposits, 2008 - 2011

Note that the increase in public fund-raising occurred in the conditions of declining of profitability of bank deposits, although less rapid. The average yield rate of attracting public funds for ten largest banks can serve as an indicator.

Dependence of individual banks on deposits of individuals at the beginning of 2011 worried the Central Bank of Russia. It indicated that the share of deposits in bank liabilities at a level above 50% carries risks for the credit institution. International practice proves conclusively that the phenomenon of "herd behavior" of depositors could lead to bankruptcy of banks not only in the phase of economic turbulence, but also in post-crisis period.

In March 2011 a 5-year-long strategy of banking sector development of the Russian Federation was adopted. According to this document “the main goal of the development of Russian banking sector in the average perspective is an active participation in modernization of the economy on the base of significant increase of the level and quality of banking services to organizations and the public while ensuring its systemic stability”¹. This requires a shift from extensive model of the banking sector to the intensive one. The importance of creating of a long-term resource base in the banking sector is increasing, which will provide credit resources for the economy of the country to the extent necessary for its modernization. There is also a task to establish "minimum standards for financial services"².

In our opinion the solution for these tasks is interconnected.

At present there are internationally well-known measures to strengthen the resource base. They are:

- introduction of the irrevocable deposit in one form or another;
- application of taxes and monetary and credit incentives for the accumulation;
- increase in size of the guaranteed repayment of the deposit insurance system;
- placing of temporarily free budget funds, and funds of state-owned companies on deposit;
- development of targeted housing and education deposits.

¹ Banking Sector Development Strategy of Russia until 2015
² ib
In addition to all these Russia also needs introduction of qualitative and quantitative standards of deposit services into the Russian banking practice.

Speaking of quantitative standards, we can be sure that optimal ratio of external and internal sources of funding will not result in dependens of the whole deposit base on one type of resources, and will not lead to a crisis in the future. At present an acceptable ratio of external debt to liabilities, is recognized at the level of "close to 20%", i.e., the main priority in resourcing of Russian banks must be attraction internal savings.

Due to with the above-mentioned problem of the sharp increase of the share of deposits in the sources of funding of the banking system of Russia, Letter of the Central Bank of Russia of 12. 08. 10 № 116-T "Risk assessment of banks, which actively attracting deposits," was issued. According to it a threshold share of household deposits in total liabilities of credit institutions must not be more than 25%, which can be viewed as a specific quantitative standard introduced.

One of the mechanisms that can make national banking system more efficient, sustainable and transparent is the system of quality standards for banking activities, developed by the Association of Russian Banks. The bank's deposit policy is a direct component of resourcing, so the standard of active banking transactions on the deposit was developed.

This standard, regulates the requirements for the implementation of the deposit process, and helps to manage it. In order to improve the formation of deposit resources, the use of standard contributes to the formation of an effective deposit policy, providing high quality savings products and services that will provide the bank an optimum combination of resources (both stable and "volatile") in deposit portfolio.

In this case the future development of the banking sector should be focused on:

- demand and market needs, customer needs, creation of banking products and services that are in demand and can bring the bank to maximize profits;
- necessity to increase the efficiency of banking activities in order to reduce costs and achieve optimum results in terms of liquidity and profitability of the bank;
- accuracy of assessment of market situation, well-timed and correct adjustment of goals, objectives and programs, depending on the condition of the deposit market;
- attraction of term deposits to ensure liquidity and balance of deposit demand for the bank profits at the expense of using "cheap" resources.

Regarding the effectiveness of the use of bank resources as a component of improving the management of resources attracted as deposit, this trend is not subject of regulation standard of quality of banking activities for deposit operations, but it is important for the future development of the banking and economy as a whole.

If we look at banking standards as a category of quality of deposit activities of banks, we should distinguish between two areas of their implementation:

1. standards of quality of organizational process and
2. standards of quality control of the involved resources.

Therefore these standards are fundamental for ensuring the effectiveness of each transaction related to customer service.

However, in accordance with the lessons of the recent financial crisis, along with the quality of banking products, services and technologies, banks need to determine to their real

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1 A. V. Ulukaev, E. O. Danilova “external debt of banks as a source of financing investment strategy of Russia: Risks and mechanisms of control” /*The Life and Credit* № 5, 2009
market value. Since in the implementation of it's deposit policy is it necessary for the bank to calculate the cost of the proposed retail deposit products and services by determining their profit margins in the context of each client. The bank must introduce flexible individual pricing policies and, accordingly it will realize an individual approach. Thus it will increase competitiveness of both individual banks and the banking system as a whole.

Also basing on the lessons of the crisis the following principles of efficient use of bank deposit resources can be distinguished:

- use of contemporary database and innovative technologies for making optimal decisions (computer technology, networks, etc.);
- systematic analysis of the movement of funds that can be withdrawn;
- individual flexible pricing policy for deposit resources;
- rational staff recruitment and effective organization of its work.

It should be noted that the crisis has stirred up a discussion about self-regulation in the banking business. And today the banking community is actively discussing prospects of self-regulation in this area as one of possible directions of solving problems of improving stability in the banking system and modernization of Russian economy.

Among the priorities of self-regulation in the banking sector there are the following recommendations:

- development of common obligatory rules of conduct for banks in the market;
- control of deposit insurance system;
- formulation and implementation of internal control standards in the banks;
- development and implementation of standards of corporate governance in banks;
- exchange of information about the borrowers (within the credit bureau);
- education of contemporary professional and diligent banking executives.

Simultaneously with the necessity of self-regulation, banks have realized the urgent changes in the alignment of development priorities. In particular, to the fore there are such issues:

1. formation of long-term resource base of mainly internal sources;
2. expansion of lending to the real sector of economy;
3. adequate assessment of effectiveness of its activities through continuous monitoring of risk always accompanying banking activities;
4. in general, the reorientation of its qualitative aspect.

In its turn, the importance of banking standards for each identified priority areas is evident. So in these areas standards for banking activities are developing, as evidenced by the developed standards BDA: “Standard liquidity management”, "Quality Standard of banking activities on deposit Operations", "Quality Standard of the Organization of strategic management in the credit organization”, "Standard of quality of work organization in managing business processes in credit institutions ", "Standard of quality of management of reputation risk in the credit institutions ", "Standard of innovative credit, etc.

Of course, numerous problems of the resource base of domestic banks require changes in the sphere of state interference - revision of laws and regulations of monetary policy, etc., but on the other hand, their solution is also directly linked to the development and implementation of quality standards in the deposit policy of individual commercial banks. We are sure that all this will be followed by spread of "best practices" for the entire banking system.
It is necessary to distinguish the standardization of banking activities and policies of the Central Bank regarding the regulation of this activity. Established by the CBR requirements are legislative and unconditional for banks and are not standard.

Due to the fact that at the present stage of development of standardization of banking activities in the sphere of self-regulation (because there is no national standard in this area), and the Russian banking system, in its turn, is characterized by a predominance of centralized control in comparison with self-regulation (which is justified and corresponds to international practice), development of standards in the field of banking should proceed in closer interaction with the CBR, but the standards of banking activities should remain the prerogative of commercial banks.

At present the importance of standardization in the banking industry for active operations and the assess of the risks taken by banks becomes more obvious, as evidenced by the Russian banks association which developed the "Standard of innovative lending."

In general, if we consider approaches to standardization in the pre-crisis time and during the crisis, we can distinguish the following features of their formation and development:

1. Before the crisis, Russian banks have paid more attention to the content of already developed standards, striving to improve them in accordance with international practice. Thus, during 2005-2006 there were developed such standards as: Standard of the form of a pledge agreement; Standard for assessing the quality of internal controls in the bank; quality standard of corporate governance; Standard of transparency of ownership, quality standard of management (including of quality of management and control of bank risks); Quality standard of bank agreements (financial documentation) for loans and deposits (including agreements with individuals): Quality standard of information disclosure (by the bank and customer).

2. During the crisis, there was a shift for finding and developing new standards of banking activity as an effective tool to protect against financial shocks.

Thus, the transformation of standards of quality tools of globalization happens, whose role is bringing together the Bank's approach to the implementation of its activities, into quality catalyst of market conditions which improve efficiency of banking activities based on the development and introduction of uniform requirements:

1. to the implementation of credit institutions operations,
2. to the quality of lending organizations' products.

This is confirmed by the active work of the Russian banks a - directly to the developers of standards in this area, due to the need of credit institutions, firstly, to obtain advice on emerging issues in the period of instability, and secondly, in bringing together the best practices with regulatory standards.

So, at present it is important to develop evidence-based deposit policy, i.e. Banks need to develop its theoretical framework, priorities in terms of development strategy of an individual bank, as well as determine the most effective and optimal for a given stage of development bank tactics and methods for its implementation. The basis for development of an individual bank deposit policy can serve a standard of quality of banking activities on deposit operations.

CONCLUSIONS

From the foregoing it can be concluded quite theoretically reasoned positive impact of the application of standards to improve the efficiency of banking activities:
1. The major category of banking activity is quality - the quality of organizational process and quality control of the involved resources is fundamental for ensuring the effectiveness of each transaction related to customer service.

2. Under the direction of improving the formation of deposit resources, the use of standard contributes to the formation of an effective deposit policy, providing high quality savings products and services that will provide the bank an optimum combination of resources (the stable and "volatile") in deposit portfolio.

3. Orientation on the demand and market needs, customer needs, the creation of banking products and services that are in demand, can help to maximize bank's profits.

4. Standards of banking activity contributes to the spread of "best practices" for the entire banking system.

Although the practical application of the standards has not yet found wide dissemination in the activities of Russian banks. Therefore, despite the fact that a small number of banks apply these standards, mostly among the developers of these standards - the members of Russian banks association, there are all reasons to believe that the standardization of banking activities will be an effective tool for increasing the competitiveness of Russian banks. In this case, an important feature of such standards should remain a voluntary nature of their application.

In general, beneficial effects of standards of banking activities to revitalize the banking business, will also contribute to economic growth, since the use of credit institutions in their activities of these standards will help increase the flow of resources to the banking sector, going on lending to the real economy. This is the priority of the development of standards of banking activities for the national economy as an effective tool to improve the quality of banking operations.

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RATIO OF ACCOUNTING STANDARDS AND TAX LAWS
IN RUSSIAN FEDERATION

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ABSTRACT

In the framework of state regulation of economy in post-crisis period a clear accounting of tax revenues is important, entailing the necessity of correlation of accounting (financial) standards and tax legislation in Russia.

There are different opinions on the independence of accounting (financial) law as a separate branch of law, and, accordingly, possible solutions to the problems the distorting influence of civil law and tax law in the interpretation of regulations (standards) of financial reporting.

The correlation of legal norms of accounting (financial) and tax legislation considered in the article emphasizes the importance of the basic rules of working with the normative documents. This is especially true in the current situation, in circumstances where regulatory framework is constantly being updated significantly, and the order of accounting (financial) and tax rules of business operations is affected with various branches of law, sometimes contradicting each other.

Keywords: Accounting (financial) law, tax law

For effective state tax policy clear accounting of tax revenues is important, which entails the need of settlement of accounting (financial) standards and tax legislation in Russia.

These standards are converging. Thus, the regulation providing for the obligation of taxpayers to provide tax authorities with accounting (financial) statements, is contained in the tax law (§5 Clause 1, Article. 23 of RF Tax Code), although the reasonability of its availability in RF Tax Code is doubtful. On the other hand, the Federal Law "On Accounting" covers the obligations of taxpayers (Article 4). In our view, this interpenetration does not lead to a rapprochement between the two types of accounting. The autonomy of tax law is evident and must be approved.

There are different views on the independence of accounting legislation as a separate branch of law, and, accordingly, the possible solutions to the problem of the distorting influence of civil law and tax law in interpreting the financial reporting standards.
Accounting (financial accounting) is regulated by the documents issued by governmental agencies at various levels, with hierarchical subordination. Their graduation according to the significance determines the power of their orders, compared with the other regulations. In the Constitution of Russian Federation (p. "p" Art. 71) "official statistics and accounting" is referred to the jurisdiction of Russian Federation. Civil Code is of decisive importance of all the codes. It states that "entities should have their own balance sheet or budget" (p. 1, Art. 48).

Federal laws are in force in all the cases if their standards do not contradict to the requirements of the Codes. The laws are the main source of regulation that directly determines the accounting practice. In the first place it is the fundamental Law "On Accounting" of November 21, 1996 N 1296FZ. Art. 5 of this Law defines three levels of regulation of accounting, under which the methodological guidance of accounting in Russian Federation is provided by the Government of Russian Federation, and not the Ministry of Finance, which means the regulation of accounting in the country by the state.

In addition, the standards relating to accounting rules are included in the Law of Russian Federation of 26.12.1995 N 2086FZ "On Joint Stock Companies" (Article 1) and the Federal Law of 29 October 1998 N 1646FZ "On financial leasing (Leasing). Traditionally the system of standard regulation of accounting is considered as consisting of the documents of four levels (Table 1) [1, p.33].

Table 1

<table>
<thead>
<tr>
<th>Level</th>
<th>Documents</th>
<th>Authorities Accepting the Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1 - Legislative</td>
<td>Federal Laws, Codes (Tax Code, Civil Code), Decrees, Resolutions</td>
<td>Federal Assembly, RF Government, RF President</td>
</tr>
<tr>
<td>Level 2 – Normative</td>
<td>Regulations (Standards) in Accounting</td>
<td>Finance Ministry, RF Central Bank, Federal Bodies of Executive Power</td>
</tr>
<tr>
<td>Level 3 - Methodology</td>
<td>Normative Acts (other than regulations), Methodological Guidelines</td>
<td>RF Ministry of Finance, Federal Executive Authorities, Consulting Firms</td>
</tr>
<tr>
<td>Level 4 - accounting policy of the organization</td>
<td>Organizational and Administrative Documents (Orders, Instructions)</td>
<td>Organizations, Enterprises</td>
</tr>
</tbody>
</table>

To our opinion, the system of regulation of accounting should still include a "zero" or "baseline" level - the Constitution of Russian Federation.

Tax accounting is regulated by the following documents issued by governmental agencies at various levels that are organized in a certain hierarchical subordination. The Constitution of RF (Article 57) stipulates that "everyone is obliged to pay legally established taxes and fees. The laws, introducing new taxes or worsening the taxpayer’s conditions are not retroactive" (zero level).
The Tax Code is the basic legal document, the Civil and Customs Code, "tax" federal laws adopted in conformity with the Tax Code should be also noted here. All these constitute Level 1 - legislative.

The letters of RF Finance Ministry and Federal Tax Service, if they have the status of regulatory documents (i.e., are addressed to the general public) make Level 2 - Normative. Numerous letters, explanations, guidelines and instructions of the Russian Federation Ministry of Finance and Tax Service, not having the status of normative documents, the requirements of Federal Executive Bodies, and the recommendations of auditing and consulting firms make Level 3 - Methodological.

Finally, the accounting policy of the organization for tax purposes closes the list.

Thus, the regulatory framework of tax accounting can be represented in Table 2.

Table 2  

<table>
<thead>
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<th>Level</th>
<th>Documents</th>
<th>Authorities Accepting the Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero level</td>
<td>The Constitution of RF</td>
<td>Referendum of Citizens of Russian Federation</td>
</tr>
<tr>
<td>Level 1 - Legislative</td>
<td>Codes (Tax, Civil, Customs), &quot;Tax&quot; Federal laws, Decrees, Resolutions</td>
<td>Federal Assembly, the RF Government, President of RF</td>
</tr>
<tr>
<td></td>
<td>of the Government of Russian Federation</td>
<td></td>
</tr>
<tr>
<td>Level 2 - Normative</td>
<td>Letters of RF Ministry of Finance and Tax Service, if they have the status of normative documents</td>
<td>the RF Ministry of Finance, Federal Tax Service</td>
</tr>
<tr>
<td>Level 4 - accounting policy for tax purposes</td>
<td>Organizational and Administrative Documents (orders, instructions, registers, tax records)</td>
<td>Taxpayers</td>
</tr>
</tbody>
</table>

Extremely important in determining the hierarchical subordination of regulations is the definition of the ratio of the Codes and Federal Laws. The problem is whether the Federal Law which came into effect after the Code can cancel any regulation (according to the rule "the following Act excludes the previously issued one"), if any Code is introduced by the Federal Law?

As it is noted by M.I. Braginskiy [2, p.44], any Code is to some extent equivalent to the Federal Constitutional Law in its legal effect. This is manifested in the fact that, with respect to any other Federal Laws the Code takes the position of "the first among the equals."

Indeed, since any Code is introduced by Federal Law, formally the Code is equal to the Federal Law in its legal force. However, any Code contains the provision on inadmissibility of the contradictions to it of the relevant Federal Laws and by-laws (Art. 1, Art. 4 Tax Code).
For example, in accordance with paragraph 2 of Art. 3 of RF Civil Code the rules of civil law contained in other laws must comply with the Civil Code, in accordance with paragraph 1 of Art. 1 of RF Tax Code Federal Laws on taxes and fees must be consistent with Tax Code, etc. These standards automatically cancel all the provisions of Federal Laws that contradict the relevant Codes, and it is only possible to change this rule by adoption of the Federal Law, cancelling the rules of the Code of the compulsory compliance with them of the Federal Laws in the relevant branches of legislation.

The Decrees of the President are obligatory in all the cases if their rules do not contradict the requirements of the Codes and Federal Laws.

The Resolutions of the Government are obligatory in all the cases if their rules do not contradict the requirements of the Codes, Federal Laws and Decrees of the President.

The normative documents of the Ministries and Departments make up the bulk of specific rules regulating the accounting. First of all, the departments, issuing these documents should be named:

1) The RF Ministry of Finance (it is the main body that regulates accounting);
2) The Federal Commission on Securities Market;
3) The Central Bank of Russian Federation;
4) Federal Service for Insurance Supervision.

The accounting regulations very often actually require to apply the provisions of the various branches of Law. The legal component of each business transaction of the company is formed out of the norms of various branches of Law: Civil Law, Tax Law, Labor Law, Customs Law, etc. Sometimes their influence determines the content of the requirements of accounting standard-setting instruments [3].

Since the adoption of the Federal Law of 21.11.1996 № 129-FZ "On Accounting" it has been the common assertion that the Federal Law has put an end to the formation of the accounting legislation as a separate sector - Accounting Law".

In this case, "Accounting Law" is often characterized as a branch of Law, quite apart from the norms of allied branches, regulating the economic life of society: civil, tax, labor, customs, and other ones. This view does not correspond to the actual content of the legislation.

The current Russian accounting legislation is legally subordinated to the two branches of Law - Civil Law and Tax Law. Such subordination is determined by the action of specific rules of Civil and Tax Codes of Russian Federation.

The obligation of providing accounting by legal entities is established by Art. 48 of RF Civil Code, in accordance with paragraph 1 which states that "legal persons should have their separate balance sheet or estimate."

With regard to RF Tax Code, both the first (general) part, and the second part, which determines the rules of calculation and payment of specific taxes to the budget, contains the rules on accounting and financial statements.

Art. 23 of RF Tax Code similarly to Art. 48 of RF Civil Code defines accounting as one of the major duties of taxpayers.

According to item 4) Clause 1, Article. 23 of RF Tax Code, “ the taxpayers are obliged to submit to the tax office the records in the prescribed manner ... financial statements in accordance with Federal Law "On Accounting". At the same time item 8, paragraph 1. Art. 23 of RF Tax Code establishes the duty of the taxpayers to "ensure the safety of accounting data" during four years.
Art. 120 of RF Tax Code defines "lack of accounting registers, regular (twice or more in a calendar year), untimely provision or misstatement in the accounts of the accounting and reporting of business transactions, money, material assets, intangible assets and investments of the taxpayer" as flagrant violation of the rules of accounting for income and expenses and taxable.

Thus, firstly, the Tax Law defines the accounting data as the basis for calculating the taxable base and, secondly, makes the correct accounting the subject of tax audits.

The second part of RF Tax Code in a number of its norms places the taxation of business transactions in direct dependence of the method of their reflection in the accounts. For example, in Section 7 of Article 166, "Procedure for Tax Calculating" of Chapter 21 "Value Added Tax," RF Tax Code states that "in the absence of the taxpayer's accounting ... tax authorities have the right to calculate the value added tax payable on the basis of the data on other similar taxpayers".

In accordance with paragraph 1 of Art. 172 of RF Tax Code, the mandatory condition of application of tax deductions, i.e., presentation to the Budget VAT on purchased goods, along with the invoices and the use of the activity subject to VAT, is the registration.

Similarly, paragraph 4 of Art. 172 of RF Tax Code stipulates that the deduction of VAT charged by the seller to the buyer and paid by the seller to the budget in the sale of goods in case of return of these goods (including during the warranty period) to the seller or refusal, are made in full upon the reflection into the accounts the respective operations on adjustment in relation to the return of the goods or to their rejection.

Before January 1, 2002, i.e. before coming into effect of Chapter 25 of the Tax Code of Russian Federation, the hierarchy of Federal Law "On Accounting" and regulations of RF Ministry of Finance to Tax Code was extremely formal, since no acts of legislation on taxes and duties imposed the rules relating to the methods of accounting, and determined solely accounting terms and concepts.

Can Tax Laws generally establish accounting rules? Since, according to the Constitution, accounting is run by Russian Government, the authorities of Russian Federation have the right to issue accounting regulators and their ratios, and the their applicability in practice is determined by the general rules of the ratio requirements of the legislation according to their status and time of publication. It follows that RF Tax Code is higher by its legal status than the Federal Law "On Accounting" and, therefore, any conflict between the accounting rules defined by the Law as well as be the Code should be resolved in favor of RF Tax Code.

Do the given by Chapter 25 of RF Tax Code definitions of accounting terms such as "income", "expenses", "fixed assets", "intangible assets", "direct and indirect costs", etc. relate to accounting and determine the methodology of accounting? On the assumption of the structure of RF Tax Code, the majority of rules of the Chapters that make up the second part of RF Tax Code, are directly related to the order of calculation and payment of a specific tax and to it only and do not affect either the issues relating to other taxes, or the issues of business transactions reflection in the accounting of the organization.

Practically every definition of Chapter 25 of RF Tax Code, containing the interpretation of any accounting concept, different from the treatment, given by the Russian Finance Ministry regulations, contains the reservation "for the purposes of this chapter" or the wording of similar content. This means that these provisions are applied only for the purposes of calculation and payment to the budget of organizations profit tax.

The disclosure of the full range of requirements of Chapter 25 of RF Tax Code, which are characterized by the formula "for the purposes of this chapter", may take a long time. The
boundaries between the methodology of accounting and the methods of qualifying the facts of economic life for the purposes of calculating the taxable profits are stressed by the definitions of tax accounting and analytical tax accounting registers given in Art. 313 and 314 of RF Tax Code.

Art. 313 of RF Tax Code states that: "the taxpayers should calculate the tax base by the end of each reporting (tax) period, based on tax records, if the Articles of the given Chapter provide for the procedure of grouping and accounting of the facilities and business transactions for tax purposes differently from the order of grouping and reflection in the balance account established by the accounting rules."

Thus, the tax accounting is defined as a system of adjustments in terms of performance, as reflected in the accounting records for the purpose of calculating the taxable profits. Secondly, Art. 313 of RF Tax Code defines as a source of information for calculating taxable profits specifically the accounting data generated in accordance with Federal law "On Accounting" and the regulations of Russian Ministry of Finance, since tax records is the exclusive domain of discrepancies between the interpretations of accounting and tax legislation.

Further, defining the way of tax accounting by the use of the notion of "analytical tax ledgers", Art. 314 of RFTax Code states: "Analytical tax accounting registers are the aggregate forms of organization of tax records for the reporting (tax) period, grouped according to the requirements of the given Chapter, without the allocation (reflection) in the accounts."

Thus, Art. 314 of RF Tax Code generally generates methodological issues of reflection of the facts of economic life in accounts from the scope of regulatory norms of Tax Code of Russian Federation.

However, in some cases the given by the Tax Code definitions do not contain the clause "for the purposes of the given chapter." In this situation they may be essential for accounting purposes due to described above subordination of accounting standards and tax laws.

The discussed above ratio of legal norms of accounting and tax legislation emphasize the importance of the basic rules of work with normative documents. This is especially true in the current situation, in conditions when the legal and regulatory framework is constantly being significantly updated, and rules of various branches of law, sometimes contradicting each other affect on the order of accounting and taxation of business operations.

REFERENCES:

F.D.I INFLOWS AND TRADE OPENNESS IN SOUTHEASTERN EUROPE
AND BLACK SEA COUNTRIES (SEE & BSC)

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Athens, Greece

Liargovas, Panagiotis
Professor
University of Peloponnese,
Tripolis, Greece

ABSTRACT

The motivation of this paper is the investigation of the importance of trade openness in attracting Foreign Direct Investment (FDI) inflows to countries of South-East Europe and the Black Sea. Theoretically, trade openness may influence FDIs both directions. A high degree of openness creates a favorable environment for FDIs in export oriented industries. At the same time, it discourages FDIs in import competing sectors. The empirical work is conducted using panel data from 12 countries of the region, for the years 1991-2010. Our findings support the view that trade openness is an important factor for the attraction of FDIs. The study therefore concludes that authorities should encourage openness in order to draw investment inflows. This is an important factor to remind governments that turn to the imposition of various forms of trade barriers for the protection of domestic economies from the repercussions of the recent economic crises.

INTRODUCTION

The recent global financial crisis which started in 2008 was probably the most severe for the world’s financial system since the one which sparked the Great Depression in 1929. It has gone far beyond the financial sector and has seriously affected the real economy. According to UNCTAD, the crisis resulted in a 20% decline in world FDI inflows. At the same time the crisis opened up the way for increased protectionism, reversing an almost three-decade trend of trade liberalisation.

Over the last three decades, foreign direct investment (FDI) inflows have provided strong impetus for economic development across countries. FDI serves as an important source of supply funds for domestic investment thus, promoting capital formation in the host country (Omisakin,
Adeniyi and Omojolaibi, 2009). FDI inflows can assist an economy by giving opportunities for ameliorating the level of service sector (ie telecommunications, banking and finance, transport), wholesale and retail trade, business and legal services. During this period there have been different strands in the empirical and theoretical literature aimed at investigating the relationship between FDI inflows and their determinants in developed and developing markets.

According to UNCTAD (2009), many developing countries, including the least developed ones, have attracted only small amounts of FDI inflows despite their efforts towards economic liberalization in an increasingly globalizing world. Moreover, FDI inflows are highly concentrated in a small number of countries. The demand-side of FDI theory argues that investment will go primarily to countries large enough to support the scale economies needed for production (Trevino and Mixon, 2004). For Grosse and Trevino (1996) this explanation helps to understand why most FDI is directed to developed rather than to developing countries, given that most investment historically has been market seeking. Developing markets have to compete in order to attract the relatively smaller percentage of FDI inflows compared to large amounts of global FDI inflows to developed markets.

This paper is focused on the impact of trade openness on FDI inflows. It tests the notion that developing markets in South Eastern Europe and the Black Sea that are more open, are more likely to attract FDI inflows.

1. FDI AND OPENNESS: THEORY

Existing literature has shown that, FDI decisions depend on a variety of characteristics of the host country, e.g. exchange rate, market size and potential, openness, political stability or risk, labor costs, trade costs, investment costs, trade deficit, human capital, tax, inflation, budget deficit, domestic investment, external debt, government consumption and energy use (Bloningen, 2005). An economically conducive environment is likely to be a magnet for foreign businesses, leading to FDI inflows (Kumar, 2002). The role of institutional quality, physical infrastructure, import tariffs, macroeconomic stability and political stability on FDI inflows are usually positive (Trevino et al., 2002). Furthermore, the economic growth of a host nation acts positively on FDI inflows (Trevino et al., 2002; Grosse and Trevino, 1996).

In this study we focus on trade openness as a significant factor affecting FDI inflows. Although openness can be considered a social or socio-economic indicator, we are only concerned in this paper with the economic (i.e. trade) dimension of openness. Trade openness induces export-oriented FDI, while trade restriction attracts “tariff-jumping” FDI, whose first target is to take advantage of the domestic market (Kosteletou and Liargovas, 2000).

Theoretically, trade restrictions or openness could affect FDI inflows positively or negatively. Some policies on trade openness might produce a significant impact in attracting FDI. For example, through the implementation of free trade agreements (FTA), several Latin American countries have been able to attract greater flows of foreign direct investment. Goldberg and Klein (1998) suggest that FDI fosters exports, import substitution, or greater trade in intermediary inputs. On the other hand, Raff (2004) argues that under certain conditions, a FTA does not lead to FDI, even though FDI would be welfare improving. This may happen, because equilibrium external tariffs are too low to induce FDI or because there are multiple equilibria and countries are stuck in one that does not support FDI. There are studies which have found a positive relationship between trade openness and FDI flows (see for example Biglaiser and deRouen ,2006; Chakrabarti, 2001). On the other side, others (e.g. Seim, 2009) find a
negative relationship between FDI inflows and the degree of openness for countries in transition. In other terms, the relationship between trade openness and FDI inflows is very complex, needs careful explanation and may depend on the characteristics of each case. Theoretically, the effect of trade openness on the inflow of FDI varies according to the motivation for engaging in FDI activities (Markusen and Maskus, 2002; Dunning, 1993).

This study contributes to the literature with an investigation of the role of trade openness, measured by eight different variables, as a determinant of FDI inflows in 12 countries in Southern Europe and the Black Sea which relatively to developed economies are in a more difficult position to attract FDI.

2. FDIs AND OPENNESS IN SOUTH EASTERN EUROPE AND BLACK SEE COUNTRIES (SEE & BS): DESCRIPTION OF THE SITUATION, COMPARISON WITH THE REST OF THE WORLD

Our data set consists of 12 developing countries and covers the period from 1991 to 2010. We concentrate in the most recent period 1991-2010, because during this period FDI inflows have increased dramatically (Table 1 and Figures 1, 3, 4, 5).

The variables employed are sourced from International Financial Statistics of the IMF (2010), an annual cross country database. We specify a cross-country panel model for these countries. Panel data allows a meaningful empirical research to be carried out even in the case of data limitation i.e. in terms of time frame and missing data. In addition, the time-dimension of the panel is fairly small in comparison to the number of countries, which helps to avoid some of

The dependent variable is expressed either as Foreign Direct Investment inflows in US $bn or as FDI inflows over Gross Fixed capital formation or FDI (inflows +outflows)/ Gross Fixed Capital Formation or as FDI inflows /GDP. We identify five main variables as determinants of FDI: (i) exchange rate stability, (ii) nominal GDP, (iii) GDP growth, (iv) price stability and (v) trade openness. A dummy for EU member countries taking the values of 1 or 0 is also used.

Exchange Rate Stability is the annual percentage change in the exchange rate of the national currency against the USD. It is used here as a proxy for exchange rate risk. According to the risk aversion theory, FDI decreases as exchange rate volatility increases (see Kosteletou and Liargovas, 2000). In other terms, a stable exchange rate may affect positively FDI. Risk neutral firms may be deterred from entering foreign markets in the presence of high levels of exchange rate uncertainty. Price volatility is also used as a negative factor affecting FDI inflows.

GDP captures the size of the market in a country. It is expected that larger markets attract more FDI inflows. Furthermore, GDP growth measures the dynamic impact of the economy.

Membership is EU may induce inflows in a country due to the adoption of more liberal community directives in almost every market.

Regarding trade openness, there is a sharp divide in the literature between approaches that emphasize export-led growth and those that emphasize openness to imports. Following Squali and Wilson (2009), we use total trade divided by GDP (X+M)/GDP. The level of openness measured by the above expression can positively affect FDI inflows as evidenced by Furceri and Borelli (2008) and Asiedu (2002).
<table>
<thead>
<tr>
<th>Country</th>
<th>FDI (millions of dollars)</th>
<th>FDI % of GDP</th>
<th>% to total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>243.69</td>
<td>4.56</td>
<td>0.4</td>
</tr>
<tr>
<td>Armenia</td>
<td>247.31</td>
<td>5.87</td>
<td>0.41</td>
</tr>
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<td>Azerbaijan</td>
<td>599.61</td>
<td>4.26</td>
<td>0.98</td>
</tr>
<tr>
<td>Bosnia Herzegovina</td>
<td>539.21</td>
<td>4.93</td>
<td>0.88</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>2530.08</td>
<td>11.59</td>
<td>4.15</td>
</tr>
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<td>1759.89</td>
<td>4.85</td>
<td>2.88</td>
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<td>Georgia</td>
<td>570.28</td>
<td>10.02</td>
<td>0.93</td>
</tr>
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<td>Greece</td>
<td>1609.08</td>
<td>0.87</td>
<td>2.64</td>
</tr>
<tr>
<td>Hungary</td>
<td>11009.89</td>
<td>14.51</td>
<td>18.04</td>
</tr>
<tr>
<td>Moldova</td>
<td>157.64</td>
<td>5.6</td>
<td>0.26</td>
</tr>
<tr>
<td>Montenegro</td>
<td>1049.3</td>
<td>-</td>
<td>1.72</td>
</tr>
<tr>
<td>Poland</td>
<td>8015.45</td>
<td>3.71</td>
<td>13.14</td>
</tr>
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<td>3349.73</td>
<td>4.59</td>
<td>5.49</td>
</tr>
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<td>Russia</td>
<td>17585.43</td>
<td>2.77</td>
<td>28.82</td>
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<td>1.83</td>
<td>0.83</td>
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<td>5302.15</td>
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<td>8.69</td>
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<tr>
<td>Ukraine</td>
<td>3150.29</td>
<td>4.47</td>
<td>5.16</td>
</tr>
<tr>
<td>SEE&amp;BSC</td>
<td>3389.77</td>
<td>5.48</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: IMF International Financial Statistics and our own calculations
* for some countries such as Serbia, Montenegro, Bosnia data is not available for all the years of the sample period.
### Table 2: Trade openness in SEE & BS countries (1991-2010 averages)

<table>
<thead>
<tr>
<th></th>
<th>X%GDP*</th>
<th>M%GDP*</th>
<th>%(X+M)/GDP</th>
<th>%(X-M)/GDP</th>
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</thead>
<tbody>
<tr>
<td>Albania</td>
<td>21.67</td>
<td>45.8</td>
<td>67.47</td>
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<tr>
<td>Armenia</td>
<td>18.98</td>
<td>39.08</td>
<td>58.05</td>
<td>-20.1</td>
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<td>Azerbaijan</td>
<td>65.58</td>
<td>37.41</td>
<td>102.99</td>
<td>28.17</td>
</tr>
<tr>
<td>Bosnia &amp; Herzegovina</td>
<td>29.37</td>
<td>63.97</td>
<td>93.34</td>
<td>-34.59</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>55.02</td>
<td>65.03</td>
<td>120.06</td>
<td>-10.01</td>
</tr>
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<td>37.64</td>
<td>43.77</td>
<td>81.41</td>
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<tr>
<td>Georgia</td>
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<td>52.11</td>
<td>81.89</td>
<td>-22.33</td>
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<td>25.87</td>
<td>44.01</td>
<td>-7.74</td>
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<td>63.81</td>
<td>126.77</td>
<td>-0.86</td>
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<td>71.04</td>
<td>-8.92</td>
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<td>56.18</td>
<td>9.76</td>
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<tr>
<td>Serbia</td>
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<td>92.25</td>
<td>146.22</td>
<td>-38.28</td>
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<td>61.17</td>
<td>61.87</td>
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<td>-0.7</td>
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<td>20.24</td>
<td>22.69</td>
<td>42.92</td>
<td>-2.45</td>
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<tr>
<td>Ukraine</td>
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<td>53.04</td>
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<td>-2.08</td>
</tr>
<tr>
<td>SEE &amp;BSC</td>
<td>39.56</td>
<td>50.14</td>
<td>89.7</td>
<td>-10.58</td>
</tr>
</tbody>
</table>

Source: IMF International Financial Statistics and our own calculations

* X stands for the value of exports and M for the value of imports.

### Table 3: GDP (%) growth in SEE & BS countries

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
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<td>Albania</td>
<td>10.07</td>
<td>6.18</td>
<td>7.55</td>
<td>8.36</td>
<td>-3.23</td>
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<td>2.65</td>
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<td>0.51</td>
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<tr>
<td>Azerbaijan</td>
<td>2.71</td>
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<td>7.76</td>
<td>7.6</td>
<td>-4.15</td>
<td></td>
</tr>
<tr>
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<td>-1.3</td>
<td>6.99</td>
<td>11.84</td>
<td>9.96</td>
<td>-7.49</td>
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<td>4.93</td>
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<tr>
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<td>7.19</td>
<td>11.1</td>
<td>13.86</td>
<td>-5.32</td>
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</tr>
<tr>
<td>Greece</td>
<td>2.61</td>
<td>8.49</td>
<td>14.3</td>
<td>7.84</td>
<td>-9.72</td>
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<td>10.21</td>
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<td>-13.16</td>
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<td>3.03</td>
<td>4.12</td>
<td>8.72</td>
<td>6.39</td>
<td>-4.78</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>-10.11</td>
<td>3.2</td>
<td>6.37</td>
<td>12.49</td>
<td>8.85</td>
<td></td>
</tr>
<tr>
<td>Romania</td>
<td>5.11</td>
<td>5.2</td>
<td>8.74</td>
<td>5.2</td>
<td>-7.55</td>
<td></td>
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<tr>
<td>Russia</td>
<td>0.47</td>
<td>8.19</td>
<td>12.21</td>
<td>10.05</td>
<td>-18.59</td>
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<tr>
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<td>9.09</td>
<td>8.72</td>
<td>15.9</td>
<td>10.27</td>
<td>-13.53</td>
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<tr>
<td>Slovenia</td>
<td>6.96</td>
<td>10.69</td>
<td>19.47</td>
<td>17.15</td>
<td>-5.4</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>3.62</td>
<td>6.29</td>
<td>10.31</td>
<td>8.94</td>
<td>-2.83</td>
<td></td>
</tr>
<tr>
<td>Ukraine</td>
<td>54.26</td>
<td>5.05</td>
<td>9.42</td>
<td>9.54</td>
<td>-8.95</td>
<td></td>
</tr>
<tr>
<td>SEE &amp;BSC</td>
<td>5.44</td>
<td>6.7</td>
<td>10.71</td>
<td>8.97</td>
<td>-6.45</td>
<td></td>
</tr>
</tbody>
</table>

Source: IMF International Financial Statistics and our own calculations
Data source: International Financial Statistics, IMF and our own calculations.

Graph 1: FDI (% of GDP)
(1991-2010 averages)

Graph 2: Trade openness and trade (% of GDP)
(1991-2010 averages)

Data source: International Financial Statistics, IMF and our own calculations.
Graph 3: FDI (selected countries from the SEE & BS sample)  
(millions of dollars)

Data source: International Financial Statistics, IMF.

Graph 4: FDI inflows by region (% of world FDIs)

Data source: International Financial Statistics, IMF and UNCTAD.
3. EFFECT OF CRISIS ON GDP, FDI AND OPENNESS

The recent financial crisis of 2008 was so severe that went far beyond the financial sector and seriously affected the real economy. A sharp contraction in global growth ensued. This was reinforced by even sharper contractions in trade, FDI and other channels of globalisation. The world suffered its worst ‘deglobalisation’ since the Second World War.

There are two main reasons that result in FDI contraction. On the one hand, tighter credit conditions and lower corporate profits weaken companies’ capability to finance their overseas projects. On the other hand, the looming global economic recession and a heightened appreciation of risk erode business confidence and therefore companies’ propensity to expand internationally. As a result, many large transnational corporations (TNCs) revise their global expansion plans, and a large number of greenfield and cross-border merger and acquisition (M&A) projects are being cancelled or suspended.

In addition, the global economic crisis has triggered a big shift in ideas and policies against free markets and in favour of government interventionism. ‘Greater protectionism would delay the adjustments needed to respond to changing demand. Ultimately, greater and more costly adjustments would be required both within the ‘protected’ economy and globally.

History has shown us that protectionism is not the best response to economic crises. Following the 1929 stock market crash, the United States increased import tariffs in the hope of protecting jobs. But the swift retaliation from other countries, historians and economists agree, deepened and prolonged the depression. More recently, growth surged in countries such as China.
and India only once they began opening up their economies after years of relatively closed trade regimes.

4. **EMPIRICAL INVESTIGATION WITH PANEL DATA, 1991-2010**

Our model is expressed as following:

\[ Y_t = \beta_0 + \beta_2 \text{OPEN}_t + \beta_1 \text{EXCH}_t + \beta_3 \text{PRICE}_t + \beta_4 \text{GDP}_t + \beta_5 \text{GDP}\_GROWTH}_t + \text{EUDUMMY} \]

where \( Y_t \) is the measure of FDI. The dependent variable is the FDI inflows in country \( i \) at time \( t \). \( \text{OPEN}_t \), \( \text{EXCH}_t \), \( \text{PRICE}_t \), \( \text{GDP}_t \), \( \text{GDP}\_GROWTH}_t \) and \( \text{EUDUMMY} \) stand for Openness, Exchange Rate Stability, Price Stability, GDP (Nominal, $bn), GDP growth and EU membership or not respectively.

We have incorporated panel data estimation for a number of reasons widely discussed in the literature and specifically relevant to our study. Hsiao (2003) and Klevmarken (1989), inter alia, note that panel data control for individual heterogeneity, as panel data indicate that units of analysis are heterogeneous and therefore minimize the risk of obtaining biased empirical results. Panel data give more informational input, more variability, less collinearity among the variables employed, more degrees of freedom and more efficiency. They provide the opportunity to identify and measure effects that are simply not detectable in pure cross-sectional or time-series data.

Table 4 reports estimated coefficients. It appears from Table 4 that in all four specifications openness, is positive and significant at the 5% level of significance.

**Table 4: Estimation Results (panel data from the SEE & BS countries, 1991-2010)**

<table>
<thead>
<tr>
<th>Equation</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variables:</td>
<td>FDI inflows</td>
<td>FDI inflows</td>
<td>FDI inflows/Gross Fixed Capital Formation</td>
<td>FDI (inflows + outflows)/Gross Fixed Capital Formation</td>
<td>FDI inflows/GDP</td>
</tr>
<tr>
<td>Independent variables:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>constant</td>
<td>390.899</td>
<td>1420.639</td>
<td>-0.081</td>
<td>-0.130</td>
<td>-3.841*</td>
</tr>
<tr>
<td>Openness: (X+M)/GDP</td>
<td>5693.500*</td>
<td>4424.039*</td>
<td>0.312**</td>
<td>0.522**</td>
<td>11.075**</td>
</tr>
<tr>
<td>Exchange rate(ER) volatility: ( \Delta \text{(log(ER))} )</td>
<td>-3127.271*</td>
<td>-3081.506*</td>
<td>-0.035**</td>
<td>-3.690**</td>
<td>-2.227**</td>
</tr>
<tr>
<td>Price (Pr) volatility: ( \Delta \text{(log(Pr))} )</td>
<td>-1541.903</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market size : GDP (constant prices)</td>
<td>1.3(10^7)**</td>
<td></td>
<td></td>
<td>6.65(10^6)</td>
<td></td>
</tr>
<tr>
<td>Output growth</td>
<td></td>
<td></td>
<td></td>
<td>-0.016</td>
<td></td>
</tr>
<tr>
<td>Dummy for EU member countries</td>
<td>3257.494*</td>
<td>3496.074*</td>
<td>-0.047**</td>
<td>-0.041*</td>
<td>-1.792**</td>
</tr>
<tr>
<td>no of observations</td>
<td>162</td>
<td>183</td>
<td>174</td>
<td>139</td>
<td>148</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.544</td>
<td>0.536</td>
<td>0.612</td>
<td>0.518</td>
<td>0.690</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.00</td>
</tr>
</tbody>
</table>

** significant at the 5% level of significance
* significant at the 10% level of significance
Furthermore, exchange rate stability is negative and significant in all four specifications. Finally, EU membership seems to be an important factor affecting FDI inflows, but the effect is mixed.

These results are in line with the ones obtained by Furceri and Borelli (2008), Asiedu (2002), Gastanaga (1998) and Edwards (1998) who reported that open economies are more likely to influence the advent of foreign capital.

5. CONCLUSIONS AND POLICY IMPLICATIONS

This study tested the significance of trade openness in the attraction of FDI inflows in South-East European countries and the Black Sea. Using an econometric model we found positive and significant relationship between FDI inflows and trade openness. Apart from openness, we also found that there are some other factors such as exchange rate stability and EU membership with significant influence to the existence of FDI.

Our study has important policy implications since many governments in Southeast European countries and the Black Sea consider various policy choices as a response to the crises. One such consideration incorporates the imposition of protective measures to their domestic economies. We have shown that such measures would have devastating effects on the attractiveness of FDI inflows.

REFERENCES

Section 1


BANKING INTERMEDIATION AS MODERNIZATION FACTOR
OF THE RUSSIAN ECONOMY

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ABSTRACT

It is obvious that the global financial crisis has given impetus to spreading crisis in the Russian economy. However the speed and depth of recession were conditioned by the existing model of functioning of the Russian economy, characterized by undiversification, non-competitiveness of a considerable part of manufacturing enterprises and structure imbalances towards extractive industries. Today, when the acute phase of crisis is supposed to be over, the main priority of economic policy is “modernization agenda”.

The modernization agenda entails, on the one hand, development of the real economy by encouraging innovations and investments. On the other hand, there is a need to modernize and develop financial sector towards increasing its role as supplier of financial resources for quality transformation of the economy and ensuring economic growth. The crucial role in this process belongs to banking intermediation.

The realization of the modernization agenda requires systematic approach to the problem of the development of the banking intermediation. It calls for coordinated actions of the commercial banks, the Bank of Russia, legislative and executive branches of power.

Key words: financial intermediation, banks, modernization

INTRODUCTION

It is obvious that the global financial crisis has given impetus to spreading crisis in the Russian economy. However the speed and depth of recession were conditioned by the existing model of functioning of the Russian economy, characterized by undiversification, non-competitiveness of a considerable part of manufacturing enterprises and structure imbalances towards extractive industries. Today, when the acute phase of crisis is supposed to be over, the main priority of economic policy is “modernization agenda”.

The modernization agenda entails, on the one hand, development of the real economy by encouraging innovations and investments. On the other hand, there is a need to modernize and develop financial sector towards increasing its role as supplier of financial resources for quality transformation of the economy and ensuring economic growth. The crucial role in this process belongs to financial intermediaries.
Numerous theoretical and empirical research shows that financial development further the economic growth (Lown, (1990), King, Levine (1993), Beck, Levine, Loayza (1999), Beck, Büyükkarabacak, Rioja, Valev (2008)). The activity of financial intermediaries has two important aspects: it favours the rise of the level of savings and investments and increases the effectiveness of allocation of financial resources in the economic system.

The consequences of the global financial crisis in Russia firstly stroke the banking sector. The banks responded by decreasing lending and in some cases even by cancelling credit programmes. Massive injections of liquidity into the banking sector favoured its stability, restoring trust in the financial system, helped to stop withdrawal of personal deposits. However the goal of reviving of bank lending activity has not been achieved, transmission mechanism “banks - real economy” has not been set to work, the transformational function of financial intermediaries has not been performed effectively. So the modernization of the banking sector in Russia must be focused on the improvement of the quality of implementation of intermediation functions by banks, which must be adequate to the priorities of the national economy.

The paper proceeds as follows. We begin in Section I by observing the problems of interaction between banking and real sector of the Russian economy. In Section II we focus on some measures that can facilitate the activization of the role of banks as financial intermediaries. Section III summarizes the main ideas of the paper.

I. ANALYSES OF BANKING INTERMEDIATION IN RUSSIA

Bank assets prevail in the structure of Russian financial sector (more than 90 %). That is characteristic for the majority of the developing countries which financial sector is characterized by a weak diversification. Process of formation of the developed system of institutional investors which includes pension funds, insurance companies, etc. takes long years and should have certain economic preconditions. Thus, at the present moment, financial maintenance of the modernization policy in Russia should be realized by development of banking intermediation. The same position is reflected in the Concept of long-term social and economic development of the Russian Federation for the period till 2020. The Concept provides increasing of level of bank lending to the economy till 70 - 75 % of GDP in 2015 and 80 - 85 % of GDP in 2020, increasing the contribution of the banking sector in fixed investment financing till 20 - 25 % in 2020.1

The involvement of commercial banks in the process of modernization of the economy is extremely important from the standpoint of the effectiveness of specific areas of modernization. Acting as delegated monitors and information producers, financial intermediaries and banks in particular, make selection of the most efficient projects and improve the allocation of public resources. Thus, today the task is the active involvement of Russian commercial banks in the investment process. This requires creation of appropriate conditions in the economic system.

Analysis of the functioning of banks in Russia shows that over the last decade the role of banks in financial intermediation has increased substantially. Traditionally, the ratio of bank credit and bank assets to GDP is regarded as one of the main indicators of the efficiency of financial intermediation. Analysis of the dynamics of these indicators in Russia over the period from 2000 to 2011 shows a significant increase in the activities of banks as financial intermediaries in Russia. As a percentage of GDP, banking assets increased from 32.9% in 2000

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1 Concept of long-term social and economic development of the Russian Federation for the period till 2020. // http://base.consultant.ru
almost twice - up to 76% by early 2011. Positive dynamics can be observed in the ratio of loans to individuals and organizations to GDP: an increase from 10.5% in 2000 to 40.8% in 2011.

Data source: Bank of Russia

Figure 1. Ratio of bank credit and bank assets to GDP

At the same time, the development of the banking sector in an international comparison remains very low. In Eastern Europe the ratio of bank assets to GDP is around 65-80%, in France - around 280% in Germany - more than 300%, in the UK - nearly 400%.\(^1\) Insufficiency of assets of banks implies that they are not able to satisfy fully the needs of organizations and enterprises of the country in credit resources. By the beginning of the crisis the country's non-financial organizations have had more than 370 billion dollars of the external debt, that is more than the entire volume of credit provided by Russian banks.

Weak involvement of the banking sector in the financing of the economy is explained by a number of problems that take place in the Russian economy and restrain the development of financial intermediation by banks.

Low degree of implementation of the transformational function of financial intermediation by Russian banks is explained by lack of adequate resource base and high credit risks of enterprises of the real sector.

Limited resource base forces banks to take considerable risks of term divergence of assets and liabilities to ensure acceptable loan terms.

At the same time, in Russia, mainly short-term bank lending does not allow enterprises to use it actively as an investment resource. So in January 1, 2011 the share of bank loans in fixed investments of enterprises and organizations (except small businesses) amounted to only 8.7%.

An important factor contributing to high risks of lending to the real sector is the low profitability of the majority of Russian enterprises. The reasons for low profitability of the enterprises are the technological backwardness of production, causing an increased production cost, its low competitiveness, lack of demand, lack of management. According to the Federal State Statistics Service, the degree of depreciation of fixed assets of Russian companies tends to rise and in the beginning of 2009 amounted to 45.3%. The share of fully depreciated fixed assets of large and medium-sized commercial organizations was 13%, including the proportion of fully depreciated machinery and equipment - 20.5%.\(^1\) Depreciation of fixed assets in some industries is 80%, while the dynamics of their update does not exceed 11%. Compared with 1970, the average age of the equipment of the domestic industry increased almost twice. In 1970, 40.8 percent of producing capacity was under the age of 5 years, and now - only 9.6 percent.\(^2\) Some major Russian corporations have a critical level of depreciation. For example, at the end of 2008, the depreciation of fixed assets of JSC “AvtoVAZ” amounted to 71.76%, OJSC “Surgutneftegaz” - 69.4%, JSC “Moscow City Telephone Net” - 61.31%, Aeroflot - Russian Airlines ” - 60.78%.\(^3\)

The high degree of depreciation of productive assets leads to the use of technological schemes with high costs, reduces competitiveness of production and promote development of the economy oriented on export of raw materials. In this regard, a significant part of production capacity in Russia is ineffective with a new set of relative prices, and lending to Russian enterprises carries considerable risks.

In implementing the information function banks face the challenge of lack of transparency of financial statement and ownership structure of enterprises. High proportion of shadow turnover of enterprises leads to a mismatch of financial statements and real situation and makes an objective assessment of credit risks and monitoring borrowers impossible. Possibility of monitoring of large companies is affected by inadequate corporate governance practices, formal and decorative nature of a number of corporate procedures, insufficient transparency, selective disclosure of corporate information.

The high level of interest rates as a result of constant shortages of money supply, consistently high expectations of risks in Russia takes place simultaneously with a high interest rate spreads - the difference between the percentage to be charged by commercial banks on loans and paid on deposits. The value of interest rate spreads in Russia was at the end of 2009 6.7%, while for 75% of the industrial countries the value of interest rate spreads do not exceed 4%, to 70% - less than 3% (Миркин, 2010). The level of interest rate spread is a reflection of the risks of financial intermediation, the existing conditions for savings in the formal banking system and effective redistribution of credits to the economy. Reduction of interest rate spreads can only be a consequence of the improvement the situation in the real economy. At the same time, it is essential to increase the effectiveness of banking intermediation and stimulate economic growth.

II. ACTIVIZATION ROLE OF BANKS AS FINANCIAL INTERMEDIARIES

Enhancing the role of banks as financial intermediaries in the economy requires the simultaneous realization of the following basic conditions:
- the formation of effective mechanisms for accumulation of savings of the society, excluding the likelihood of bypassing the financial system;
- development of the society's ability to use financial resources from the perspective of sustainable development.

Russian banking sector, despite the unprecedented scale and depth of the financial crisis, has managed to maintain stability and potential for further growth. This greatly contributed to the anti-crisis measures of the Government of the Russian Federation and Bank of Russia, allocated considerable financial resources for supporting the banking sector. These resources filled an acute shortage of bank liquidity, normalized the functioning of the interbank market and prevented the outflow of deposits from private banks. However, the crisis led to a sharp slowdown in the dynamics of growth of the Russian banking system, as clearly denoting its major "pain points":
- excessive dependence on international borrowing;
- a weak capital base;
- lack of development of public-private partnership in the banking sector in the financing of priority investment projects, as it is actively used in many countries to stimulate economic growth.

Eliminating these disparities should be a strategic task of the state and the banking community, the solution of which will determine the dynamics and quality of growth of the national banking sector in the future.

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1 According to the National Institute for System Studies of Entrepreneurship share of shadow activities in the turnover of small businesses before the crisis was 30-40% of the company's turnover. It is expected that because of the crisis, this figure could increase to 60%.
The strategic objective of increasing bank lending to modernization of the economy requires a radical expansion of the resource and capital base of domestic banks. Moreover, as the crisis has demonstrated, the growth of the domestic banking sector must rely primarily on the most complete and efficient use of the domestic sources of funding by Russian credit institutions, rather than an accelerated buildup of external debt, which brings credit facilities of banks dependent on changeable environment of global capital markets.

In this regard, the priority is the involvement in the credit and cash flow of unorganized private savings and temporary free funds of the state. According to experts, the population holds over 1.5 trillion rubles and more than $ 35 billion of savings in cash, which could become a valuable source of banks' liabilities.

Enhanced interaction of banks and the state would facilitate a more active implementation in Russia of such high forms of public-private partnership as government guarantees on loans, cofinancing of large investment projects, the use of free state financial resources for strengthening the resource and capital base of domestic banks.

One of the areas of incentives for banks to the real sector of economy is the development of credit guarantee system - private and public institutions and foundations, the main activity of which is to provide guarantees on loans to enterprises (especially to SMEs). Many countries have made credit guarantee system a central part of their strategy to lift restrictions on small businesses access to financing.

Guarantee funds first emerged in the early 20th century and became especially popular in recent decades in both developed and developing countries. For example, in Japan and Korea share of loan guarantees exceed 5% of GDP (Ilhyock Shim, 2006). As on 31.12.2009, about 8% of all SMEs of the European Union benefit from the guarantees societies that are members of the European Association of Mutual Guarantee Societies.

Being a catalyst for development of the banking intermediation, guarantee institutions represent a specific type of financial intermediaries whose main function is to foster active interaction between banks and SMEs, ensuring the continuity of the movement of capital between economic agents. Through the production and sale of special financial products - credit guarantees - they provide SMEs access to finance, reduce the costs of its customers.

The results of empirical studies indicate the presence of a positive macroeconomic effect of the credit guarantee system, which is manifested in the growth of GDP, employment, increase tax revenues and reduced social transfers. Researchers at the University of Trier in Germany came to the conclusion that because of the German guarantee banks, GDP, on average, annually grow by 3.4 billion euros (Schmidt, 2010).

Currently, the Russian Federation has more than 70 guaranty funds. Guarantee funds established by the executive authorities of subjects of the Federation and are financed from the budgets of subjects of the Federation and the federal budget and work exclusively in the territory of subjects of the Federation, where they were created. In accordance with the applicable Russian legislation, guarantee funds are included in the list of organizations supporting infrastructure for small and medium-sized businesses. The sharp increase in the number of regional guarantee funds occurred in 2009 - from 23 to 61, which was associated with an acute need to support SMEs in the period of crisis in the economy. As of 01/07/2010 under the

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1 European Association of Mutual Guarantee Societies - www.aecm.eu
2 Small Business Credit Assistance Fund of Moscow - http://fs-credit.ru
supporting of regional guarantee funds in Russia were granted 33,564 million rubles of credit resources of SMEs.¹

However, experience shows that credit guarantee system evolve cyclically. Stage of rapid growth in the loan portfolio is not always accompanied by the maintenance of its qualitative characteristics. The increase of non-performing loans leads to increased financial constraints of guarantee funds and reduces the volume of their operations (Миркин, 2010b). So it puts the problem of the stability of operation, improvement of organizational performance of guarantee funds, development of mechanisms of monitoring of their activities by extending to them special standards and ratios. Banks should have the right to receive accurate information about the guarantee institutions, including the evolution of the obligations assumed by the guarantee fund, as well as on the total amount of guaranteed loans which are judicial proceedings.

Credit guarantee institutions should be represented throughout the country, and the guarantee should be equally reliable in both problem and prosperous region. So the effective model is the creation of a nationwide system of guarantee of liabilities of the private sector. In constructing such a system might take into account the experience of Japan, which has a two-tier system of guaranteeing loans. 52 independent Credit Guarantee Corporations (CGCs), established in each prefecture and 5 cities assess the creditworthiness of borrowers and offer guarantees for bank loans. Japan Finance Corporation (JFC) provides support to CGCs by reinsuring 70-90% of their risks. JFC also supports the securitization of debt to SMEs. Capital JFC is fully formed from the central government. The current system of credit insurance in Japan has played a key role in ensuring stability and reliability of CGCs guarantee coverage.

The first level of a national credit guarantee system in Russia can be represented by guarantee funds of subject of the Federation and municipalities, funds with private capital and mutual guarantee societies. The experience of many countries shows a trend towards active state involvement in the initial stages of development of the guarantee system and its gradual restriction on strengthening of the financial, organizational and legal framework of credit guarantee system (Mirkin, 2010b). The state in this system should act as a guarantor of last resort, while fulfilling the function of reinsurance of the first level funds. Thus, at the second level should be the National Guarantee Fund, whose function is regulation and oversight of the guarantee funds. Its assets may be formed from the National Welfare Fund.

Foreign experience has shown the successful use of loan guarantees for businesses that are at the start-up stage. Banks are generally unwilling to work with such companies, even though the presence of liquid collateral. Meanwhile, the maximum demand for financing of enterprises is seen in its infancy. Before the crisis, some banks offered programs to help budding entrepreneurs to attract financial resources, but increased credit risks forced them to abandon these programs. Today, regional guarantee funds in Russia work only with business passed the stage of formation. Use of the guarantee mechanism can remove some risk from banks and encourage them to work with new companies. A successful example in this direction shows Germany, where in 2010 greatly increased the proportion of new enterprises with loan guarantees - the total number of operations with new enterprises has reached three thousand.²

In addition, as part of economic policy, aimed at upgrading production and introduction of innovative technologies, the current system of guarantees must be supplemented by

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¹ Irkutsk Regional Guarantee Fund - http://www.fondirk.ru
² European Association of Mutual Guarantee Societies - www.aecm.eu
institutions to guarantee the obligations of borrowers, offering high-tech investment projects. Work on selection of investment projects and offer guarantees for them expedient to concentrate in the specialized funds, that has a staff qualified in this area.

III. CONCLUSIONS

Thus, the development of bank lending to the real sector of Russian economy requires the intervention of the state – activation of the bank lending should be the state program and should obtain the necessary legislative framework. In the current situation, banking intermediation may play a key role in overcoming the crisis in the economy and financial supporting of economic growth. Therefore, the public authorities should compensate market failures and shortcomings of the institutional environment for ensuring economic development and giving effect to the chain of "mobilization of savings - investments in the real sector – economic growth".

The realization of the modernization agenda requires systematic approach to the problem of the development of the banking intermediation. It calls for coordinated actions of the commercial banks, Bank of Russia, legislative and executive branches of power.

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CROSS-BORDER LOANS DURING THE WORLD’S ECONOMIC CRISIS

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ABSTRACT

Cross-border loans have become direct transmission mechanism of spreading the crisis from developed countries to the developing countries (which is the output of renewed estimation of global risk and expected volition on the world’s financial market). At the same time, in order to avoid situation that they will not be able to satisfy the demand of local market, developed countries turned their own strategy of capital and credit concentration to developing countries, or they minimized their cross-border activity with high interest rates.

Reports of different international financial institutions at the beginning of 2010 showed the huge decrease of cross-border loans, as result of: 1) restrictions in financing of developing countries; 2) decrease of demand due to the recession of the economy, and 3) increase of sensitiveness of the possible risks. Due to the lack of capital, banks used to depend on their own states, which gave financial injections to the financial sector in order to maintain the stability. In return, banks used to be in position to accept financing of the companies which did not have good credit standing, but they were important for the state. So, there is small portion left for developing countries.

Empirical analysis showed that the pass-through stress was stronger in the developing counties which had closer and stronger financial relations with the developed counties (for example higher number of foreign direct investments or higher level of cross-border loans portfolio). During this crisis period, it becomes evident that the connection of one economy with banks’ cross-border loans used to be the main transmission mechanism of spreading of the crisis. The West European banks were the dominant creditor of developing countries, especially in the neighbouring regions of Central and Eastern Europe (CEE) from the mid-1990s of last the century. Their assets in developing countries used to be 10% of GDP of developed counties at the end of 2007, which is significantly more than other developed countries had (for example Canadian, Japanese or American banks had 2.5% of GDP). European developing countries used

1 Part of the project “Improvement of Serbian competitiveness in the process of entering to EU”, no. 47028 for the period 2011-2015, financed by the Ministry of the science and technology development of Republic Serbia.
to be the biggest beneficiary of cross-border loans. During the period from 2005 to 2008 region of CEE used to get on average 40 billion dollars of cross-border loans (for example developing countries in Asia received above 20 billion dollars and Latin America about 16 billion dollars).

The different empirical analysis showed that the relevant factors for cross-border lending are: existing of daughter bank in the country credit beneficiary, geographical and culturological connection of country lender and country beneficiary, law regulation in the country credit beneficiary and macroeconomic performances of the country credit beneficiary.

The critical moments in cross-border business are: 1) to identify possible losses in portfolio, 2) to continue the international cooperation in order to achieve sustainable level of cross-border lending in developing countries (which used to be generator of the world’s economy growth in the past 20 years), because it replaced lack of the capital in those countries.

**Key words:** cross-border lending, developing countries, developed countries, crisis.

**INTRODUCTION**

The purpose of this paper is to consider the cross-border loans during the world’s economic crisis, with the special point on the participation of Austrian banks in cross-border lending in the region of CEE. The participation of Austrian banks on financial markets of those counties used to be below 20% at the end of 2008, so the philosophy and processes of those banking group were predominantly important for the economic development of the countries of CEE. On Serbian financial market the participation of Austrian banks is 21% in terms of balance assets at the end of the third quartile of 2010. Also, the aim is to show the impact of world’s economic crisis on decrease of cross-border loans, with the special point on the root of this product in Serbia. This paper is addressed to the credit-beneficiaries and state authorities.

**CROSS BORDER LOANS – DEFINITION AND FACTORS WHICH DETERMINE THE BENEFICIARY**

Cross-border credit transfer is the transaction which is initiated by the creditor through one institution or its branch in one of the member countries, with the purpose to allow usage of some sum of the money to the beneficiary – particular company or its branch in another member country, and the creditor and beneficiary of the funds can be the same entity (EU Directive no. 97/5/ EC dated 1/27/97). In accordance with this definition, the cross-border loan transfer does not include transfers between two financial institutions i.e. banks’ transfers. So, when we are talking about the cross-border loans we mean on direct crediting of beneficiary in another country.
Table 1. The factors which determine the level of cross border loans in the country beneficiary of the loan

<table>
<thead>
<tr>
<th>The factors which determine the level of cross border loans in the country beneficiary of the loan</th>
<th>Comment</th>
</tr>
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<tbody>
<tr>
<td>Macroeconomic and institutional characteristics of the country</td>
<td>The most important impact on the volume of the cross-border loans have: inflation rate, long term rate of industry growth and exchange rate volatility. In accordance with it, Derviz and Podpiera (2007) proved in their study that the increase of the inflation for 1% in the country-beneficiary decreases the volume of the credit growth in that country for 3%. The increase of the industry growth rate of 1% has impact on credit base growth for roughly 5%. The non-stable exchange rate decreases the rate of credit growth in the relation 1 to 7. Puhr and his group of researchers (2009) found out that the level of cross-border loans is in: a) direct correlation with the increase of the: consumption, GPD and consumer loans; b) inverse correlated to the growth of unemployment. De Haas and Leyveld (2006) showed in their analyses that the cross-border loans were going in the most profitable countries, with the stable positive macroeconomic surrounding.</td>
</tr>
<tr>
<td>Geographical and culturological connection of the countries – creditor and beneficiary</td>
<td>The group of European researchers (Heuchemer et al, 2008) which analysed the cross-border loans in Europe, in their study mentioned that the higher volume of the cross-border loans is in the case when the country-creditor and country-beneficiary: share the border, have the similar language, belong to the similar legal regulation, where the cultural differences are smaller and the level of trust is high and the political risk is similar. Also, the developed trade exchange exists and strong financial connection. Berger and his group of experts (Berger et al, 2004) mention that the foreign banks could have big competitive disadvantage in providing the price, quality and the combination of services which the beneficiaries of banking services in some country prefer and this disadvantage could be the limited factor in further integration of banking division. Analyses of Hermann and Mihaljek (2010) show that the cross-border lending is decreasing for roughly 6% with the increase of distance roughly 10% (if the distance is counted form the capital of country-creditor and country-beneficiary).</td>
</tr>
<tr>
<td>The factors which determine the level of cross border loans in the country beneficiary of the loan</td>
<td>Comment</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>Existence of the daughter-bank in the country beneficiary of the loan</td>
<td>Analysis of CEE countries showed that the majority number of cross-border loans was granted by the banks or their entities which already have big and strong daughter banks in the beneficiary countries (Prasad et al, 2003). The reasons for it should be connected to the some restrictions which the banking systems of the beneficiary countries determine (i.e. the legal lending limit, the capital level, the level of the mandatory reserve on cross-border loans, etc). The cross-border loans were suitable for skipping those restrictions, and to use, at the same time, the knowledge about the local market.</td>
</tr>
<tr>
<td>Regulation of the beneficiary country</td>
<td>In many countries there are lows which control entrance of cross-border loans through obligation of loan registration with the central bank. Prasad and his group of the researchers in their empirical study (2003) did not find strong correlation with the legal systems of the country-creditor and country-beneficiary. The authors of this study said that the liberal legal system allow usage of direct cross-border loans. The knowledge of the legal and institutional system of the country-beneficiary decreases the information cost. Of course that the information cost is decreased if the bank-borrower of the loan has the own branch, i.e., daughter-bank. In the moment of establishing branch in the country-host, bank-mother nominate on the leading managers position host (domestic) experts which represent the ticket for the leading local companies in the country-host. The beneficiary of the loan recognizes the daughter-bank and maintains the relation with it, despite the fact that it is not the direct creditor. On the other side mother-bank uses the daughter-bank’s expertise of credit beneficiary in the terms of evaluation the credit-standing of the customer and assessment of the credit collateral. Very often the daughter-bank is the guarantor of loan repayment. The legal basis is the contract on issuing bank guarantee concluded between the daughter-bank and the cross-border credit beneficiary, where the daughter-bank guarantees the repayment of the cross-border loan.</td>
</tr>
</tbody>
</table>
CROSS-BORDER LOANS BY AUSTRIAN BANKS

Austrian banks started expansion in CEE in min-1980s of the last contrary, as result of following expansion of Austrian companies, and fulfilling their needs with banking services. At the beginning of 1990s, three Austrian banking groups had own branches in the neighbouring countries including Poland and Russia. Other banks followed this example from mid-1990s. At the end of the last century, economic performance of many CEE countries stabilized and the banking industry started stable growth. It was the signal for other Western European banks to enter on those markets, by taking part in the privatization process in local banks in those countries. At the same time those markets became the important part of Austrian banking system. Many Austrian banks have become leading world’s banking groups thanks to the branch network in those countries. In 2008 the market share of Austrian banks in this region was roughly 20%, which had impact on international researchers to monitor it.

Austrian investment in the surrounding countries and CEE countries was tripled in the period from the second quartile of 2002 until the last quartile of 2008, i.e. from the level 15.3 billion Euros up to the level of 67.4 billion Euros. It is important to say that the growth of cross border loans was constant until the second quartile of 2008, when started slower growth as result of the world’s economic crisis and the increased assessment of the credit risk. If we particularly analyse countries where it was invested, we can notice that the countries which entered to EU have constant increase of 20%, while the investment in the countries which entered to EU in 2007 have much higher growth rate, higher than 50%. At the same time, the level of investment in Eastern Europe had annual growth of 35% and achieved level of 15.3 billion Euros, while the level of investment in the Balkan achieved level of 5.2 billion Euros with the significant differences between the countries. If we analyse the countries the top 5 beneficiary of the cross-border loans are: Croatia (17.5%), Poland (13.3%), Chez Republic (12.3%), Hungary (11.8%) and Romania (11.5%).

Graph 1: Cross-border loans granted by Austrian banks in the period of 2002-2008 (in bill EUR)
Important characteristic of direct cross-border loans of Austrian banks is their denomination in foreign currency. At the end of 2008, 85.4% of all cross-border loans granted in this region was denominated in the currency which was not domestic – the majority was in Euros, and in the Eastern countries (Russia and Ukraine) in dollars. Never the less, tests showed that the loans connected to the foreign currency were not exposed to currency risk. The analysis executed between 5 big Austrian banks in terms of balance asset showed that 30% (in some countries it was higher) of loans connected to the foreign currency had some type of natural hedging of currency risk. The reason for it was high level of usage of foreign currency in the local economy. Also, the analysis of Puhr and his researchers (2009) showed that Austrian banks the predominantly granted loans in the industry of those countries with the longer period then one year.

The biggest problem of Austrian banks was their exposure on interbank money market, due to the low exposure to the credit products (the big 6 Austrian banks had participation of 14.6 billion Euros, according to the Winkler and Haiss, 2010). Their business was touched by the crisis in the latest phase, due to the fact that they perform business in the region of CEE.\(^1\)

At the end of 2008, Austrian banks were faced with the problem of high growth of country risk (CSD), why were implemented following measures: 1) Austrian government prepared the pocket in the amount of 100 billion Euros. 2) Austrian banks prepared the set of measures in order to avoid the drop of own portfolio, such as: strong capital base, restructuring of business policy and necessary adjustment. Also, Austrian banks used all types of media in order to send the message that they plan to permanently keep the leading position on CEE.

**IMPACT OF WORLD ECONOMIC CRISIS ON THE CROSS BORDER LOANS**

The last world’s economic crisis had the biggest impact on the economy drop in the developing countries.

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\(^1\) Achieved net profit of the most important Austrian banks in the region of CEE in 2008 was: UniCredit 2,577 billion Euros, Erste bank 1,569 billion Euros and Raiffeisen bank 1,078 billion Euros.
The international active banks were one of the main sources of financing big development growth in the developing countries in the previous past years. This fact was recognized as one of the main transmission mechanisms for spreading the crisis from developed countries to developing countries, as beneficiary of the loan. With the appearance of the crisis on own market, internationally active banks were faces with the problem of collecting liquid funds and skipping, from the nice and suitable hedge funds position in the previous period. At the same time, with skipping under the umbrella of different state interventions in order to improve own liquidity, they start to show aversion toward any kind of risk. This aversion leads to the increase of country risk of developing countries having in mind their own weakness, because the economy was not developed enough, very evident exposure on foreign exchanges, wake or insufficient developed methodology for risk assessment (for example losses in the economy, blockades and the brake down of stocks in some countries), as well as the dramatic growth of banking balance assets.

The fear of the possible losses was strong and spread very fast on all industries in all over the world countries. It had as impact huge drop of industry production and international trade from the last quartile of 2008 and was spread all over 2009, in developed and developing countries. Consumption of cars or household appliances was stopped which increased the nervous on the market. Companies implemented cost cutting strategy which resulted with the redundancy of employees. The unemployment started to growth rapidly. All of those activates had as result decrease of the world’s GDP in the last quartile of 2008 for 6.25% (last year GDP growth was 4%) and had tendency of further dropping in the first quartile of 2009. The developed countries had drop of 7.5% and they were in the deep recession. In developing countries drop was lower and it was 4%. The loss for developing countries was visible in two divisions: trade and finance. European developing countries and Commonwealth countries were faced with the problem of getting external financing and with the decrease of the demand for their goods. These movements resulted with the big inflation pressure and loss of value of the currencies which were replacement currency for some countries (relation USD/EUR, JEN/USD). These activates engaged involvement of the states to protect own financial system through big national donations / loans and in some kind of wide nationalization. This had impact on the states budgets, which resulted with huge deficits. So, this opened miracle circle without exit. The root of the problem was trust and recovery of international financial flows.

The systematic and proactive approach to the problem started to replace ad hoc interventions, but the market was not sure that the financial market was recovered, because there was implemented too many fiscal and monetary interventions. One of the most important limitations was existence of big caution toward cross-border investment – so the international cooperation becomes one of the most important conditions for returning to the trust to financial division. IMF in own report (IMF, 2009) mentioned that the 3 main elements of strategy for restitution of the trust in financial system were: 1) to provide the liquidity of financial institutions, 2) to identify and work with the healthy assets, 3) increase the capital of weak but important institutions. The critical moments in cross-border business are: 1) to identify possible losses in portfolio, 2) to continue the international cooperation in order to achieve sustainable level of cross-border lending in developing countries (which used to be generator of the world’s economy growth in the past 20 years), because it replaced lack of the capital in those countries. Cross-border loans have become direct transmission mechanism of spreading the crisis from developed countries to the developing countries (which is the output of renewed estimation of global risk and expected volition on the world’s financial market). At the same time, in order to
avoid situation that they will not be able to satisfy the demand of local market, developed 
countries turned their own strategy of capital and credit concentration to developing countries, or 
they minimized their cross-border activity with high interest rates. Reports of different 
international financial institutions at the beginning of 2010 showed the huge decrease of cross-
border loans, as result of: 1) restrictions in financing of developing countries; 2) decrease of 
demand due to the recession of the economy, and 3) increase of sensitiveness of the possible 
risks. Due to the lack of capital, banks used to depend on their own states, which gave financial 
injections to the financial sector in order to maintain the stability. In return, banks used to be in 
position to accept financing of the companies which did not have good credit standing, but they 
were important for the state. So, there is small portion left for developing countries. 

Empirical analysis showed that the pass-through stress was stronger in the developing 
countries which had closer and stronger financial relations with the developed counties (for 
example higher number of foreign direct investments or higher level of cross-border loans 
portfolio). During this crisis period, it becomes evident that the connection of one economy with 
banks’ cross-border loans used to be the main transmission mechanism of spreading of the crisis. 
The West European banks were the dominant creditor of developing countries, especially in the 
neighbouring regions of Central and Eastern Europe from the mid-1990s of last the century. 
Their assets in developing countries used to be 10% of GDP of developed countries at the end of 
2007, which is significantly more than other developed countries had (for example Canadian, 
Japanese or American banks had 2.5% of GDP). European developing countries used to be the 
biggest beneficiary of cross-border loans. During the period from 2005 to 2008 region of CEE 
used to get on average 40 billion dollars of cross-border loans (for example developing countries 
in Asia received above 20 billion dollars and Latin America about 16 billion dollars).

CROSS BORDER LOANS IN SERBIA

Dominant banks on Serbian financial market are foreign owned banks (74% participation 
in the balance asset of total banking division). Very important role on Serbian financial market 
has Austrian banks in lending activities, due to the fact that they participate 21% in the balance 
asset and 20% in the profit of Serbian banking division at the end of the third quartile of 2010 
(NBS, 2010b). This implies questions such as: how does this influence on Serbian market in 
terms of availability of cross-border? Does Serbia attract cross-border loans?

In every day in Serbian economic life, from the appearance cross-border loans have huge 
number of opposite opinions. Negative aspect of cross-border loans is non-controlled debiting of 
the country, while positive aspect is that cheap source of financing is basis for creating new 
working places and higher production, and to the higher GDP. The main indicators for attracting 
cross-border loans in Serbia are: 1) existence of the branch, i.e. daughter-bank in the country 
beneficiary of the loan, including the limitations of National bank of Serbia (such as: level of 
mandatory reserve on the loans in the country and on foreign credit lines of domestic banks). In 
accordance with the data for the third quartile of 2010 (NBS, 2010), the level of cross-border 
loans in favour corporate was 9.8 billion Euros (connected to Euros), where 51.2% were granted 
by foreign banks and financial institutions which were connected with the local banks. 2) 
geographical and culturological connection of the country creditor and Serbia as credit 
beneficiary (in the structure of granted cross-border loans in favour of corporate in Serbia, 
dominate Austrian and Greek banks/NBS, 2010a), including the elimination of competitive 
disadvantage of the banks which came on Serbian market in the later phase (favourite credit
terms, due to the elimination of Serbian country risk in final price of the loan). 3) Law regulation which was in favour of cross-border loans. Also, it is important to emphasize that there is obligation for cross-border credit registration with the central bank.

Table 2. Top 10 banks in terms of balance assets in Serbia (in bill EUR)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Banca Intesa</td>
<td>2.822</td>
<td>14,1</td>
<td>1</td>
<td>3.212</td>
<td>14,3</td>
<td>1</td>
<td>3.184</td>
<td>14,0</td>
<td>1</td>
</tr>
<tr>
<td>Komercijalna</td>
<td>1.932</td>
<td>9,6</td>
<td>2</td>
<td>2.138</td>
<td>9,5</td>
<td>2</td>
<td>2.392</td>
<td>10,5</td>
<td>2</td>
</tr>
<tr>
<td>Raiffeisen</td>
<td>1.817</td>
<td>9,1</td>
<td>3</td>
<td>2.023</td>
<td>9,0</td>
<td>3</td>
<td>1.978</td>
<td>8,7</td>
<td>3</td>
</tr>
<tr>
<td>UniCredit</td>
<td>2.144</td>
<td>5,0</td>
<td>6</td>
<td>1.418</td>
<td>6,3</td>
<td>4</td>
<td>1.498</td>
<td>6,6</td>
<td>4</td>
</tr>
<tr>
<td>Hypo-Alpe Adria</td>
<td>1.287</td>
<td>6,4</td>
<td>5</td>
<td>1.450</td>
<td>6,4</td>
<td>5</td>
<td>1.385</td>
<td>6,1</td>
<td>5</td>
</tr>
<tr>
<td>Eurobank EFG</td>
<td>1.400</td>
<td>7,0</td>
<td>4</td>
<td>1.533</td>
<td>6,8</td>
<td>6</td>
<td>1.375</td>
<td>6,1</td>
<td>6</td>
</tr>
<tr>
<td>AIK bank</td>
<td>937</td>
<td>4,7</td>
<td>8</td>
<td>1.137</td>
<td>5,1</td>
<td>7</td>
<td>1.149</td>
<td>5,1</td>
<td>7</td>
</tr>
<tr>
<td>Societe General</td>
<td>813</td>
<td>4,0</td>
<td>9</td>
<td>1.043</td>
<td>4,6</td>
<td>8</td>
<td>1.130</td>
<td>5,0</td>
<td>8</td>
</tr>
<tr>
<td>NBG Vojvodanska</td>
<td>981</td>
<td>4,9</td>
<td>7</td>
<td>907</td>
<td>4,0</td>
<td>9</td>
<td>829</td>
<td>3,7</td>
<td>9</td>
</tr>
<tr>
<td>Alpha bank</td>
<td>655</td>
<td>3,3</td>
<td>12</td>
<td>772</td>
<td>3,4</td>
<td>10</td>
<td>819</td>
<td>3,6</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: NBS (2010b) [internet - 19/01/11].

Having in mind standardized scheme for execution of cross-border loans: daughter bank evaluates the creditworthiness of the credit beneficiary, providing the credit collaterals for the banking guarantee which is issued by the daughter bank in favour of the mother bank (creditor bank) as the guarantee for the repayment of the cross-border loans, we started analysis of off-balance record of Serbian banks in the period of the December 2003 until June 2010 (graph 3), in order to find out through which local Serbian banks cross-border loans were executed.

Graph 3. Off-balance activity of Serbian banks in the period of the second quartile of 2005 until the second quartile of 2010 (in bill EUR)

Source: NBS (2010b) [internet -01/19/11]
Analysis shows that the off-balance record of Serbian banking division had regular activity in terms of issuing guarantees, letter of credits and other products which belong to off-balance record, in the period of forth quartile of 2003 until the second quartile of 2005. Significant off-balance activity started from 2005, as result of recovery of the Belgrade Stock Exchange, because the securities are part of off-balance records. UniCredit bank and Raiffeisen bank used to be leaders in this segment. The constant growth of off-balance record has Raiffeisen bank, while UniCredit bank has cyclic movement, especially in the period of crisis starting from the last quartile of 2008. It is important to notice that Eurobank EFG has interesting part in this segment from 2006, which was the result of merger of Eurobank EFG and Serbian bank Nacionalna stedionica (which had huge off-balance portfolio of FX savings). Period of 2006 until 2010 represents the biggest volume of off-balance activity of Serbian banks. It is important to say that 5 Serbian banks have the leading role in off-balance activity, which are foreign owned and they represent focus of our further analysis. Absolute leaders in off-balance segment are Raiffeisen bank and Eurobank EFG. Following banks are: Banca Intesa, Hypo-Alpe-Adria bank and UniCredit bank (graph 4).

![Graph 4. Off-balance activity of top 5 Serbian banks in the period of the second quartile of 2005 until the second quartile of 2010 (in bill EUR)](source: NBS (2010b) [internet – 01/19/2011])

**Graph 4.** Off-balance activity of top 5 Serbian banks in the period of the second quartile of 2005 until the second quartile of 2010 (in bill EUR)

In the crisis period, including cyclic movement, there was no important decrease of cross-border loans (as it was the case in other developing countries). One of the reasons for it was the meeting initiated by IMF in Vienna in 2009 in order to keep macroeconomic stability of Serbian economy (Vienna’s initiative). Participants of Vienna’s initiative were: governor of National bank of Serbia (NBS) and representative of 10 banks important creditors of Serbian market. The result of meeting was agreement that the foreign banks will not decrease the level of the loans in Serbia until the end of 2010 i.e. the level of the loans at the end of 2010 will be equal to the level which was at the end of 2008. At the same time, banks committed to maintain the liquidity ratios and adequacy capital ratio on defined level. After the meeting NBS prepared and implemented
special measures for support to financial stability of the country in order to keep the trust in banking division, as well as to track financial and macroeconomic stability.

The data of NBS showed that there were no decrease in the volume of the loans, but it can be expected. The reasons for it are: high capitalization of Serbian banks and low ROE indicator. It can be expected that the capital which is not in the function will be returned to the head quarter due to the decreased possibility of granted the loans with acceptable risk, and this results with the fact that this capital becomes big cost.

What has happened during 2010 i.e. did the Serbian banks foreign owned converted cross-border loans in the loans from local sources? If we analyse the two biggest Serbian banks in terms of off-balance record it cannot be concluded that the level of cross-border loan is decreased in favour of the loans from local sources (graph 5).

![Graph 5](image)

**Graph 5.** Comparison of balance assets and off-balance record of Raiffeisen bank Belgrade and Eurobank EFG Belgrade (in bill EUR) in the period of the second quartile of 2006 until the second quartile of 2010

If we analyse data of NBS (2010), it can be noticed that there is decreased of the foreign external debt of private sector (table 3).

**Table 3.** Credit portfolio of Serbian business banks and cross border loans (in billion EUR)

<table>
<thead>
<tr>
<th>Credit portfolio</th>
<th>12/31/08</th>
<th>12/31/09</th>
<th>09/30/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial banks (balance record)</td>
<td>13.598</td>
<td>13.331</td>
<td>14.854</td>
</tr>
<tr>
<td>• Corporate</td>
<td>7.135</td>
<td>7.826</td>
<td>8.298</td>
</tr>
<tr>
<td>• Retail</td>
<td>4.112</td>
<td>4.119</td>
<td>4.587</td>
</tr>
<tr>
<td>• State receivables</td>
<td>1.351</td>
<td>1.386</td>
<td>1.969</td>
</tr>
<tr>
<td>Cross border loans</td>
<td>11,508</td>
<td>10,871</td>
<td>9,800</td>
</tr>
</tbody>
</table>

Source: NBS (2010, 2010c) [internet - 01/19/11]
We can conclude that the Serbian banks foreign owned are important creditors on Serbian market (despite the restrictive credit policy during the world’s economic crisis), and they granted more loans to Serbian corporate segment. Also, the beneficiaries of the cross-border loans used loans with the average interest rate of 3.7% p.a. in the last quarter of 2010 and with the longer period of repayment (longer than 5 years), while the average interest rates on the loans financed by local sources was 10.4% p.a. during 2010 and the period of repayment the loan is predominantly short term.

CONCLUSION

Cross-border loans are definitely big source of financing developing countries. Some countries attract more investment comparing to others. Relevant factors for attracting cross borders are: 1) Macroeconomic and institutional characteristics of the country, 2) Geographical and culturological connection of the countries – creditor and beneficiary (borrower), 3) Existence of the daughter-bank in the country beneficiary of the loan.

It is important to say that the region of Balkan was in the game. The level of cross-border loans in the Balkan was 5.2 billion Euros with the significant differences between the countries at the end of 2008. Three leading countries in attracting cross-border loans in this region were: Croatia (17.5% of total cross-border loans of Austrian banks exposure), Hungary (11.8% of the total cross-border loans of Austrian banks exposure) and Romania (11.5% of the total cross-border loans of Austrian banks exposure).

In spite the fact that the cross-border loans represent the cheaper source of financing of the economy in pre-crisis period, during the world’s economic crisis they represent transmission mechanism. The crisis was spreading from developed countries to developing countries. Many developing countries returned into the phase of recession due to the problem of access to financing, and the economy was not in position to keep it by own sources.

We can say that Serbia skipped the worst scenario despite the fact that it felt recession as result of introduction more restrictive conditions for financing. Having in mind that the picture of cross-border loans is not clear, due to the fact that the off-balance record of the bank cover different areas of banking business such as: payment guarantees issued in favour of foreign creditors, trade with security, overdrafts and frames, letter of credits and other documentary business products, some trends can be notices. In Serbia cross-border loans appeared at the end of 2006. The highest volume of cross-border loans was at the end of the third quartile of 2008. Then there was the period of stagnation of cross-border loans. During 2010 the volume of cross-border loans started to increase. The low increase of industry growth is felt. The only open issue is: is it in the interest of Serbia to allow further usage of the loans connected to Euros through cross-border loans or is it better to consider slow and stable growth of economy with establishing internal ambient for local banks to grant loans through banking system?

LITERATURE

THE PROBLEMS OF THE INVESTMENT BANK LOANS
AND WAYS TO OVERCOME THEM

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Rostov-on-Don, Russia

ABSTRACT

This paper presents the problems of the investment bank loans in the Russian Federation, researches the current condition of those loans. Author explained the serious lag in economic development in Russia. The factors restrain development of investment bank loans are determinate.

Keywords: investment bank loans, economic development, financial infrastructure.

One of the most important functional forms of bank credits is an investment. Commercial banks, development banks and some other credit and financial institutions provide investment to entrepreneurs for the implementation of various innovative projects. This form of bank credits plays a crucial role in the development of a market economy.

In developed countries, such as the United States of America, more than half of investment projects are financed by bank loans. On the other hand, Russian financial institutions are only providing 14-16% of those loans. Obviously, today Russia is far behind in investment and economic development of the market in comparison with other developed countries.

One of the conditions for economic growth of the national economy in the long term outlook is involvement of the banking sector to meet investment demand of economic entities.

The serious lag in economic development in Russia may be explained by:
- the lack of favorable investment environment in the entire marketplace of the country,
- the inadequacy of the basic practices of risk assessment for projects,
- enormously expensive bank loans. These factors result in a gap in interest rates on loans and the profitability of most businesses that are focusing on meeting domestic demand.

Furthermore, in Russian Federation we observe the lacks of considerable tax incentives for banks that are working with entrepreneurs by lending to investment projects.

As a result, unfavorable environment for entrepreneurs and bank loans with high interest rates together with lack of adequate risk assessment arise in the long payback period investments.

The factors restrain development of investment bank loans:
1. For economic as a hole:
   - the absence of the united information data base;
- the imperfection legislative and regulatory base;
- undeveloped market and investment infrastructure.

2. For enterprises and organization:
- the low rate of profitability;
- the low level of corporate management.

3. For credit organization:
- the long payback period;
- the high risks of investing to the industry;
- misbalance between assets and liabilities (in terms of placement and attraction).

Low level of intermediation of the investment sector of the Russian banks is affected by:
- the extremely high credit risks;
- high credit risks are associated with financial instability in most sectors of Russian economy;
- the lack of long-term borrowers with good credit history;
- reliable mortgage and other secured loans;
- the lack of appropriate investment insurance along with legislative and judicial risks.

As a result, in current economic situation investment lending is high risk, complex and quite expensive activity. Risk factors adjusted to the investments prevent the dynamic development of these areas of banking activity. Integrated assessment of the investment projects performed by credit organizations will help to eliminate this barrier. Issues of quality of risk management and administration of credit process play the particular relevance in these circumstances.

The share of long-term resources in the resource pool the banking system of Russia is growing during the last few years.

Table 1

<table>
<thead>
<tr>
<th>Indicators</th>
<th>1.01.2007</th>
<th>1.01.2008</th>
<th>1.01.2009</th>
<th>1.01.2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credits in rub (as % of total)</td>
<td>25,6</td>
<td>13,7</td>
<td>26,8</td>
<td>28,8</td>
</tr>
<tr>
<td></td>
<td>&gt;3 yrs</td>
<td>1-3 yrs</td>
<td>&gt;3 yrs</td>
<td>&gt;3 yrs</td>
</tr>
<tr>
<td>Credits in currency (as % of total)</td>
<td>33,2</td>
<td>32,9</td>
<td>32,1</td>
<td>31,7</td>
</tr>
<tr>
<td></td>
<td>&gt;3 yrs</td>
<td>1-3 yrs</td>
<td>&gt;3 yrs</td>
<td>&gt;3 yrs</td>
</tr>
</tbody>
</table>

However, the demand for investment resources is still relatively low, which does not allow the upgrade of the quality of Russian industry and the economy as a whole. The bulk of loans to real sector is short-term in nature and primary aimed at the working capital of enterprises. In nowadays the national economy especially requires the long-terms loans (over 3 years); however fraction of these long-term loans is just low.

Table 2

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit weight of medium-term resources in the total</td>
<td>40,3</td>
<td>40,2</td>
<td>41,7</td>
<td>41,3</td>
<td>47,9</td>
</tr>
<tr>
<td>obtain of funds attracted by banks, %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit weight of long-term resources in the total</td>
<td>7,7</td>
<td>8,5</td>
<td>9,6</td>
<td>11,2</td>
<td>13,8</td>
</tr>
<tr>
<td>obtain of funds attracted by banks, %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The portion of bank credit in financing investment has increased from 8,5% in 2007 to 13,8% in 2010 in Russian Federation. Bank financing gives way to different funds in structure of attracted funds. The attracted funds make 59,6% in 2007 year, 60,5% - 2008, and 62,9% in 2009 of total (picture 3).
Budgetary founds make 21,5%, 20,9%, 21,8% 2007-2009 years respectively. Borrowed founds from other organizations make 7,1% in 2007 year, 6,2% -2008 year and 7,4% in 2009 (picture 4).

Equity capital of the Russian banking system amounted 4732,3 billion rubles in the beginner of 2011. It’s increased at 177% for the period of crisis. [1] Significant part of equity capital (near 37,8%) concentrated in two banks – Sberbank and Bank VTB. They accumulate from 60% to 70% the capital of Russian banking system [2].

Most banks have stopped long-term loans as a result of the Global Financial Crisis 2008. Deposits of individuals have become the main source of the resource base for medium and small banks at financial crises. At the same time, balances of enterprises has increased (from 1170,1 to 4845,1 billion rubles). Aggregate balances of individual economic entities on passive accounts credit organization grew up in 2,3 times. It’s says about contraction in demand of debt financing. Credit activities of the banks returned in 2010 year. Leading members such as Sberbank and Bank VTB haven’t increased the lending. One the one hand, banks made purchases of non-core
assets; first of all, it’s strategically important but insolvent enterprises. One the other hand, redirection of the strategies happened from traditional to the investment (picture 5).

![Dynamics of bank lending in 2007-2010, billion rub.][1]

Consequently, the investment bank lending is playing an increasingly important role in the functioning of individual economic entities as well as the country's economy as a whole. We can allocate positive quality of credit. It’s a strictly target using of means. The means goes for only realizing investment project. Obviously, credit and financial institutions can’t to make an active participation in reproduction of productive assets in Russian Federation without creating of significant amount of long-term resource base of domestic credit institutions.

The stability of the legal system, legal compliance, possibility of providing enforcement are important for investors. Russian lows have a serious flows. This flows are borrowing provisions of low from different countries; competing provisions of low. Consequently, perfection of legislation plays important role for further development for investment bank loans. Perfection of legislation by:

1. the formation of the united information data base investment bank loans;
2. the formation of the mortgage and guaranteed founds;
3. the reduce tax burden for credit organization which involved in investment bank loans on regular basis;
4. prepare specialists for management of investment projects.

These changes will help to strengthen the resource base of credit institutions and will be future development of investment bank loans.

It should be noted, national financial infrastructure is not formed until the end. Many elements of infrastructure are just beginning to form: marketing, rating, engineering, expert and other agencies.

It’s necessary to create a finance unit (‘Interbank Center of Investment Bank Loans’ ICIBL). ICIBL will help to solve the problems with low infrastructure development.

ICIBL can solve the following problems:
1. Training of highly qualified specialists for investment projects:
- training lectures, seminars, presentation for students, specialists and executives of enterprises and financial organizations;
  2. Organization of complex investment:
  - selection and analysis effectiveness of the investment projects;
  - organization, development of the investment projects which have priority for region;
  - to make monitoring, management of the projects;
  3. Organization of mutually beneficial cooperation:
  - attracting domestic and foreign investments for realization of regional programs of social and economic development;
  - support exports of industrial products and services;
  4. Development of the public private partnership in the investment bank loans:
  - methodological assistance to public authorities;
  - the direct organization of the public private partnership projects, investment attraction on these principles;
  - coordination of national projects in the region.

Despite of the difficult economic situation, the credit investment activities of banks are necessary and very important. Government of the Russia has a number of important challenges for the national banking sector: financing for sustainable long-term growth of Russian economy and its development through innovation.

A number of transformations and qualitative changes in the economy are required for these purposes. These transformations and changers include improving of the business environment and creating a favorable investment climate formation. Also these changes should include development of the national financial infrastructure, which focuses on effective long-term investment financing, launching mechanisms of innovative activity of companies, and active transformation of savings investment in the domestic economy.

REFERENCES

MODERN FAMILY: LIFE VALUES AND ATTITUDES OF THE POPULATION

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ABSTRACT

The determinants of partnership forms of individuals in modern Russia are investigated on the basis of micro data of European values study.

Key words: family, marriage, micro data, multinomial logit model.

INTRODUCTION

In the last decade the values and attitudes of the population, the preferences associated with entry into adulthood and family have changed. All these actualize the study of behavioral patterns of individuals in their lives. The present paper is intended to identify and explain the current situation with individuals’ family planning. The object of study is the modern family, the subject – the research of values, attitudes and preferences, as well as the determinants that define the forms of partnership.

LITERATURE REVIEW

In recent years Russian scientists have actively researched the family planning and identification of factors determining the forms of partnership.

Nuptiality and limiting factors were investigated by S. Zakharov (Zakharov, 2006, 2007). The author noted that formal alliance lost previous dominant positions at a young age. At the age of 25 half of men and women, who live with partners, are in informal alliances. In Russia informal alliances are widely spread at childbearing age. This proportion is 13-15% at the age of 20 to 40.

As a result, nearly one third of children are born out of wedlock (according to official statistics). S. Zakharov also notes (Zakharov, 2007) that nowadays at least 25% of women at the age of 20 and 45% at the age of 25 don’t register marriage with their first partners. The data
confirm these figures for men. Currently, 40-45% of first alliances are informal and trial marriages. Moreover, only half of them (by the third year of marriage) officially register marriage.

The empirical microeconomic analysis of marriage processes was performed by (S. Roshchin, J. Roshchina, 2007). The authors investigate the processes of partner’s choice, modeled marriage probability, marriage age and likelihood of divorce.

The author (Kartseva, 2003) notes, that despite the fact that family remains one of the most important values to individual, the evolution towards individualization and egalitarianism is being clearly outlined.

According to D. Popova the most educated and wealthy groups (middle class, especially the kernel), on the one hand, and the least educated and wealthy groups (lower class), on the other one, are the main actors of innovative attitudes proliferation towards family and marriage in Russia. They are tolerant of cohabitation without marriage, childbearing outside of marriage and divorce (Popova, 2009).

I. Eliseeva (Eliseeva, 2010) notes that almost every third man and nearly one in four women at age 20-24, live separately with partners. Moreover, the mean age of marriage increased by more than two years for men and almost by two years for women.

The authors of the research use the term «marital partnership» to characterize the marital status, which implies stable relationship of individuals, involving sexual intimacy. Marriage partnership may be in the form of a registered marriage (formal alliance) and unmarried (informal alliance). We will distinguish between legal marriage and de facto marriage (cohabitation, civil marriage, the informal alliance).

Marriage preferences follow the changes in the society. In general, there is a substantial tolerance with respect to certain factors. According to WCIOM (WCIOM, 2010) the respondents generally perceive the neutral mismatch of spouses’ educational and cultural levels (57%), but more often perceive this factor rather negatively than positively (19 vs. 14%, respectively). This applies to the presence of marriage experience of one of the spouses (53% take it calmly and 29% – negatively), children from previous marriage (48% and 34% respectively), as well as that one of the spouses is of another nationality (47 and 34% respectively), or come from another country (48 and 30% respectively).

Adultery and permanent flirtation interfere with a partner (71 and 59%, respectively, could not accept it) (WCIOM, 2011). Men cannot stand women’s untidiness and thriftlessness, women – men’s reluctance to work.

**PRIMARY DATA ANALYSIS**

As an information database, we used micro data of European values study. It is focused on the basic European value orientations, including attitudes toward family, work, politics and society at large. This European study is being conducted once in 9 years. Russia has participated twice - in 1999 and 2008. These data were obtained on the basis of a national representative survey of adults by using the random route sampling. We used 2008 data as the most modern and containing a complete set of interest variables. 839 individuals aged 18 to 60 responded to the questionnaires were the sampling for the purpose of our study.

Marriage is a traditional family form. It is viewed as old-fashioned by 22% of working sample individuals. 78% of Russians think that marriage or long-standing relations are needed to be happy. The respondents believe the following conditions are important for happy marriage
(Fig. 1): fidelity, kids, good income, and happy sexual relationship; agreement on politics, the same social background and religious beliefs are not very important.

Men and women roles in the family are not rigidly fixed. About 81% agree that fathers take good care of children as mothers do; and 83.3% believe that both husband and wife should contribute to family income.

Russians consider birth of children the main social role for women. 85% of respondents think childless women can’t feel full. The same position to men is shared by 73% of respondents.

Respondent opinions are conflicting as to: should a woman work and is it really good if she does. On the one hand, about 85% consider that working is good, but most women want to have a home and kids. On the other hand, 73% believe that work is the best way for women to become independent. 19.9% of men and 29.5% of women fully agree with that opinion. In this case, more than half (58%) of respondents believe (61.2% men and 55.9% women accordingly) that working mother is bad for a child at preschool age.

The situation with the marriage legal registration is changing to the informality trend. Cohabitation without marriage is considered normal by 64.7% of individuals and 65.5% of women share this position. In this case, on the one hand, about 60% endorse the women’s position to have kids without having long-term relations with men. On the other hand, 54.7% approve abortions for unmarried women.

Note that the respondents’ attitude to abortions is generally negative (Fig. 2).

Moral values are biased somewhat towards a free life. Although the overwhelming majority (86%) is not endorsed by prostitution, nearly 22% justify casual sex and 15% acquit
infidelity. In this case, legal marriage value is not high, about 43% of Russians feel justified in divorce (Fig. 2). Divorce justifying proportion is biased towards actually married (civil, not registered legally) individuals. An even a greater shift to de facto married respondents, as compared with legally married individuals, was detected for the fraction of supporting casual sex.

Living before marriage is popular with 47.2% of married. However, about 15% of legally unmarried live with their partners and 33% have regular sexual partners.

Unresolved housing problem remains a bottleneck in this case. More than 53% of unmarried and 47% of cohabitating live with their parents.
In the sample most individuals are married and live together (55.8%), lonely individuals are significantly less (26.3%), 17.8% are in de facto marriage (including those who are in permanent intimate relations). Distribution by gender shows that women are often lonely and a little bit prone to de facto marriages as compared to men. Respondents with kids are more likely to live in legal marriage (over 71%), while childless ones mostly are either alone (48.2%), or in a civil alliance (32.1%). Distribution of individuals by age confirms the fact that the informal alliance is peculiar to young age (16-25 years) and is regarded as a trial marriage. At that age only about a quarter of respondents legally formalize relationships. In the most productive age of 26-35 more than 64% of individuals are in a registered marriage; unregistered relations have half the respondents (16.3%) as compared with the previous age interval. The unregistered marriages proportion remains roughly at the specified level (15.8%) for the category aged 36-45 and reduces to 9.8% for those aged 46-60 (Fig. 3).

ECONOMETRIC ANALYSIS

Logistic model of multiple choices is specified to identify the determinants of marital status (Greene, 2000). It allows us to estimate the probability of selection of the J alternatives $\Prob(Y=j)$ as a function of explanatory variables $x_i$:

$$\Prob(Y = j) = \frac{e^{\beta_j x_i}}{1 + \sum_{j=1}^{J} e^{\beta_j x_i}}, \ j = 1,2,\ldots, J.$$

The coefficients of this model are interpreted in odds ratio terms. It shows how many times the probability of choosing one alternative is more (or less) than the other choice alternatives.

Socio-demographic characteristics of individuals (age, gender, kids) and a set of dummy variables to characterize the value orientations of individuals are selected as the exogenous factors. A number of variables (education, employment, etc.) are not included in the model after a preliminary analysis due to lack of significant effects on the dependent variable.

The estimation results of multinomial logit model by maximum likelihood method are presented in Table 1.

The odds ratio shows that women are likely to be single in 2 times more than men. Having children and living together before marriage factors reduce the likelihood of loneliness, as well as is agreed that marriage or long-term relations are necessary to be happy. Age and attitudes on loyalty-free relations, fidelity, responsibilities for having children, distribution of roles within the family, marriage as a means of family formation, as well as the impact of parents’ divorce are not statistically significant for the implementation of loneliness alternative.

Unregistered marriages probability is being decreased with age and presence of children, as well as cohabitation before marriage.

The consent of the individual with the importance of marital fidelity, the need for happiness in long-term relations, equal responsibility of men and women for home and kids, reduce the probability of cohabitation outcome. This confirms the thesis on individual’s greater freedom in the informal alliance.
Table 1

Multinomial logit model to form partnerships
(European values study, 2008)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Single</th>
<th></th>
<th>Coefficient</th>
<th>Odds ratio</th>
<th>Coefficient</th>
<th>Odds ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Coefficient</td>
<td></td>
<td>Coefficient</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.003</td>
<td>1.003</td>
<td>-0.024**</td>
<td>0.976</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (1 – female)</td>
<td>0.717***</td>
<td>2.047</td>
<td>0.329</td>
<td>1.391</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of children (1 – yes)</td>
<td>-2.262***</td>
<td>0.104</td>
<td>-1.867***</td>
<td>0.155</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohabitation before marriage (1 – yes)</td>
<td>-1.220***</td>
<td>0.295</td>
<td>-0.589***</td>
<td>0.555</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance of fidelity for a happy marriage (1 – yes)</td>
<td>-0.102</td>
<td>0.903</td>
<td>-1.079***</td>
<td>0.339</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marriage or long-standing relationship is necessary to be happy (1 – yes)</td>
<td>-0.541***</td>
<td>0.582</td>
<td>-0.554***</td>
<td>0.575</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It’s normal to live together without marriage (1 – yes)</td>
<td>0.279</td>
<td>1.321</td>
<td>0.712***</td>
<td>2.038</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The birth of children – the duty to society (1 – yes)</td>
<td>0.102</td>
<td>1.107</td>
<td>0.491***</td>
<td>1.634</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men and women should bear equal responsibility for home and children (1 – yes)</td>
<td>0.018</td>
<td>1.018</td>
<td>-0.748***</td>
<td>0.473</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marriage is an outdated way of organizing family (1 – yes)</td>
<td>-0.295</td>
<td>0.745</td>
<td>0.096</td>
<td>1.101</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents’ divorce (1 – yes)</td>
<td>0.341</td>
<td>1.406</td>
<td>0.669**</td>
<td>1.953</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.017</td>
<td></td>
<td>2.466***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-674.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>839</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood ratio</td>
<td>304.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseudo $R^2$</td>
<td>0.184</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Basic categories – the legal marriage. In parenthesis – standard errors. Significance of coefficients: *** – 1% level, ** – 5% level, * – 10% level.

Those who consider it normal to cohabit, double the chance to live in the unregistered marriage. Confidence in the thesis that birth of kids is a duty to society increases the probability of informal relations outcome by 60%, and almost by 100% in case of parents' divorce. The results are consistent with the postulate that the majority of individuals consider civil marriage a trial. Determinants of gender and attitudes to marriage as an obsolete way of family organization are not statistically significant for the alternative to informal alliance.
CONCLUSIONS

Thus, childless individuals who are not ready to build long-term relations and cohabit, remain lonely. Mostly these are women. Individuals gravitating towards child-free relations, choose alternative to an informal alliance considering it to be a trial one. Is the bias to unregistered marriage relations justified? In terms of demographics, as noted by (Zakharov, 2007), in developed countries a variety of matrimonial relation types correspond to an increase in fertility.

Using panel data is prospective to study this topic further on.

REFERENCES

LIFE INSURANCE PRODUCT PRICING: INDIVIDUAL AND REGIONAL RISK CHARACTERISTICS’ EFFECT

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ABSTRACT

The competitive market situation leads life insurance companies to search for ways to involve in insurance more policyholders. An estimation of an appropriate premium is the main competitive advantage of insurer, especially in crisis conditions. Generally premium depends only on individuals' age and sex. The good solution is to offer to policyholders the flexible tariff system, which allows reducing premium for policyholders with low risk and increasing it for ones with high risk of diseases and death.

The price reducing might be based on premium differentiation procedure reflecting the level of individual risks of diseases and death caused by policyholders’ peculiarities, such as smoking, obesity, etc. This kind of pricing mechanism should charge different premium levels according to the risk characteristics of individuals, to raise selection quality.

However the limited statistical data or the lack of data makes premium differentiation difficult. It provides the necessity to use the combined methods to estimate level of individual risk.

This paper contains the authors’ technique developed for pricing of long-term assurance contracts. This technique can be used e.g. for estimation risk of death caused by lungs diseases for the smoking person. Also authors offer to differentiate risk premium according to regional factor as one of the major mortality variation causes in Russia. Thus, authors’ method allows calculating elements of premium for different risks (cause of death) and estimating summary premium volume on the basis of policyholders’ peculiarities.

Keywords: Life insurance, risk premium, actuarial calculations, individual risk characteristics
1. INTRODUCTION

Economic crisis affected all the economic sectors. Insurance was among the most declined branches of the Russian economy. Crisis challenges induce insurance companies to develop some new marketing methods. Flexible pricing is a good way of creating the competitive advantage and sales growing.

Economic considerations make it important for insurers to accept as many applicants as possible at premium rates that correspond to the risks presented, in order to maximize market share, premium income, and profitability [1, pg.3].

Life insurance in Russia is a developing part of insurance market. But because of economic crisis it has to reduce. Thus in 2008 the amount of earned premium went 15 percent down from the previous year, and in 2009 it was over 31 percent down from the 2007, reports the Federal agency of insurance supervision [2]. But in 2010 it nearly reached the pre-crisis level. Therefore we can speak about a big potential of Russian life insurance market. That is why life offices have to improve the tariff system by using some models of calculating premiums to make life insurance more attractive for a wide audience.

In order to attract new policyholders, insurers aim to offer low and competitive insurance price. However, insurers also must ensure that the premiums charged are adequate to enable paying claims, and to allow accumulating sufficient funds to remain financially stable. Establishing premiums that are neither too low nor too high requires the ability of reliable forecasting the future claims level. To make these forecasts, insurers rely on actuaries, who use principles of probability and statistics, expertise in finance and economics, and mathematical reasoning to calculate the appropriate premiums that an insurer charges [1, pg.2].

In this paper we develop the actuarial pricing technique of long-term assurance contracts on the basis of policyholders’ peculiarities. Using this technique can make a tariff system more flexible and give an additional competitive advantage to a life insurance company that is very important in crisis. Actuaries may find this information useful in preparing statements of actuarial opinion for other audiences or regulators.

2. PURPOSE AND SCOPE OF INVESTIGATION

The main purpose of the paper is an introduction of new actuarial pricing technique based upon using the different data sources and allowed to calculate a premium on the basis of individual peculiarities.

Long-term assurance contracts are within the scope of this paper. Despite of modern life insurance generally includes two types of claims: death and maturity, the maturity risks are outside the scope of this investigation.

3. DEFINITIONS

Throughout this paper, the following definitions were used to help understand the meaning of the specified terms.

An actuary is a business professional who deals with the financial impact of risk and uncertainty. Actuaries provide expert assessments of financial security systems, with a focus on their complexity, their mathematics, and their mechanisms [3, pg.7].
**Anti-selection** - when those who have most to gain from exercise an option or guarantee are the most likely to exercise it against the life office. If there is a guaranteed option to renew a term assurance at the end of its term, those in poorer health are more likely to exercise it. If the office is known to operate weak underwriting procedures, it will attract the poorer lives that would be rejected by other offices [14].

**Binary Choose Models** - in this class of models, the dependent variable, may take on only two values - might be a dummy variable representing the occurrence of an event, or a choice between two alternatives [5, pg.247].

**Life table** - one of the most important demographic tables, system of indicators that quantitatively describe the age changes in some population caused by mortality. It is presented as a set of interrelated age functions [4].

**Logit binary model** is based upon the cumulative distribution function for the logistic distribution [5, pg.249].

**Probit binary model** is based upon the cumulative distribution function of the standard normal distribution [5, pg.250].

**Product pricing** - product pricing is the determination of the actual office premium (or the rates of office premium per mil of sum assured). This will take account of current market conditions [14].

**Risk premium** - the amount of premium required to cover claims arising under a particular risk heading. This usually refers to a single premium that covers a specific risk for a specific period of time [14].

**Risk factor** - a factor which is expected, possibly with the support of statistical evidence, to have an influence on the intensity of risk in an insurance cover [15].

**Claim** - a request by a policyholder for payment following the occurrence of an insured event. A claim does not necessarily lead to a payment [15].

**The odds ratio** is the ratio of the odds of an event occurring in one group to the odds of it occurring in another group. The term is also used to refer to sample-based estimates of this ratio [6]. For example, these groups might be smokers and non-smokers, healthy and diseased individuals.

### 4. PROBLEM STATEMENT

#### 4.1. Risk factors in life insurance premium calculations

Often applicants for life insurance policies are accepted as standard risks (i.e., they represent average, healthy individuals). Though some bad habits of policyholders, their current health condition, increase the likelihood of future illness or probability of death caused by particular disease. Therefore actuaries have to assess the risk and calculate premiums accordingly.

Estimating the premiums for a voluntary individual insurance product is integrally related to risk selection and risk classification [1, pg.5].

Risk classification and risk selection helps maintain the financial soundness of the life insurance market. If individuals purchase insurance on the basis of adverse health information or other risk characteristics that are unknown to or not considered by the insurer, adverse selection results. Adverse selection means that otherwise similar people at lower risk for high health
spending subsidize those at greater risk. This may drive lower risks from the insurance system and lead to higher premiums or even insurer insolvency [1, pg.1].

To avoid insolvency, insurers must group together individuals with similar levels of risk and charge adequate premiums to pay policyholder claims [1, pg.1]. Excessive premiums damage an insurer’s competitiveness, while inadequate premiums place its policyholders in jeopardy by undermining the insurer’s ability to meet its obligations [1, pg.2].

The claims that an insurer may expect to face ultimately depend largely on the risk characteristics of the individuals who are covered. Thus, actuaries must calculate the appropriate premiums to be charged for various sets of risk characteristics [1, pg.2].

### 4.2. Data problems

One of the most significant underpinnings of the premium-calculating process is data. The quality of the final rates depends largely on the quality and quantity of data available. Premium-making analyses are performed on existing insurance products and involve the use of internal historical data (such as exposures, premiums, claim counts, losses). Often an actuary is required to perform premium-making analysis with limited data. In those cases it may be necessary to use available external data [7, pg.36].

In actuarial theory and practice in Russia we often face the problem of appropriate statistical data searching. This causes an inability to take into account various characteristics of individuals insured (risk factors). Actuaries use life tables as the basic tool to describe age pattern of mortality in life insurance. Life tables developed by Federal State Statistics Service (Rosstat) provide a possibility of premium rate differentiation according to age and sex as well as region. In some cases also possible to take into consideration the settlement type (urban/rural). But some important mortality factors, such as chronic and critical diseases, bad habits, professional groups, etc. are practically cannot be used in life insurance product pricing because of data lack.

However from the point of life office risk management view, it is important to discriminate between policyholders with high and low risk degree. We introduce a method of calculating the composite risk premium taking into account increased likelihood of a claim due to some policyholders’ attributes, such as smoking habits and state of health.

We are giving the technique description in a case of lung conditions and death of smoking individuals. But it stays invariant when using to other risk factors (e.g. obesity, etc) (see figure 1 for details).
5. METHODOLOGY DESCRIPTION

As a first step towards the measuring of factors influencing the degree of risk, the actuary may use a regional data on mortality by causes (see Fig. 2).

Premium rate of insurance for death in age $x$ due to smoker's particular disease can be expressed in the form

$$ T^i_x = T^b_x \cdot i^d_x \cdot q^d_x \cdot k_x, $$

where

- $T^i_x$ – $n$-years term premium rate for death on risk $i$ (e.g. lung decease);
- $T^b_x$ – basic premium rate. Calculates on data of regional life table. Includes sex, age and region;
- $i^d_x$ – decease probability in the age $x$. Calculates on illness rate. Includes decease type;
- $q^d_x$ – probability of death caused by particular disease. Calculates on number of deaths in region by causes. Includes sex, age, region, cause of death;
- $k_x$ – increasing ratio for smoker aged $x$. Calculates on RLMS. Includes sex, age, smoking habits.

* - by healthy condition we consider the absence (or non-diagnosed) of deceases increasing the risk of death
Fig. 2. Sequence of mortality factors variation into account in life insurance based on various sources of statistical data

Using data providing by RLMS we could estimate the binary choice models (logit or probit) with a particular decease as an dependent variable, and the sex, age, smoking and some others as an independent ones. As a result, we can calculate the odds ratio and use it as $k_i$.

Note that smoking, in the opinion of medical specialists, can cause many diseases. That is why we have to calculate premium rates for some of them and then aggregate it and obtain the resulting premium rate

$$T_x = T_x^b + \sum_{i=1}^{m} T_x^i,$$

where $i$ – decease caused by smoking, $i = \overline{1,m}$.

Thus we can receive a premium rate that will be higher or lower than rate calculating only on the basis of population life table and reflecting only average mortality risk.

### 6. EXPERIMENTAL RESULTS

#### 6.1. Data description

Since the goal of the paper is to differentiate risk premium according to regional factor and policyholders’ peculiarities such as smoking habits and state of health several data sources was used.

**Rostov region life table** is performed by Rosstat’s territorial statistical office of Rostov region. This table contains population statistics and estimates of age-sex structure of Rostov region population, such basic indicators as:

- $l_x$ - the number of survived by the age $x$,
- $l_0$ - a starting point, usually 100000;

<table>
<thead>
<tr>
<th>Factors to take into account</th>
<th>Regional life table</th>
<th>Illness rate by decease types</th>
<th>RLMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Governance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Governance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Region</td>
<td>Governance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cause of death</td>
<td>Governance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decease</td>
<td>Governance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>Governance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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$q_x$ - death probability, the probability that someone aged exactly $x$ will die before their $(x+1)$-st birthday;
$p_x$ - the probability of surviving from age $x$ to age $x+1$;
$d_x$ - the number of deaths at age $x$, i.e. people who die aged $x$;
$L_x$ - the number of living at age $x$ to $x+1$;
$T_x$ - the number of coming person-years to live for those survived by age $x$;
$e_x$ - life expectancy at age $x$ [4].

Public Health in Russia Report contains data on the health network and personnel of the medical institutions, on population morbidity and disability rates by main disease classes, the number of persons recognized as disabled by Federal Districts and regions (using International Classification of Diseases and Problems connected with health) [9]. This report is performed by Federal State Statistics Service (Rosstat).

Number of deaths in Rostov region by causes allows taking into account a cause-of-death distribution. Contains numbers of deaths, mortality rates by different causes (main disease classes, such as diseases of the heart, chronic lower respiratory disease, etc.) by age and by sex. This table is performed by Rosstat’s territorial statistical office of Rostov region.

Unfortunately, Russian official statistic data do not describe behavioral influences that most strongly contribute to disease and death from it. Since individuals behavior greatly influences the likelihood of dying of these causes representative survey samples must be used.

The Russia Longitudinal Monitoring Survey (RLMS) is one of the precision unofficial surveys in Russia. It is a series of nationally representative surveys designed to monitor the effects of Russian reforms on the health and economic welfare of households and individuals in the Russian Federation. These effects are measured by a variety of means: detailed monitoring of individuals' health status and dietary intake, precise measurement of household-level expenditures and service utilization, and collection of relevant community-level data, including region-specific prices and community infrastructure data. Data have been collected 18 times since 1992 [8, 10].

6.2. Premium calculation

To demonstrate our method of calculating elements of premium for different risks we estimate premium rate of 10 year term life insurance in age 40 due to male smoker's lungs disease in Rostov region. The following calculations show resulting element of premium (death only from lungs disease) charged if the policyholder is a 40 years age smoker male.

Firstly, we calculate basic premium rate of 10 year term life insurance for 40 years old male on Rostov region life table data in 2007 [11] using commutation functions (for more details see e.g. Chetyrkin, E.M. [12, pg.61-62, 79]).

$$10T_{40}^b = \frac{M_{40} - M_{50}}{D_{40}} = 0.051994.$$ 

Note, that for our calculations discount rate is chosen to be equal the refinancing rate of the Central Bank of the Russian Federation (7.75% per year, February, 2011).

On the next step, lungs decease probability in Rostov region is calculated on population morbidity rate by respiratory organs diseases in 2007 (Public Health in Russia Report, 2009 [13]).
\[ r^d_x = 0.3089. \]

Then, probability of death caused by lungs disease for male in the 40-44 age group in Rostov region in 2007 is estimated on Number of deaths in Rostov region by causes [14] (we use number of deaths caused by respiratory organs diseases and number of deaths caused by all causes).

\[ q^d_x = \frac{82}{1614} = 0.050805. \]

For the purpose of the paper a sample of 2990 male individuals in the 14-60 age group is formed on RLMS data (round 14, 2005 year). Simplify our calculations we select only two variables: dependent variable (lungs condition) is binary, with two levels 1 if individual have lungs diseases and 0 if individual do not have lungs diseases; independent variable (smoke) is also binary, with two levels 1 if individual smoke and 0 if individual do not smoke.

To calculate increasing premium rate for smoking male we estimate logistic regression model (table 1 show results).

Table 1. Estimated parameters for logistic regression model of lungs condition  
(for male separately)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Odds ratio (range)</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoke</td>
<td>0.5709641</td>
<td>1.769973</td>
<td>0.2132889</td>
</tr>
<tr>
<td>Constant</td>
<td>-3.5477</td>
<td>-</td>
<td>0.1850455</td>
</tr>
<tr>
<td>Chi-Square criterion</td>
<td>7.7659</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum likelihood function</td>
<td>509.02553172</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The model show that the variable SMOKE is found to be statistically significant at the 0.05 level (Standard Error in table 1). A Chi-Square criterion and maximum likelihood function show that the model provided a reasonable statistical fit (at the 0.05 level).

Odds ratio in this model indicates that the odds having lungs diseases for smoking male is 1.77 higher than having lungs diseases for non-smoking male. Then increasing rate for smoking male premium is

\[ k_s = 1.77. \]

In order to show the sex-associated difference of the lungs condition risk provided by smoking, we estimated a similar model for all sample (table 2 show results).

The RLMS data set (round 14, 2005 year) used to estimate model (table 2) consists of a sample of 6597 individuals (male and female) in the 14-60 age group.

As the previous one, the model show that the variable SMOKE is found to be statistically significant at the 0.05 level (Standard Error in table 2). A Chi-Square criterion and maximum likelihood function show that the model provided a reasonable statistical fit (at the 0.05 level).

Odds ratio in this model indicates that the odds having lungs diseases for smoking individual is 1.59 higher than having lungs diseases for non-smoking individual.

Thus, the odds having lungs diseases for smoking male is higher than having lungs diseases for smoking individual (male or female).
Table 2. Estimated parameters for logistic regression model of lungs condition (total)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Odds ratio (range)</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoke</td>
<td>0.4661116</td>
<td>1.593785</td>
<td>0.1307994</td>
</tr>
<tr>
<td>Constant</td>
<td>-3.476535</td>
<td>-</td>
<td>0.0934471</td>
</tr>
<tr>
<td>Chi-Square criterion</td>
<td></td>
<td>12.634</td>
<td></td>
</tr>
<tr>
<td>Maximum likelihood function</td>
<td></td>
<td>1034,3696533</td>
<td></td>
</tr>
</tbody>
</table>

Therefore, we can calculate 10 year term life insurance premium for only one risk (death from lungs disease) for 40 years old smoking male in Rostov region

\[ T_{40}^{\text{lungs}} = 0.051994 \cdot 0.3089 \cdot 0.050805 \cdot 1.77 = 0.0014. \]

Similarly other diseases can be considered and the total premium with multiple risk factors can be calculated as the sum of the premium for the separate risks.

7. CONCLUSIONS

The proposed method allows us to estimate a separate part of the rate of insurance for death from particular diseases, taking into account several characteristics of the proposer.

Thereby, we adjust not the entire premium rate (for all risks), but only the part (for particular decease caused by smoking). This allows us to justify the selection of risks and make the product pricing more flexible. It can help the insurer to protect itself from anti-selection by prospective policyholders. Thus the life office could receive a competitive advantage that makes it more stable in after-crisis conditions and entails a faster grow after reduction during crisis.

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THE NATIONAL WELFARE FORESIGHT: POST-CRISIS WAYS OF HUMAN CAPITAL DEVELOPMENT FOR INNOVATIONS

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ABSTRACT

In the article innovation-reproductive and rent-generating function of national welfare is exposed, complex analysis of the results of system parametristic indication of the strategy of national welfare development in the innovation economic growth interests on the author’s set of instruments ground is conducted.

Key words: national welfare; foresight; innovation-reproductive and rent-generating function; human capital.

In a context of the modern economic development model the essence of national welfare is expressed in new aspects – it becomes not only the accumulated re-iterative reproduction process result, but also is converted into the integrated innovation-oriented economic growth resource-factor. This conversion is connected with world and national economic systems movement towards innovative «knowledge economy», competition gravity center transference to the science, education, innovative activity sphere, non-material actives role in economic reproduction process increasing.

The resource-provided countries have the export-raw model of economy. Their development may be characterized in comparison with other countries by the rough, spasmodic rate, mainly caused by considerable raw materials prices and economic instability.

Such development is inevitably accompanied by the problems which brake economic modernization and its social and innovative orientation. On the contrary, the development of the countries which realize the policy of human capital quality, national well-being, high technologies increment provides advantages in world socioeconomic evolution, raises competitiveness of national «intellectual» economy.

Increasing human development quality importance for economic growth generating and competitiveness has initiated the mounting interest of economists to the subjective factor (the human capital) role in production progress. It has gradually promoted the national welfare parameters (at first – the individual, especially economic; later – the social, public) inclusion into the economic dynamics resource supply research system.

The globalization accompanied by substantial capital mobility and national economies openness increasing transforms the national welfare economic content and display forms in
reproduction process, modernizes its structure and functions in the conditions of transition to the innovative-focused economy.

These tendencies find reflection in the new long-term economic trend research methodology – the methodology which equally considers society and economy interests. The national welfare becomes the major productive forces element and the integrated institutional condition of the human capital reproduction.

The new national welfare interpretation won't be coordinated with the implanted representation about well-being as a gross national product and national monetary income synonym. National welfare is not identically to the economic well-being of a society, but it depends on it. The average income growth in a society leads to an educational and population health quality increasing, improvement of working conditions, higher access to scientific achievements and technologies... and, as consequence, – to the cumulative national well-being growth. Basic difference between the narrow economic and the expanded concepts of national well-being consists in that the monetary income serves in the first of them as a final measuring welfare instrument, and in the second – only as an auxiliary means of its rising.

The national economies innovative-focused development researches trace the obvious cyclic nonlinearity of the dynamic trends, originally indicated by the national welfare accumulation – consumption relation. Accumulated national welfare becomes depleted during the period of stagnation, low rates of economic dynamics (as the result of its part mobilization for economic growth objectives), and, on the contrary, collects and creates the integrated basis of a long-term economy rising trend at the cost of the increasing add-on national income during the lifting period of high growth rates. It being known that sizeable accumulated national welfare rate in highly developed countries creates the definite innovation-oriented economic growth «stability stock», which decreases the depth of the depression in crisis (fig.1).

The non-material goods-resources together with traditional material blessings form this «stability stock» basis due to such their key properties as value (limit utility) increasing in use, unlimited reproducibility and positive network effects. The considerable part from them acts in the form of non-material actives. These actives institutional converting in innovative productive factors of competitive, «intellectually roomy» goods/services is carried out in the global competitive markets, forming the income in the shape of an innovative rent. Capitalization of an innovative rent transforms it into a source of the innovative-focused reproduction process modernization.

Economic innovative factors role increasing and action scales widening change the traditional views on classical phases of the modern expanded reproduction process. The non-material actives accumulation stage (but not the production process) becomes an initial, defining phase in the new scheme of reproduction economic relations, because it creates a resource basis of economy of innovative type.
The analysis of functional properties and set of interrelations of national well-being components with innovative development of economy process has led to its structured representation in the form of the four-sector resource system which components express quality of the population, a standard of living, quality of social sphere and quality of the ecological environment. The distinguished four national welfare components just define the basic vectors of its accumulation at an initial reproduction stage. They form the potential of innovative economic dynamics rates increasing on the basis of national welfare resources converting into innovative economic growth factors.

Research of conditions and factors of new subject-objective relations in national well-being reproduction model forming has shown that «network economy» subjects under the global competition pressure demands high degree of all involved interests coordination and form corporate community in the course of sharing of national welfare resources. Collective strategy of actions coordination, cooperation, mutual training, information interchange, intersubject contractual partnership justs out as the key mutually advantageous strategy of the given community.

The «corporate» (associated) strategy efficiency is defined in these institutional conditions by degree of its three imperatives – economic efficiency, social justice and ecological stability in the course of national welfare resources sharing coordination. The priority role in the institutional mechanism of subjects’ collective strategy realization is given to the public long-term economic policy. The key principle of national welfare accumulation (its reproduction as socially useful blessing), basically, for the account of innovative rent re-investing into development of the population and socially-ecological conditions of its reproduction quality – education, public health services, fundamental science, social infrastructure, environment protection forms the basis of the interfacing three specified public policy imperatives.

The complex estimation of national welfare four components for innovative growth of economy supply is based on the «resources – results» methodology of national well-being diagnostics using. The national welfare as an economic development integrated resource diagnostics methodology and monitoring indicator base reflect the two-aspect, «resources – results» structurization of the integrated national welfare resource potential (INWRP) – their resource component characterizes the separate resources potentialities (possibilities) for innovative activity initiation, and resulting one – reflects the economic benefit from resource possibilities using, i.e. characterizes the reached level of national welfare converting into innovative growth factors.

National welfare as an economic development integrated resource state-of-the-art (fig. 2) and its increase innovative effect diagnostics (on an example of Russia with the four-sector modeling toolkit realizing «resources – results» methodology) has revealed that by force of economic policy strategies realization (including strategy of educational level/quality improving and decreasing of population morbidity, poverty rate cutting and per capita income buying power increasing strategy, property and infrastructure facility population ratio and employment rate rising strategy, development of small-scale business and enterprising freedom increasing strategy, dynamical information infrastructure creating and technologies access increasing strategy, etc.) indicators of modern Russian economy subjects innovative activity can be increased approximately in 1,5 times.

Figure 2 – National Welfare as the Russian Economic Development Integrated Resource State-of-the-art Estimation

1 Composed according to the author’s set of instruments approbation results
The highest importance (132 %) among four basic national welfare components in innovative effect integrated indicator belongs to social sphere resources that reflects a priority of the social, socially useful blessings – sources of the social capital accumulation reproduction. These goods are characterized by such important from the innovative growth point of view properties as positive network effects and their limiting utility in the course of use increasing.

The received results testify that the complex system of the long-term innovative economic policy measures in the national welfare sphere is necessary. It, in turn, demands transformation of existing system of strategic social and economic decisions acceptance, stimulation methods and the state support, including national welfare resources mechanisms of accumulation and productive use in interests of innovative dynamics perfection. The offered four-sector model of the national welfare resource management integrating analytical procedures of national welfare resource potential and long-term economic policy strategies innovative effect complex estimation can be used for a substantiation, diagnostics and monitoring of the long-term policy modernization.

Considerable asymmetry of various strategies innovative effect estimations defines priorities of a long-term social and economic policy. In particular, for the economy characterized by zero, weak, average and high social sphere resources converting in innovative dynamics factors ratio, strategy of social infrastructure development and employment rate rising, strategy of small-scale business development and enterprising freedom increasing, strategy of scientific achievements and new technologies access increasing, development of an information infrastructure are priority, accordingly (fig. 3).

Figure 3 – Spatial Strategic Russia’s National Welfare «Development Crystal» in the Innovation Economic Growth Interests

1 Composed according to the author’s set of instruments approbation results.
The revealed innovative effects verify to a basic change of national welfare function during the innovative economy epoch and about the state long-term economic policy complex modernization necessity. They also specify in priorities in social and economic policy realization. Investments into innovative national welfare resources – living conditions, social and information infrastructure, science, education, public health services, culture, etc. – should play a key role.

REFERENCES

SECTION 2.

Trade and Development: International and National Cooperation Experience
POST-CRISIS DEVELOPMENT OF THE WORLD ECONOMY: VECTOR AND MODEL OF RESTORATIVE GROWTH

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ABSTRACT

In spite of the fact that for several decades there was functioning of Keynesian programs formulation of incentive the growth of the real sector of the world economy its development in the two last decades was characterized by the expansion of specific segment – industry of the economical simulacrs and also the financial sector. Such configuration of the sectoral economy structure was typical for the USA, it was also demonstrated by the high economies of Europe.

The modern phase of the world crisis turned to be the consequence of achievement the development bounds by the commodity sector of the world economy which existence was described in Marxist labour theory of value. Historically worked-out methods of solution this problem were always moving away the evolitional level on reaching which at this moment the world economy started to undergo the structure deformation.

In this article the authors presented the ground that crisis of the model of incentive the economical growth on the basis of demand expansion due to the forming indebtedness caused immanently the necessity of building the new model which is based on the more stable growth driver. Development of this model will require the widening of conceptual apparatus and introduction the new terminology units which are provided with important methodological functions. As one of these units it must be used the conception of decoupling which allows getting more detailed understanding of the nature and rules of synchronization the economical cycles in the world economy. Development of this conception in the next years will be adjusted by the new trend of postcrisis of the world economy which after having passed the bifurcation point in 2008-2010 can experience the next recession caused by the collected global imbalances, worsening of problems with budgetary shortfalls in the EU countries and not solving the macro economical problems in the USA.

Key words: world economy, model of economic growth, crisis.
Development of the world economy in the last two decades was characterized by an expansion of its specific segments - industry of economic simulacras. The financial and entertainment segments of human services as the locomotive part of the economy of the USA formed a demand for the issue of the required for them indirect simulacras. Also highly developed economies of Europe demonstrated similar hierarchy and "functional configuration" of the structure of branch-wise economy. The advanced growth of segments of human services has become indicative just in the economy of post-modernism: up to the middle of the 20th century service economy had nonsignificant portion of the GDP in countries of anglo-saxon capitalism.

It will be sufficient to mention the fact that the formulation of Keynesian programs of stimulation of economic growth did not contain a strategic focus on the development of the financial sector because it was maximum landed at reforming of primary industrial economy.

From an empirical point of view such emphasizing turned to be more than reasonable. "The task of significant reduction of amplitude of cyclical swings in the economy has been resolved practically for more than 70 years. Even global energy crisis of 1973-1974 did not loosen the world economy but it contributed to structural rebuilding of the economy of the developed countries (in the direction of increasing energy efficiency and reducing ecologic capacity)"[1].

Such verification on more than half a century distance allows to conclude a posteriori that the sphere of material production acts as a reliable reference point in designing of a steady model of economic growth in the nearest future. This conceptual intention should be taken as a fundamental principle both in the ideological reconstruction of the neo-liberal doctrine with a purpose to design a steady post-crisis mechanics of the market development and in making the macroeconomic models of the market development.

In methodical plan as an important limitation in this case will act irreversibility (immanence which is empirically fixed - rooted by crisis) of those changes which characterize structural deformation of the world economy. It should be noted, that a detailed scientific assessment of objectivity and rationality of those immanent shifts which led to the crisis development in the world economy in the modern time will have a little bit fragmentary (conceptually incomplete) character that is caused by the existing in economic science methodological blank. As the scientists A. Buzgalin and A. Kolganov note, for today "economic science has nor the necessary statistical studies or generally accepted concepts which describe the cycles of updating of main capital and change of technological forms in the modern changing for the "society of knowledge" era" [2].

The modern phase of world crisis turned to be a result of reaching those limits which empirically were "discovered" by real (trade) sector of the world economy.

Approximately until the 1990s periodically arising cyclical crises were being smoothed by the tools of state regulation. In the present century the institutional removal of these regulators led to aggravation of the problem of updating the main capital in the conditions of the wave fluctuation of technological development.

These conditions proved to be firmly determined by impossibility of financing the next coil of the STP which weakened the possibilities of development of the world economy in the context of former model of growth. The scientist-crisisologist M. Khazin makes a scaled and heavier conclusion in the light of ideological development of this concept. - "There is enough
reasonable opinion that many problems of contemporary financial system of capitalism are caused just by the fact that in the absence of new consumers the administration of the USA started (implicitly or explicitly) to speed up capacity of consumers available in terms of their purchasing power - this became an embryo of the current debt crisis.

But the essence of the problem does not change from this: paradigm of technological progress has exhausted itself and reached the limits of possibilities of its development" [3].

M. Khazin stresses that "not the progress itself has ended but his very particular model under which over the last 400 years the entire economy of our planet has reconstructed" [3] .

The proclamation of this logic allows us to describe theoretically and comprehend conceptually basic empirical backgrounds of unstable development of the world economy the most acute contemporary phase of which has ended with global crisis.

Weakening of functional niche of Keynesian program of regulation of economic cycle at the expense of massive procedure of institutionalization of deregulation in the global scale has acted as one of the factors of crisis development. The character of current crisis has also changed in comparison with former crises of overproduction and Keynesian methods are oriented on their suppression.

Development of basic methodological procedures in designing of model of economic growth will certainly require the use of a broader range of scientific tools - rules and concepts that would substantially display the new technology of designing. In the dissertation the author suggested to introduce and terminologically fix in the context of the problematic of research system and technical concepts of "co-operative effect" and "synergetic functional convergence" of separate national economies in the system of international labor division.

These concepts the author offers to define as follows.

Under cooperative effect it should be understood co evolution of effectiveness and stability of functioning of interrelated individual economies in which the basic factors of economic growth of each of the last will rely (be in dependence) on the functioning results of any of the rest economies provided keeping a stable dynamics of long-term growth of the last, the absence in them of imbalances and unacceptable skews of inter-branch proportions of reproduction, exorbitant conjuncture depending on the situation on external markets.

Synergetic functional convergence in our interpretation will mean such a functional joint of economies in which development of each of them will be focused on execution of two conditions: achievement the normal level of effectiveness and stability of its own growth; accounting of meeting an identical (with a reasonably justified symmetry level) condition for the technologically related economies.

The logic of development of the proposed methodological line and its amplification due to introduction of suggested operationalizing it conceptual means follows from the complexities of those transformations which global economy has endured as a result of crisis.

Emerged system of economic imbalances in the structure of the global market can be removed only on the basis of resolution of conflicts implicitly built into mechanics of development of the world economy dichotomy between the conceptions "efficiency" and "justice". Modern macroeconomic version of the first conception in its various neo-liberal stylizations forms practically insoluble conceptual and empirical antagonism with meta criterion "justice". Removal of this duality is possible only on the basis of configuration change of target function of the world economy and amplification of "justice" as its basic system limit.
From the author’s point of view imperatives of rational theoretical and empirical synthesis of criteria of efficiency and justice in the regarded by us context have quite clear ideological content which ideological format has pointedly non liberal basis.

The modern world financial-economic crisis acted only as detonator of those trends which appeared to be immanent for modern capitalism and spontaneously (without crisis) formed regression vector of its development.

The model of support of vital energy of capitalist development was based on permanent expansion into non-capitalist area and controlled transformation of the last into capitalist periphery as additional sales market and a source of cheap labor. The model of permanent colonial expansion appeared at this time practically exhausted.

The model of colonial expansion acted as a tool to support the social world in the "core" of the capitalist system. Limitations of market freedom of capital in this core were nation-state and the civil society. Their institutional joint is being rapidly dismantled since the 1970s. As a result of contemporary crisis this process got an additional powerful impetus and, in our opinion, it will be seriously forced in 2010-ies.

The current synchronization of global dysfunction of the financial sector, lack of sufficiently powerful source of the current makeup of economic growth in the sector of real production of economically developed countries, overwhelming burden of social obligations of the state (slowly being restricted in the context of total policy of dismantling the concept of welfare state) - all this very much complicates conceptualization of the analytical scheme of convergence of efficiency and justice criteria as dominant components of objective function of post-crisis growth of the world economy.

Theoretical reflection of complexity of synthesis of considered criteria is the scheme presented by us in figure 1.

Developed scheme shows the spectrum of the basic discovered by us factors which synchronous "one-stage" empirical joint determines the complexity of configuration of the model of stable post-crisis growth of the world economy. Nevertheless, the development of this scheme allowed to indicate the key "painful points" and at the level of theoretical vision to underline the specific of conceptual diagnostic of difficulties in developing of growth rate of the world economy in the primacy of social and rational (economically centric) vision of this process.

Contemporary crisis as well as post-crisis factography of the world markets development will serve as a scaled impulse which at the managerial level will inevitably urge the government radically reconsider its attitude to the programs of economy support. In 2010-2011 the difference in understanding of basic springs of crisis development should be hastily smoothed. Despite keeping the inertia of development of the world economy on the basis of previous mechanisms of growth the majority of states will face a choice: either to allow speculative bubbles grow preventing their correction or to produce a strong correction in a proactive manner preventing the occurrence of more serious consequences in the future.

Coming back to the symbolic for understanding the essence of crisis insufficiency of demand Zh. Attali is showing basic semantic imperatives which caused it. Explanation of the last becomes possible in the context of strategy of the global creation of demand at the expense of debts. "In order to keep economic growth (without redistribution of property!) it is necessary to support the demand without increasing incomes of the population. For that the middle class must take loans" [4].
Figure 1. Classification of factors of post-crisis suboptimal balance of the world economy on the criteria "effectiveness" and "justice"

Blocking insufficiency of real effective demand was implemented through the expansion of crediting the consumer demand. Amplification of this trend was restrictively complemented by decline in the value of funding both for the public and for the corporative sector [5].

In the context of formed regularities the market mechanism itself started working in the self-reproducing system. Amplification of inertia of this trend has led to aggravation of competitive struggle. In the basic segments of industrial production maintenance of operating financial flows and current strategy proved to be maximum attached to possibility of permanent attraction of loan. Set on flow supply of liquidity on both flanks of the market - demand and
supply established a certain level of tension, the framework conditions of safe keeping of which required constant maintenance of level of investment business support.

Overcrediting of households and corporations became the basic factor on the background of which it was devaluation of stimulating effect including after reduction (in Japan nullification) of interest rates.

The crisis has exposed all functional weakness of the modern liberal market model which loss of stability was caused not so much by cyclical deficit appeared because of recession (fall in tax collection on the background of growth of social benefits) as by structural caused by problems which are not connected with crisis but worsened by it.

As a main subject able to neutralize complication of consequences of structure crisis it was the state that was able to increase its debt load forming on the domestic market supporting the economy level of demand and directly supplying with liquidity the corporate sector of the economy. The last, along with the population, redirected current incomes not for consumption and investment but mainly for the reduction of debts. So since 2007 till 2009 state debt of the USA has grown from 61.9% to 84.8% of GDP. According to the forecast of the IMF by 2014 it will be already 108, 3% of GDP. In Britain the national debt since 2007 has increased in one and a half time and by 2014, according to the same forecast, it will grow on the same delta [6].

From our point of view, this trend in the nearest future will empirically increase the possibility of multiplication of the problem of excess debt in the corporate sector of the economy (plus at the household level) due to appearance of a more complex problem of state debts. In the Euro zone actualization of this promise will make it the most verifiable due to the lack of consolidated position in decision of this question, common mechanism of the control over state debt, a unified fiscal policy, and flexible economic, financial and monetary policies between the countries of the European Union [7].

Thus, the above given integrated assessment allows us to conclude that in the context of empirically grounded scheme of stimulating economic growth the loan has strongly transformed into a dominant factor of support for the demand and therefore for guaranteed issue in the production.

Giving to demand and production a new dynamics through amplification the credit vaccination in economy in order to resist the crisis is not really effective since it may only intensify the recession. If the country suffers from the inflow of short-term capital (the Ukraine, Hungary and others.) the government because of danger of extra unwinding may not reduce the interest rate. At the same time, in conditions of "impossibility" to reduce the interest rate it appears an inflow of speculative capital which pushes up the currency exchange rate suppressing the competitiveness of the processing industry. That is, the regulatory mechanism for stimulating economic growth in the context of national economies has low potential. Its effort is possible on the basis of development of the system of regulation the branch markets supplemented by some mechanism of regulation the global market.

Problematic place emerged in the anglo-saxon zone of capitalist model of demand stimulation is an objective stipulated weakness of final demand for products in extensible overproduction.

This weakness is artificially camouflaged with a powerful credit support of the consumer market.
Asymmetry of internal construction of the economy in individual countries and their unreliable functional linkage with other economies in the system of international labor division allows to speak a priori about inefficiency, instability and short life of any interstate cooperation at the level of individual corporations, industries and etc.

The logic of this promise is the most verifiable in modern time. Development of Germany for the period since 2005 till 2009 was secured by massive exports to the Euro-zone countries which after introduction of Euro due to impossibility of using devaluation mechanism failed to oppose the cheapness of their work to German competitiveness intensified by the same labor dumping. At the same time Germany was a supplier of liquidity for these markets, in fact financing sales of their own products.

Thus, stability of the modern system of international labor division is weakened by the lack of understanding about the necessity of formation of some synergetic effect, in which context the growth of production in individual countries would have relied only on the level of savings financed by their own real production. In our opinion, this is a fundamental concept which theoretical development, taking into account critical mass of those defects that weaken typical for the world economy mechanics of economic growth, should make up a platform of anti-crisis building of macroeconomic models of a fundamentally new configuration on a planetary scale.

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RUSSIA’S APPROACH TO CREATION OF COMPETITIVE ECONOMY: HISTORY OF SUCCESS AND FAILURE OVER THE PAST DECADE

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ABSTRACT

The past years of considerable growth of Russian economy was followed by expansion of state influence on the majority of sectors of country’s economy after a decade of “liberalization tendency” of Eltsin’s epoch. Today when Russia along with the whole world is living through hard times of post-crisis reality, government is seeking for new sources of development and is trying to formulate new formula of economic success for short-, middle-, and long-term period. The paper is investigating measures that were taken in Russia over the past years in order to create fundamental and infrastructure basis for economic-technological development, changes in country’s economic performance and gives conclusions on the achieved results.

Key words: Russian economy, socio-economic development, country’s competitiveness, state influence.

INTRODUCTION

Throughout much of the 20th century the USSR was trying to create its own economic and political order. Now after dramatic political and economic changes in the country over the past twenty years when Russia transformed from a communist, centrally planned society to a relatively more open political system and a more market-oriented economy, we still witness how newly emerged “industrial economies in decline” are trying to cope with all the economical, political, and cultural changes.

After change of power in 2000 new Russian government started to emphasize importance of country’s role in world politics and economics. In 2007 The Time named then President Vladimir Putin as the Person of the Year for “bringing country back on the map after it has been
on the verge of becoming a failed state... due to his dauntless persistence and sharp vision of what Russia should become".\(^1\)

Putin indeed did a lot but what he did best of all during the first term of his presidency – ensured all the nation that it still lives in powerful and very strong country, which is on its way to economic prosperity. Thus, survey conducted by WCIOM, leading Russian public opinion research center, about the Russians’ perception of Putin’s 7-years presidency showed that 61% of surveyed saw positive changes in level of living and 62% - in international relations\(^2\). And almost all the surveys conducted since 2002 show that people are more and more satisfied with country’s performance in a whole and their own well-being in particular [Rosgosstrah, WCIOM, Institute of Demographic Research] (see, e.g., Figure 1). Thus, real income of population and real salaries were growing steadily over the last 9 years at a rate of about 10-13% and number of population with profits lower than living wage was shrinking (13.5% in 2008 compared to 29% in 2000).

But does this optimistic perception mean that there are real positive shifts in the way Russia is governed, state and private business develops, and, what’s more important, economic structure changes? Or are these just separate, unrelated occurrences that lay within any consecutive measures of Russian authorities to create a competitive economy?

**GOVERNMENTAL MODERNIZATION REFORMS HISTORIC OVERVIEW**

Since beginning of market reforms at the end of 1980-s, country managed, better or worse, to solve some of the most critical issues: transformation to a more open economy, price

\(^1\) http://www.time.com/time/specials/2007/article/0,28804,1690753_1690757,00.html#ixzz12BvWnhiC
liberalization, privatization, creation of independent bank system and formation of stock market, tax system reform, etc. These were absolutely urgent actions, essential for transformation from administrative to market economy. But then a new question arose: what is next? And, after a long period of inefficient efforts of devising a somehow mature state approach to country’s development (state’s macroeconomic strategy was mainly based on principles of Washington Consensus), in 2000 Government presented a Social and Economic Development Strategy until 2010, which main statements were continued in President’s addresses to Federal Assembly on a regular basis. Later on, in 2006, Government presented 4 “Priority National Projects” aimed on development of human potential (“Healthcare system”, “Education”, “Housing”, “Agriculture”), supported by creation of special State Agencies and Corporations aimed on implementation of these initiatives, and then, in 2008 – a Concept of Long-Time Socio-Economic Development of Russian Federation until 2020 that stated that Russia’s development is dedicated to creation of innovative economy “which means transformation of intellect and creative potential of each human being into the leading factor of economic growth and national competitiveness as well as improvement of efficiency of nature resources usage and industrial capital”\(^1\). The Concept became a Holy Grail of officials’ new economic vision, it was and it is cited almost in every public speech or meeting of governmental representatives.

The idea of innovative development was once more supported by President’s Medvedev article “Rossiya, vpered!” that determined 5 vectors of country’s economic modernization:

1. Standing among leading countries on production efficiency, transportation, and usage of energy. Development and promotion of new types of fuel.
2. Maintenance and development of nuclear technologies.
4. Ownership of earth and space information exchange infrastructure (GLONAS project).
5. Obtaining leading positions in production of medical equipment, diagnostic devices, and drugs to cure virus, heart, cancer, and neurologic diseases.\(^2\)

Realization of all activities mentioned above is brought into life by 54 Federal Special-Purpose Programs that are aimed on development of high technologies, accommodation facilities, rural settlements, transport infrastructure, social infrastructure, state institutions, security, etc, as well as development of specific Russian regions such as Far East, South of Russia, Republics of Chechnya and Ingushetia, Kaliningrad region (Table 2). Most of these Special-Purpose programs are realized within so called “institutions of development” that were established in order to bring support and help to those sectors of Russian economy that were considered incredibly important but underdeveloped for some reasons. At the moment Russia boasts more than 10 of such institutions which capitalization, according to Ivan Oskolkov, Director of Corporative Management Department of Ministry of Economic Development of the Russian Federation, exceeds 1.2 trillion rubles (Table 1).

In 2011 financing of the Special-Purpose Programs, according to the Russia’s State Budget for 2011, is to reach $32.7 billion. In overall state investments in 2011 are to be $45.5

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billion, that is higher than 2010 level on 15.3%. These expenditures are to include such projects as support for pharmaceutical industry, machine-tool construction and diesel engines of new generation (Table 2).

Table 1 - Governmental investments into Russian Institutions of Development

<table>
<thead>
<tr>
<th>Name of Institution</th>
<th>Year of establishment</th>
<th>Goals</th>
<th>State investments into institution’s activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian Bank of Reconstruction and Development</td>
<td>1992 (declared bankrupt in 2000)</td>
<td>Financing and crediting of investment projects aimed to improve industrial structure of Russian economy, including development of export activity and import-substituting industries</td>
<td>N/A</td>
</tr>
<tr>
<td>State Investment Corporation (GOSINCOR)</td>
<td>1993 (abolished in 2003)</td>
<td>Improvement of investments’ efficiency and creation of favorable environment for investment inflows, including consulting, legal, economic and audit services for investors</td>
<td>$1.25 billion</td>
</tr>
<tr>
<td>Russian Financial Corporation</td>
<td>1993 (reorganized into Bank “Russian Financial Corporation” in 2005)</td>
<td>Activization and improvement of investment activity by financing of investment programs, their development and expertise, transactions on the securities market, banking services, consulting, etc.</td>
<td>$1.5 million</td>
</tr>
<tr>
<td>Fund for Promotion of Development of Small Business in Science-Technology Sector</td>
<td>1994</td>
<td>Creation of favorable environment for entrepreneurship, development of science and national innovative system, recruitment of young people into innovative activity</td>
<td>1.5% of State expenditures on science</td>
</tr>
<tr>
<td>State Specialized Russian Export-Import Bank (Roseximbank)</td>
<td>1994 (since 2007 – part of Bank of Development and Foreign-Economic Activity (Vnesheconombank))</td>
<td>Agent of Government of Russian Federation that operates within state policy of Russian industrial export support; export financing and support on all stages of project realization</td>
<td>$31.7 million</td>
</tr>
<tr>
<td>Russian Bank for Development</td>
<td>1999 (since 2007 – part of Bank of Development and Foreign-Economic Activity (Vnesheconombank))</td>
<td>Promotion of realization of state investment policy: financing infrastructure projects, modernization of basic industrial sectors, development of export branches, etc.; support for small- and medium-sized business</td>
<td>$489 million</td>
</tr>
<tr>
<td>Name of Institution</td>
<td>Year of establishment</td>
<td>Goals</td>
<td>State investments into institution’s activity</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>-----------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Russian Venture Company</td>
<td>2006</td>
<td>Promotion of venture investments in Russia and growth of financial resources in venture funds</td>
<td>$940.9 million Investments via Unit investment trust funds in coordination with private investors</td>
</tr>
<tr>
<td>Russian Investment Fund for Information and Communication Technologies (Rosinfocominvest)</td>
<td>2006</td>
<td>Development of Russian IT companies, by investment into innovation projects and perspective technologies on start-up level</td>
<td>$48.3 million</td>
</tr>
<tr>
<td>Joint Company “Special Economic Zones”</td>
<td>2006</td>
<td>Development of Hi-Tech and import-substituting industries, tourism, recreation and transport sectors</td>
<td>$1.5 billion</td>
</tr>
<tr>
<td>Bank for Development and Foreign-Economic Affairs (Vnesheconombank) and its two affiliated banks – Russian Bank of Development and Roseximbank</td>
<td>2007</td>
<td>Overcoming of infrastructure growth restrictions, upgrading and promotion of non-raw materials economic sector, high-technology industries, encouragement of innovations, exports of high-technology products, implementation of projects in special economic zones, environment protection projects and support for small and medium-sized enterprises</td>
<td>$12.7 billion</td>
</tr>
<tr>
<td>Russian Corporation of Nanotechnologies (Rusnano)</td>
<td>2007</td>
<td>Support and growth of Russia’s share in the global pool of knowledge in the nanotechnology field; creation of global forum in Russia to discuss progress and challenges in the nanotechnology industry. Commercialization of nanotechnology projects with high commercial potential or social benefit</td>
<td>$4.3 billion</td>
</tr>
<tr>
<td>Fund for Promotion of Reforms in Housing and Communal Sector</td>
<td>2007</td>
<td>Promotion of effective management in housing facilities sector, implementation of resource-saving technologies In housing sector</td>
<td>$8.2 billion</td>
</tr>
<tr>
<td>Fund for Promotion of Development of Housing Construction</td>
<td>2008</td>
<td>Promotion of housing construction, development of territories and engineering infrastructure, creation of business-incubators, industrial parks, etc</td>
<td>$41.7 million</td>
</tr>
</tbody>
</table>
Table 2 – Special-Purpose Programs’ State Budgeting¹

<table>
<thead>
<tr>
<th>Name of Federal Special-Purpose Program</th>
<th>Coordinator / Responsible Body</th>
<th>Objective</th>
<th>Planned Budget Allocation</th>
<th>Federal Budget Expenditures de facto*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research and Development in priority directions of development of Russia’s scientific-technology sector for 2007-2012</td>
<td>Ministry of Education and Science of the RF</td>
<td>Development of scientific and technological potential of Russia</td>
<td>133 830 million rubles from federal budget 61 062.9 million rubles from extra-budgetary sources</td>
<td>42 978.2 million rubles from federal budget 26 758.12 million rubles from extra-budgetary sources</td>
</tr>
<tr>
<td>Scientific, Research and Educational Personnel of Innovative Russia for 2009-2013</td>
<td>Ministry of Education and Science of the RF</td>
<td>Creation of necessary environment for reproduction of scientific, research and educational personnel; encourage of youth to conduct researches in science, education and high-technology fields; maintenance of generations’ succession in science and education</td>
<td>80 315.50 million rubles from federal budget 9 934.40 million rubles from extra-budgetary sources</td>
<td>8 904.6776 million rubles from federal budget</td>
</tr>
<tr>
<td>Development of Nanoindustry Infrastructure for 2008-2010</td>
<td>Ministry of Education and Science of the RF</td>
<td>Creation of new generation of technologies and materials for civil and twofold purposes</td>
<td>24 527.15 million rubles from federal budget 2 788.40 million rubles from extra-budgetary sources</td>
<td>15 404.5238 million rubles from federal budget</td>
</tr>
<tr>
<td>Modernization of Transport System in Russia for 2002-2010</td>
<td>Ministry of Transport of the RF</td>
<td>Modernization, optimization and harmonization of material and technical basis of rail, marine, air and road transport systems</td>
<td>1 269 123.40 million rubles from federal budget 1 457 482.20 million rubles from regional budgets 1 673 302.90 million rubles from extra-</td>
<td>1 111 382.8896 million rubles from federal budget²</td>
</tr>
</tbody>
</table>

¹ http://fcp.vpk.ru
² Data for 2002-2009
<table>
<thead>
<tr>
<th>Name of Federal Special-Purpose Program</th>
<th>Coordinator / Responsible Body</th>
<th>Objective</th>
<th>Planned Budget Allocation</th>
<th>Federal Budget Expenditures de facto*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Russia for 2002-2010</td>
<td>Ministry of Communications and Mass Media of the RF</td>
<td>Improvement of government’s efficiency by means of usage of communication technologies; improvement of the access of Russian citizens to all the information necessary for realization and protection of their constitutional rights; etc</td>
<td>20 369.44 million rubles from federal budget</td>
<td>16 550.5795 million rubles from federal budget</td>
</tr>
<tr>
<td>Federal Space Program for 2006-2015</td>
<td>Federal Space Agency</td>
<td>Expansion and improvement the efficiency of cosmic space usage for solving economic, social, cultural, etc tasks facing Russia</td>
<td>684 842.87 million rubles from federal budget</td>
<td>179 926.0125 million rubles from federal budget</td>
</tr>
<tr>
<td>Development of Russian Spaceports for 2006-2015</td>
<td>Ministry of Defence of the RF</td>
<td>Creation of functional on-earth structure for racket and spaceship launching and maintenance of independent access and presence of Russia in cosmic space</td>
<td>51 549.60 million rubles from federal budget</td>
<td>12 325.8717 million rubles from federal budget</td>
</tr>
<tr>
<td>Development of Civil Aircraft Engineering in Russia for 2002-2010 and up to 2015</td>
<td>Ministry of Industry and Trade of the RF</td>
<td>Aimed on resolving problem of competitiveness of civil sector of aircraft engineering on domestic and foreign markets</td>
<td>201 496.80 million rubles from federal budget</td>
<td>78 502.3237 million rubles from federal budget</td>
</tr>
<tr>
<td>Development of Civil Marine Engineering for 2009-2016</td>
<td>Ministry of Industry and Trade of the RF</td>
<td>Aimed on resolving problem of competitiveness of civil sector of marine engineering on domestic and foreign</td>
<td>90 664.00 million rubles from federal budget</td>
<td>6 948.6170 million rubles from federal budget</td>
</tr>
<tr>
<td>Name of Federal Special-Purpose Program</td>
<td>Coordinator / Responsible Body</td>
<td>Objective</td>
<td>Planned Budget Allocation</td>
<td>Federal Budget Expenditures de facto*</td>
</tr>
<tr>
<td>----------------------------------------</td>
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</tr>
<tr>
<td>National Technological Base for 2007-2011</td>
<td>Ministry of Industry and Trade of the RF</td>
<td>Technological development of Russian industries based on creation and implementation of state-of-art energy-efficient and environment-friendly technologies</td>
<td>43 849.00 million rubles from federal budget</td>
<td>15 860.5158 million rubles from federal budget</td>
</tr>
<tr>
<td>Development of Electronic Component Base and Radioelectronics for 2008-2015</td>
<td>Ministry of Industry and Trade of the RF</td>
<td>Development of science-technological and production basis for creation of competitive radio-electronic equipment and products</td>
<td>110 000.00 million rubles from federal budget</td>
<td>13 602.1789 million rubles from federal budget</td>
</tr>
<tr>
<td>Nuclear Energy Technologies of New Generation for 2010-2015 with perspective to 2020</td>
<td>State Atomic Energy Corporation ROSATOM</td>
<td>Development of nuclear energy technologies of new generation for meeting country’s demand in energy and improvement of efficiency of usage of natural uranium and depleted nuclear fuel</td>
<td>110 427.96 million rubles from federal budget</td>
<td>212.2440 million rubles from federal budget</td>
</tr>
</tbody>
</table>

* As of the data covering period from the beginning of the Program until 3rd quarter of 2010, unless otherwise specified

**STRUGGLING FOR ECONOMIC SUCCESS**

It is important to emphasize that since beginning of 2000s Russia, along with China, India and Brazil, demonstrated a considerable economic growth. Government’s (or better to say Putin’s) statement to double GDP in 10 years was launched in 2004 and, mainly due to the high oil and commodities prices, that goal was mostly achieved in 2008 (if only Russia didn’t face a drop down of GDP growth in second term of 2008 up to 5.6% instead of forecasted 7.2%)
Still, in spite of the fact that Russia has a positive balance of payments and the level of country’s GDP was growing constantly since 1999, there are no signs of qualitative changes within GDP structure, moreover, year by year statistics shows growth of raw-materials’ share in Russia’s economy and its external trade. In 1995 share of mineral products in Russia's export was 42.5%, in 2000 – 53.8%, in 2005 – 64.8%, 2009 – 67.4%. Simultaneously share of machines and equipment in export is steadily shrinking (1995 – 10.2%, 2000 – 8.8%, 2005 – 5.6%, 2009 – 5.9%) and in import is steadily growing (1995 – 33.6%, 2000 – 31.4%, 2005 – 44%, 2007 – 50.9%, 2008 – 52.7%, 2009 – 43.4%)\(^1\). Moreover, recent Rosstat data shows that among the most hit industries of Russian economy during crisis years of 2009-2010 were those, involved in the production of goods of investment purpose (such as machinery and equipment).

Thus, the main feature of Russian economic growth model for the last decade – huge revenues from raw materials export, mainly was transforming into growth of private consumption rather than investments, especially in manufacturing (Figure 2).

**KEY CHALLENGES**

So far it is clear that Government’s development strategy is facing a lot of challenges. As some researches show, competitiveness in new innovative sectors is not enough for considerable economic growth. “The innovative emerging sectors themselves are too small to make a difference to economy-wide growth… even taking into account potential linkages through their suppliers”\(^2\).

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\(^{1}\)Based on Russia in Figures 2010 – Rosstat calculations

\(^{2}\)How to compete and grow: A sector guide to policy. MGI report 2010, p. 12, 29
Indeed, it is more and more common for Russian government to blame commodity sector and claim it to be country’s curse. But as the other countries’ experience shows, there is nothing bad in having huge mineral reserves. The problem is that the sector needs improvement of its energy-efficiency, more deep processing, less waste products, etc. Russia needs to realize that “modern post-industrial system requires not only well developed technologies and educated labor forces, but also adequate political and social institutions”\(^1\). Thus, Government needs not only concentrate resources in priority development sectors, but also provide the conditions for economic agents (companies) to grasp development trends and take account of them in their business. Adaptability of the economic system becomes a more important condition of success than ability to mobilize material and human resources\(^2\).

And here Russia has a lot of difficulties. World Economic Forum in its World Competitiveness Report 2010-2011 placed Russia on 63\(^{rd}\) place. According to this report most of all Russia suffers poor institutions, lack of financial market development, innovations and business sophistication. Even in comparison to its BRIC neighbors this is the worst performance (Figure 3).

Figure 3. Russia’s performance in World Competitiveness Report 2010-2011 by World Economic Forum

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According to World Bank’s World Governance Indicators, the greatest country’s concerns over the past 10 years are not changing: poor control of corruption and rule of law (Figure 4).

![Graph showing governance indices from 2002 to 2009](image_url)

* Estimate of Governance according to the WB methodology was measured from -2.5 to +2.5 (higher value correspond to better governance)

†Based on World Governance Indicators – World Bank

Figure 4. Estimate of Governance in Russia in 2002-2009

**Corruption**

In recent years Russia adopted several measures focused on combat with corruption (see, for example, EBRD Transition Reports 2009 and 2010). Still corruption stands among the biggest obstacles for development of competitive and free business environment and its scope is only seems to widen.

In 2008 GRECO (Group of States against Corruption under Council of Europe) gave to Russian state authorities 26 recommendations which were aimed on fight with corruption. By June 30, 2010 Russia had to fulfill at least 2/3 of these recommendations in order to pass that stage of evaluation. GRECO Report 2010 admitted satisfactory fulfillment of only 6 recommendations (training (educational courses) of judges, tax and law-enforcement authorities, launch of Corruption Fight Strategy, improvement of financial status of law enforcement authorities that leads to their independence) and 2 recommendations were fulfilled nominally. The rest 18 recommendations either were fulfilled partially or not fulfilled at all.

According to another survey in this field - Corruption Perceptions Index (CPI) for 2009, produced by Transparency International, Russia is ranked 154 (out of 178) with a score 2.1 (out of 10). In 2008 Russia was ranked 147 (out of 180) with a score of 2.1, in 2007 - 143 (out of

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1 EBRD Transition Report 2009, P. 212.
179) with a score of 2.3, in 2006 - 121 (out of 163) with a score of 2.5. In terms of perception, this places Russia as one of the most corrupt countries in Europe.

Results of this evaluations are also supported by recent data of Russian Financial Inspectorate Committee Report that shows that there were revealed violations on more than 1 trillion rubles (more than 32 billion $) within fulfillment of governmental order. Since 2004 violations in this sector are steadily growing: in last 3 years it reached 491%. Only within National Projects “Health” and “Education” 6.2 and 9.5 billion rubles were spent with violations in 2007 and 2008 respectively. Another financial evidence of corruption – volume of money outflow with the use of fake custom entries: 8 billion rubles in 2008, 170 billion rubles in 2009 and 124 billion rubles just in the first half of 2010.1

**Rule of Law and Economic Freedom**

Corruption issue is closely connected with another issue that is frequently arose in many countries’ performance evaluations – rule of law and economic freedom. The 2011 Index of Economic Freedom by The Heritage Foundation and The Wall Street Journal2 ranked Russia 143 (50.5 scores out of 100), beyond Brazil (113), India (124) and China (135). Indicator reflects evaluation of the following 10 dimensions: 1) Business Freedom; 2) Trade Freedom; 3) Fiscal Freedom; 4) Government Spending; 5) Monetary Freedom; 6) Investment Freedom; 7) Financial Freedom; 8) Property Rights; 9) Freedom from Corruption; 10) Labor Freedom. As the Report states “…prospects for sustained long-term diversification and growth for Russia remain dim. An increasingly statist approach to economic management adds to the cost of investment and mutes private-sector dynamism. Pervasive corruption and limited respect for property rights hinder the development of economic activity that is free from government control or influence…”3.

Another survey in this field - Fraser Institute’s Economic Freedom of the World Report 2010 for 20084, based on such criteria as: 1) Size of Government: Expenditures, Taxes, and Enterprises; 2) Legal Structure and Security of Property Rights; 3) Access to Sound Money; 4) Freedom to Trade Internationally; 5) Regulation of Credit, Labor, and Business, ranked Russia 84 (out of 142). Poorest performance was marked again in Legal Structure and Security of Property Rights.

**Productivity**

Labor productivity in Russia since 2003 is steadily improving with 5-6% average growth: year-to-year growth of about 2.5-10.9% in agriculture sector, 3.7-8.8% in manufacturing, 0.6-7% in mining operations, 0.3-3.7% in gas and energy sector.

At the same time effectiveness of usage of labor resources almost in all the segments of Russian economy is about 5 times lower than in Western countries. Thus, investigation of ARB Pro for Russian Business Chanel showed that in Russian companies proceeds per one employee are about 9 times lower in aviation sector (comparison of Sukhoi to Boeing and EADS), about 6 times lower in banking (Sberbank to BNP Paribas) and oil production (Lukoil to Exxon and Shell), about 2 times lower in retail sector (X5 Retail Group to Tesco and Metro Group). The

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2 http://www.heritage.org/index/Ranking
3 http://www.heritage.org/Index/Country/Russia
only company that could compare to level of foreign competitors was Telecom: just 67% lower than Vodafone and even 75% higher than France Telecom.

Researches insist that the main reason for such poor performance are undeveloped and out of state of art technologies and poor management. Among other reasons they indicate low labor cost that make companies comfortable with big and mostly inefficient staff, small markets where companies’ production is presented, poor logistics, disuse of outsourcing, etc.

This investigation confirms that at the moment most Russian companies are trying to substitute lack of technologies by hiring more employees. They get their competitive advantage by using cheap resources instead of working out smooth business-process strategies. However, the reason for reluctance of implementing new technologies is not only within low labor and other resources cost: for many companies it is not remunerative to invest into new technologies because of high risks and interest rates.

This negative tendency is also confirmed by the data on sources of investments into R&D projects (Figure 5). Over the past years the main investor in this sphere is Russian government - its share in total expenditures is stably more than 60%, and private investments hardly exceed 20%. That shows that Russian R&D sector should be more integrated with system of higher education, market institutions of intellectual property and innovation stimulus tools – everything that creates an atmosphere, enabling exchange of new ideas, attraction of investments and desire to take risks and to orient on long-time goals.

![Figure 5](http://www.arb-pro.ru/surveys/)

†Based on Russia in Figures 2010 – Rosstat calculations

Figure 5. Share of state and private expenditures on R&D projects in Russia

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1 http://www.arb-pro.ru/surveys/
CONCLUSIONS

Twenty years ago Russia stepped into “open-economy” phase and since that time as every country on this path it is trying to find the most appropriate and successful model of economic reforms and strive for a position that gives it profit within free trade environment. Experience of the last 10 years shows that along with some considerable improvements in country’s performance, Russia still has a lot of problems (high dependence on commodities export, low productivity, corruption, bureaucracy, etc.) that are to be solved in the nearest future in case country wants to maintain and improve its positions on the world trade and political market. Today’s forced economic situation in Russia, caused by world economic and financial crisis, which destroyed settled perception of favorable and absolutely correct way of country’s development and showed much more disbalances in its economy than anyone expected, provides one more compelling opportunity for Russia to make changes in its economic structure, business environment, and institutional reform.

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THE ECONOMIC CRISIS RECLASSIFIES
EUROPEAN UNION’S FORCES

Plesco, Olga
PhD student
Alexandru Ioan Cuza University,
Iasi, Romania

ABSTRACT

The European Union is a powerful and dynamic economic part of the world where forces are distributed rightly by the most important indicators of the development. The countries that form the European Union where differently affected by this boom of the “something wrong”, changing the structural strength of the union. It’s an important subject to discuss because the European Union wants to be a tycoon of the economic and social processes, even in the time of a crisis. This paper explores what economic forces really contribute to the maintenance and development of the European Union.

Key words: European Union, crisis, economic force, quantitative analysis.

INTRODUCTION

The economic-financial crisis started in 2008 is a subject covered by many areas worldwide, such as economics, sociology, politics and other. The importance attached to this issue derives from the impact that this phenomenon has had and still has on the economical, social, cultural, political people’s life quality. A long process, with deep roots in economical boom period, just remembered that human rationality has the native tendency to exceed the silent limits of the normality, exceeding the equilibrium toward which every nation tends.

The economical plan of life has a huge importance for the existence, development, but also for the resistance of the society. The European Union is a belief of Europeans, generated by the dream to be a part of a harmonized space. In fact, in this territory marked by treaties and pacts, no member state waives its culture, its own financial and economic levers or social or any other kind, to the right to do what is typical of that country (and the typical is deducted from that state’s history, from its independence, and from its power created over the years). European Union’s economy is a mined area, because the foundation of this territory is not solid yet and the crisis established a new order.
The purpose of this paper is to present the impact of the economic crisis started in 2008 on the European Union’s member states and how the power ration changed between them, analysing five relevant statistical indicators for a period of five years with SPSS.

The value of this paper lies in its exposition about the way in which the actual crisis affected the European Union and generated changes in its economic power.

**STATISTICAL INDICATORS AND ANALYSIS TOOLS**

This paper discusses how the economic crisis has influenced the distribution of the economic power in the European Union, between 27 countries. The supremacy of the developed countries, sometimes morbid, in some cases proved illusory. This practical study, based on statistical results provided by the Statistical Commission of the European Union –Eurostat, processed using SPSS (Statistical Package for the Social Sciences), aims to highlight the top of economical forces before and during the crisis.

The study is based on an empirical and applied research. The analysis of the statistical indicators is a very important part of the work, considered the practical side of this approach. There have been used quantitative methods to understand the meaning of the results produced by the crisis like a phenomenon, helping to give expression to its qualitative idea.

Statistical indicators used in this practical approach are: Gross Domestic Product (GDP) per capita in Purchasing Power Standards, GDP at market prices: Purchasing Power Standard per inhabitant, Export of goods and services (euro per inhabitant), Import of goods and services (euro per inhabitant), Business investments: Gross fixed capital formation by the private sector (percentage of GDP). The relevance of these key indicators derived from the information released by this analysis, but also the category they are a part: national accounts from the economy and finance category (coherent and consistent set of macroeconomic indicators, which provide an overall picture of the economic situation and are widely used for economic analysis and forecasting, policy design and policy making\(^1\)). They are defined, by Statistical Commission of the European Unions in this way\(^2\):

- **Gross Domestic Product (GDP) per capita, in Power Purchasing Standards (PPS),** is an indicator used for comparison of standards of lives between countries, taking into account the inflation and the cost of living. It is calculated like a ration of GDP, expressed in power purchasing standards, and the total population of the country. To obtain GDP in PPS special conversion factors are used, converting GDP to a fictitious currency. PPS reflects prices between countries, expressed in the same currency. This eliminates differences in expression in the currency and price differences between countries.

- **GDP at market prices** is the final result of the production activity of resident producer units. This indicator can be defined as follows: the sum of gross value of the various sectors or the various industries plus taxes and less subsidies on products (which are not allocated to sectors and industries). It is also the balanced item in the total economy production account; the sum of final uses of goods and services by resident institutional units (actual final consumption and gross capital formation), plus exports and minus imports of goods and services;


the sum of uses in the total economy generation of income account (compensation of employees, taxes on production and imports less subsidies, gross operating surplus and mixed income of the total economy).

- **Gross fixed capital formation** consists of resident producers' acquisitions, less disposals, of fixed assets during a given period plus certain additions to the value of non-produced assets realized by the productive activity of producer or institutional units. Fixed assets are tangible or intangible assets produced as outputs from processes of production that are themselves used repeatedly, or continuously, in processes of production for more than one year. Disposals of fixed assets are treated as negative acquisitions.

- **Exports of goods and services** consist of transactions in goods and services (sales, barter, gifts or grants) from residents to non-residents.

- **Imports of goods and services** consist of transactions in goods and services (purchases, barter, gifts or grants) from non-residents to residents.

The statistical methods used in this applied study, using the SPSS program, are construction of graphs and one sample test, displayed for the period starting with 2007, a year before the great crisis, up to 2009, a year after the trigger of the crisis. The information presented for the years 2005 and 2006 are also important for this approach, because it can be observed how an illusory growth prevents an efficient development.

**GROSS DOMESTIC PRODUCT PER CAPITA, IN POWER PURCHASING STANDARDS**

Luxemburg is the country that was situated on the first place during the analyzed period, obtaining the highest value in 2008, 70,000 PPS, with 3.97% more than in 2007 and with 5.67 % more that in 2009, when the crisis established a new order. Ireland varies between the second (in 2005 till 2007) and the third place (in 2008 and 2009), making exchange with Netherlands that was more resistant during the crisis period than before it. Austria is strongly attached to the fourth place, losing it just in 2007, when Sweden realized 31,200 PPS, like Denmark strongly hold the fifth place in 2005, 2006, 2008 and 2009. United Kingdom is the first country in top ten that falls from 2005 to 2008, starting with sixth place arriving to the ten and remaining there in 2009 year to. Sweden starts in 2005 from the seventh place, it is growing until 2007 to the fourth, but it can’t resist when the crisis has embraced the world and fell back to the sixth place in 2008 and 2009. Belgium has made just enough values for the best eighth place in 2005 and 2006, lost this position in 2007 occupying the tenth, and earning a bit of land in 2008 and 2009 to ninth. Germany was lucky in the crisis time, stealing the eighth place from Belgium in 2008 and 2009. Finland was the last in the top ten in 2005-2006, but took revenge in 2007-2009 when recorde sufficient amounts to occupy the seventh place.


The mean difference varies in the analyzed period between minimum 21.666,63 PPS in 2005 and maximum 24.887,78 PPS in 2008. The effect of the crisis can be viewed not in 2008, when it started, but in 2009, when the mean value for GDP in PPS decreases with 7,2% up to 23.096,3 PPS. About half the countries had higher values in 2005-2009, but Latvia, Romania,
Bulgaria and Poland, the last three countries in the top realized values with more than 50% less than the mean difference for each year.

**Figure 1.** GDP per capita in PPS 2007

**Table 1 - One-Sample Test**  GDP per capita in PPS 2007

<table>
<thead>
<tr>
<th>Country</th>
<th>Value (per capita in power purchasing standards)</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Ireland</td>
<td>29,000</td>
</tr>
<tr>
<td>Netherlands</td>
<td>24,600</td>
</tr>
<tr>
<td>Sweden</td>
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</tr>
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<td>Austria</td>
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</tr>
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<td>19,000</td>
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<tr>
<td>Belgium</td>
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<tr>
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<td>Italy</td>
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<td>Cyprus</td>
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<td>Greece</td>
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<td>Slovak Republic</td>
<td>16,000</td>
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<td>16,000</td>
</tr>
<tr>
<td>Austria (ex-Yougoslavia)</td>
<td>16,000</td>
</tr>
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<td>16,000</td>
</tr>
<tr>
<td>Hungary</td>
<td>16,000</td>
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<td>Bulgaria</td>
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</tr>
<tr>
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Figure 2. GDP per capita in PPS 2008

Table 2 - One-Sample Test  GDP per capita in PPS 2008

<table>
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<tr>
<th>Country</th>
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</thead>
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<td>Denmark</td>
<td>30,800</td>
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<td>Sweden</td>
<td>29,000</td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>28,700</td>
<td></td>
</tr>
<tr>
<td>Germany (including former DDR from 1990)</td>
<td>20,405.22</td>
<td>29350.34</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>22,800</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>22,800</td>
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<td>France</td>
<td>21,400</td>
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<td>19,600</td>
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<td>16,100</td>
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</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>Czech Republic</td>
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<td></td>
</tr>
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<td>Malta</td>
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<td>Portugal</td>
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<td>Poland</td>
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<td>Latvia</td>
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<td>Romania</td>
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<tr>
<td>Bulgaria**</td>
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<td>26</td>
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</tr>
<tr>
<td>Upper</td>
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</tr>
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</table>
Analyzing the statistical results from this point of view, Luxemburg has the best results again, registering the highest value in 2008 (81.200 euro per inhabitant), but loosing 5.67% till 2009. Ireland change places with Denmark, which became stronger in the crisis time. Sweden appears like a country that had something to lose, reaching the eighth position in 2009, starting from fourth in 2005-2007 period. Netherlands ranged between the fourth and the fifth place, like Finland between the seventh and the sixth, while the United Kingdom was strongly affected by the crisis, instead of climbing into the top ten, declined to the eleven position in 2008 and
recovering a bit in 2009. Austria made progresses in the crisis time, starting from the eighth place (2005-2007) to the fifth place in 2009. Belgium resisted to the crisis and grew from the ninth to the seventh place in the last year of analysis. France, the country that took the place of Germany in this analysis rose slowly, but encouraging from the tenth place to the ninth.

Top three laggard countries which wasn’t able to develop their economy before the crisis, even after it is formed by Romania (2005-2009) and Bulgaria (2005-2009), while Latvia succeeded to pass through this shameful position starting with 2007, ceding it to Poland for 2007-2008 years and to Lithuania in 2009, countries that was shot down by the economical problems.

The mean difference for GDP at market prices analyzed starting with 2005 till 2009 varied from 20,781.48 euro per inhabitant (2005) to 24,403.7 euro per inhabitant (2008). In 2009 the average decreased with 6.65% up to 22,781.48 euro per inhabitant because of the strong effect of the crisis. The last countries in top had values for this statistical indicator with 70% less than the mean difference.

Figure 4. GDP at market prices in euro per inhabitant 2007

Table 4 - One-Sample Test GDP at market prices in euro per inhabitant

<table>
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Figure 5. GDP at market prices in euro per inhabitant 2008

Table 5 - One-Sample Test GDP at market prices in euro per inhabitant 2008

<table>
<thead>
<tr>
<th>Country</th>
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<td>81,200</td>
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<td>Germany (including former GDR from 1991)</td>
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<td>Estonia</td>
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<tr>
<td>Hungary</td>
<td>70,200</td>
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<tr>
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Test Value = 0

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<th>Mean Difference</th>
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<td>7.940</td>
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<td>.000</td>
<td>24403.704</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>30721.42</td>
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</table>
BUSINESS INVESTMENTS: GROSS FIXED CAPITAL FORMATION BY THE PRIVATE SECTOR (PERCENTAGE OF GDP)

The first place in top ten in the analysis of this statistical indicator is occupied by Estonia in the first three years of the study and by Bulgaria in the last two. Latvia started from the second, where it stayed for three years (2005-2007) leaving the place to Romania (2008-2009). Spain realized a uniform trend, sitting on the third place for four years (2005-2008) and fell to the fourth in 2009, place which was occupied also by Slovakia in 2005-2006, Romania in 2007 and Latvia in 2008. Number five position was Ireland in 2005, Bulgaria in 2006, Slovakia in 2007, Slovenia in 2008 and Belgium in 2009. Slovenia, also took the sixth place in 2005, 2007 and 2009, near Ireland in 2006 and Estonia in 2008. The seventh place was disputed Bulgaria in 2005 and 2007, Slovenia in 2006 and Slovakia in 2008-2009. Austria had an interesting
evolution in this study, because it started from the eighth place (2005) where it returned in 2008, and it reached the third position in 2009 with 19.9% business investments in the private sector from GDP. Also, Lithuania (2006-2007) and Hungary (2009) obtained sufficient values to rank the eighth place. The ninth place were occupied by Portugal (2005), Romania (2006), Ireland (2007), Belgium (2008) and Latvia (2009), but the tenth by Czech Republic (2005, 2007), Austria (2006), Lithuania (2008) and France (2009).

The last three positions in this top of countries that took business investments in the private sector like a way to make through the crisis like through the wind where occupied by Netherland (2005, 2007), Sweden (2005-2007), Poland (2005), Luxemburg (2006), United Kingdom (2006-2009), Greece (2008), Malta (2008-2009) and Ireland (2009). The mean difference for Business investments is between 16.61% (2009) and 20.57% (2007) and the differences between developed countries and the poor ones are not so big, like in the analysis of the first two indicators, with 24% less than the average for all the countries in EU.

![Figure 7](image_url)  
**Figure 7.** Gross fixed capital formation by the private sector (percentage of GDP) 2007

**Table 7 - One-Sample Test Gross fixed capital formation by the private sector (percentage of GDP) 2007**

<table>
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Figure 8. Gross fixed capital formation by the private sector (percentage of GDP) 2008

Table 8 - One-Sample Test Gross fixed capital formation by the private sector (percentage of GDP) 2008

<table>
<thead>
<tr>
<th>Country</th>
<th>Value %</th>
</tr>
</thead>
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<tr>
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<tr>
<td>Spain</td>
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</tr>
<tr>
<td>Latvia</td>
<td>20.5</td>
</tr>
<tr>
<td>Estonia</td>
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<tr>
<td>Slovakia</td>
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<tr>
<td>France</td>
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</tr>
<tr>
<td>Czech Republic</td>
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</tr>
<tr>
<td>Germany (including former GDR from 1991)</td>
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</tr>
<tr>
<td>Luxembourg</td>
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<tr>
<td>Netherlands</td>
<td>16.1</td>
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<tr>
<td>Ireland</td>
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<td>Greece</td>
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<th></th>
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<tr>
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<td>.000</td>
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</tbody>
</table>
Figure 9. Gross fixed capital formation by the private sector (percentage of GDP) 2009

Table 9 - One-Sample Test Gross fixed capital formation by the private sector (percentage of GDP) 2009

<table>
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<tr>
<th>Country</th>
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</thead>
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<tr>
<td>Romania</td>
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<td>Belgium</td>
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<td>Italy</td>
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<td>Sweden</td>
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<td>Greece</td>
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<tr>
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<tr>
<td>Malta</td>
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<tr>
<td>United Kingdom</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td></td>
</tr>
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</table>

**EXPORTS OF GOODS AND SERVICES**

The export of goods and services is a very important statistical indicator for both micro- and macroeconomic analysis. Luxemburg and Ireland are the countries that have maintained the first and the second position during the studied period. The discrepancy of valued recorded by Luxemburg from other countries is huge, thus presenting a high level of economic transactions in this field. The third and fourth places were disputed between Netherlands and Belgium, while Denmark didn’t gave up to the position number five of the top ten and Austria to the sixth and Sweden to the seventh, less in 2006, when Sweden registered a value (17.900 euro per
inhabitant) with 1.13% bigger than Austria (17.700 euro per inhabitant) and the place changed between them. Also, Finland could not exceed the eighth position in the period 2005-2009, loosing this place in 2009, when Germany gave up for a year to the ninth position in the top. Even if Slovenia was the number ten in 2005, Malta succeeded to “steal” this place for the next four years of the study.

Last ranking countries in the analysis of this indicator have been Poland, Bulgaria and Romania.

The average of the values for this statistical indicator in the analyzed period is situated between 12.970.37 euro per inhabitant (2005) and 17.018.52 euro per inhabitant (2008), but in 2009 it decreased up to 14.514.82 euro per inhabitant (with 15.3%). The comparison between the mean value and the value of poor countries is not relevant in this situation, because of the huge values registered by Luxemburg, more than 700% than the average for all the countries.

Figure 10. Exports of goods and services in euro per inhabitant 2007

Table 10 - One-Sample Test Exports of goods and services in euro per inhabitant 2007

<table>
<thead>
<tr>
<th></th>
<th>Test Value = 0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t</td>
</tr>
<tr>
<td>value</td>
<td>3.304</td>
</tr>
</tbody>
</table>
Figure 11. Exports of goods and services in euro per inhabitant 2008

Table 11 - One-Sample Test Exports of goods and service in euro per inhabitant 2008

<table>
<thead>
<tr>
<th></th>
<th>Test Value = 0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t</td>
</tr>
<tr>
<td>value</td>
<td>3.290</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The evolution of the values registered in each analyzed country offered a surprise: first eight positions in the top ten were not changed throughout the period studied, thus presenting Luxemburg, Ireland, Belgium, Netherlands, Denmark, Austria, Sweden and Finland. The last two places in top ten were disputed between Malta (ninth in 2005-2007 and in 2009, tenth in 2010), Germany (tenth in 2005-2006, 2007-2009) and Slovenia (tenth in 2007).

The mean difference of imports of goods and services in the analyzed period is between 12.036,3 euro per inhabitant (2005) and 16.02,22 euro per inhabitant (2008). In 2009 the values
decreased with 17.71% up to 13,185.19 euro per inhabitant. We find in the same situation like in the analysis of Exports of goods and services, when Luxembourg is one that creates the large value of the average and it’s irrelevant to compare these values with the results obtained by the poor countries from EU.

![Figure 13. Imports of goods and services in euro per inhabitant 2007](image)

**Table 13 - One-Sample Test Imports of goods and services in euro per inhabitant 2007**

<table>
<thead>
<tr>
<th>Country</th>
<th>Value</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>112,200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>81,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>31,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>23,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>16,400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td>12,200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>10,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>8,900</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>8,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>7,600</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>6,400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portugal</td>
<td>6,400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latvia</td>
<td>5,600</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td>4,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>3,600</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulgaria</td>
<td>2,500</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Test Value = 0
Figure 14. Imports of goods and services in euro per inhabitant 2008

Table 14 - One-Sample Test Imports of goods and services in euro per inhabitant 2008

<table>
<thead>
<tr>
<th>Country</th>
<th>Test Value = 0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Luxembourg</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td></td>
</tr>
<tr>
<td>Czech Republic</td>
<td></td>
</tr>
<tr>
<td>Slovak Republic</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td></td>
</tr>
<tr>
<td>Estonia</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td></td>
</tr>
<tr>
<td>Hungary</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td></td>
</tr>
<tr>
<td>Portugal</td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td></td>
</tr>
<tr>
<td>Latvia</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td></td>
</tr>
<tr>
<td>Bulgaria</td>
<td></td>
</tr>
<tr>
<td>Romania</td>
<td></td>
</tr>
</tbody>
</table>
Figure 15. Imports of goods and services in euro per inhabitant 2009

Table 15 - One-Sample Test Imports of goods and services in euro per inhabitant 2009

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>value</td>
<td>3.603</td>
<td>26</td>
<td>.001</td>
<td>13185.185</td>
<td>5662.45</td>
</tr>
</tbody>
</table>

CONCLUSIONS

The conclusions derived from the conducted applied research are as follows: the most stable countries in the European Union both before the crisis and the time of crisis are Luxemburg, Ireland, Denmark, Netherlands and Austria, but Luxemburg never lost his first position thus demonstrating how a strong economy can’t be damaged in time of crisis more than the economy of other countries in the same geographical space. United Kingdom was more affected by the crisis than other countries, recording higher values before the crisis than during it. Sweden is another country that does not have the power shown before the crisis. Romania,
Bulgaria, Latvia and Poland are by far the most inefficient economies in the European space, leading the standings only by business investments.

To realize the goal to be a real economical power it’s important to realize that the base of the economy is the quality of people’s living. The quantitative analysis made in this applied research helped to view the real picture of the top of economic powers in the European Union and to understand how the crisis worked inside it.

The paper underlines the idea that the European Union is a homogeneous construction of economical and social forces. The economic crisis made the countries recognize and show their own strenghts and weaknesses. The impact of the crisis was acceptable from the standpoint of economic changes in the countries of the European Union, because of the different conditions imposed by the European legislation and the treaties helped them realize the true economic force they hold, less the countries that have cheated before the crisis. The statistical indicators analyses helped to understand how the crisis has restored map standings of the countries of the European Union from the economic point of view, in the first place. The empirical findings suggest that the European Union is an economic force, composed of countries that tend to their development as independent countries but also to the development of the union they belong to.

There are a lot of important statistics that could help a research in this field, but the main idea and purpose of this paper can be strongly supported by the present applied aproach.

REFERENCES

NEW MODEL OF GROWTH IN TRANSITION ECONOMIES: SHOULD IT BE DEVELOPED EARLIER?

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Dr., Professor

*Nojkovic, Aleksandra*
Dr.

* University of Belgrade,
Belgrade, Serbia

ABSTRACT

Despite some claims that the most developed countries in terms of transition progress are ending their transition process – predominantly those that entered the EU – it appeared that transition economies are still looking for their proper place and form in regard to the developed market economy model. This problem has been particularly exacerbated during the economic crisis. It was discovered that growth model applied in the majority of transition economies that was based upon foreign savings and import related growth of aggregate demand implies a high degree of vulnerability of those economies. For that reason an idea on the necessity of a new growth model was launched. In the paper we question the dominant model of growth during transition and try to answer whether at all transition reforms necessarily imply only one growth model that should be spontaneously developed along transition progress and in course of market forces. By significantly augmenting a pooled panel analysis that we have previously presented, we show how growth models change during transition and how they became transformed into a single model of import led expansion. We define break points in transition progress that undoubtedly require a variety of growth models. If proper period for a change of the model has been omitted the economies in question plunge into a model that leads toward poor outcomes criticised in recent discussions. On the other hand the findings impose two questionable issues: whether all the transition countries suffer from the same problems and whether some countries due to their specific institutional heritage could be seen as specific cases. In order to define that question we present the results for a specific sets of economies in transition dividing in the groups that comprise Central European economies, former USSR economies and European and Asian economies. We find the differences between the models studied and recommended and corresponding policies. Finally we put the question should the differences identified be known before and what could be the losses caused by the wrong theoretical forecasting.
1. INTRODUCTION

The objective of this paper is to re-question a number of issues regarding economic growth under transition. We shall try to explore (i) how long do initial conditions of a transition economy affect its economic performance as measured by the rate of growth, (ii) how much and in what way transition progress can add to growth of a transition economy, (iii) what was expected concerning growth during transition and what has happened in reality, (iv) why the need of a new growth model for transition economies has been observed during the global economic crisis and should it be developed earlier.

Basically, the kind of growth pattern that should be appropriate for a transition economy was never posed as an essential issue in designing transition reforms. It was believed that the change directed towards a market economy model will in itself enhance economic performance. This reasoning relied on common understandings that markets would eventually lead to the most efficient resource allocation and would result in a desirable outcome concerning economic performance and growth of a country in transition.

The first analytical papers seemed to confirm such a position. It was found that countries with faster reforms and superior reforms’ implementation should benefit from better performance and diminish impact of inherited conditions (de Melo et al. 1996; 1997; Sachs, 1996; Selowski and Martin, 1997). Despite some precisions regarding the difference between level achieved and the speed of reforms (Heybey and Murrell, 1999) and certain dependence of reforming speed on inherited conditions (Krueger and Ciolko, 1998), the idea of reforms as a principal drive of economic growth remained a dominant vision among transition advocates.

However, already by the end of the nineties it appeared that the relationship between reforms and growth was not a clear cut. The speed of reforms as a supportive factor of growth became largely disputable, new institutional variables entered growth analyses and proved fairly important (Brunetti et al. 1997; Moers, 1999, Stiglitz, 2001) whereas endogenous character of reforms and institution building came into sight (Stiglitz, 1999; Hoff and Stiglitz, 2004). The growth related impact of reforms was re-questioned and found mostly insignificant (Popov, 2000) while privatisation speed negatively related to growth (Godoy and Stigliz, 2007). Nonetheless, temporary reform reversals were seen as to adversely influence growth (Merlevede, 2003). Certain peculiarities have been observed in comparing transition countries with those with developed markets in regard to renown long-term growth models, indicating poor structural changes within transition economies (see: Campos, 2001 for the first decade of transition and Cerovic and Nojkovic, 2009 for the second one). The least controversies aroused regarding macroeconomic stabilisation, particularly disinflation (in line with Rodrik, 1996, who found that it should not necessarily be followed by other reforms like liberalisation etc.) though some new findings were put forward (non-exogenous character of policy choice, Campos and Coricelli, 2002).

Finally, it was found that factors that should be contributing to growth during transition, including reforms, did change their impact over time (Falcetti et al. 2002; and recently, Dragutinovic-Mitrovic and Ivancev, 2010) and some hidden, reform related breaks were defined indicating changes of growth patterns during transition (Fidrmuc and Tichit, 2007).

Despite huge literature on reform – growth relations, there were incredibly few contributions that explicitly discussed what should be an applicable growth model for transition economies. Indeed, the notion of a transition growth model (sometimes even coupled with a need
of new reforms; see: Berglof, 2010) emerged during the economic crisis of 2008. Being impelled by that fact we shall try to explore were there some better opportunities – and how and when they have been missed – for establishing an appropriate development policy among transition economies.

The paper is organised in six sections. After introductory notes we analyse in Section 2, the impact of pre-reform initial (and therefore inherited and unchangeable) conditions on transition reforms and growth. In Section 3 it is shown that growth patterns vary over time in relation to transition progress. Section 4 discusses the current crisis and its effects regarding growth in transition economies. In section 5 we apply and illustrate some findings by presenting typical examples of transition countries that support our results and summarise our conclusions in Section 6. Along the analysis we shall refer to some of our earlier findings in order to make our arguments more understandable.

### 2. LONG-LASTING IMPACT OF INITIAL CONDITIONS

Although formally mentioned as early as in the first papers on reforms, the impact of initial, inherited conditions on growth in transition economies (de Melo et al. 1996; Heybey and Murrell, 1999) was primarily seen as a potential obstacle for economic performance. Fortunately, it was argued, this impact will decrease over time if reforms are conducted quickly and properly.

In some of our previous research papers we analysed a potential counter-effect: whether – and to what extent – transition progress and its speed depend on initial conditions. This approach was firstly presented as an easy experiment on the issue (Cerovic, 2000) that took transition progress (expressed by the sum of EBRD transition indicators) to be a dependent variable on GDP per capita in 1989 (US$, PPP) and on a dummy for deeper market oriented reforms conducted during preceding system (Poland, Hungary and the countries emerged from former Yugoslavia were seen in that way). This simple relationship (for 1999) proved significant with a determination coefficient of 66%.

Later on, we have augmented this kind of analysis (e.g. Cerovic and Nojkovic, 2008, p. 119) estimating regression equations with transition progress (sum of the nine EBRD indicators) depending on: (a) initial GDP per capita (GDP1989), (b) a dummy for market reforms within previous system (MREF), (c) years under communism (INST1) and (d) exchange rate black market premium (1989) in comparison with the official rate as to represent initial macroeconomic distortions (INST5). Estimations were made for the years 1998, 2001, 2004 and 2007. Since some variables were highly correlated we had to use three separate equations. They were specified to include GDP1989 plus one of the remaining independent variables.

Apart from robust results that confirmed the relationship explored (positive impact of GDP level and MREF and a negative one of INST1 and INST5) the most appealing result was the one showing no specific change in the impact of inherited conditions: both variable coefficients and determination coefficients did show no systematic change and remained quite strong.

---

1 The data were used from de Melo et al. (2001) except for the MREF that was based on our assessments (as explained above).
stable over time. We found this result important because it asserted that initial conditions impact lasts much longer and proved stronger than it was predicted\(^1\).

Furthermore, when we compared fitted values for transition progress resulting from the model with the real ones we remarked that a big majority of countries had achieved transition progress which was in close vicinity of the fitted values. This finding convincingly confirmed our proposition that reforming progress is firmly determined by initial conditions of each country.

The long-lasting impact of initial conditions on transition progress gave us an idea that they also might influence growth even more powerfully than the first analyses had envisaged. For that reason we specified another simple OLS model (Cerovic and Nojkovic, 2009 pp. 14-15) where GDP per capita index (1989=100) was dependent on: (a) GDP1989 (as defined above); (b) transition progress squared (TPROG x TPROG)\(^2\) – in order to capture U shaped transition growth curve, (c) a dummy – MREF (as defined above) and (d) average rate of inflation taken as a policy measure for macroeconomic stability (INF average) but computed from 1994 onwards to avoid starting and turbulent years of transition. All data (except for MREF are taken from the EBRD on-line statistics, in 2008). Our sample included all 25 transition economies with available data and we estimated the model again for the years 1998, 2001, 2004 and 2007.

The results obtained were encouraging in regard to our expectations. Initial conditions appeared to be significant in all the years observed, particularly the initial GDP per capita exhibiting high significance at 1% and growing positive impact (increasing coefficients); the other variable MREF showed some decrease in significance over years (1% in 1998 but 10% in 2007 and 5% in remaining, medium years) but with increasing positive coefficients. Thus, we can conclude that initial conditions do affect economic growth and do so in longer run, contrary to the first analytical estimations that they will decrease their impact along with reforms implementation.

Moreover, the reforms previously seen as a principal factor of growth that should reduce impact of initial conditions appeared to be indeed significant positively influencing growth. Nevertheless, they were noticeably less significant over time when compared with the inherited development level (initial GDP per capita) and/or with macroeconomic stability (average rate of inflation), which significantly (at 1% all over the years observed) supported performance of transition economies.

Being incited by the results obtained and inspired by the findings on reform related breaks in economic performance during transition (Fidrmuc and Tichit, 2007) that change roles and importance of growth factors over time, we have advanced with our analysis. We slightly restructured our model putting real GDP growth rate (GR) to be dependent on: (a) macroeconomic stability represented by CPI inflation rate (in logarithm values) lagged for a year to capture its expected positive impact on growth in the year of observation; (b) initial conditions

\(^1\) Here is an easy to follow example that presents just correlation coefficients between transition progress and GDP1989 in different years; they only slightly change over time including their significance/probability:

<table>
<thead>
<tr>
<th>Year</th>
<th>1998</th>
<th>2001</th>
<th>2004</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>0.48</td>
<td>0.47</td>
<td>0.50</td>
<td>0.48</td>
</tr>
<tr>
<td>Probability</td>
<td>0.015</td>
<td>0.017</td>
<td>0.011</td>
<td>0.016</td>
</tr>
</tbody>
</table>

Source: Cerovic and Nojkovic, 2009, p. 17.

\(^2\) TPROG was measured in terms of percentage points on a 0-100 scale instead of the EBRD indicators that start at 1 (no reforms) and end at 4.33 ("as if" developed market economy).
expressed by the two first principal components (IC1 and IC2) that were composite indices derived from common factor analysis of 13 relevant variables presenting initial conditions but usually highly correlated; (c) reform index defined by the average value of the nine EBRD transition indicators (see details in: Nojkovic and Cerovic, 2010).

We used a pooled panel specification to estimate growth for 25 countries between 1989 and 2007. We wanted to identify structural breaks at a priori unknown points in growth regressions; there was only one prior assumption: the breaks occur in relation to attained transition progress. For identifying structural breaks in our model, we used modified Chow test in order to find unknown structural breakpoints in the sample for a specified equation. The results for the sample or period observed are summarized in Table 1. The testing procedure indicates that there are two structural breaks. The breaks emerge at the reform index valued at 2.33 and 2.81 or if expressed in percentage points of full reforms package completion, at 39.9%-54.35%.

Table 1

<table>
<thead>
<tr>
<th>A: Index range</th>
<th>Full sample (A1)</th>
<th>(Min; 2.33)</th>
<th>(2.33; 2.81)</th>
<th>(2.81; Max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-9.814 *** (2.196)</td>
<td>-18.373 *** (3.023)</td>
<td>18.546 (12.172)</td>
<td>0.264 (2.411)</td>
</tr>
<tr>
<td>Inflation (log, lagged)</td>
<td>-2.950 *** (0.572)</td>
<td>-5.163 *** (0.795)</td>
<td>-4.554 *** (1.110)</td>
<td>-0.862 * (0.481)</td>
</tr>
<tr>
<td>IC1</td>
<td>2.315 *** (0.352)</td>
<td>2.080 *** (0.784)</td>
<td>2.349 ** (1.100)</td>
<td>1.875 *** (0.245)</td>
</tr>
<tr>
<td>IC2</td>
<td>-1.844 *** (0.531)</td>
<td>-1.476 (0.981)</td>
<td>-1.554 (1.500)</td>
<td>0.127 (0.361)</td>
</tr>
<tr>
<td>Reform index (lagged)</td>
<td>6.335 *** (0.620)</td>
<td>15.111 *** (1.492)</td>
<td>-3.651 (4.782)</td>
<td>2.069 *** (0.696)</td>
</tr>
<tr>
<td>R²</td>
<td>0.444</td>
<td>0.417</td>
<td>0.202</td>
<td>0.276</td>
</tr>
<tr>
<td>F-stat (prob)</td>
<td>86.904 (0.000)</td>
<td>29.889 (0.000)</td>
<td>3.554 (0.012)</td>
<td>17.654 0.000</td>
</tr>
<tr>
<td>N</td>
<td>441</td>
<td>171</td>
<td>61</td>
<td>190</td>
</tr>
</tbody>
</table>

Notes: Standard errors are in parentheses. Significant levels are indicated as 1% (***) , 5% (**) and 10% (*). Source: Nojkovic and Cerovic (2010).

The overall result (Panel A1) shows that all specified factors of growth are highly significant for the entire sample/period. The result is in line with fundamental approach implicit to transition design: macroeconomic stability, initial conditions and reforms are principal drives of growth during transition. However, the overall result could be confusing since it mixes up data from different growth models that emerge at different levels of transition progress. Analysing models obtained in regard to identified breaks it comes out that the specified factors in reality change their significance. The impact of initial conditions in terms of the first principal

1 For IC1 and IC2 we used indices as calculated by de Melo et al. (2001). All other data were taken from the EBRD on-line database in 2010.
2 The approach is known as Quandt-Andrews test, which tests whether there is a structural change in all of the original equation parameters (see Andrews, 1993; and Hansen, 1997). The extension of this test to more than one unknown break point is developed by Bai (1997) and Bai and Perron (1998, 2003).
component (IC1) is persistent and significant at all reforming levels (panels A2, A3, A4). So is macroeconomic stability as represented by inflation rate. Surprisingly to transition architects and advisers, reform index exhibits variable impact: at the beginning it is highly significant and highly influences growth (high coefficient) but between the two break points it becomes insignificant and yet with negative sign. At higher reforming stage reform index is significant again but contributes remarkably less to growth (low coefficient).

Summarising all the results presented we may conclude that initial conditions play undoubtedly a more important role and appear as the most persistent factor that affects economic performance of a transition economy. Besides, as explained above, they determine the reforming achievements of transition economies. Hence, reforms are endogenous in character and cannot be accelerated at one’s will nor might be understood to depend solely on commitment of policy makers. Finally, initial conditions demonstrate a long-lasting impact on reforms and growth that does not fade out over time as it was predicted by the first analysts of transition process.

Secondly, our results indicate that during transition there exist a number of different models of growth applicable at various stages of transition. Moreover, a pretty substantial change was identified between the two breaks – more or less in the middle of transition – that points at a necessary alteration of growth patterns at that stage of reforming advancement. In other words, economic growth is not merely a spontaneous process that will be efficiently provided by means of reforms themselves but should be a matter of proper policies, employed in accordance with inherited conditions and conducted reforms within a country.

This last point brings us to the question of applicable growth patterns and their determinants during transition and even proper time for their initiation and modifications.

3. REFORM RELATED ALTERATIONS IN TRANSITION GROWTH MODEL

As we have remarked at the beginning it was during the global crisis when the term ‘new growth model’ entered the debates on transition economies. An almost common platform was found that the prevailing pattern of growth widely based on foreign savings, imports and increasing share of non-tradables could not be sustainable. This was indeed, a positive move. Prior to the crisis economic growth under transition was mostly seen as a spontaneous process and no specific growth policy was studied, analysed or proposed. However, market reforms although unquestionably needed in these economies previously constrained by overregulation and centralised decision making proved not to be a sufficient tool for shaping development. In this section we shall demonstrate that even the reforms do urge for certain adjustments in development policies in the course of their implementation.

We shall augment our model from preceding section by adding some variables that appeared critical in recent discussions about a new growth model for transition. Again, we shall analyse growth rates taking them now as to be dependent on: (a) lagged inflation rate (log-values) as above; (b) initial conditions represented by IC1 (IC2 appeared to be mostly insignificant); (c) lagged reform index as defined in the previous section; (d) a new variable – industrial output share in GDP to capture the impact on growth of structural changes and tradables manufacturing over transition period and (e) another new variable – trade balance (exports minus imports) to GDP ratio for estimating how much export and/or import orientation of a country affects its growth rate.
We shall use exactly the same sample of 25 transition economies as before while the period observed is somewhat shorter (due to some missing data) and covers years 1991-2007.

The methodology will be the same as in the analysis from the preceding section, that is, an estimate of a pooled panel specification. The pooled panel is characterized by all constant parameters across the countries observed and no universal effects across time. Thus, it resembles to a simple regression result and does not recognize any specificity of certain countries and is also time-invariant across the sample. Apart from its statistical relevance for the problem explored these characteristics are also in line with obvious uniformity of transition design that was recommended for all countries regardless of a variety of their inherited conditions, development levels, historical experience etc. The results obtained are presented in the Table 2.

Table 2  
Growth models and structural breaks related to reform index; dependent variable: growth rate (sample: 1991-2007)

<table>
<thead>
<tr>
<th></th>
<th>Full sample (A1)</th>
<th>(Min; 2.25)</th>
<th>(2.25; 2.96)</th>
<th>(2.96; Max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.89 (2.381)</td>
<td>-13.557 ** (9.553)</td>
<td>-1.828 (7.638)</td>
<td>0.795 (3.124)</td>
</tr>
<tr>
<td>Inflation (log, lagged)</td>
<td>-4.113 *** (0.490)</td>
<td>-6.580 *** (1.501)</td>
<td>-4.666 *** (0.772)</td>
<td>-0.119 (0.540)</td>
</tr>
<tr>
<td>IC1</td>
<td>1.704 *** (0.342)</td>
<td>3.298 *** (1.310)</td>
<td>1.146 *** (0.495)</td>
<td>2.054 *** (0.298)</td>
</tr>
<tr>
<td>Reform index (lagged)</td>
<td>2.336 *** (0.586)</td>
<td>12.820 *** (4.128)</td>
<td>3.229 (2.471)</td>
<td>1.939 ** (0.854)</td>
</tr>
<tr>
<td>Industry</td>
<td>3.537 (0.042)</td>
<td>0.083 (0.135)</td>
<td>0.150 ** (0.071)</td>
<td>-0.026 (0.051)</td>
</tr>
<tr>
<td>Trade balance</td>
<td>0.032 (0.024)</td>
<td>-0.042 (0.037)</td>
<td>0.074 ** (0.038)</td>
<td>-0.031 (0.035)</td>
</tr>
<tr>
<td>R²</td>
<td>0.4206</td>
<td>0.527</td>
<td>0.369</td>
<td>0.351</td>
</tr>
<tr>
<td>F-stat (prob)</td>
<td>54.1626 (0.000)</td>
<td>22.285 (0.000)</td>
<td>14.715 (0.000)</td>
<td>14.624 (0.000)</td>
</tr>
<tr>
<td>N</td>
<td>379</td>
<td>106</td>
<td>132</td>
<td>141</td>
</tr>
</tbody>
</table>

Note: Standard errors are in parentheses. Significant levels are indicated as 1% (***) and 10% (*). Source: Cerovic and Nojkovic (2011).

Firstly, one can notice that similarly to the analysis from the preceding section, we have again two break points at similar levels of reform index: 2.25 and 2.96 (that is, in the middle of transition process although with slightly wider range or in percentage points, between 37.5% and 58.9% of transition completion).

Looking at the overall result (Panel A1) it comes out that only three factors – low inflation, initial conditions and higher reforming achievements – positively affect growth while industrial output share and trade balance seem to be irrelevant from growth standpoint. A similar conclusion could be drawn concerning results and/or corresponding growth models found below the first break and above the second one (panels A2 and A4; though in latter case even price stability ceased to be significant and reforms decreased their significance as well as their contribution to growth according to their low coefficient).

1 Being expressed by a first principal component that is, a composite index obtained from common factor analysis of 13 different indicators it is difficult to interpret the result; we can only state that initial conditions affect growth all along the period observed and appear in all the models obtained as a significant factor of growth regardless of identified break points.
However, in the middle of the reforming process, between the two breaks, the model of growth within transition economies considerably changes. At this level of transition completion the reforms cease to significantly affect growth while other previously neglected factors have an effect on growth rate values. Apart from macroeconomic stability and initial conditions that appear in all the models defined (except for inflation in A4 that could be due to little divergence in inflation rates when the best reformers among transition countries remain in the sample) we are advised to pay attention to industrial output and trade balance of a transition economy. Bearing in mind that breaks occur in relation to transition progress it turns out that – contrary to expectations of the first analysts – transition reforms themselves at their medium level urge for certain policy adjustments concerning growth and development pattern. Ceteris paribus it could be concluded that in the middle of reforming process (approximately between 38-40% and 58-60% of reforms completion) a new development policy and/or growth strategy should be established in each country. According to our results the new policy should support macroeconomic stability, rely on inherited conditions of a country and take care of industrial output and trade balance while liberalising the economy. Further on it seems that in mid-phase of reforming activities and parallel to reform oriented commitment there is a need for an appropriate industrial policy seriously neglected among transition advocates.

However, one can expect some annoyed arguing from those convinced in the necessity of fast reforms – won’t it be a loss of time if we change pattern of growth in the middle of transition; it is just a momentary effect that should rapidly pass since the analysis of the next transition phase suggests that reform advancement is the only remaining policy that is conducive to growth. In response to such reasoning, which is very likely, we shall prolong our analysis and include additional two years 2008 and 2009 that bring the crisis into our analysis.

4. TRANSITION GROWTH MODELS AND GLOBAL ECONOMIC CRISIS

In Table 3 we present the results obtained in estimating the same pooled panel specification as in the preceding section but for the period extended for two critical years when the effects of global crises flooded the world of transition economies. How much the two only additional years could affect our previous analysis conducted for a 17 year long period?

Indeed, there are not many changes in comparison with the results from Table 2 when panels A1, A2 and A3 are in question. There is a little change in A3 since trade balance is outside the confidence interval but with unchanged sign whereas reform index changed its sign but remained insignificant. Again, we encounter two reform related break points basically in the very similar (though somewhat shorter) range that covers medium phase of transition between 2.33 and 2.92 in terms of reform index values (or 39.9% and 57.7% as regards transition completion).

However, Panel A4 considerably differs from the corresponding panel in Table 2 presenting an entirely new growth pattern although a pattern that looks very much as logically connected with and developed after the preceding growth model displayed in Panel A3. Although all variables become significant there are three features that are particularly worth notifying. Firstly, inflation rate is again highly significant indicating the importance of macroeconomic stability in the longer run. Secondly, industrial output share in GDP appears as a significant factor of growth indicating that more industrialised economies have better chances under economic turbulences. Last but definitely not least, reform index is highly significant but as an adverse factor of economic growth signifying that the most advanced reformers – or maybe those countries that over-accelerated reform process in regard to their initial conditions and capabilities – become the most vulnerable and the most suffering under the crisis. Perhaps
the only somewhat puzzling result concerns trade balance indicating that higher deficit to GDP ratio supports growth. For the moment we understand this effect to be in consequence of global aggregate demand squeeze that could harm more big exporters but an additional study is necessary for final conclusion. As to the initial conditions they behave predictably continuously affecting growth though less significantly than before.

Table 3
Growth models and structural breaks related to reform index; dependent variable: growth rate (sample: 1991-2009)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Full sample (A1)</th>
<th>(Min; 2.33)</th>
<th>(2.33; 2.92)</th>
<th>(2.92; Max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>2.441 (2.448)</td>
<td>-11.444 **</td>
<td>-2.382 (8.965)</td>
<td>13.383 ***</td>
</tr>
<tr>
<td>Inflation (log, lagged)</td>
<td>-4.732 *** (0.520)</td>
<td>-6.434 *** (0.891)</td>
<td>-4.574 *** (0.840)</td>
<td>-2.862 *** (0.903)</td>
</tr>
<tr>
<td>IC1</td>
<td>2.004 *** (0.353)</td>
<td>3.049 *** (0.832)</td>
<td>1.303 ** (0.557)</td>
<td>0.796 * (0.424)</td>
</tr>
<tr>
<td>Reform index (lagged)</td>
<td>2.011 *** (0.599)</td>
<td>11.662 *** (1.946)</td>
<td>3.185 (3.025)</td>
<td>-3.862 *** (1.253)</td>
</tr>
<tr>
<td>Industry</td>
<td>0.045 (0.044)</td>
<td>0.064 (0.083)</td>
<td>0.163 ** (0.077)</td>
<td>0.234 *** (0.073)</td>
</tr>
<tr>
<td>Trade balance</td>
<td>0.014 (0.024)</td>
<td>-0.033 (0.040)</td>
<td>0.053 (0.040)</td>
<td>-0.100 ** (0.041)</td>
</tr>
<tr>
<td>R²</td>
<td>0.335</td>
<td>0.519</td>
<td>0.353</td>
<td>0.153</td>
</tr>
<tr>
<td>F-stat (verovatnoća)</td>
<td>41.083 (0.000)</td>
<td>23.553 (0.000)</td>
<td>11.797 (0.000)</td>
<td>6.4737 (0.000)</td>
</tr>
<tr>
<td>N</td>
<td>414</td>
<td>115</td>
<td>114</td>
<td>185</td>
</tr>
</tbody>
</table>

Note: Standard errors are in parentheses. Significant levels are indicated as 1% (***) , 5% (**) and 10% (*).

Finally, we checked which growth pattern would be dominant for the period 2008-09 that is, for the period of crisis when all transition economies enter the sample (the Panel A4 refers only to countries that have passed second break point thus representing the most advanced reformers; the lack of some data limited our new sample to 22 economies). In some respect the results obtained and presented in Table 4 could be even more enlightening.

Table 4
Growth model during the crisis; dependent variable: growth rate (sample: all countries in 2008-2009)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Full sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>40.708 *** (10.873)</td>
</tr>
<tr>
<td>Inflation (log, lagged)</td>
<td>-18.590 *** (6.111)</td>
</tr>
<tr>
<td>IC1</td>
<td>0.857 (1.597)</td>
</tr>
<tr>
<td>Reform index (lagged)</td>
<td>-10.061 *** (2.258)</td>
</tr>
<tr>
<td>Industry</td>
<td>0.379 ** (0.158)</td>
</tr>
<tr>
<td>Trade balance</td>
<td>-0.083 (0.066)</td>
</tr>
<tr>
<td>R²</td>
<td>0.595</td>
</tr>
<tr>
<td>F-stat (prob)</td>
<td>8.509 (0.000)</td>
</tr>
<tr>
<td>N</td>
<td>35</td>
</tr>
</tbody>
</table>

Note: Standard errors are in parentheses. Significant levels are indicated as 1% (***) , 5% (**) and 10% (*).

Ironically enough this diminishing significance of initial conditions is the only result that goes in line with expectations of the first transition analysts but under totally different circumstances in comparison with those defined in their projections of reforms driven growth.
The results show that inherited conditions did not affect the scale of crisis consequences (clearly insignificant); it was the policies applied by a country that influenced growth rate decrease. Namely, it appeared that higher reform index caused the most significant yet negative effect on growth while stable economic environment and higher industrial output are those factors that could lessen the crisis impact. Trade balance to GDP ratio remained negative but did not prove to be of utmost importance when all transition economies are observed. Hence, the negative sign could just reflect an import related growth frequently followed during transition.

Looking at all the results presented it becomes pretty obvious why a broader discussion on the growth model for transition economies has been initiated as late as economic crisis struck. It seems that in the period prior to that event any rethinking of transition effects was successfully suppressed by a widespread belief in optimising capacity of liberalised markets despite increasing number of warnings in regard to oversimplified optimistic transition expectations. This was additionally strengthened by relatively smooth developments based on the continuing economic boom. When it finally ended in blasts of overblown bubbles, many failures have been unveiled including those linked with transition development, growth and corresponding policies.

It is reasonable to expect that the delay in finding right solutions for growth within transition economies will cause additional costs in terms of growth shortfall and subsequent losses. Could this be avoided and could a proper growth model be developed earlier? According to the results of our analyses it comes out that it was possible, appropriate and quite achievable long before recent events. Our analysis suggests that the right time for initiating suitable growth models was at the middle stage of transition process. Moreover, our analysis points at principal elements which such a model should incorporate: it should be based on local circumstances, maintaining of stable economic environment and corresponding industrial policy that would back industrial production increase and trade capabilities improvements in global market.

5. FACING THE REALITY – APPLICATION OF THE RESULTS

Sometimes econometrics, being constrained by a given model specification could hide some piece of real events. For that reason we shall try firstly, to compare our results from Table 3, Panel A4 with the factual state in the most developed economies in terms of reform implementation. In Table 5 we present seven countries that are the most reformed according to the EBRD assessments in 2007. We also provide their fitted level of transition progress (a ‘should be’ percentage of transition completion) according to our earlier analysis when transition progress was seen as to depend on initial GDP per capita and some additional initial condition: reforms under socialism (case 1) or years under that system (case 2) or exchange rate black market premium (case 3) as explained in section 2 above and elaborated in detail in Cerovic and Nojkovic (2008). We finally present their shares of industrial output in GDP (2007, 2009) and growth rates (GR) in 2009.

One may conclude that the presented data do correspond to our findings: the majority of these countries show high level of reforms completion and a moderate industrial output followed by a remarkable growth rate fall. However, Czech Republic and Slovakia although at high level of transition completion are mainly in line with the fitted values depending on initial conditions and have lower negative rates of growth if compared with other countries except for Poland. But remark that Poland, the only country with positive growth rate in 2009, exhibits a high and rising
industrial output share. On the other hand, the Baltic countries that exhibit the highest negative growth rates are mostly above their fitted values for transition completion and show a downturn in industrial output (not very high even before the crisis). Finally, Hungary though above fitted reforms’ level managed to keep up its industrial output share, which altogether resulted in a less diminishing growth rate. Apart from other factors influencing such outcomes the examples presented reveal an additional indication – over-accelerated reforms coupled with small or diminishing industrial output are likely to be negatively related to growth under external shocks.

Table 5

<table>
<thead>
<tr>
<th></th>
<th>Real values</th>
<th>Case 1: Fitted values</th>
<th>Case 2: Fitted values</th>
<th>Case 3: Fitted values</th>
<th>Ind/GDP 2007</th>
<th>Ind/GDP 2009</th>
<th>GR 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech R.</td>
<td>84.48</td>
<td>74.18</td>
<td>86.46</td>
<td>85.92</td>
<td>42.0</td>
<td>n.a.</td>
<td>-4.3</td>
</tr>
<tr>
<td>Estonia</td>
<td>87.85</td>
<td>75.15</td>
<td>79.78</td>
<td>71.32</td>
<td>26.4</td>
<td>22.8</td>
<td>-13.9</td>
</tr>
<tr>
<td>Hungary</td>
<td>87.85</td>
<td>79.57</td>
<td>81.73</td>
<td>81.38</td>
<td>25.6</td>
<td>25.3</td>
<td>-6.3</td>
</tr>
<tr>
<td>Latvia</td>
<td>78.95</td>
<td>74.15</td>
<td>78.97</td>
<td>70.31</td>
<td>20.5</td>
<td>18.6</td>
<td>-18.0</td>
</tr>
<tr>
<td>Lithuania</td>
<td>81.15</td>
<td>67.15</td>
<td>73.26</td>
<td>63.24</td>
<td>29.2</td>
<td>24.1</td>
<td>-14.8</td>
</tr>
<tr>
<td>Poland</td>
<td>83.38</td>
<td>74.19</td>
<td>78.18</td>
<td>73.76</td>
<td>33.7</td>
<td>35.9*</td>
<td>1.7</td>
</tr>
<tr>
<td>Slovakia</td>
<td>82.28</td>
<td>70.94</td>
<td>83.82</td>
<td>82.65</td>
<td>27.9</td>
<td>23.2</td>
<td>-4.7</td>
</tr>
</tbody>
</table>

Note: *2008; Source: columns 2,3,4,5 Cerovic and Nojkovic (2008); columns 6,7,9 EBRD (2011)

As an example how reforms, particularly when too accelerated, can negatively affect performance we present a graph showing the history of Russian transition (Graph 1). The Russian case is of particular interest since it gave a platform for the one among the first serious critiques of transition projects (Stiglitz, 1999). The graph presents interrelation of the sum of nine EBRD indicators, growth rates (GR) and GDP per capita (in thousands of US$).

Graph 1

Source: EBRD (2011)
It is evident that fast reform execution in the first decade of transition definitely unadjusted to inherited conditions, keeps the country at negative growth rates. By the end of the nineties, this process ended in a severe financial crisis. When policy was changed and reforms rescheduled and even slowed down they were followed with positive growth rates and an increasing GDP per capita until the global crisis erupted in 2008. Naturally, there were other factors contributing to these outcomes but the presented relationships are nonetheless worth noting.

We have also remarked that in general, there was a high degree of uniformity in designing of transition policies. However, transition economies may well differ, sometimes even essentially. Some earlier studies on the matter have proved that inclusion of certain country specific variables could considerably shrink and even eliminate the significance of reforms regarding economic performance (e.g. Popov, 2000 by including dummies for ex-USSR countries and/or wars etc.).

Following that line of reasoning we included in our model a dummy for ex-USSR countries but excluding Baltic countries for their specificity. We run a pooled panel least square regression for 2008 and 2009 wondering whether there are significant differences in reacting to crisis between ex-Soviet and other economies.

*Table 6*

**Growth model during the crisis; dependent variable: growth rate**

(sample: all countries in 2008-2009)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Full sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>26.660 **</td>
</tr>
<tr>
<td>Inflation (log, lagged)</td>
<td>-19.602 ***</td>
</tr>
<tr>
<td>IC1</td>
<td>-0.853</td>
</tr>
<tr>
<td>Reform index (lagged)</td>
<td>-6.770 **</td>
</tr>
<tr>
<td>Industry</td>
<td>0.424 ***</td>
</tr>
<tr>
<td>Trade balance</td>
<td>-0.105</td>
</tr>
<tr>
<td>Ex-USSR</td>
<td>7.142 *</td>
</tr>
<tr>
<td>(R^2)</td>
<td>0.643</td>
</tr>
<tr>
<td>F-stat (prob)</td>
<td>8.392 (0.000)</td>
</tr>
<tr>
<td>N</td>
<td>35</td>
</tr>
</tbody>
</table>

Note: Standard errors are in parentheses. Significant levels are indicated as 1% (**), 5% (*) and 10% (*).

When compared with the results from Table 4 it can be seen that all factors found there as significant remain so in the new model. However, we find a new variable with significant (at 6%) yet positive impact on growth rate for the countries that emerged from former USSR. This means that an ex-Soviet country – keeping all other factors equal – will have a higher growth rate in the years of crisis for around 7 percentage points when compared with other transition economies.
The finding is not that surprising albeit analyses for the entire transition period find the ex-Soviet dummy significant but negative\(^1\). Namely, if we take into account that reforms are less developed in many of these economies it is clear that the negative impact of reforms might be reduced over the crisis. Also, these countries exhibit higher industrial output, a characteristic which is found typical for the entire transition period and a good number of these countries are resource rich which also positively affects growth.\(^2\) All these factors, according to our analyses, may contribute to the mentioned switch in the sign of ex-USSR variable and make it quite reasonable under the crisis.

On the other hand, these findings on the specific features of the ex-USSR countries point at another important fact. Despite very similar transition projects that have been employed all over the transition area they have not been conducted and developed in the same way. Actually, this is a fairly predictable outcome. The reason for such a conclusion is pretty simple – the countries in question altogether with their inherited conditions and experience, their geographical position, structural distinctiveness and their general level of development deserved more specifically designed transition schemes that could be better applicable to their initial positions and would result in a more favourable overall performance. The fact that some of their reforming delays appeared as to be a convenient outcome during the crisis came out under very particular circumstances and cannot be taken as a sustainable effect.

6. CONCLUSIONS

Referring to our earlier analyses and putting together the results obtained we have demonstrated how (i) initial conditions do affect both – transition progress and economic performance and that (ii) their impact lasts much longer than initially expected. We have also shown that the pattern of growth in transition economies is subject to changes related to the achieved advancement in reforms.

We have identified a considerable alteration in growth pattern when the period of crisis (2008-09) entered the analysis. The recommended yet spontaneous growth model that was principally based on reforms implementation and market liberalisation turned to be unsustainable during the crisis. For that reason a necessity of a growth model change has been put forward.

We find this reaction to be late since our analyses show that proper time for model change and for a new development and/or industrial policy in each country should be at the medium stage of transition reforms at roughly, 40-60% of transition completion.

Moreover, our analyses show that such a change of the model and corresponding policies should promote industry production (or in a broader sense production of tradable goods and services) and more balanced or more export oriented trade. Further on, the new model should be coherent with inherited conditions and based on stable economic environment. The crisis has unveiled certain failures of the broadly employed model based on the reforms only and promoted similar requirements but in a much later reforming period pointing in that way, at costs suffered as a result of that delay.

\(^1\) Corresponding results available upon request.
\(^2\) Corresponding results available upon request.
Finally, it was indicated that over-accelerated reforms – in regard to specific circumstances of individual countries – exacerbate negative effects on growth that become evident and fully effective during external shocks. Additionally, we have provided a number of typical examples that correspond to the results obtained and support our findings.

REFERENCES


DECOMPOSITION OF THE CHANGE IN POVERTY BETWEEN TWO PERIODS:
THE CASE OF RUSSIA

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ABSTRACT

The promotion of economic growth and redistribution polices are central to the reduction of poverty. Thus, the dynamics of poverty and its decomposition according to the impact of income growth and redistribution polices plays a critical role. The author uses Shapley value approach to achieve an exact decomposition, in a sense that contributions to all factors sum up to the total change, and develop procedures for decomposition of the impact of income growth and inequality as well as contribution of various factors to poverty change over time.

Alleviation of poverty is one of the main objectives of the Russian Federation. Development of effective strategies of dealing with poverty has been in the centre of attention of the Russian government, international organization, and academic community.

The global financial crisis in the late 2000s had a major negative impact on Russian economy which, prior to the crisis, had been growing at the record rates. The government undertook extraordinary measures to maintain social stability and prevent deterioration in the population living standards. The macroeconomic indicators reported in Table 1 illustrate a positive effect of the government policies. Despite a negative effect of the crisis on GDP and wages, which in 2008 declined by 7,9 and 3 percents respectively, we do not observe any deterioration in the level of poverty and inequality. Of course, the issue of how the Russian government was able to achieve this remains an open question.
Table 1. Selected Macroeconomic Indicators for the Russian Federation, 2000-2009

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2005</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (% to the previous year)</td>
<td>110,0</td>
<td>106,4</td>
<td>108,5</td>
<td>105,2</td>
<td>92,1</td>
</tr>
<tr>
<td>Real disposable income of population (% to the previous year)</td>
<td>112</td>
<td>112</td>
<td>112</td>
<td>102</td>
<td>102</td>
</tr>
<tr>
<td>Gini coefficient</td>
<td>0,395</td>
<td>0,409</td>
<td>0,423</td>
<td>0,422</td>
<td>0,422</td>
</tr>
<tr>
<td>Real wages (% to the previous year)</td>
<td>121</td>
<td>113</td>
<td>117</td>
<td>111</td>
<td>97</td>
</tr>
<tr>
<td>Real pension benefits (% to the previous year)</td>
<td>128</td>
<td>110</td>
<td>105</td>
<td>118</td>
<td>111</td>
</tr>
<tr>
<td>Share of population with incomes below the subsistence level</td>
<td>29,0</td>
<td>17,7</td>
<td>13,3</td>
<td>13,4</td>
<td>13,2</td>
</tr>
<tr>
<td>The poverty gap (the share of income shortfall below the subsistence level as a percent of total income of population)</td>
<td>5,0</td>
<td>2,1</td>
<td>1,3</td>
<td>1,3</td>
<td>1,3</td>
</tr>
</tbody>
</table>


Population living standards tend to positively correlate with the business cycle, rising in the periods of a stable economic growth and falling during crisis periods. Nevertheless, the poverty trends in a country are greatly affected by the redistribution policies of governments. In this context, a quantitative empirical methodology could be used to analyze changes in poverty levels over time separating the effects of general income changes and the impact of income redistribution policies. In a situation when the economic cycle moves from boom to bust, the changes in quantitative contributions of general income growth and redistribution component on poverty indicators could be used as an indicator of effectiveness of government policies towards poverty alleviation. The choice of an adequate mechanisms of income redistribution can potentially have a significant effect on the level and magnitude of poverty in a country even when the overall growth in income declines.

To test the effects of the Russian government policies directed at alleviating the consequences of the 2008 financial crisis on low income groups of population we compare the levels of relative poverty of Russian households before and after the crisis. The data for our study comes from the project “Gender Generation Survey”. The panel data representative at the national level comes from the surveys of individuals of 18-79 age in 2004, 2007, and 2010. The data allows us to study the changes in the general welfare and poverty indicators of households between the crisis and growth periods.

Our study focuses of indicators of poverty which can be fully characterized by the poverty line, mean income, and the Lorenz curve, which characterizes the structure of income inequality. An indicator of poverty $P$ can be expressed as function $P_t=P(z/\mu_t, L_t)$, where $z$ is a poverty line, $\mu_t$ - mean per capita income of a household at time $t$, and $L_t$ is a vector of parameters describing Lorenz curve at time $t$. In our model, the poverty level could change in response to the changes in mean income $\mu_t$ relative to the poverty line and in response to changes in inequality $L_t$.

1 More information about the project is available at [www.socpol.ru](http://www.socpol.ru).
FGT indexes (Foster, Greer, Thorbecke, 1984) satisfy the above criteria and can be defined as:

$$FGT = \frac{1}{N} \sum_{i=1}^{n} \left[ \frac{Z - Y_i}{Z} \right]^\alpha,$$

where $Y_i$ is a per capita income, $N$ is an overall number of observations, $n$ is a number of poor individuals, $Z$ is a substance level (poverty line), and $\alpha$ is a "sensitivity" parameter. If $\alpha$ is low then the FGT metric weights all the individuals with incomes below $Z$ roughly the same. If $\alpha$ is high, those with the lowest incomes (farthest below $Z$) are given more weight in the measure. The higher the FGT statistic, the more poverty there is in an economy.

For $\alpha = 0$, the index becomes the Headcount ratio, or the fraction of the population which lives below the poverty line. For $\alpha = 1$ the index captures the average poverty gap, or the amount of income necessary to bring everyone in poverty right up to the poverty line, divided by total population. For $\alpha \geq 2$ the index combines information on both poverty and income inequality among the poor and the significance of large observations of poverty gap is increasing.

The growth-redistribution decomposition methodology was suggested by Datt and Ravallion (1992). According to the authors, decomposition of the change in poverty between periods $t_1$ and $t_2$ ($P_2 - P_1$) accounting for the impact of income growth (difference in mean income), redistribution component (difference in relative income shares) and error term which depends on interdependence of growth and redistributive policies is given by the formula:

$$P_2 - P_1 = \frac{[P(\mu_2, \pi_{2_1}) - P(\mu_1, \pi_{1_1})]}{C_1} + \frac{[P(\mu_2, \pi_{2_2}) - P(\mu_1, \pi_{1_2})]}{C_2} + R,$$

for $t_1$,

$$P_2 - P_1 = \frac{[P(\mu_2, \pi_{2_1}) - P(\mu_1, \pi_{1_1})]}{C_1} + \frac{[P(\mu_2, \pi_{2_2}) - P(\mu_1, \pi_{1_2})]}{C_2} + R,$$

for $t_2$,

where ($P_2$-$P_1$) – difference in poverty between $t_1$ and $t_2$, $C_1$ – growth impact, $C_2$ – contribution of redistribution effect, $R$ – un-decomposable error term (residual), $P(\mu_{t_2}, \pi_{t_2})$ – FGT index of the first period where we multiply all incomes $Y_i^{t_1}$ of the first period by the ratio $\mu_2/\mu_1 \cdot P(\mu_{t_1}, \pi_{t_1})$ – FGT index of the second period where we multiply all incomes $Y_i^{t_2}$ of the second period by the ratio $\mu_{t_1}/\mu_{t_2}$.

Using the Shapley values the exact FGT decomposition of the impact of growth and redistribution (free from error term) is given by the following formula:

$$P_2 - P_1 = \frac{1}{2} \left[ \frac{[P(\mu_2, \pi_{t_2}) - P(\mu_1, \pi_{t_1})]}{C_1} + \frac{[P(\mu_2, \pi_{t_2}) - P(\mu_1, \pi_{t_1})]}{C_2} \right] + \frac{1}{2} \left[ \frac{[P(\mu_2, \pi_{t_2}) - P(\mu_1, \pi_{t_1})]}{C_1} + \frac{[P(\mu_2, \pi_{t_2}) - P(\mu_1, \pi_{t_1})]}{C_2} \right].$$

Table 2 reports the results of decomposition of FGT index following Datt& Ravallion and Shapley approaches. The main focus of our analysis is the effect of redistribution and therefore we chose FGT index with parameter $\alpha = 2$ which is the most sensitive to the transfers.
Table 2. Decomposition of FGT index into income growth and redistribution components (Datt and Ravallion (1992) approach and Shapley values)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Index</th>
<th>Difference of indexes</th>
<th>Growth effect</th>
<th>Redistribution effect</th>
<th>Residual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$t_1$</td>
<td>$t_2$</td>
<td>$t_1 - t_2$</td>
<td>$\alpha = 0$</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>2007</td>
<td>0.1732</td>
<td>0.0283</td>
<td>-0.1449</td>
<td>-0.0815</td>
<td>-0.02375</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Shapley value</td>
<td>0.1014</td>
<td>0.4361</td>
</tr>
<tr>
<td>2007</td>
<td>2010</td>
<td>0.1495</td>
<td>0.0172</td>
<td>-0.1322</td>
<td>-0.1269</td>
<td>-0.0221</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Shapley value</td>
<td>-0.1186</td>
<td>-0.0137</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$\alpha = 1$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>2007</td>
<td>0.0971</td>
<td>0.0092</td>
<td>0.0879</td>
<td>-0.0313</td>
<td>-0.0507</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>Shapley value</td>
<td>0.0341</td>
<td>0.0537</td>
</tr>
<tr>
<td>2007</td>
<td>2010</td>
<td>0.0462</td>
<td>0.0046</td>
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<td>-0.0408</td>
<td>-0.0008</td>
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<td></td>
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<td></td>
<td></td>
<td>Shapley value</td>
<td>-0.0372</td>
<td>-0.0045</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$\alpha = 2$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>2007</td>
<td>0.0758</td>
<td>0.0038</td>
<td>-0.0720</td>
<td>-0.0160</td>
<td>-0.0549</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Shapley value</td>
<td>0.0165</td>
<td>0.0555</td>
</tr>
<tr>
<td>2007</td>
<td>2010</td>
<td>0.0209</td>
<td>0.0018</td>
<td>-0.0191</td>
<td>-0.0188</td>
<td>-0.0038</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Shapley value</td>
<td>-0.0170</td>
<td>-0.0021</td>
</tr>
</tbody>
</table>

Sen (1976) pioneered the axiomatic approach to the measurement of poverty by explicitly setting out the axioms against which a poverty measure should be judged. According to the Weak Transfer Axiom, poverty should rise with a regressive transfer of income - and fall with a progressive transfer - between two poor households, provided both continued to be poor after the transfer. With this axiom, Sen (1976) proposed that the poverty measure should be sensitive to the degree of inequality between the incomes of the poor. It should rise when inequality among the poor increased (through a regressive transfer) and it should fall when inequality among the poor decreased (through a progressive transfer). Sen (1976) justified this axiom on the grounds of relative deprivation: relative deprivation would increase when inequality among the poor rose and decrease when it fell.

The transfer axiom is due Sen (1976) and simply says that transfer from a poor person to a richer person should increase the value of the poverty index. In other words, the weak transfer axiom is concerned with transfers between individuals below the poverty line, while the transfer axiom deals with transfers among all income groups.

Table 2 reports the results of estimation of growth and redistribution components using all three proposed measures. As a measure of poverty line we use 40% of the mean individual income in each period, which is the closest to the official indicator of subsistence level during the period studied.

As we can see in Table 2, the growth component is negative for all periods. This indicates
that income growth has consistently contributed to decline in the level of relative poverty.\footnote{It should be noted that the effect of income growth reflects the changes in nominal income level, which were quite significant primarily due to high levels of inflation in the 1990s in Russia.} The effects of redistribution reported in Table 2 also contributed to poverty alleviation. Nevertheless, between 2004 and 2007 redistribution played a greater role relative to income growth, while between 2007 and 2010 the relative importance of these factors reversed. The decomposition using the Shapley delivers rather similar results. The redistribution component is somewhat stronger between 2004 and 2007 and weaker between 2007 and 2010.

Between 2004 and 2007 Russian experienced a period of strong economic growth accompanied by a strong growth in individual incomes. The level of social transfers also increased during this period. For example, the government introduced a number of new maternity benefits/transfers which led to a noticeable decrease in the poverty level during this period both in our study and in the official statistics. According to the decomposition results, the crisis period between 2007 and 2010 did not result in deterioration in the main indicators of living standards, but it did weakened the redistribution component although this component still contributed positively to poverty alleviation. Preservation of the relative poverty at the pre-crisis level was achieved through the overall income growth, due to continued increase in retirement benefits, and relatively high level of social transfers. Decrease in the real wages of some households during the crisis period did result in their lower living standards but did not push them below the poverty line. This in turn contributed to the stable indicators of inequality.

Our study of decomposition of relative poverty into growth and redistribution components using micro-level data reveals high sensitivity of redistribution component to changing macroeconomic situation in the country, and the 2008 crisis in particular. In a situation of a deteriorating income growth, the social safety net components for low-income groups developed in the period of high economic growth allowed to prevent deterioration in the living standards of these population groups and maintain social stability. A positive factor in the context of Russia was a relatively short duration of the crisis. A prolonged slowdown in the redistribution processes would likely lead to an increase in poverty. Therefore, the development of redistribution strategies from relatively rich groups of population to relatively poor ones and reduction in inequality remain on the list of major issues of the Russian policy-makers.

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THE FINANCIALISATION OF RUSSIAN COMMODITY MARKET

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ABSTRACT

Commodity market is an important component of the country's independence, which provides income, food production and development. A well developed spot commodities market is a barometer for efficient pricing mechanism. Spot market heavily depends on physical market infrastructure.

Exchange trade is world practice of commodity markets organization. The financial industry has developed new products that allow institutions and individuals to invest in commodities. From market of goods commodity exchange has become market of rights for goods. Commodity derivatives provide three economic functions – risk management, price discovery and transaction efficiency. Commodity derivatives require large participation, liquidity and efficient trading platform. In a liquid and efficient market cost of transportation goods from one place to another is also reduced. Commodity derivatives are an innovation for Russian commodity market. That is why its peculiarity is low trading activity.

First of all, development of exchange trade of goods in Russia will protect domestic pricing from the world prices. Economic incentives to buyers and sellers are needed to intensify the exchange trade of goods. The experience of the financial markets’ regulation should be taken into account in case of commodity market. It seems that commodity exchanges should be one of the most important elements in Russian commodity market development.

The relationship between spot and futures markets is an important area of research. The paper analyses the influence of futures trading on development of Russian commodity market.

Key words: commodity market, spot market, futures

INTRODUCTION

The sharp increase in commodity prices, especially for energy and base metals since 2002 has gone hand in hand with growing derivatives market activity. The number of contracts outstanding in exchange-traded commodity derivatives almost tripled from 2002 to 2010. Over-the-counter (OTC) trading of commodity derivatives also grew rapidly. [2]

Along with the rapid increase in commodity derivatives trading, the presence of financial investors in commodity markets has grown rapidly over the past few years. While commodity
market investment is still small relative to overall managed funds, it is large relative to commodity production. In addition, there are indications that the types of financial investors and the strategies they employ have changed.

Financial activity in commodity markets is large compared with the size of physical production and has grown much faster in recent years. For gold, copper and aluminium, the volume of exchange-traded derivatives was around 30 times larger than physical production.

The current upturn in commodity prices has been accompanied by greater variety in the types of financial investors and investment strategies in commodity markets. One rapidly growing area is passively managed investment and portfolio products, which is consistent with investors now viewing commodities as an attractive separate asset class.

The financial industry has developed new products that allow institutions and individuals to invest in commodities through long-only index funds, over-the-counter (OTC) swap agreements, exchange traded funds, and other structured products. Regardless of form, these instruments have a common goal—provide investors with buy-side exposure to returns from a particular index of commodity prices.

The weakness of the commodity futures market in Russia impacts on the farmers’ income and interests. For instance, though Russia is the largest exporter of oil and gas, the country has an insignificant role in determining prices, which are decided in the futures market at New-York and London, similar situation in the case of metals.

In condition of globalisation, importance of efficient price discovery mechanisms has increased. It is also required to protect the interests of domestic farmers, traders and other intermediaries. Theoretically, commodity exchanges play a vital role in price discovery, its stabilisation and hedging of risks involved in commodity trading. While financial derivatives have established their role in risk hedging, commodity exchanges have a long way to go.

The first part of this article documents the increasing role of financial investors in world commodity markets, while the second presents some facts about Russian commodity market. The third section looks at ways of Russian commodity market development.

FINANCIALISATION OF COMMODITY FUTURES MARKETS

Traditionally, specialised financial traders in commodity markets focused on exploiting arbitrage opportunities. Typically, such opportunities arise as the consequence of commercial investors seeking to hedge their production or consumption in futures markets. These arbitrage trades, usually conducted by specialised commodity traders, typically involve taking long or short positions in forward markets for specific commodities and offsetting positions in spot markets. In doing so, financial investors provide liquidity in commodity derivatives markets.

Commodity derivatives provide three economic functions – risk management, price discovery and transactional efficiency. It is imperative to note that the primary purpose of risk management is to protect existing profits and not to create new profits. Similarly price discovery means ability to achieve and disseminate price information. Derivatives also facilitate efficiency in transactions which is the product of liquidity. Higher the liquidity lower is the transaction costs.[7]

The economic function of corporate securities such as stocks and bonds, that is, liabilities of firms, is to raise external resources for the firm. Investors are bearing the risk that the future
cash flows of the firm may be low and may occur during bad times, like recessions. These claims represent the discounted value of cash flows over very long horizons. Their value depends on decisions of management. Investors are compensated for these risks. Commodity futures are quite different; they do not raise resources for firms to invest. Rather, commodity futures allow firms to obtain insurance for the future value of their outputs (or inputs). Investors in commodity futures receive compensation for bearing the risk of short-term commodity price fluctuations.

Commodity futures do not represent direct exposures to actual commodities. Futures prices represent bets on the expected future spot price. Inventory decisions link current and future scarcity of the commodity and consequently provide a connection between the spot price and the expected future spot price. But commodities, and hence commodity futures, display many differences. Some commodities are storable and some are not; some are input goods and some are intermediate goods.

A commodity futures contract is an agreement to buy (or sell) a specified quantity of a commodity at a future date, at a price agreed upon when entering into the contract – the futures price. The futures price is different from the value of a futures contract. Upon entering a futures contract, no cash changes hands between buyers and sellers – and hence the value of the contract is zero at its inception.

How then is the futures price determined? Think of the alternative to obtaining the commodity in the future: simply wait and purchase the commodity in the future spot market. Because the future spot price is unknown today, a futures contract is a way to lock in the terms of trade for future transactions. In determining the fair futures price, market participants will compare the current futures price to the spot price that can be expected to prevail at the maturity of the futures contract. In other words, futures markets are forward looking and the futures price will embed expectations about the future spot price. If spot prices are expected to be much higher at the maturity of the futures contract than they are today, the current futures price will be set at a high level relative to the current spot price. Lower expected spot prices in the future will be reflected in a low current futures price.

Because foreseeable trends in spot markets are taken into account when the futures prices are set, expected movements in the spot price are not a source of return to an investor in futures. Futures investors will benefit when the spot price at maturity turns out to be higher than expected when they entered into the contract, and lose when the spot price is lower than anticipated. A futures contract is therefore a bet on the future spot price, and by entering into a futures contract an investor assumes the risk of unexpected movements in the future spot price. Unexpected deviations from the expected future spot price are by definition unpredictable, and should average out to zero over time for an investor in futures, unless the investor has an ability to correctly time the market.

What return can an investor in futures expect to earn if he does not benefit from expected spot price movements, and is unable to outsmart the market? The answer is the risk premium: the difference between the current futures price and the expected future spot price. If today’s futures price is set below the expected future spot price, a purchaser of futures will on average earn money. If the futures price is set above the expected future spot price, a seller of futures will earn a risk premium.

Are there any theoretical reasons for the risk premium to accrue to either buyers or sellers of futures contracts? Keynes’ (1930) and Hicks’ (1939) theory of normal backwardation
postulated that the risk premium would on average accrue to the buyers of futures. They envisioned a world in which producers of commodities would seek to hedge the price risk of their output. For example, a producer of grain would sell grain futures to lock in the future price of his crops and obtain insurance against the price risk of grain at harvest time. Speculators would provide this insurance and buy futures, but demand a futures price which is below the spot price that could be expected to prevail at the maturity of the futures contract. By “backwardating” the futures price relative to the expected future spot price, speculators would receive a risk premium from producers for assuming the risk of future price fluctuations.

James Chong and Joëlle Miffre came to conclusion that commodity futures and equity markets have become more segmented and, thus, commodity futures have become over time better tools for strategic asset allocation. They observe that for more than half of our cross section, the conditional correlations between commodity futures and global equity returns fell in periods of market turbulence. Possible explanations for this finding include the fact that: i) institutional investors treat commodity futures (such as precious metals) as refuge assets in periods of high market volatility and ii) the differing effects that major events (such as hurricane or a rise in unexpected inflation) have on the prices of commodity futures and equities. It is important to note however that the evidence is not uniform across commodities and that for some commodities, conditional correlation rises with the volatility of equity markets. This is somewhat to be expected since commodities behave differently from one another and cannot be treated as substitutes. [5]

So we can make conclusion, that growing investor presence has altered the character of commodity markets.

DEVELOPMENT OF DERIVATIVES MARKET IN RUSSIA

The Russian market for financial derivatives, which exists only since 1992, underwent in the last nineteen years difficult periods and experienced rapid changes. After a twoyear pause following the default crisis in 1998, and in 2008 Russian exchanges reopened their floors to derivatives trading. Since the beginning of trading in derivative instruments in Russia in 1992 the developmental stages of Russian derivatives markets have been plagued by dominance of speculative trading, underdeveloped legal and regulatory infrastructure, defective governance, and instability, culminating finally in the financial crisis of 1998 and the consequent sharp decline in trade. However, the market virtually resurged in 2000, as old and new exchanges opened their floors to derivatives trading, following similarly regenerative developments on other financial markets. The relatively slow re-institution and growth of derivatives markets compared to spot markets has been attributed partly to the inherently higher risk associated with derivatives trading and partly to the lack of participant confidence in governance and reliability of trade organizers on these markets. The major share of exchangetraded derivatives concentrates almost exclusively on the following four exchanges: Russian Trading System Stock Exchange (RTS), Moscow Interbank Currency Exchange (MICEX), Saint Petersbourg Currency Exchange (SPCEX), and Stock Exchange Saint Petersbourg (SPBEX).2 Judging by the turnover, RTS and MICEX provide the largest trading floors, followed by SPBEX and SPCEX. In 2006 turnover of derivative instruments on Russian exchanges totaled EUR 102 billion, of which RTS and MICEX jointly claimed 99 percent. [10] This situation isn’t changed in 2011.
The leading trading venue for futures and options in Russia and Eastern Europe is Futures and options on RTS (FORTS). FORTS combines the developed infrastructure, reliability and the RTS Stock Exchange guarantees with high trading technologies conformed to more than ten years of successful market development. The most liquid instruments on the Russian market are futures on the RTS index that have been available since 2006, and are more heavily traded even than cash stocks on blue chips. Forts offer different types of commodities. The most popular are three energy products: cash-settled futures on Urals crude oil, launched in June 2011; Brent crude oil, launched in June 2011; and a physically delivered gas oil future. Forts also has futures on sugar, gold, silver, silver ingots, palladium and platinum, while National Mercantile Exchange, the commodity division of Micex Group, lists several classes of feed wheat futures.

The current quantitative indicators dynamics of NAMEX Derivatives Market make it the first successful project of deliverable commodity derivatives trade settlement in Russia. In 2008 the NAMEX Derivatives Market trading volume amounted more than 95% of the total trading volume of all deliverable commodity derivatives on Russian market, and open interest volumes exceeded 85% of the total open interest volume of deliverable commodity derivatives. In 2008 more than 16 thousand transactions were closed on NAMEX Derivatives Market with total volume of more than 80 thousand contracts (more than 5 million tons in material equivalent) and total sum of more 26 billion rubles.

On the Commodity Derivatives Market NAMEX is the trading organization and MICEX is the clearing organization. The Section membership conditions are determined by the Membership Rules for the NAMEX Standard Contracts for Wheat, Legumes, and Industrial crops Section for grain, legumes, and industrial crops Section; trading procedures are determined by the Trading Rules of the NAMEX Standard Contracts for Wheat, Legumes, and Industrial Crops Section for grain, legumes, and industrial crops Section; the clearing conditions are regulated by the MICEX Clearing Rules for transactions settled in the NAMEX Standard Contracts for grain, legumes, and industrial crops Section. 

Source: http://www.micex.com/markets/futures/commodity/info

Figure 1. Organization structure of NAMEX derivatives market
Nevertheless, volumes are thin. Russian companies that have direct exposure to commodity price risk still mainly trade on foreign exchanges: CME, ICE Futures, Nymex, Comex and the London Metal Exchange.

We came to conclusion, that commodity futures are still a relatively unknown asset class in Russia. This may be because commodity futures are strikingly different from stocks, bonds, and other conventional assets. Among these differences are: (1) commodity futures are derivative securities; they are not claims on long-lived corporations; (2) they are short maturity claims on real assets; (3) unlike financial assets, many commodities have pronounced seasonality in price levels and volatilities. Another reason that commodity futures are relatively unknown may be more prosaic, namely, there is a paucity of data.

WAYS OF DEVELOPMENT OF RUSSIAN COMMODITY MARKET

The recent financial crisis had exposed the inadequacies of the current monetary order, which has the dollar as its linchpin. The leaders of Brazil, Russia, India, China and South Africa (BRICS) also called for stronger regulation of commodity derivatives to dampen excessive volatility in food and energy prices, which they said posed new risks for the recovery of the world economy.[1]

Futures market of the commodity sector can be an effective tool for shaping emerging cropping patterns of the farmers, provide them with price hedges to improve their income levels and improve holding power. Apart from this, transparency in price information will benefit all participants in the value chain. Robust warehousing facility reaching down to rural areas is a key infrastructure requirement. To achieve these goals, permitting options to farmers, negotiability of warehouse receipts (WR), enabling banks and other financial sector participants to enter commodity markets are some of the key legal and regulatory changes which are urgently required to be undertaken.

According to world experience the most important factor for a commodity exchange to achieve success is that trade should happen on a large scale through online trading. Here, there is need to learn from the equity market and they way concept of equity investment has penetrated across the income-groups as well as its regional spread. The challenge is to read the mindset of people in order to orient them to investment in commodity futures market.

Further important factor for growth of futures market in commodities is its liquidity. Unless hedgers, arbitrageurs and speculators all play significant role in the market, it is very difficult for any derivatives market to have volumes. The process and entry level restrictions should be simplified and removed wherever possible to increase liquidity. Liquidity can be increased by allowing financial intermediaries like mutual funds, banks who have no underlying physical exposure to the commodity to participate in futures trading as principal as a business by itself and not for hedging. This will lead to development of liquid and efficient commodity exchanges.

Commodity exchanges should further ensure effective system of warehousing and warehouse receipt. It becomes essential that commodity exchanges ensure a proper system of quality assurance and certification procedure in place. The standards to be decided should match the commercial practices and administration of certification should be taken up by reputed quality certification agencies.
Also the main participant of commodity market is regulator. In Russia it is Federal Service for Financial Markets (FSFM). FSFM formed an agenda for regulatory and legal reforms, in order to bring Russian security markets to international standards. According to the FSFM, this plan was officially adopted by the Russian government in 2006 with the intention to put all necessary regulations into national legislation by 2008. To assure legal protection to derivatives market participants, the FSFM pushed for amendments to the Civil Code that will prevent exchange-traded derivative contracts from being classified as wagers and hence being unenforceable.

Commodity derivatives require larger participation, liquidity and efficient trading platform. Russian commodity markets need to be broadened by allowing participation of banks, mutual funds, primary dealers and especially producers of goods. An efficient markets lead to higher volumes of trading, greater market liquidity and tighter bid-ask spread. In a liquid and efficient market, cost of capital is also reduced.

CONCLUSIONS

An effective commodity market is a barometer for efficient pricing mechanism as it is the market which is made of direct participation from farmers/producers, intermediaries, wholesalers, consumers, investors, etc. A well developed commodities market with pure commercial interest helps in discovering the true price of commodities in Russia. However, spot market will heavily depend on physical market infrastructure as well as cost of moving goods from one place to another, tax rate applicable to the particular commodity, etc.

Also we have to take to account that the presence of financial investors in commodity markets has increased considerably during the past ten years. While it is difficult to be precise about the exact magnitude and composition of inflows, there is much evidence that the investor base, and with it the range of instruments and strategies employed in commodity trading, has broadened substantially. It is not clear to what extent these changes reflect structural shifts in investor behaviour or a temporary boom supported by a “search for yield”. In any case, a full reversal of the trend towards a greater role of financial investors appears unlikely against the backdrop of greater investor sophistication and a broadening range of commodity-related financial instruments.

Commodity markets have become more like financial markets in some respects. Financial investors are increasingly active on both sides of trades, creating a kind of financial trading sphere. Yet the characteristics of physical markets, such as inventory levels and the marginal cost of production, are still important. A lack of liquidity especially in the long tenors of commodity derivatives markets and physical limits to short selling in the spot market may at times significantly affect market dynamics. These effects require further investigation.

While the increase in investor activity can be expected to bring benefits in terms of market efficiency, the ongoing “financialisation” of commodity markets raises issues similar to those in other financial markets.

There are very limited amount of financial instruments, lack of expertise in pricing instruments and risk evaluation on Russian exchanges.
As the second biggest exporter of oil and a leading producer of many minerals, Russia is extremely rich in commodities. This presents a big opportunity for the listed derivatives market, which it is just beginning to exploit.

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FINANCIAL-ECONOMIC CRISIS AND TURKEY

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ABSTRACT

Below, financial and economic crisis of Turkey after 1980 will be examined in relation with IMF (International Monetary Fund) and World Bank baked economic policies during the integration process of Turkish economy to a global world economy. As a conclusion this paper will be included an evaluation of the pros and cons of the integration process of the Turkish Economy to the global market economy and points at some lessons to be drawn from this process.

Key Words: Turkish Economy; (Integration to the world economy) globalization; financial – economic crisis; economic policies (to cope with crisis).

1. INTRODUCTION

As was the case in most developing and underdeveloped countries during the late 1970s Turkey also witnessed the weaknesses of import substitution strategy and attempted to overcome these weaknesses by gearing towards a more outward oriented economic development strategy. Especially during the 1980s there was an accelerated reform and adjustment process in almost all sectors of the economic system. The reform process started with liberalization of the foreign trade regime and the financial sector and culminated in the liberalization of capital accounts during the late 1989, the latter changed whole pattern of policy making environment radically.

During the final two decades of the twentieth century, development theory and practice were dominated by a single paradigm that placed market forces at the center of policy. There was a wave of market oriented economic reforms, the likes of which have never been seen. Financier George Soros (2002, pp. 4-10) termed that prevailing paradigm “market fundamentalism”. In Latin America in particular the theory and practice came to be known as “neo-liberalism” many however simply call it “free market economics”. In 1990 economist John Williamson (after analyzing the views of both the political Washington of congress and senior members of the administration and the technocratic Washington of the international financial institutions, the economic agencies of the US governments, the Federal Reserve Board, and the think tanks) deemed it appropriate to term the policy core of this period ‘the Washington Consensus’.
Williamson, 1990 p.9). While Williamson enumerated ten major policy tenets, the list concentrates primarily in three areas of reform: liberalization, deregulation and privatization. According to Washington Consensus an appropriate economic strategy emphasizes fiscal rectitude, competitive exchange rates, free-trade, privatization, undistorted market prices and limited intervention (save for encouraging exports, education, and infrastructure).

In addition to governments the paradigm dominated the circles of academia, the media, the international financial institutions, the corporate world and others involved in the elite policy debate, both North and South. As this paradigm radiated out to sweep the globe, so too did global capital; indeed, the Washington consensus policies provided the unregulated, liberalized and privatized space needed for capital to become truly global. (Broad, 2004, pp.130-131)

Turkey was also one of the developing countries which adopted economic policies similar to Washington Consensus. In fact, Turkey was one of the major examples of a country where a joint IMF-World Bank program implemented in the 1980s. Since 1980s IMF has been playing an important role in the implementation of these policies in Turkey. Turkish governments have largely adhered to the IMF-baked economic policy framework since 1999 and Turkey signed another three year IMF stand-by agreement for the years 2005-2008. IMF’s backing of the government’s economic policies remains important for maintaining investor confidence, especially in view of high inflation and interest rates and burgeoning current – account deficit of Turkey.

By the help of policies imposed by IMF and the World Bank, liberalization process started step by step in 1980s and Turkish economy have been an entirely open economy since 1990.

1990s were not easy years for the Turkish society as a new born player in the global open market economy. 1994, 1998, 2001 and 2008 were the years of important financial-economic crisis that had experienced by Turkish economy. This paper will be focused on these four different financial-economic crises of Turkey. And try to find out answers for the questions listed below:

- What were the reasons of financial crisis in Turkish economy?
- What were the explanations of the economists for the crisis of Turkey?
- What were the differences and similarities of the crisis of 1994, 1998, 2001 and 2008?
- What did happen in the crisis years of the economy and what were the effects of the crisis on the Turkish society?
- What were the solution policies offered by economists?
- What were the decisions taken by Turkish governments for solving the problems that had created by the crisis?
- What are the lessons gained from the Turkish experience of integration to the open market economy and resulted crisis of the economy?
- What are the roles of IMF and the World Bank in the integration of Turkish economy to the world economy?
- What are the conditions for Turkey to be a successful global player of the world economy in the future?
To find the answers of the above questions first of all crisis periods of the Turkish economy examined separately. Then we compare each period with respect to the listed questions above.

2. THE 1994 CURRENCY CRISIS IN TURKEY

Full capital account liberalization in 1989; in an environment with no fiscal discipline resulted in continuously increasing Public Sector Borrowing Requirement (PSBR) in 1990s. Public Sector Borrowing Requirement of the consolidated public sector as a percentage of Gross National Product (GNP), was below 10% between 1993-1998, peaked in 1999 and 2001, reaching 15.6 and 15.9% levels, respectively, and then decreased to 8% in 2002, by the enforcement of the fiscal discipline through the IMF prescription (Keyder, 2003, p.22). Cost of fighting terrorism and the earthquake of 1999, were additional factors contributing to surging PSBR in those years. Keyder (2003, p.2), told this story of increasing public depth in the banks as follows:

“Increasing PSBR, led to the banking system becoming the financier of surging public sector debt. In the end, banks, instead of transferring the resources in their possession to the real sector, became the biggest lender to the public sector. At times, they even funded the public sector through open positions. Share of government debt instruments in total bank assets increased from 10% in 1990 to 25% in 2000s. Gross credit-to-deposit ratio, on the other hand, fell from 85% in 1990, to 56% in 2000, while share of total credits in total assets of the banking sector decreased from 47 to 33% between 1990 and 2000. Companies relied on self-finance and the larger ones borrowed from abroad. Even companies, themselves, preferred buying risk-free, high-yield government debt instruments rather than undertaking investments. All these developments in the economy restricted Turkey’s growth potential.”

Özatay, (http://www.econturk.org/Turkisheconomy/ozat2.pdf, p.1638) analyzed the causes of 1994 crisis of Turkey and he insisted that despite weak fundamentals of the period preceding the crisis, in the absence of policy “mistakes” that played a role of a series of shocks in the second half of 1993, the financial crisis could have been avoided. Only soon after two important shocks given to the economy, pressures in the exchange market sharply increased and culminated into crisis:

- First, the government cancelled various domestic debt auctions or accepted a small percentage of short maturity offers to prevent a further rise in the cost of servicing the domestic debt, in the second half of 1993.
- Second, the government relied heavily upon the Central Bank of Republic of Turkey’s (CBRT) resources.

These shocks triggered a run for foreign currency.

In Turkey, since the late 1980s, main financing mechanism of public deficit had been domestic debt. Consequently, the domestic debt to GNP ratio followed an upward trend up to 1994. However, at the end of 1993, policy-makers gave clear signals to the market that they were strongly willing to change the financing mechanism of the deficit.

Short maturity domestic debt auctions were cancelled, and the Treasury started to rely upon CBRT resources heavily. According to Özatay and many other economists these were significant policy mistakes. Özatay, argued that despite weak fundamentals of the period
preceding the crisis, in the absence of these shocks in the second half of 1993, the financial crisis could have been avoided. This does not mean that fundamentals are not important; on the contrary, they were. They rendered an economy vulnerable and set the stage for speculation. However, exact timing of the crisis depended upon shocks that play an igniting factor. Özatay, further argued that fundamentals in the post-crisis period were, to a great extent, not stronger than the pre-crisis period; nonetheless, no crisis had observed in those years.

As a conclusion Özatay, argued that:

"Prior to the crisis starting from the late 1980s that heavy reliance on domestic debt finance of continuously increasing budget deficits prevented both an increase in the inflation rate and depletion of reserves. In the absence of corrective measures to maintain this outcome, domestic debt finance should have been continued. However, continuation of this process depends on actions of both sides of the debt market. In the Turkish case, it was the supplier who changed its behavior.

The main policy lesson that can be drawn is that countries with open economies which mask undesired consequences like high inflation and reserve losses of high public deficits by relying upon domestic borrowing should abstain from changing rules of the game. That is, in the absence of radical stabilization measures, governments of such countries should do their best to continue debt finance. A failure in fulfilling this condition causes governments to face the inevitable collapse rather early."

The Turkish government announced a new stabilization package on the 5th of April 1994. The package especially relied upon a radical expenditure cut to correct the fiscal fundamentals. A once and for all type wealth tax was also put into action. At the same time, a shock to public prices was given. The stabilization package lacked a very important element; an attempt to solve the funding crisis. The financial crisis ended only after the Treasury was able to re-borrow from the domestic debt market at the end of May, after the stand-by agreement with the IMF. Ironically enough, the rate of interest offered by the Treasury, which had been around 90 percent in the cancelled auctions, then reached 400 percent. At the same time the annual inflation rate was 118 percent at that time.

3. THE EFFECTS OF RUSSIAN CRISIS ON TURKEY (1998)

Turkey’s complete encounter with the process of financial globalization occurred, following the decision to establish full capital account liberalization almost a decade after the inception of Turkey’s neo-liberal experiment in January 1980. In spite of the fact that full capital account liberalization took place at a later stage of the program, many observers have rightly considered the full opening of the capital account to be premature. Turkey had not accomplished a stable macroeconomic environment and a strong regulatory infrastructure for the financial sector for capital account liberalization to produce the desired outcomes in the form of lower real interest rates and higher economic growth on a sustainable basis. Given the weakness of the domestic environment, Turkey failed to capitalize on the benefits of financial globalization. A lopsided pattern emerged in which a disproportionate share of capital flows were of a short-term nature. Turkey failed to attract significant long-term foreign direct investment (FDI). The annual inflow of FDI has remained below USD 1 billion, which is clearly a dismal figure compared with the performance of other emerging markets of similar size and level of development. Turkey’s
weak FDI performance was, in part, due to an unstable macroeconomic and political environment. However, other factors were also at work including bureaucratic barriers and deficiencies of the legal framework. The pattern of economic growth in the Turkish economy became heavily dependent on inflows of short-term capital which were highly volatile in nature. This in turn, resulted in highly cyclical pattern of economic growth.

1998 Russian financial crisis attached Turkish economy in those difficult conditions. Capital in flow to developing counties like Turkey decreased as the negative effects of the crisis spread over the financial sources.1990s were characterized by a pattern of recurrent financial crises with costly consequences and lower economic growth. Following a series of ill-founded and poorly focused set of stabilization attempts through the decade, the government initiated a comprehensive disinflation program in July 1998 under the guidance of the IMF. Referred to as the Staff Monitored Program (SMP). The program aimed at improving the fiscal balance and reducing the long-lasting price inflation (Yeldan, 2001, p. 2-3). However, the SMP was baffled with limited accomplishments due to the continued political uncertainty surrounding the general elections and two unfortunate earthquakes. Conditions worsened in 17 August 1999 when Kocaeli and Düzce earthquakes hit the society and the economy. As the public expenditures continued to expand, fiscal balances deteriorated even further and deficit-financing requirements exerted heavy pressures on the domestic financial markets giving rise to significantly high real interest rates. Finally in December 1999 the government adopted another three-year disinflation program, aiming at decreasing the inflation rate to a single digit by the end of 2002. Aided with the supervision and technical support of the IMF, the new program relied on exchange rate based disinflation and monetary control by setting upper limits to net domestic asset position of the CBRT. Accordingly the CBRT, committed itself to a policy of no sterilization, whereby changes in the monetary base would directly reflect changes in the net foreign assets of its balance sheet. The program further entailed a series of austerity measures on fiscal expenditures and set specific targets for the balance on non-interest, primary budget.

4. THE 2000-2001 CRISIS OF TURKEY

Over the implementation of the Exchange Rate Base Stabilization Program (ERBSP) adopted in December 1999, the exchange rate was used as the nominal anchor (see, Keyder, 2001 for ERBSP’s application in Turkey). But the banking system was too weak to support this regime. The end-result was; overvalued TL, huge current account deficit and enlarged open positions in foreign exchange (FX), which rendered the financial system highly vulnerable to external shocks. Maturity mismatches, on the other hand, increased bank’s vulnerability to interest rate shocks. The severe banking and currency crises of November 2000 and February 2001 resulted in loss of international reserves, high capital losses, bankruptcies and increased non-performing loans (NPLs).

During the financial crisis, the CBRT’s official reserves decreased drastically (Keyder, 2003, p. 3). Reserves, which amounted to USD 27.6 billion in mid-February, 2001, decreased to USD18.8 billion by April 6, 2001. Only over the February 19-22 interval, the size of the CBRT’s reserve loss was USD 5 billion. This meant a withdrawal from the system, liquidity equivalent to 58% of the reserve money, which was around TL 6 quadrillion at the time. Abiding with the “no sterilization rule” of the ERBSP, the monetary authority could not take immediate action, hence
for a day or two interest rates skyrocketed. The result was collapse of the three-year ERBSP, only after 14 months following its adoption. On February 22, 2001, the crawling peg regime was abandoned and TL was let to float. The immediate devaluation rate against the basket (0.5 Dollar+0.5 Euro) was close to 30%. Both nominal and real interest rates skyrocketed, triggering the banking sector crisis. TL’s depreciation continued due to high degree of currency substitution. The crises were followed by a deep recession (GNP declined by 9.5%, GDP by 7.5% over 2001), accompanied by surging inflation and unemployment.

Following the demise of the ERBSP, the newly appointed minister, Mr. Kemal Derviş (former Vice President of the World Bank), submitted a new letter of intend to the IMF. Finally in May 15, Mr. Derviş announced the invigoration of a new stabilization effort under the guidance of the “Transition to the Strong Economic Program”. As it was mentioned in its introduction, the new program would be the continuation of the previous disinflation program, and would be backed by a series of “structural reforms” aimed at strengthening the banking system and at transforming the “old ways of economic policy making”.

The major structural reforms proposed by the program were; public sector reform, restructuring and rehabilitation of the banking sector, liberalizing markets where private sector would have the dominant role. Implicit public debt in the form of huge duty losses originating from uncompensated credit subsidies and payments for agricultural sector and small and medium sized companies, was paid out by the Treasury over the year 2001. Similarly, the ill-managed banks in financial difficulty were turned over to the Saving Deposit Insurance Fund (SDIF). Due to 100% guarantee (blanket coverage) on deposits, Treasury had to take over their deposit liability as well. Because of the duty losses, even though state banks held 40% of total deposits, their share in total credit was only 25% prior the banking operation. Total resources transferred to state banks (Ziraat, Halk and Emlak Banks) for securitization of duty losses, their restructuring and re-capitalization, was USD 17.7 billion. The necessary amendments to the relevant laws barred formation of further duty losses as of July 3, 2001. From then on, the interest rates offered by state banks would be determined in the same way as in private banks. For rehabilitation of banks turned over to SDIF, the Treasury issued USD 16.9 billion worth of securities (BRSA, 2002, p. 19). Cost of all these clean up process corresponded to around 30% of the GDP of 2001. The CBRT, played a major role during the restructuring of State and SDIF banks.

Structural problems faced by the banking sector during and following the crises were; extreme exposure and fragility toward market risk due to maturity mismatch and FX open positions; small scale, inefficient, fragmented banking structure; dominance of loss-ridden state banks, weak asset quality (group banking, mismatch between loans and provisions, low Capital Adequacy Ratio (CAR)), lack of transparency; inadequate internal control, risk management and corporate governance. Tax advantages extended within the context of bank reform, encouraged merging and takeovers. As a result of this, along with the turnover of non-viable banks to SDIF, the number of banks decreased from 81 to 55 between 1999 and November 11, 2002. Of the 55 banks, 41 were commercial, and 14 were investment and development banks (BRSA, 2002, p. 2).

Public units responsible for monitoring and supervising the banking sector were combined under the structure of Banking Regulation and Supervision Agency (BRSA), which
was founded in June 1999 and became operational on August 31, 2000. The Agency holds an autonomous status, and functions independent from political powers.

The turmoil in the financial markets triggered by political tensions created by 2002 early elections, for example, lasted only a short time. Over the implementation of the “Strengthened Stabilization Program” the CBRT used monetary targeting, where the primary goal was lowering the inflation rate gradually. The target was reaching a single-digit-rate by 2005. CBRT was successful in reaching this target and had adopted an inflation-targeting regime since the beginning of 2006 officially. By the help of successful application of policies much more suitable environment created by decreasing inflation rates. The pressure of fiscal policy on monetary policy was reduced, the degree of pass-through between the exchange rate and the inflation rate weakened and the financial system has enough strength nowadays thanks to adhering decided programs truly by the CBRT.

5. THE EFFECTS OF GLOBAL CRISIS ON TURKEY (2008)

The Strengthened Stabilization Program and the legal and structural changes introduced by it, made the Turkish economy more resistant to shocks; by loosening the ties between politics and the economy on the one hand; and between fiscal and monetary policy, on the other. Factors contributing to this resilience are the floating exchange rate system, stronger fiscal stance, reduced fiscal dominance, autonomy of the CBRT and BRSA, and a stronger financial system, which is less vulnerable to shocks.

2008 global crisis attached Turkey in much more favorable conditions than former 1994, 1998 and 2001 crisis of Turkey with respect to macro economic variables. Although prevailing of better economic conditions since 2002, global crisis of 2008 caused a very big decline in the growth rate of 2009. GDP declined by 14.3% in the first quarter of 2009. Predictions of 6% decrease in GDP didn’t realize at the end of 2009 and resulted in 4.7% decline which was moderate than predicted level. 2010’s first quarter growth of GDP was 11.7%. 2010 ended with the growth rate of 8.9 %.

Although current account and unemployment problems still save their importance as a risk factors for the functioning of the economy, beginning conditions of 2008 much more favorable than former crisis periods of Turkey. But this is not enough to prevent the emerging of huge rate of unemployment during the crisis period. It increased from 11% in 2008 to 14% in 2009.

Unlike to 1994 and 2001 crisis and similar to 1998 there was no pressure on macro economic variables of exchange rate and interest rate in 2008. And also decrease in foreign reserves much more moderate than the former crisis. Some economists insist that these relatively better results for the economic variables caused misunderstanding of the dimensions of the global financial crisis (Özatay, 2009, pp. 140-160). Özatay, thinks that by taking early steps against the effects of global crisis it could have possible to reach much more moderate results with respect to unemployment and growth rate performances of Turkey. Outward floating of capital increased the risk of the economic activity. Decreasing foreign and domestic demand, decreasing foreign and domestic financial sources, decreasing confidence and the increasing unemployment rates were the most important results of the 2008 crisis.
Some economists argue that the policy makers didn’t react immediately for preventing the decreasing trends in growth and employment. Tax reductions in some sectors put into action in the middle of March 2009 which was too late for the success. And they criticize the tax reductions for causing increase in foreign products demand not domestic products demand. Some authors appreciated the fiscal discipline of the government and approved the policy approaches to the global financial crisis of 2008. Good performance of Turkish banks during the crisis period, saving fiscal discipline and increasing grades from rating institutions were the evidence for the increasing power of Turkish economy against external shocks of the integrated world economy.

6. THE ROLE OF IMF IN CRISIS OF TURKEY

Turkey experienced a very severe economic and political crisis in November 2000 and again in February 2001. The IMF has been involved with the macro management of the Turkish economy both prior and after the crisis, and provided financial assistance of 20.6$ billions in net terms between 1999 and 2002. An important question to pose is the extent to which the IMF itself was responsible for the premature opening of the capital account in Turkey. This decision appears to be primarily the outcome of the domestic political process. In retrospect, a striking myopic element could be discerned in this decision, in the sense that it was trying to capitalize on short-term gains based on short-term capital inflows without paying adequate attention to the disastrous medium and long-term consequences in an environment of political fragmentation and under-regulated financial system. There is no evidence, however, that the IMF resisted Turkey’s transition to full capital account liberalization (Alper; Öniş, 2002, pp.16-18). Anecdotal evidence suggests that the Fund favored the build up of domestic financial regulation right after the inception of the new capital account regime by promoting the creation of a new regulatory institution. This reflected the broad preference of the Fund in favor of rapid capital account liberalization based on the somewhat overoptimistic assumption that the necessary accompanying regulatory institutions could be constructed and be rendered effective in a relatively smooth manner over short periods of time. Yet, the Fund was not successful in instigating such a regulatory agency in a non-crisis environment. It is striking to observe that the kind of regulatory institution that the Fund was trying to promote namely, BRSA could only be founded in 1999, at a time when the Fund was much more powerful in promoting its reform package as part of its conditions for access to financial assistance. In hindsight, the premature capital account liberalization delayed the reform process in Turkey. Certainly it is possible to argue that Turkey’s early exposure to financial globalization aggravated the underlying disequilibria, which to a large extent, were rooted in Turkey’s domestic politics. In the presence of severe distributional constraints, which could not be adequately managed in a fragmented party system with weak institutions, lack of fiscal discipline emerged as an endemic source of instability leading to the crisis of April 1994, and subsequently the November 2000 and the February 2001 crises. Turning specifically to the role of the IMF in the aftermath of the 1994 crisis, it is striking to observe the Fund’s active involvement in the reform implementation phase, long before the stabilization program of December 1999. Indeed through its Article IV Consultations with Turkey and its Country Staff Reports, the Fund has monitored the macroeconomic developments in Turkey and frequently highlighted the deficiencies concerning
the fiscal disequilibrium and financial sector fragility, deficiencies that have contributed to the subsequent crisis of November 2000 and February 2001. Yet the Fund’s position in the intra-crisis period (1994-2000) shows the inherent dilemma that the Fund faces. This dilemma is not an attribute, which is unique to Turkey. In all fairness, even though the Fund was actively involved in the policy process, it did not possess executive power during this period. Consequently, its role could not be extended beyond a mere advisory role to include an ability to impose key policy changes in the desired direction. Only when the sustainability of the fiscal position seemed to be seriously jeopardized, did the Turkish policy making elite reluctantly yield to the Fund’s pressure. This half-hearted commitment to the Letter of Intent of December 9, 1999, in retrospect, proved to be a major cause of the ensuing crises. This brings us to the more general point that political ownership of the program by key domestic constituencies is crucial for program success. In the Turkish case, there was no guarantee that the program would succeed in an environment of weak political ownership. This clearly draws attention to one of the central dilemmas facing the IMF not only in Turkey but also in other national settings like Argentina, Indonesia and Russia, which has already been highlighted. It would perhaps be unfair to accuse the IMF directly in this context; yet at the same time, the Fund’s failure to recognize problems associated with political ownership has often proved to be a major cause of program failure.

The November 2000 and February 2001 crises in Turkey, in a rather paradoxical fashion, occurred during the implementation of the IMF program. The Fund’s contribution to the outbreak of the twin crises should not be underestimated. Looking back, the Fund underestimated the fragility of the Turkish financial system, notably in an environment where the success of the program relied heavily on the availability of short-term capital inflows on a sustained basis. Steady availability of capital inflows, however, rested on a knife-edge equilibrium based on steady implementation of the program. Given the uncertain environment within which the program was introduced, this proved to be an unwarranted and simplistic assumption. The Fund underestimated the scale of adjustment involved partly because of information problems and consequently the financial assistance provided by the Fund, totaling approximately USD 4 billion extended over a three year period, was not commensurate with the scale of adjustment notably in the context of the banking sector. Furthermore, the amount of resources provided by the IMF failed to provide sufficient insurance considering the magnitude of capital flows involved. One could also detect a sequencing problem in the Fund’s approach to Turkey in the post-1999 period. Ideally, the reform process should have given immediate priority to banking sector restructuring, considering that the private banks played an instrumental role in the November 2000 and the public banks were the prime contributors to the February 2001 crises. Yet, one could argue that far more emphasis was placed by the Fund on the elimination of the budget deficit in the short-term, putting much less weight on the longer-term problem of banking sector regulation in the process. Perhaps, given the uncertain political environment and the scale of adjustment involved, there should have been some consideration of the need to institute temporary controls over short term capital flows right at the inception of the program. This is the kind of policy, however, that the IMF is opposed to by definition.

The IMF has played an instrumental role in the creation of the regulatory apparatus needed for the creation of a sound financial and banking system. The creation of the Banking Regulation and Supervision Agency (BRSA) was a direct outcome of IMF pressure. This undoubtedly constituted a major source of progress in terms of establishing a well-regulated
banking sector, which is a fundamental prerequisite for full capital account openness. Looking back, however, the Fund seems to have underestimated the political problems associated with the institution of a regulatory state. The operation of the BRSA has been subjected to significant delays and the institution was not in a position to prevent the twin crises, which were very much associated with a malfunctioning banking system. To be effective these institutions must enjoy a considerable degree of independence from short-term political considerations but at the same time, they must enjoy broad political support. The danger is that these institutions can be discerned by the public purely as the creation of an external agency. In that case, these institutions will fail to elicit political legitimacy and hence may fail to be viable institutions in the longer run.

The post-1999 experience of Turkey also illustrates some of the limitations of the exchange rate based anti-inflationary programs typically sponsored by the Fund in many developing country settings in an environment of open capital accounts and high capital mobility. The post-1999 experience of Turkey highlighted two central dilemmas associated with exchange rate based-cum-currency board stabilization strategies. IMF typically assumes that the fiscal component of the program will be smoothly implemented and consequently underestimates the incentives, which exist in the political sphere which operates in the direction of partial or weak implementation. Whilst the Turkish government appeared to display an initial commitment to the fiscal component of the program, this commitment proved to be ultimately half-hearted. Major problems of implementation appeared to manifest themselves in the areas of privatization and reduction of agricultural subsidies. Perhaps this was not surprising given the electoral base of the principal members of the coalition government in office and considering the weight of the rural component of the Turkish electorate. Incomplete implementation of the fiscal measures displayed the weak commitment of the coalition government to the program that in turn increased the possibility of sudden capital outflows. Incomplete implementation of fiscal measures also contributed to a drastic increase in the trade deficit, given the contribution of the public sector deficits to the overall demand in the economy. The inability to control domestic demand resulted in a strong import boom raising questions about the sustainability of the balance of payments equilibrium. By undermining investor confidence, the set of mechanisms considered above clearly contributed to the outbreak of the 2000-2001 crises. The second dilemma relates to the lack of flexibility in the use of the monetary policy associated with “quasi-currency board” practices. The IMF may be defended on the grounds of trying to provide credibility to a program by introducing a powerful external anchor. Yet, there is also a negative side to this approach, which became obvious in the context of the twin crises. Given the constraints imposed on the central bank in terms of its ability to influence its domestic credit expansion, the central bank is unable to fulfill its role as the “lender of the last resort.” This meant effectively that the central bank was not in a position to provide the implicit insurance on inter-bank loans; this in turn increased the fragility of the Turkish banking sector also contributing to the outbreak of the crises. At this point, the scale of IMF assistance provided also enters the picture. To be more precise, one possible criticism of the IMF is that it failed to provide sufficient resources at the right time due to its inherent bias towards protecting the interests of the lenders of the “center”. In the absence of sufficient financial backing, the IMF failed to provide proper implicit insurance for the Turkish program as a systemic lender of the last resort. However, it would be wrong to place the full responsibility of the crises on the IMF taking into account the fact that the root
causes of the problem were located in the domestic political sphere. Finally at a more fundamental level, the Turkish experience in the post-2001 crisis period reflects a certain lack of attention on the part of the IMF to the issue of long-term economic growth. One can criticize the IMF for paying too much attention to the issue of fiscal prudence at the expense of real economic recovery. At a deeper level, the IMF may be criticized on the grounds of not paying adequate attention to the problems concerned with long-term growth and competitiveness of the real economy. A narrow vision that concentrates simply on the regulatory role of the government, as has been clearly the case in the Turkish setting, deemphasizing its other functions, notably, its contributions to long-term economic development may not be sufficient in terms of creating a robust real economy that would be less vulnerable to the future economic crises.

7. CONCLUSIONS

1990s were full of economic problems for Turkey. Turkey faced the 2000s by huge financial crises and applied structural adjustment programs in order to curb the crises. Turkey adhered to the IMF backed economic policy framework since the end of 1999; signed another three-year IMF stand by agreement for the years 2005-2008. Overview of the Turkish economic reform process revealed the fact that much has been done by Turkey in order to integrate to the world economy. Turkey reached the growth path after 2002; but growth of the economy couldn’t combine with the sufficient increase in employment. Turkey has been paying very high interest rates for the capital inflow. High interest rates combined with overvalued Turkish Lira have been destroying the productive capacity of the Turkish economy. The Turkish economy hasn’t been able to create enough new jobs for its increasing young population. Turkey is a dependent economy which has to pay high costs for capital inflow in order to move its economic power. The Turkish case has clearly exposed the limitations of premature opening of the capital account in the presence of acute fiscal disequilibrium and an under-regulated banking sector. Many of the reforms pushed by the IMF are desirable and countries themselves need to develop an internal political base to enhance the legitimacy of such reforms. Countries like Turkey and Argentina need to develop strategies for long-term growth that extend well beyond the regulatory role for the state envisaged by the IMF. In a sense, the Fund’s reform agenda is incomplete in so far as it fails to pay sufficient attention to the developmental and distributional functions of the state and places undue emphasis on the external determinants of economic growth. Hence, individual countries need to develop their capacities well beyond the areas identified by the IMF and pay attention to the domestic determinants of long-term growth. They should also concern themselves explicitly with social and distributional issues, which are of critical importance for building and sustaining a broad-based reform coalition. The Fund fails to provide a continuous external anchor for the development of appropriate regulatory institutions given the central dilemma namely, the ability of the Fund to intervene effectively in the reform process only in times of crises. One should consider as a serious possibility, at least in predominantly democratic settings, that countries might, through their internal evolution process, successfully reform their economies in the absence of IMF involvement.
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THE POSSIBILITIES OF APPLYING THE THEORY OF POLITICAL MACROECONOMICS ON FISCAL POLICY IN SERBIA

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ABSTRACT

Political macroeconomics in transition countries such as Serbia includes specific features, primarily related to the specific motives of policymakers that arise from the characteristics of the political process in countries that are experiencing political democratization, which implies political parties with unstable membership and unclear political - ideologically profiled economic objectives. As a result, policy making, including economic policy, is dominated by opportunistic behavior. In these circumstances, fiscal policy becomes an important tool for manipulating macroeconomic policy for political purposes. Taking into account the significant political instability and polarization, as well as uncertainty over the election results in frequent elections held in Serbia, the models in which debt is a strategy variable becomes relevant to the analysis. At the same time, given that all governments in Serbia were coalition governments which gathered political parties of different political and ideological orientation, problems related to the budget deficit and the inability of implementation of fiscal stabilization also involve the models of distribution conflict, which focus on the conflict of political goals among partners, members of the coalition government. Specifics of political manipulation in Serbia refer to ways of using privatization revenues based on discretion, and due to that the application of political macroeconomics on fiscal policy in Serbia is primarily devoted to analysis of size and structure of government expenditure.

Key words: political macroeconomics, opportunistic motives, fiscal manipulation models.

1. INTRODUCTION

Political macroeconomics proved to be a relevant discipline for analyzing and understanding the specifics of economic policy in economies in transition. The issues of political macroeconomics are relevant in Serbia, which is characterized by economy in transition and the process of democratic consolidation, what makes it a so-called "new democracy". The strengthening of these two processes in Serbia has been present since the social and political
changes that occurred in October 2000. The specifics of political influence on macroeconomic trends in Serbia are the following:

- high political instability caused by frequent political elections,
- opportunistically motivated behavior of economic authorities,
- dispensing with those elements of economic reforms that could lead to lower support of the public,
- lack of social consensus and agreement between the elite and the public concerning the reforms,
- significant use of fiscal manipulation in pre-election period (in relation to the abuse of monetary policy),
- coalition governments with large political dispersion - significant differences in political and economic objectives.

The above characteristics suggest that theories developed in political macroeconomics could also be applied on the economic policy that has been carried out in Serbia in the previous period (since October 2000). It is especially true for opportunistic models (traditional and rational ones) that focus fiscal policy (political budget cycles). Within them, important element refers to the specific method of financing "competence" of policymakers through privatization revenues which have been used for discretionary fiscal policy, i.e. fiscal expansion – the growth of government expenditures, including growth of current government expenditures that have been used for financing salaries in public sector and pensions, as well as certain capital expenditures which have shorter period of implementation and whose effects are quickly visible. Fiscal expansion has also included various forms of government support to businesses and households, through subsidized loans (consumer, housing and liquidity) that became especially actual in the period when the global economic crisis started to have negative effects on Serbian economy (since the last quarter of 2008).

2. POLITICAL BUDGET CYCLES – A BRIEF OVERVIEW OF THEORIES

Political cycles that occur as a result of fiscal policy changes due to electoral cycles, causing changes in the amount of government budget deficits, as well as the changes in the structure of government expenditure and revenues, are called political budget cycles. At first, the concept of political budget cycle was related to the countries with developed parliamentary democracy, in which fiscal policy remained the only source of possible manipulation by economic policy, because monetary policy had been left to the independent central bank. However, later analysis showed that significant political budget cycles occur in the "new democracies" and developed economies (Brender and Drazen, 2002, 2005, Persson and Tabellini, 2003, Shi and Svensson, 2002, 2006), indicating precisely the importance of consolidation of democratic processes in these countries (creation of democratic institutions and procedures implementation) for the removal of politically motivated misuse of economic policies, causing macroeconomic instability in the form of political business cycles. The further the country went in the development of democracy, the more weakened politically induced cyclic fluctuations were (Akhmedov, A. and E. Zhuravskaya, 2004).

Depending on the motives of the politicians who predetermine their pre-election behavior – the models of political cycles are opportunistic (Nordhaus, 1975, Rogoff and Sibert, 1988,
Rogoff, 1990, Drazen, 2000) or party (Hibbs 1977, Alesina, 1987), and depending on the assumptions about the characteristics of the voters, the models are traditional (Nordhaus, 1975, Hibbs, 1977) or rational (Rogoff and Sibert, 1988, Rogoff, 1990, Drazen, 2000, Alesina, A., 1987).

Summing up the theoretical concepts, opportunistically motivated manipulation of fiscal policy assumes that an improvement in economic indicators in the pre-election period will be rewarded by the voters, which is why economic authorities resort to pre-election fiscal expansion, which can lead to budget deficits and growing share of deficit in GDP due to lowered taxes or increased government expenditure.

Based on the equation of budget constraints:

$$G = T + S + dB$$  \hspace{1cm} (1)

government spending (G) may be financed by tax revenue (T), borrowing (B) or seigniorage income (S) on the basis of monetary expansion and inflation tax.

Traditional models assume "naive" voters who do not know the motives of politicians, form adaptive expectations and forget the behavior (manipulation) of policymakers in earlier period, with predictable pre-elections effects of manipulation - higher income growth than inflation, and the post-election effects in the growth of the inflation rate and reduction of income to its previous level. However, the inclusion of rational voters eliminates the possibility that voters might be systematically deceived by the policymakers, which is why the effects of fiscal manipulation in the model must provide some form of information asymmetry. In this case, the competence of policymakers to make fiscal policy is being considered, in doing so, they send certain signals to the voters regarding their ability to reduce losses in the budget process, that is, their ability to provide more public goods for the same tax burden. Therefore, political budget cycles occur in the form of tax reductions in the election period ($\tau_t$) with the growth of government expenditures ($g_t$), whose funding is attributed to the competence of the government ($\varepsilon_t$), and is actually funded through seigniorage income ($s_t$), based on inflationary taxation (Rogoff and Sibert, 1988):

$$g_t = \tau_t + s_t + \varepsilon_t$$  \hspace{1cm} (2)

As a consequence of this pre-election fiscal policy in the pre-election period, in principle, occurs lower tax burden than effective, while the inflation rate is higher than optimal.

Another way (Rogoff, 1990) for fiscal authorities to show their competence is to change the structure of government expenditure in favor of those expenditures that are easily visible to the public - current expenses or capital expenditure whose effects are quickly visible, which is why the structure of government expenditure is being monitored:

$$g_t + k_{t+1} = \tau_t + \varepsilon_t$$  \hspace{1cm} (3)

$k_{t+1}$ is public investment with a time delay of one period, they are decided upon in the period $t$, and become obvious to the public only in the period $t+1$. Information asymmetry implies that during the time $t$ the public knows the amount of state expenditures for goods, services and transfers, as well as capital expenditures ($g_t$ and $k_t$), but does not know the value of $k_{t+1}$, or the value of the parameter of competence ($\varepsilon_t$). The competence is provided by greater share of expenditures by public notices in the pre-election period $t$: $g_t$, it is also necessary to reduce the tax burden ($\tau_t$), which is visible to the public during the election period $t$, and can lead the public to the conclusion that the government is incompetent.
3. THE INFLUENCE OF POLITICAL INSTABILITY ON ECONOMIC POLICY IN SERBIA

The behavior of policymakers in Serbia was determined by opportunistic motives, as in most other countries of the "new democracy" and the transition economies. In a much lesser extent, there were partisan or ideological motives – determined by political program of the party, or the realization of a particular ideology, as well as the achievement of specific economic goals that would enhance the position of a certain segment of the society – the members or supporters of a particular party. The reason for this was primarily in the unclear ideological diversification of the parties in Serbia, especially in the area related to economic objectives.

In addition to the parliamentary elections that until May 2008 were held on average every two years (instead of four), so that from December 2000 until May 2008, there were four elections for the national parliament, frequent presidential elections also contributed to political instability. In the last 11 years, only four years have not been either pre-election, or election years, out of which two were the years of the crisis (2001, 2005, 2009 and 2010) which says enough about extreme political instability and political tensions that have accompanied economic reforms in Serbia (Praščević, 2008, 2009, 2010).

Table 1. EBRD Transition indicators for Serbia – achieved progress in transition

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total indicator values sum</td>
<td>13,33</td>
<td>16,67</td>
<td>21</td>
<td>21,66</td>
<td>21,99</td>
<td>23,33</td>
<td>24,34</td>
<td>24,67</td>
<td>25,67</td>
<td>26</td>
</tr>
<tr>
<td>Achieved reforms (%)</td>
<td>14,45</td>
<td>25,59</td>
<td>40,04</td>
<td>42,24</td>
<td>43,34</td>
<td>47,81</td>
<td>51,18</td>
<td>52,28</td>
<td>55,62</td>
<td>56,72</td>
</tr>
</tbody>
</table>

Source: EBRD

Table 2. Indicators of democracy in Serbia

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Democratic Score</td>
<td>5,67</td>
<td>5,04</td>
<td>4,00</td>
<td>3,88</td>
<td>3,83</td>
<td>3,75</td>
<td>3,71</td>
<td>3,68</td>
<td>3,79</td>
<td>3,79</td>
</tr>
<tr>
<td>Type of the regime</td>
<td>Semi-Consolidated Authoritarian Regime</td>
<td>Semi-Consolidated Authoritarian Regime</td>
<td>Transitional Regime</td>
<td>Semi-Consolidated Democracy (SCD)</td>
<td>SCD</td>
<td>SCD</td>
<td>SCD</td>
<td>SCD</td>
<td>SCD</td>
<td>SCD</td>
</tr>
</tbody>
</table>

Source: Freedom House

---

1 Total scale of progress in transition according to the EBRD transition indicators goes from 9 points (0% achieved reforms) to 38.97 points (100% achieved reforms).
2 The democracy scale is a scale that goes from 7 (the lowest level of democracy – 0%) to 1 (the highest level of democracy – 100%).
* Data in the period before 2004 are given for Yugoslavia (Serbia and Montenegro).
The election results show that the support of the citizens to economic reforms quickly "melted". This has been accompanied by the difficulty to form the government after the each election (except the first one in December 2000). Another important issue for the application of the theory of political cycles in macroeconomic policy of Serbia is: to what extent has economic performance affected the election results of the parliamentary elections? According to the transition indicators (EBRD) and indicators of democratization (Freedom House), it can be stated that the greatest progress in both types of reforms was made until 2003, when the first government was in power. This was also a period characterized by dramatic conflicts between the parties, and had its biggest blow when Prime Minister was assassinated in March 2003.

However, in addition to the above results, the coalition that formed the first government in Serbia after the democratic changes in 2000 definitely broke up in 2003, and the most important coalition party, which was the backbone of the first government, suffered a heavy defeat in the elections on 28/12/2003. After the elections, the new government was formed after nearly three months (03/03/2004) as a minority government that lasted the longest (as long as 37.5 months), composed of former coalition partners who were leaving the previous ruling coalition at different moments. The support for this government was provided by the party that was the ruling party in the period before the October changes and that once was the main political rival for the pro-democratic political forces in Serbia.

Regardless of the goals it is evident that since 2004 there has been a slowdown in economic reforms in Serbia (Cerovic, B., 2009) and greater turn towards populist measures, primarily in the area of fiscal policy. The reasons for this can be found in the lack of social consensus about the necessity of implementation the reforms and accepting the costs of these reforms.

Instead, in Serbia the aggregate demand, that is, its component of domestic demand, was the key driver of economic growth, which, in the period between 2000 and 2008, recorded an average rate of about 5.5%, insufficient if we take into account the period of economic decline that was noted during the 1990s. The consequences of such growth were internal and external imbalances, which are still evident if we take into account the structure of sector growth in which the three sectors (trade, transport and telecommunications, financial intermediation), or non-exchangeable goods, contributed to about 75% of the total growth of the economy. The growth in domestic demand was primarily financed by capital inflow from abroad and from privatization, which meant a one-time inflow of funds.

The non-implemented economic reforms and inadequate growth model promoted in Serbia have contributed to the fact that even after 11 years of intensive reforms the problem of extremely high unemployment and hence poverty has still not been resolved, and those have particularly intensified during the latest global financial crisis (table 3).

The model of economic growth realized in Serbia had its stronghold in consumption and in an attempt to quickly improve the standard of living for the citizens, and thus provide greater support for economic policy makers. Monetary and fiscal policy in particular, realized especially between 2006 and 2008 had their share in this as well. However, this development did not provide a productive basis for the involvement of the Serbian economy in the international exchange, which is why the share of exports in gross domestic product (GDP) only 31% remained small in 2008 and because of the small share of agriculture and industry in GDP and their low growth rates - agriculture (0.3% per year), industry (1.6%), export products were not
provided. On the other hand, the rise in domestic demand led to increase in the demand for imported goods, which was also enhanced by the exchange rate policy (a significant appreciation of Serbian dinar until the end of 2008), all of which increased the current account deficit (from 13 to 17.5% in the period of 2006-08) and Serbian foreign debt (to 64% in 2008).

Table 3. Employment and unemployment rate in Serbia, 2004-2010

<table>
<thead>
<tr>
<th></th>
<th>Employment rate age 15-64</th>
<th>Total number of employed age 15-64</th>
<th>Unemployment rate age 15-64</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. 2004</td>
<td>53,4</td>
<td>2,735.977</td>
<td>19,5</td>
</tr>
<tr>
<td>Oct. 2005</td>
<td>51,0</td>
<td>2,574.139</td>
<td>21,8</td>
</tr>
<tr>
<td>Oct. 2006</td>
<td>49,8</td>
<td>2,516.794</td>
<td>21,6</td>
</tr>
<tr>
<td>Oct. 2007</td>
<td>51,5</td>
<td>2,525.570</td>
<td>18,8</td>
</tr>
<tr>
<td>Oct. 2008</td>
<td>53,3</td>
<td>2,646.215</td>
<td>14,7</td>
</tr>
<tr>
<td>Oct. 2009</td>
<td>50,0</td>
<td>2,450.643</td>
<td>17,4</td>
</tr>
<tr>
<td>Oct. 2010</td>
<td>47,1</td>
<td>2,269.565</td>
<td>20,0</td>
</tr>
</tbody>
</table>

Source: Labour Force Survey, Statistical Office of Serbia

3. FISCAL POLICY MANIPULATION IN SERBIA

The beginning of the reforms in Serbia was characterized by poor fiscal structure, there was a fiscal syndrome of high inflation, and the creators of economic policy faced the task of building an efficient fiscal system, whose most important elements were completed through the introduction of VAT in 2005. It was necessary to solve the issue of inefficient collection of tax revenues and their non-transparent spending, as well as soft budget constraints. The first years of economic transition were also characterized by the growth of budget revenues and expenditures, with expenditures growing faster, so that the period of 2001-2003 recorded budget deficits, along with tight monetary policy, these deficits did not put significant pressure on inflation. The balance of the state budget came in 2004, with a reduction of public expenditure and a growth in public revenues from increased economic activity.

In Serbia, the relevant indicators are those related to the trends in the level of the state budget deficit and its share in the GDP, in the quarters preceding the elections, and due to the specifics of the last elections (in 2008), fiscal expansion was accompanied by the formation of a coalition government, so that the trends in the level of deficit in late 2008 are typical (table 4).

In late 2003, before the December elections, and also during the first half of 2004 there was a very significant fiscal expansion, which affected the growth of aggregate demand and rapid economic growth as 2004 recorded extremely high growth rate of the real GDP (Table 5), with a sudden increase in inflation (Table 6).
**Table 4.** The share of consolidated budget deficit in the GDP in the pre-election/post election periods

<table>
<thead>
<tr>
<th></th>
<th>Q3 - 2003</th>
<th>Q4 - 2006</th>
<th>Q4 - 2007</th>
<th>Q1 - 2008</th>
<th>Q4 - 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal deficit (% in GDP)</td>
<td>5%</td>
<td>8,1%</td>
<td>8,0%</td>
<td>1,0%</td>
<td>6,5%</td>
</tr>
</tbody>
</table>

Source: QM

**Table 5.** Real GDP growth, in % (2001-2008)

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>5,6</td>
<td>3,9</td>
<td>2,4</td>
<td>8,3</td>
<td>5,6</td>
<td>5,2</td>
<td>6,9</td>
<td>5,4</td>
</tr>
</tbody>
</table>

Source: QM

**Table 6.** Inflation rate (2000-2008) – consumer prices (end year)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation</td>
<td>111,9</td>
<td>40,7</td>
<td>14,8</td>
<td>7,8</td>
<td>13,7</td>
<td>17,7</td>
<td>6,6</td>
<td>11,0</td>
<td>8,6</td>
</tr>
</tbody>
</table>

Source: EBRD

It is possible to observe fluctuations in the level of inflation and real GDP growth that originated from changes in the level of aggregate demand, so in 2005, the inflation rate was the highest. However, the most obvious examples of fiscal expansion in the pre-election period were related to economic policy during the period of 2006-2008, which was extremely politically unstable – two parliamentary elections (21/01/2007 and 11/05/2008), after which they were long negotiations on forming a government. It can be stated that the start of this long pre-election period was in mid-2006 when there was significant disagreement in the government because of freezing negotiations with the EU, which was completed by calling the elections in November 2006, so that the second half of 2006 was the pre-election period. It was in mid-2006 that there was a shift in fiscal policy towards fiscal expansion. The fiscal expansion, which was then implemented, is consistent with the theories of political budget cycles based on rational expectations, precisely because the fiscal authorities tried to send a signal to the voters about their competence through the growth of government expenditures, including the growth of current spending, and capital expenditures, which were not accompanied by an increase of taxes or inflation. A specific way to finance such “competences“ of the policymakers were privatization revenues.

High privatization revenues, particularly from 2005/06 represented a significant financial injection for the budget of the Republic of Serbia, and thus for the economic policymakers as well. The trends in macroeconomic variables, as well as in salaries, testify of strong political pre-election cycle that had had a support in a large financial injection in the form of revenues from privatization of the telecommunications company "Mobtel - 063 Mobi."

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1 Inflation resulted from the increase in energy prices (in December 2005 oil price in world market rose by 87% compared to December 2004), but also from more expensive services which were under the administrative control of the state. The inflation rate also rose by 2.0 to 2.3% because of the introduction of VAT (Petrovic and Mladenovic, 2005, p. 40). The exogenous shocks, however, were still of secondary importance.
It is particularly important that the use of these revenues was determined through
discretionary rights of the policymakers, because only the part of that income realized on the
basis of the Law on Privatization had a clearly defined purpose, while the other part was the
subject of the so-called National Investment Plan - NIP (2006-2011), which defined a number
of priorities in capital expenditures. NIP was announced in April 2006, immediately before the sale
of "Mobtel", as a plan that would allow planned state investment in four sectors - education,
health, infrastructure and economy. It was announced that the NIP, which would amount to 1.5
billion euros – the amount of privatization revenues, would be used to build highways, bridges,
for gasification and other projects.

However, despite good intentions for the use of the funds from the sale of "Mobtel" in the
past, these were used to finance a large number of smaller projects whose effects could be seen
more quickly - before the elections, so that the fiscal authorities could show their competence
(according to the Rogoff model, 1990). A prominent growth of fiscal expenditures for the
employees was also present because of a growth of salaries in several important sectors
(education, culture, military). The expenditures for salaries in December 2006 were 40% higher
than the expenditures in December 2005. It was also during 2006 (in July) that the second part of
the debt to pensioners was paid, subsidizing housing loans continued, and there were daily
biddings with money from the NIP that was directed to different municipalities and regions in
Serbia, for smaller infrastructure projects (paving roads, repairing schools and hospitals, and
rehabilitation of cultural and religious objects).

Expansive economic policy had its effect on the trends in salaries, especially in the public
sector (Tables 7 and 8). The growth in nominal wages during the two election cycles 2006-2007
(Table 7) in dinars is even more obvious when we consider that the exchange rate in this period
was stable, i.e. it appreciated, which is why wage growth calculated in euro was even more
significant (Table 8).

The situation was similar with respect to the number of employees in the public sector
(Table 9) showing that in the period of 2004-2010 it declined by only 38,000 employees, while
the rest of the economy (private sector) dropped by 174,000 persons, which corresponds to the
fact that the public sector in Serbia was not reformed, partly for political reasons, since this
sector includes employees in administration at all levels, where the number of employees has not
changed for seven years, a similar situation is in education, culture and health as well, while the
drop is actually relevant only to the state owned public enterprises. High unemployment and lack
of employment opportunities in the private sector because of low economic activity, and non-
restructured economy, has postponed the needed public sector reform in Serbia, which would
further increase unemployment and dissatisfaction of the citizens – the voters with the reforms,
and thus the economic policy makers. The policymakers have „paid“ the votes in parliamentary
elections by wage growth, exchange rate policy and unreformed – massive public sector.

Expansionary fiscal policy followed by the high domestic aggregate demand exerted
significant pressure on inflation, which is why a restrictive monetary policy was required at the
same time, so that inflation was under control, but the problem of external trade imbalances
became actualized. Parliamentary elections in January 2007 were followed by long negotiations
on forming a government due to which it was not possible to adopt a new budget. This led to
restrictive fiscal policy in the first half of 2007, which was a good thing after the fiscal expansion
in the pre-election period. The second half of 2007 again had significant fiscal expansion, due to
the rise of salaries and discretionary spending - public investment, subsidies, budget loans etc. At the same time there was a slowdown in the growth of public revenues, which resulted in a government budget deficit equal to the one in 2007 of 37.3 billion Serbian dinars (RSD), or 1.5% of GDP. The growth of public expenditure in 2007 was related to the expenditures of local governments that began with major funding of investments (creating deficits), which was expected for the pre-election period, the elections were held on 11/05/2008, but were certain already in late 2007, with major disagreements within the ruling coalition.


<table>
<thead>
<tr>
<th></th>
<th>Administration (all levels)</th>
<th>Education and culture</th>
<th>Health and social services</th>
<th>State owned public enterprises</th>
<th>Local public enterprises</th>
<th>Serbia average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>28.268</td>
<td>22.944</td>
<td>23.120</td>
<td>29.104</td>
<td>28.575</td>
<td>20.555</td>
</tr>
<tr>
<td>2006</td>
<td>42.386</td>
<td>33.812</td>
<td>33.150</td>
<td>42.052</td>
<td>38.385</td>
<td>31.801</td>
</tr>
<tr>
<td>Q2-2006</td>
<td>40.118</td>
<td>32.390</td>
<td>31.322</td>
<td>40.731</td>
<td>38.295</td>
<td>30.914</td>
</tr>
<tr>
<td>Q3-2006</td>
<td>41.106</td>
<td>33.700</td>
<td>31.849</td>
<td>42.379</td>
<td>38.572</td>
<td>32.130</td>
</tr>
<tr>
<td>Q4-2006</td>
<td>48.413</td>
<td>37.127</td>
<td>42.542</td>
<td>46.070</td>
<td>42.067</td>
<td>35.951</td>
</tr>
<tr>
<td>Q1-2007</td>
<td>46.633</td>
<td>37.797</td>
<td>35.345</td>
<td>53.092</td>
<td>41.294</td>
<td>35.046</td>
</tr>
<tr>
<td>Q2-2007</td>
<td>49.166</td>
<td>39.908</td>
<td>42.550</td>
<td>50.030</td>
<td>41.368</td>
<td>37.900</td>
</tr>
<tr>
<td>Q3-2007</td>
<td>58.941</td>
<td>49.428</td>
<td>51.048</td>
<td>59.964</td>
<td>50.499</td>
<td>46.180</td>
</tr>
<tr>
<td>Q4-2007</td>
<td>63.310</td>
<td>53.483</td>
<td>61.678</td>
<td>63.628</td>
<td>53.531</td>
<td>50.781</td>
</tr>
</tbody>
</table>

Source: QM

Table 8. Trends in gross salaries in public sector in EUR during two election cycles (2006-2007)

<table>
<thead>
<tr>
<th></th>
<th>Administration (all levels)</th>
<th>Education and culture</th>
<th>Health and social services</th>
<th>State owned public enterprises</th>
<th>Local public enterprises</th>
<th>Serbia average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1-2006</td>
<td>458,23</td>
<td>367,81</td>
<td>308,73</td>
<td>448,17</td>
<td>397,38</td>
<td>323,91</td>
</tr>
<tr>
<td>Dec-2007</td>
<td>838,65</td>
<td>727,37</td>
<td>956</td>
<td>833,78</td>
<td>699,01</td>
<td>713,06</td>
</tr>
</tbody>
</table>

Source: QM
Table 9. The number of employees in public sector and in private sector (other) in Serbia (2004-2010)

<table>
<thead>
<tr>
<th></th>
<th>Public sector</th>
<th>Other (private sector)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep. 2004</td>
<td>508.000</td>
<td>1.052.000</td>
</tr>
<tr>
<td>Sep. 2005</td>
<td>498.000</td>
<td>1.038.000</td>
</tr>
<tr>
<td>Sep. 2006</td>
<td>475.000</td>
<td>972.000</td>
</tr>
<tr>
<td>Sep. 2007</td>
<td>476.000</td>
<td>952.000</td>
</tr>
<tr>
<td>Sep. 2008</td>
<td>482.000</td>
<td>943.000</td>
</tr>
<tr>
<td>Sep. 2009</td>
<td>473.000</td>
<td>910.000</td>
</tr>
<tr>
<td>Sep. 2010</td>
<td>470.000</td>
<td>878.000</td>
</tr>
</tbody>
</table>

Source: QM

Summing up the fiscal expansion in the period of 2006-08, the following are important characteristics of politically motivated expenditures and revenues:

- the start of the National Investment Plan 2006,
- a significant increase in public sector salaries during the election year 2006, which continued in 2007, based on the realization of the agreement between the trade unions and the government in the pre-election period in 2006,
- subsidy programs for enterprises (small, medium and those in the process of restructuring) in 2006,
- reduction of income tax and the introduction of non-taxable earnings in 2007,
- reduction of some tax rates - tax on transfer, VAT on certain products, total exemption from payment of VAT for first time home buyers in 2007.

The new government, formed in July 2008, immediately had to face the consequences of the fiscal expansion in the previous period. However, as a "socially responsible government" which included various coalition partners whose goals were to improve living standards, to reduce poverty and to introduce a more equitable distribution of costs of economic reform and transition, it had to chose between the pre-election promises and maintaining macroeconomic stability in new, challenging circumstances of the global economic crisis that affect Serbia in late 2008. This was accompanied by the problem known in political models of macroeconomics as a distributional conflict, which focuses on the conflict of the objectives among coalition partners, members of the coalition government, which hinder fiscal stabilization (Alesina and Drazen, 1991).

Serbia faced the main impact of the global economic crisis with high government budget deficit of about 2%, with an estimated structural deficit of at least 3% of GDP, and the prospects of eventually reaching 6-7% of GDP. Therefore, instead of the fiscal expansion measures that were being recommended in other countries, to encourage economic activities in Serbia, the policymakers faced the attempts to reduce the deficit and implement severe measures which, by definition, have recessional consequences. In late 2008, through an agreement with the IMF (the financial support of 2.9 billion euro) budget deficit for 2009 was fixed at 1.5% of GDP, which
due to unfavorable trends in the amount of GDP and fiscal income, was revised in May 2009 to 4.5% of GDP. The IMF program partially solved the problem of fiscal stabilization load distribution between the coalition partners in government.

The implementation of the program was successful - in 2009 there was a state deficit of about 4.1 of the GDP (less than agreed). The fiscal deficit in Serbia, in the crisis year 2009, was financed primarily by borrowing, since the privatization revenues had dried up, while the program planned a reduction in spending in both the public and the private sector, since it could no longer count on substantial inflows of foreign capital (in the period 2005-07 the inflow of foreign loans amounted to an average of 3.4 billion per year, direct foreign investments were on average 2.5 billion per year). At the same, it had to be ensured that fiscal policy did not have additional recessional effects on the economic developments in Serbia, which is why the approved deficit was 4.5% of the GDP.

However, the economic trends in Serbia during and after the global economic crisis (2008-2010) intensified the economic problems in the form of high unemployment, inflation, poverty and low living standards. The factors that were present in the past have also been present during the 2011, which can be considered a pre-election year for the next parliamentary elections, in terms of conflicts within the ruling coalition and the growing popularity of the opposition, but in a much more difficult circumstances for the policymakers, precisely because of the great dissatisfaction that is a consequence of high unemployment and a drop in real value of the salaries in the previous period.

3. CONCLUSIONS

In the period of democratic changes in 2000, the economic policy of Serbia, and especially its fiscal policy, had a significant political stronghold, which was reflected in political instability and political election cycles. The fiscal policy corresponded with the most important theories of political macroeconomics - the opportunistic rational models. The policymakers primarily used privatization revenues to finance the growing public and private consumption, with a withdrawal from the implementation of economic reforms, including the necessary public sector reforms, and forcing the model of economic growth based on aggregate demand.

Until the global economic crisis, fiscal policy in Serbia was pro-cyclical and when the economic crisis started the authorities have tried to apply some of the measures of countercyclical fiscal policy, in order to provide fiscal stimulus. They were limited in these efforts by previous expansion that had caused high budget deficit that came in a particularly difficult time for Serbia - when the need for fiscal stimulus was present, but when tax revenue from economic activity were significantly reduced, as well as the inflow of foreign capital (from privatization and foreign direct investment). Therefore, when Serbia started to feel the impact of the crisis, it also had to "pay" for the previously carelessly undertaken expansion that was politically motivated – by frequent elections.
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PRIORITY AND DOMINANTS OF INSTITUTIONAL DEVELOPMENT STRATEGY OF RUSSIAN ECONOMY IN POST-CRISIS RESTORATION ASPECT

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ABSTRACT

The world financial crisis has shown the importance and size of miscalculations in economic policy, disproportions in structure of economy, Russian economic system institutional structure imperfections. The fact that possibilities created by a rise in oil prices haven't been effectively use in 2000-2008 Russia, for an intensification of processes of structural reorganization of economy, end of institutional reforms and adaptation of a national financial system to new calls of globalization became obvious. It has caused necessity of new strategic problems statement of Russian development. Thus, formation in Russia of the international level financial center that will allow to modernize a financial infrastructure of the country becomes a strategic problem of institutional development of the Russian economy in the postcrisis restoration aspect, that will transform Russian market into a universal financial platform in the region, capable to compete in the global markets in the long term, and will raise integration level with the CIS and other countries, and also transformation of rouble into regional reserve currency as institutional basis of construction of effective system of financial safety maintenance.

Key words: strategy of Russian economy, institutional development, the world financial crisis, Russian economic system

INTRODUCTION

Innovative character of Russia’s economic development in conditions of globalization suggests the changes in the institutional space, which determines the range of the (formal and informal) possible choice of economic subjects’ objectives as well as ways and costs of these objectives. Meeting these objectives economic subjects set new rules of play to be recognized formally and used informally. It should be mentioned that introduced rules can create opportunities for some subjects and block them for the others.

Russia’s economic development is interconnected with the rest of the world, borrowing various institutional innovations. Post-crisis situation provides the opportunities for applying the most successful and efficient institutional solutions. Application of these innovations is
imperative to conduct reforms and transformations. Transformational potential of the development of the national economies in the context of the globalization brings about qualitative changes of their elements.

The present world financial crisis has manifested the significance and size of mistakes in economic policy, disproportions in the economic structure, imperfection of institutional structure of Russian economic system.

The period of 2000-2008 showed that Russia did not use efficiently the opportunities created by the growth of the oil and gas prices to intensify the processes of structural reconstruction of the economy, to complete institutional reforms and to adjust national financial system to new challenges of globalization. All these facts determined the necessity of setting new strategic tasks of the development of Russia. Thus, the main strategic task is turning Russia into an international financial centre to modernize financial infrastructure of the country, turn Russian market into a universal financial ground of the region able to compete at the global level in the future, to raise the level of integration with the CIS and other countries as well as turn rouble into regional reserve currency as institutional basis for developing the efficient system to provide economic security.

INVESTIGATION

The fact that Russia is taking leading positions and is strengthening its role in the world economy is connected with high costs and must be accompanied with reforms aimed at recovery and overcoming the existing disproportions in the national economy, in the financial regulation system as well as with the necessity to develop the existing competition potential.

Analysis of the results of the anti-crisis measures in different countries has showed that government’s active measures do not always bring about positive results involving a country in the lasting recession.

Anti-crisis measures taken to recover national economies in the developing countries actually repeated the measures which had been taken by the developed countries (Fig. 1). However they had specific features of the developing countries while being implemented. Financial injections are dangerous for such developing markets as Russia, whose national currency is not a reserve one. Increasing money circulation velocity, inflation, weakening of budget and monetary policy due to weak national currency are among the dangers. Moreover it should be mentioned that a fast economic growth in Russia was stimulated by two important facts: rising prices for raw material resources available in abundance and cheap monetary resources available at the global market invested inefficiently in the national economy without reducing its raw material orientation.

Thus, anti-crisis measures aimed at recovering the financial system of Russia possessed specific features:

1. at the stage of intensification of the crisis situation money supply was not increased to extend liquidity but it was contracted
2. increase of refinancing rate to maintain profitability of financial assets and prevention of capital flight (fig.2). However the scales of the system risks did not allow implementing this measure.
Fig. 1. Uses of state funds allocated to the fight against financial crisis

Fig. 2. Dynamics of the Bank of Russia refinancing rate (August 2008 –November 2009), 

Strong national economy predetermines macroeconomic stability in the country. Macroeconomic stability and all structural adjustments are interconnected processes. This relationship is determined by relationship between changes in the financial sector of the economy and macroeconomic stability, between social protection of the population and changes in the macroeconomic situation. Thus, priorities of institutional strategy of economic development of Russia in the context post-crisis recovery are to be defined:
creating preconditions for formation regional financial centre in Russia by means of developing and implementing anti-cyclical measures of economic policy; the main of which is replacing “raw material” dominant and development of alternative energy sources to reduce the impact of oil prices fluctuations on the Russian economy;

− ensuring national economic security in Russia through creating a new innovative model of banking system development, which guarantees transparency of financial flows and prevention from legalizing profits obtained illegally.

− increasing competitiveness of the Russian economy and changing Russia’s role in modern financial architecture by means of formation new and modernization of available institutions to ensure reduction of transaction costs of economy regulation.

Value assumptions that impede and promote the development of regional financial centre in Russia, on the one hand, shows the need to improve national financial system, financial management, to develop different segments of the market, but, on the other hand, the need to develop the existing competitive capacity. At the same time working out and implementing of innovative measures aimed at developing of regional financial centre in Russia is impossible without macroeconomic development. Relationship of financial integration, economic growth, economic cycles and formation of international financial centers are to be considered in this context.

In our view the developing countries can have institutional preconditions for formation new types of global financial centers in favourable environment of national economic cycles. In this case, the criterion for determining the preconditions for the formation of the financial center may be the coincidence of the phase of the national economic cycle and the upward wave of the global economy or a mismatch in these indicators in the national cycling anti-phase.

It is also necessary to take into consideration the fact that undulating nature of the motion of world economy towards global means that national financial systems have to take into account the possibility if “pauses” in the globalization process which appear in the post-crisis periods. In such periods the significance of decisions taken at the national level will slightly increase [1].

Having evaluated the level of development of the financial system of Russia and cyclic dynamic of economic processes it is possible to predict turning points of its cycles (ups and downs) and to work out measures for its effective development as well as to justify the strategy of formation regional financial centre in Russia. The analysis of cyclic dynamic of economic processes can be evaluated by researching changes of business activity indices. Historically, noted that the highs and lows of indices are preceded by rotations of the economy, i.e. recession or a rise in the economic cycle (Table 1).

Analyzing the development of Russian economy and financial sector within the period of 1990-s – 2000-s the experts of Central Institute of Current State of Market single out the following cycles and phases of implementation (table 2). Analyzing the current state of Russian economy and the financial sector, and correlating these data with indicators of the global economy, it is possible to conclude the phases of national economic cycles of Russia and the world economy coincide. Thus, with maintaining the existing institutional dynamics of the Russian economy and its financial sector there are no prerequisites for the formation of the financial center in Russia at the moment.
Table 1

Index of business activity in Russia

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integral index</td>
<td>163,2</td>
<td>173,8</td>
<td>187,8</td>
<td>194,5</td>
<td>190</td>
<td>178,7</td>
</tr>
<tr>
<td>Percent change</td>
<td>0,6</td>
<td>1,2</td>
<td>1</td>
<td>0,7</td>
<td>-1,15</td>
<td>-1,71</td>
</tr>
<tr>
<td>Industrial index</td>
<td>158,2</td>
<td>173,1</td>
<td>188,6</td>
<td>193,7</td>
<td>191,3</td>
<td>182,3</td>
</tr>
<tr>
<td>Percent change of Industrial index</td>
<td>0,9</td>
<td>1,2</td>
<td>0,9</td>
<td>0,3</td>
<td>-1,2</td>
<td>-1,3</td>
</tr>
<tr>
<td>Financial index</td>
<td>200,5</td>
<td>191,1</td>
<td>206,8</td>
<td>208,2</td>
<td>182,8</td>
<td>165,4</td>
</tr>
<tr>
<td>Percent change of Financial index</td>
<td>-0,3</td>
<td>0,5</td>
<td>1</td>
<td>0,3</td>
<td>-2,4</td>
<td>-2,1</td>
</tr>
<tr>
<td>Resource base index</td>
<td>159,4</td>
<td>195,7</td>
<td>213,7</td>
<td>213,8</td>
<td>206</td>
<td>189</td>
</tr>
<tr>
<td>Percent change of Resource base index</td>
<td>1,1</td>
<td>1,9</td>
<td>0,8</td>
<td>0,2</td>
<td>-1,7</td>
<td>-2,3</td>
</tr>
<tr>
<td>Consumer index</td>
<td>295,5</td>
<td>327,6</td>
<td>344,2</td>
<td>361,2</td>
<td>355</td>
<td>331,4</td>
</tr>
<tr>
<td>Percent change of Consumer index</td>
<td>0,7</td>
<td>1,3</td>
<td>1</td>
<td>0,9</td>
<td>-1</td>
<td>-2</td>
</tr>
<tr>
<td>Index of business expectations and estimations</td>
<td>95,6</td>
<td>89,4</td>
<td>98,8</td>
<td>103,7</td>
<td>104,1</td>
<td>98,9</td>
</tr>
<tr>
<td>Percent change of Index of business expectations and estimations</td>
<td>0,1</td>
<td>0,4</td>
<td>0,9</td>
<td>0,6</td>
<td>-0,9</td>
<td>-1,6</td>
</tr>
</tbody>
</table>

Data are on April 2009.
Source: compiled by the author according to [http://www.amr.ru/research/wa/](http://www.amr.ru/research/wa/)

Accordingly, there is a need for their development and implementation of anti-cyclical policy measures, the main of which is replacing “raw material” dominant and development of alternative energy sources to reduce the impact of oil prices fluctuations on the Russian economy.

The second priority of institutional development strategy is the development of banking system as it is responsible for the stability of the whole social and economic system. Although the Russian Federation government actively introduces the anti-crisis measures in the banking sphere, it is still necessary to improve banking institutions by means of innovations including the structure of the banking institutions system in Russia. All these measures will allow the Russian banks to meet requirements of modern global international economic system. Currently Russian banking institutions have institutional and resource restrictions which put barriers for formation stable and competitive national banking system:

− growth of external debt against the excess of savings exported abroad in a form of increase of official currency reserves;
− low level of population’s savings, imbalances in a number of sectors of the financial market (consumer credit);
− imbalance between the growth of credit and inefficient mechanisms for controlling borrowers’ risks;
Table 2

Cycles of the Russian economy and financial sector in the 1990's- 2000's

<table>
<thead>
<tr>
<th>Cycle</th>
<th>Contents</th>
<th>Growth pattern</th>
<th>start</th>
<th>finish</th>
<th>years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(decumulation capital)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>phase 1</td>
<td>Financial &quot;deprivation&quot;</td>
<td></td>
<td>1992</td>
<td>1994</td>
<td>3</td>
</tr>
<tr>
<td>phase 2</td>
<td>Reliance on domestic savings</td>
<td></td>
<td>1995</td>
<td>1996</td>
<td>2</td>
</tr>
<tr>
<td>phase 3</td>
<td>Reliance on external funding</td>
<td></td>
<td>1997</td>
<td>1998</td>
<td>2</td>
</tr>
<tr>
<td>Cycle II</td>
<td>Compensation for lack of competitiveness</td>
<td>Export of raw materials growth</td>
<td>1999</td>
<td>2007</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>(funding of extensive growth)</td>
<td>/import substitution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>phase 1</td>
<td>Financial deprivation</td>
<td></td>
<td>1999</td>
<td>2000</td>
<td>2</td>
</tr>
<tr>
<td>phase 2</td>
<td>Reliance on domestic savings</td>
<td></td>
<td>2001</td>
<td>2003</td>
<td>3</td>
</tr>
<tr>
<td>phase 3</td>
<td>Reliance on external funding</td>
<td></td>
<td>2004</td>
<td>2007</td>
<td>4</td>
</tr>
<tr>
<td>Cycle III</td>
<td>Compensation for lack of involvement in global supply chains</td>
<td>Capacity of non-commodity exports/ imports</td>
<td>2008</td>
<td>2016</td>
<td>9</td>
</tr>
<tr>
<td>phase 1</td>
<td>Financial deprivation*</td>
<td></td>
<td>2008</td>
<td>2010</td>
<td>3</td>
</tr>
<tr>
<td>phase 2</td>
<td>Reliance on domestic savings</td>
<td></td>
<td>2011</td>
<td>2013</td>
<td>3</td>
</tr>
<tr>
<td>phase 3</td>
<td>Reliance on external funding</td>
<td></td>
<td>2014</td>
<td>2016</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Solntsev O. Transformation of the banking system under the impact of the crisis. Presentation at the Conference of the newspaper Vedomosti // II Banking Forum, November 28, 2008, Moscow - www.forecast.ru

- inefficient anti-inflation policy;
- adverse institutional environment (namely legal and information provision);
- lack of legal mechanisms providing protection of financial sovereignty.

Imbalances in development of the Russian banking system and scales of national economy make the processes of bank consolidation, merger and takeover more active. Moreover, the growing number of bank mergers and acquisitions there amid falling of margins of banking profits, increased competition from both Megabank and multinational banks, and from the non-banking institutions.

In contrast to the European countries and the USA where consolidation process is going together with bank regulation liberalization, one of the main reasons in Russia to promote bank unification is toughening requirements by the Central Bank of Russia mostly concerning own capital, the level of bank capitalization and banks’ right to participate in the system of deposit insurance. On the other hand The Bank of Russia’s goal is stimulate the bank consolidation process not only by means of toughening the normative requirements, but by means of simplifying of merger and acquisition procedures as well, creating suitable economic and legal conditions to fulfill these tasks.
The Banking system of Russia is an element of global financial architecture which provides transparency of financial flows and resistance to legalization of income obtained illegally. The problem of money laundering is global that is why demands global standards and rules. The procedures of identification, monitoring and personnel training, audit, specific divisions and management are considered to be effective programs to fight money laundering.

Thus, the tendencies of the development of the banking system of Russia under globalization are conditioned by two groups of factors: external globalizing environment and internal state of economy and of its development. The main feature of the banking system of Russia is unfinished character of its formation leading to contradictions, disproportions and “system weaknesses” and eventually turns out to be a threat to national economic security. The ideal state of the banking system is its ability to oppose to threats which can have negative impact on both banking system and financial system of the country on the whole. As to the banking system of Russia there are two kinds of threats.

First, Russia’s involvement in financial globalization processes besides positive impact has negative consequences as well, namely impact of the 2007-2008 crisis on the banking system of Russia. Secondly, there are contradictions and imbalances in the development of Russia's banking system, which makes it unable to respond adequately to the needs of the economy and may result and do lead to the substitution of domestic banks by foreign ones, that creates a series of threats:

- domestic banks stop developing as there is no demand on their services which are satisfied by the foreign banks;
- limited possibilities for state regulation of the bank activity;
- the state is loosing its influence on the banking system which can result in financial dependence and inability to resist external financial crises.

The national banking system should be adequate to the scale of our country, both on the total available financial resources and ability to reach every region, the production site, each person.

Acceleration of globalization of world economic relations, the deepening integration of the markets of different countries through elimination of barriers to the movement of goods, services and capital and increasing competition at global markets demand systematic and coordinated actions of government, business and society aimed at making Russian economy more competitive. It is a priority of institutional strategy of economic development as well. Maintaining and strengthening of the countries positions in the world economy is one of the main objectives of Russia at the present stage of post-crisis recovery.

Growth of four leading developing countries (BRIC – Brazil, Russia, India, and China) and a number of other countries has changes the picture of the world development.

Securing of national interests of individuals, society and state of Russian is connected with the solution of the strategic problem – self-determination of the country under the globalizing world. Taking into consideration the influence of the globalization processes common principles to secure national interests of Russia are to be worked out.

While considering globalization issues the regional factor is to be taken into account. In the general system of the world economy relationships, a regional integrative formation is a complex organism comprising a variety of closely connected elements. The unified integrative organism is more effective than its constituent parts.
Naturally enough that specific features of the regional development of Russia have influenced upon Russia’s entering the globalization. This process significantly increases both economic and political fragmentation of the Russian market on the one hand, and strengthening of “centre-periphery” structure of the Russian space on the other hand. It should be mentioned that in contrast to the European context where globalization makes competition among regions stronger, it is too early to speak about full-fledged competition in Russia. There are some so-called “entry points” of globalization and the rest of the space represents the periphery where globalization impulses are either much weaker or reach it in mediated form (“borrowed globalization”). There is only one “global” city on the territory of our country – Moscow; our second capital St. Petersburg cannot claim to be a global one.

The growing gap in the standard of living in the regions, the state of the labour market, availability of the main services resulted in increasing economic inequality in the transition period. The development of Russian Federation’s subjects should be leveled, but to fulfill this task priorities and efficient mechanisms for redistribution of the financial resources in the system of inter-budgetary relations are to be developed. The Federal authorities are using the simplest mechanism – the centralization of resources and large-scale redistribution – to reduce the inequality and smooth out the accumulated contradictions in inter-budgetary relations. The concentration of the budgetary resources on the federal level has become an addition to political centralization. The social consequences of such policy are very contradictory.

Globalization, on the one hand, means the unification of the development models based on a dominant idea. On the other hand, globalization provides opportunities to all countries to choose the most effective way for their development. Globalization is to provide the opportunity to select the best solutions based on their quality but not on the subject which offers a solution.

Capital motion liberalization, fast development of financial instruments markets and positive aspects of the globalization process going on in many countries have manifested both the danger of financial imbalances accumulation and possibility for the fast development of the financial crisis in Russia. Under these conditions the priorities in securing Russia’s stable positions on the world arena are legal reforms, effective mechanism to control the compliance of the Russian Federation legislation and strengthening the state regulation. It is also necessary to take measures to overcome the consequences of the financial crisis, to maintain sustainable economic development of Russia and to raise living standards.

**CONCLUSIONS**

To sum up, despite the integration processes, each state strives to preserve its sovereignty and its specific features of the economic development. Consequently the problems of the Russian economy adaptation to the financial globalization processes and the issues of national and global security of the world economic architecture are to be solved as soon as possible.

To be effective the system of securing the country’s national interest in economy should take into account modern tendencies of changing threats for national interests of the state, society and individuals.

Currently no country in the world (namely developing markets) is immune to the risks caused by the ongoing global financial crisis. The scale of the crisis turned out to unexpected for many countries.
Therefore, under current conditions the main priorities of the institutional development strategy of countries are to effectively deal with threat of financial crisis and provide the financial "air-bag" to protect their financial systems. In addition to that, the formation of the international regulating institutions, setting up of arbitral institutions, development of common requirements for macroeconomic, fiscal and monetary policies as well as risk management based on maximum transparency must become the guidelines of the further development of the world economy.

The Russian economy due to changes in oil prices is cyclical. For example, the EC countries follow the principle of anti-cyclical fiscal policy. This principle allows to maintain the real expenditures cost and to curb the fluctuations in the economy. That is why financial rules and financial discipline to preserve financial stability are necessary. The adoption of the financial rules worked out in the developed countries can be considered as a constitute part of the measures to reduce risks of the ongoing reforms.

At the same time we argue that while developing and implementing innovative measures aimed at developing the regional financial centre in Russia it is necessary to take into account the interaction of the financial sector and the macroeconomics on the whole. In this context we conducted the analysis of the cycles of the Russian economy development and revealed synchronization of its development with the world economy development. Since the world economy is on the downward stage of the cycle, only the asynchronous development of the Russian economy will create economic incentives for development of the regional financial center in Russia. All these allowed to ground the priority of development and implementing anti-cycle measures of the economic policy.

REFERENCES

THE ROLE OF CLUSTERS IN IMPROVEMENT OF REGIONAL COOPERATION AND DEVELOPMENT

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Džunić, Marija*
Dr.

Brkić, Ivan*

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Djenić, Marina*
Assistant

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ABSTRACT

Clusters represent key driver of competitiveness in economic development. Organizing in clusters is one of the most efficient and most flexible ways of improving competitive position and exploiting competitive advantages, both on national and regional level. Objectives of this paper are to: (a) determine potential for increasing regional development and strengthening competitive performances through exchanging experiences and best practices with specialized industry clusters in SEE countries and (b) propose guidelines for further regional growth through collaboration within industries and companies presented in clusters. Our research is mainly focused on three selected high-potential industries for cluster growth and regional collaboration – food processing, ICT and automotive industry, according to cluster mapping in Serbia, Hungary, Romania and Bulgaria. Paper is based on various statistical data including WEF Global Competitiveness Report, World Bank Doing Business report, national statistical reports and cluster mapping methodology according to European Cluster Observatory. We have used the methodology of Michael Porter’s competitiveness framework including three layers of competitiveness and Diamond model. The research is divided in three segments: (i) global outlook on competitiveness and importance of cluster in boosting competitiveness, (ii) focus on cluster mapping and establishing best practice benchmarks in clusters in selected industries, and (iii) potential development of innovative supranational clusters in specialized industries focused on strengthening of the regional cooperation. Our study points out to a relatively weak
geographic concentration in clusters in SEE specified regions, especially in comparison with those in the EU, while all four analyzed countries are weak in state of cluster development criteria and ranged far below the overall competitiveness rating. Despite the results which indicate low level in SEE clusters development on national scale, there is significant potential for boosting competitiveness and encouraging further growth and development in the SEE region, through collaboration and networking of clusters.

Key words: competitiveness, clusters, specialization, industry

JEL Classification: O57, R12, L62, L66, L86

1. OUTLOOK ON GLOBAL COMPETITIVENESS AND ROLE OF CLUSTERS

The modern theory of competitiveness deals with competition among different locations. Achieving prosperity in the globalized economy is linked to the creation of the best possible conditions in which companies can increase their productivity. Competitiveness is what determines the productivity with which endowments are used to create goods and services (Porter, Delgado, Ketels and Stern 2008, 45). Therefore, competitiveness also has its roots in macroeconomic and microeconomic factors.

We will focus further on microeconomic competitiveness which has a direct impact on a company’s productivity level. The most important components of microeconomic competitiveness are: 1) company sophistication and strategy (COS), 2) the quality of the national business environment (NBE), and 3) the state of cluster development (SCD), which is closely related to agglomeration economics. Although the state of cluster development is the third component of microeconomic competitiveness, the limited availability of relevant data poses an obstacle to the separate treatment of this component at the moment. Consequently, it is a separate component from a methodological viewpoint, but for the mentioned reasons it will be treated as part of the business environment (in the area of the diamond referring to related and supporting industries - Porter, M., M. Delgado, C. Ketels and S. Stern 2008: 48). According to the new methodology, Porter and associates treat company sophistication and strategy, expressed through the strategy and operating practice of companies, as an especially important component of microeconomic competitiveness in the NGCI. In their view, this segment has been neglected in traditional literature on economic growth (Porter, M., M. Delgado, C. Ketels and S. Stern: 48). Since a country’s productivity is defined by the productivity of its companies, an economy can be competitive only if the companies operating within it are competitive, regardless of whether it is the question of domestic or foreign-owned ones. Since the productivity of companies depends directly on the sophistication with which they compete, productivity will:

• Increase, if companies improve their operating efficiency and assimilate the best global practices;
• Increase, if companies implement distinctive strategies, which include unique products and innovative means of production and service deliveries, and
• Decrease, if companies compete with low prices of factor inputs due to their small
collection to sustainable prosperity.

The quality of the national business environment has a direct impact on company
productivity. Companies can implement more productive strategies and operating practices only
by ensuring highly educated human resources, more efficient administrative, physical,
communication and other infrastructure, advanced research institutions, quality suppliers and the
like. The quality of the business environment is directly derived from the simultaneous
improvement of all four components of Porter’s diamond (M. E. Porter, 2008):

1. The quality of factor conditions, using 36 indicators within the following
infrastructure subgroups: logistic (6 indicators), communication (6 indicators), administrative (6
indicators), capital market (9 indicators) and innovation (9 indicators).

2. The context for firm strategy and rivalry, using 21 indicators.

3. The quality of demand conditions using more than 6 indicators and

4. The existence of related and supporting industries (coupled with the existence of
developed clusters) using 5 indicators.

By analyzing four interrelated segments of the diamond, we can get the precise definition
of the strengths and weaknesses of a specified business environment and can provide the basis
for identifying the most significant activities for the improvement of competitiveness. The state
of cluster development, as the third element of microeconomic competitiveness, is significant,
because it links the national business environment and company sophistication. Clusters
establish natural links among specialized knowledge, skills, infrastructure and supporting
industries with a view to increasing productivity. Clusters are geographical agglomerations of
companies, suppliers, service providers and affiliated institutions, which are linked by the
complementarity of industries and positive external effects (Porter, M. 2008a). Economies
should specialize within those clusters for which there is an especially favorable and quality
business environment. The nature and depth of clusters depend on the development level of an
economy. In economies in transition, the level of cluster development is lower than in developed
ones (Christian Ketels and Örjan Sölvell. 2006). In these economies one can feel the insufficient
development level of activities and supporting institutions, so that firms compete primarily on
the basis of cheap labour and locally available natural resources, coupled with heavy dependence
on imported components, equipment and technology. One can also observe the lack of efficiency
or low efficiency level of specialized local infrastructure and institutions.

There is great scope for generating tangible economic benefits for cluster members by:

i) Raising the level of productivity; for example, by exchanging information and using
joint resources, cost reduction through linkages with agencies that provide specialized services –
marketing, accounting, professional and other services, easier access to specialized suppliers and
human resources and the like, and

ii) Intensifying innovation efforts; for example, by rapidly sharing ideas and
technological knowledge, thanks to the lower costs of developing new products and services and
the possibility to implement larger investment and development projects.

Clusters significantly influence economic performance and create economic benefits,
which can be derived from the following three dimensions (Porter 2008):

1. The quality of factor conditions, using 36 indicators within the following
infrastructure subgroups: logistic (6 indicators), communication (6 indicators), administrative (6
indicators), capital market (9 indicators) and innovation (9 indicators).

2. The context for firm strategy and rivalry, using 21 indicators.

3. The quality of demand conditions using more than 6 indicators and

4. The existence of related and supporting industries (coupled with the existence of
developed clusters) using 5 indicators.
First, clusters open up an opportunity for increasing productivity – companies can operate more efficiently, thus achieving the higher specialization of their assets and suppliers, coupled with a shorter time reaction than that if they operate alone;

Second, companies and research institutions can establish higher quality links and intensify innovation, and

Third, clusters enable the formation of bigger business entities.

Porter emphasizes that not all economic activities have to be organized into clusters (Porter 2003). For some industries it is more important to be located near the market they cater to than to be geographically close to other companies operating in the same region. For other industries the crucial benefits are derived from their participation in the cluster and the vicinity of the market is less significant.

2. CLUSTERS AND CLUSTER MAPPING METHODOLOGY

Over the past two decades, the significance of clusters has extremely increased - concept of clusters has become the central idea of competitiveness and economic development. Attempts to use clusters as economic policy tools have been gradually increasing since the early 20th century. Linking into clusters represents one of the key drivers of the competitiveness of regions and countries, and the basis for achieving competitive advantage under current conditions. The cluster definition is based on the following three factors:

(i) Geography – clusters have a strong geographical dimension and are often regionally concentrated;

(ii) Value creation – clusters include companies in different industries which are mutually linked in the production of goods and services, and

(iii) Business environment – clusters are strongly influenced by the quality of the business environment.

The analysis of clusters has progressed to individual case studies only recently. A few years ago, quantitative methodology was developed with the aim of determining the geographic concentration of specified cluster categories. (DG Enterprise and Industry Report, 2008) As this is a relatively new area of research, it is necessary to define the key terms:

Cluster categories are defined as the list of the specific sectors of the economy for which it has been empirically proven that they tend to be geographically located close to each other. The Institute for Strategy and Competitiveness, Harvard University, has identified 38 cluster categories using the US SIC industrial classification system, which has been translated into the European NACE system.

Cluster sector encompasses all sectors of the economy assigned to one of about 40 defined cluster categories.

Regional cluster - According to cluster mapping methodology, their geographic concentration is measured at the NUTS 2 level.

Cluster initiatives are defined as organized efforts to increase the competitiveness and growth of clusters within a region, encompassing firms, government institutions and scientific research organizations.

Cluster mapping is a relatively new approach that contributes to a better understanding of the presence, profile and economic performance of clusters. The use of the term “mapping”,
relates to two aspects of this research method: the determination of industrial classifications in clusters and determination of clusters according to their geographic location.

Methodology has been developed by the European Cluster Observatory (see: DG Enterprise and Industry Report, 2008, 9-11). It determines whether the level of employment in specified sectors of the economy, which belongs to the cluster categories in a certain region, has achieved a critical mass needed for specialization, in order to develop interlinking and netting effects that can generate positive economic effects.

**Cluster size.** If employment reached a sufficient absolute level, it is more probable that the economic effects of clusters will be significant. According to the methodology of the European Cluster Observatory, regional clusters with more than 15 thousand employees have a one-star rating. The figure represents the upper average of all clusters in EU member countries.

**Cluster specialization.** If a region is more specialized in a specific cluster category than the whole sector across all regions, it is more likely that the economic effects of the regional cluster will be strong enough to attract related economic activities from other regions to this location and that their links will be stronger. Regional clusters with the coefficient of specialization higher than 1.75 are also rated one star. This means that their level of employment is higher by 75% than the average in the whole region in a given cluster category. This figure again reflects top 10% of all clusters in EU member countries.

**Cluster dominance.** If a cluster has a higher share in total regional employment, it is more likely that netting effects will be generated, instead of being immersed into other parts of the local economy. The one-star rating is obtained by clusters which account for 7% or more of total employment in the region. This figure also reflects top 10% of all clusters in EU member countries.

As a result, each cluster can be rated up to three stars. Three-star clusters are clusters with the highest regional concentration and specialization compared to European clusters and such clusters have a serious perspective.

Our paper research is mainly focused on three selected high-potential industries for cluster growth and regional collaboration – food processing, ICT and automotive industry. We will further examine the results of cluster mapping in Serbia, Hungary, Romania and Bulgaria. In Global Competitiveness Report 2010 (*The World Economic Forum, 2010*), Hungary is on 52nd place with rating 4.33, Romania is on 67th place (rating 4.16), Bulgaria is on 71 place (rating 4.13) and Serbia is on 96th place, with overall rating 3.84. If we examine criteria which are important for clusters development, we can conclude that Hungary is best ranked in all categories, while all four countries are very weak in state of cluster development criteria and ranged far below the overall competitiveness rating. However, Hungary has far better conditions for clusters development than other three countries, because it has better local suppliers quality, local availability of research and training services, university-industry collaboration in R&D and value chain breadth. Bulgaria is a little better ranked than Romania, and Serbia is far below, especially in value chain breadth and local suppliers’ quality. Serbia is front of Rumania and Bulgaria only in university-industry cooperation in research and development (*Table 1.*).
Table 1: Criteria important for clusters development (GCR)

<table>
<thead>
<tr>
<th>Criteria important for clusters development</th>
<th>Hungary</th>
<th>Romania</th>
<th>Bulgaria</th>
<th>Serbia</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of cluster development</td>
<td>101</td>
<td>113</td>
<td>112</td>
<td>122</td>
</tr>
<tr>
<td>Local suppliers quantity</td>
<td>73</td>
<td>93</td>
<td>72</td>
<td>86</td>
</tr>
<tr>
<td>Local suppliers quality</td>
<td>62</td>
<td>96</td>
<td>82</td>
<td>107</td>
</tr>
<tr>
<td>Local availability of research and training services</td>
<td>47</td>
<td>95</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td>Company spending on R&amp;D</td>
<td>75</td>
<td>103</td>
<td>96</td>
<td>108</td>
</tr>
<tr>
<td>University-industry collaboration in R&amp;D</td>
<td>32</td>
<td>103</td>
<td>110</td>
<td>71</td>
</tr>
<tr>
<td>Value chain breadth</td>
<td>46</td>
<td>110</td>
<td>90</td>
<td>116</td>
</tr>
</tbody>
</table>


Comparing the data from cluster mapping however shows a little different picture (Figure1). The most frequent three stars clusters in these four countries are in apparel, agricultural, farming and animal husbandry production. We can notice that in all four countries prevail working and resources intensive clusters. Exception from this is only education and knowledge creating cluster in Kozep-Magyarorszag and Automotive cluster in region Sumadija and Western Serbia. Modern automotive industry includes working intensive, but also a part of knowledge and technology intensive sectors of industry, the existence of strong concentration in this sector is a perspective chance for development of this region, and inclusion of other regions in SEE, especially from Hungary and Romania, which also has a good concentration in automotive clusters. In total, 8 regions in these four countries has automotive clusters with at least one star. Romanian economy has highest level of specialisation. Clusters in 8 statistical regions in Romania has in total 212 observatory rating stars. Highest number of stars has a Central region, while apparel is cluster category with highest concentration in Romania with 43 stars. Besides apparel, strongest clusters in Romania are textile, footwear, oil and gas, metal processing, processed food, maritime, farming and animal husbandry and construction. Clusters in six Bulgarian regions have in total 120 stars. Highest number of stars (26) has a Southern-Central Region, while the strongest cluster category is agricultural production. Besides her, strongest clusters in Bulgaria are farming and animal husbandry, tobacco production, apparel and textile. Agriculture production clusters has three stars in five regions, while animal husbandry clusters has maximum number of stars in four regions. Hungary has seven statistical regions and their cluster has 109 stars. Highest number of stars got regions Kozep-Magyarorszag and Nyugat-Dunantul with 19 stars. Cluster category with highest number of stars is food processing, then information technologies, electrical and lighting equipment and construction. Sumadija and Western Serbia is the regions with highest number (28) of stars in Serbia. Strongest cluster category is food processing with 8 stars, then construction, apparel and metal processing.
The following segment represents benchmarking results on clusters in SEE and Serbia, according to Observatory ratings (on size, stars, employment, focus and specialization) in three selected industries - food processing, IT and automotive (see Exhibit 1).

Our research indicates that in all four countries most regions have increased concentration of food-processed manufacturers. If we exclude primary food production and focus mainly on processed food for the purpose of this research, we can emphasize only two regions in Bulgaria, one in Hungary and one in Romania without such geographic concentration as to achieve at least one star. In Serbia, food processing is divided across regions and all four clusters achieved two stars in cluster mapping. Similar situation is in Hungary where four main regional clusters have two stars, while in Bulgaria there is a higher level of primary food production. Primary food production is among the most developed industries in Romania, yet central region in Romania has three star clusters in food processing industry, and three additional regions have two stars clusters.

If we compare clusters in SEE with clusters in developed EU countries, such as Germany, Great Britain and Italy, we will notice that EU has far larger employment in food processing clusters, which are technologically superior to clusters in SEE and create larger value add than primary food production. There is a similar condition present in biotech clusters which are serving as support to development of primary food industry, and is underdeveloped in SEE, particularly in Bulgaria and Serbia (Figure 2).
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As for automotive industry, the level of employment significantly differs between SEE clusters. Figure 3 points out the employment in automotive clusters which gained at least one star.

Figure 3 shows that Hungarian and Romanian automotive clusters have significantly larger number of employees than Serbian clusters, even though automotive cluster in Sumadija and Western Serbia represents the only regional three star cluster. Despite its lower strength, this particular cluster has the largest dominance in the region, 4.59% of total number of employees are working in automotive cluster in Serbia. This cluster has estimated 3.55 which is...
exceptionally large rank comparing to automotive clusters in Hungary (2.78 and 2.64) and Romania where specialization is lower.

In the global knowledge-based economy, companies in affluent countries compete in innovations and the creation of new solutions in order to meet global challenges. In their race for innovations, companies often join global innovation alliances. At the same time, however, they are becoming increasingly dependent on local conditions for knowledge creation and exchange as an important source of innovation. Increasing competition in innovations and the significance of knowledge are gradually changing clusters. Thus, the existing clusters are gradually shrinking, while some new, more specialized clusters are gradually emerging through local cooperation. The monitoring of these transformations and their translation into policy measures are very important for national and local policy makers. It is becoming increasingly evident that access to quality human resources and specialized knowledge is gaining in importance in a knowledge-based economy and that even large companies must cooperate in knowledge creation and exchange (Graversen A.B. and Rosted J., 2009, 4-5). The European Cluster Observatory has singled out three large segments of the economy, on the basis of empirical research, as being knowledge-intensive and having a significant impact on an increase in innovation and the protection of intellectual property. Those are clusters in knowledge-intensive services, creative and cultural industries and life sciences. As the hitherto results have shown, clusters in Hungary are characterized by a much lower degree of regional specialization and dominance, but Hungary tops the competitiveness ranking list according to the state of cluster development and other criteria being important for cluster development according to the WEF Report. The reason for a low geographic concentration should be sought in the gradual shifting of the Hungarian economy from labour- and resource-intensive to knowledge- and technology-intensive segments. *(Table 2)*

The table presents regions in four countries where there are clusters with stars in knowledge-intensive services. Knowledge-intensive services include business support services, education and knowledge creation services, financial services and IT. The regions in Hungary have even 14 stars in knowledge-intensive services. The education and knowledge creation cluster in the central Hungarian region of Közép-Magyarország is the strongest, while three regions have two-star information technology clusters. Regions in Romania and Serbia have clusters with four stars in knowledge-intensive services, while Bulgarian clusters have none. Research has shown that regions with strong knowledge-intensive services clusters have made the greatest progress in Europe. The presence of strong knowledge-intensive services clusters also has a positive impact on an increase in innovation and the number of patents (see: Europe Innova, 2010). Creative industries are economic activities related to knowledge and information creation and exploitation. They can refer to culture or the creative segments of the economy, such as: advertising, architecture, arts, crafts, design, fashion, film, music, printing and publishing, R&D, software, video games, TV and radio. In Europe, creative and cultural industries represent a significant segment of the economy. In 2006, the total number of employed in creative and cultural industries in the EU was 6.5 million, thus accounting for about 2.75% of total employment. The regions with a high concentration of creative and cultural industries across Europe achieved the highest level of development. Creative industries are also the major generators of the creation of intellectual property, especially copyrights, while regions with the
highest concentration of creative and cultural industries are the largest centres of employment in the copyright-based economic sectors.

Table 2. Clusters in knowledge-intensive services

<table>
<thead>
<tr>
<th>Region</th>
<th>Business services</th>
<th>Education and knowledge creation</th>
<th>Financial services</th>
<th>IT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kozep-Magyarorszag, HU</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Kozep-Dunantul, HU</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Nyugat-Dunantul, HU</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Del-Dunantul, HU</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Eszak-Magyarorszag, HU</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Eszak-Alfold, HU</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Bucuresti - Ilfov, RU</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Vest, RU</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Belgrade, RS</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Southern and Eastern Serbia, RS</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Authors’ calculation, European Cluster Observatory (www.clusterobservatory.eu)

3. CONCLUDING OBSERVATIONS: POSSIBILITIES FOR REGIONAL COLLABORATION AND INNOVATIVE CLUSTER DEVELOPMENT

Our study points out to a relatively weak geographic concentration in clusters in SEE specified regions, especially in comparison with those in the EU. Labor and resource intensive clusters are dominating in the four observed countries, while knowledge and technology based clusters, are less developed. Serbia, for example, is seriously lagging behind the EU member countries in terms of investing in companies’ research and development and innovation. Weak level of availability of research and educational institutions and their low connection with businesses, in all four countries, point to low development of companies’ innovativeness and clusters. That influences quality and competitiveness of companies as well as growth in FDI and foreign market entrants. Exception is partly Hungary which most progressed in competitiveness, therefore policies and experiences from this country could be significantly benchmarked. Tendencies in Hungarian economy are shifting toward more knowledge intensive and high technology clusters development. High geographic concentration in research and educational institutions in central region around Budapest offers possibility for becoming an innovative centre for knowledge development and transfer into regions in surrounding countries.

In automotive industry, several strong manufacturers (Fiat, Audi, Renault) is present in all four countries which can be considered as a strong platform for further cluster development and regional specialization. However, it is noticed that international alignment in value chains is low, partly due to a low competitiveness of local suppliers of components. Collaboration of vendors, engineering and innovative projects in automotive clusters would contribute to better regional specialization and improved FDI.
Food processing is characterized with geographic concentration in clusters, however, mapping results indicate a far lower level of development in these clusters compared to developed EU countries. One of the problems is low level of competitiveness in primary food production which is a significant input. It is necessary to determine businesses in which some regions can be successfully specialized in relation with natural resources of the selected regions (for example, in areas with conditions in favor of raising grapes regions can be focused on production of wine, regions rich in mountains can specialize in tea, cheese, ham or prosciutto manufacturing, etc.) Fostering education of manufacturers for primary food competitiveness, collaboration and networking with educational and research institutions in biotechnology development can lead to improved organic food production, new investments and industrial growth in competition of food processing clusters.

Regional clusters are the key source of innovations and can be an important factor in the improvement of competitiveness. Clusters have the potential to be the key dimension of the regional value plan: healthy clusters offer a higher value for companies operating in the sectors encompassed by clusters. And through the cluster portfolio of one region they provide a unique mix of skills and abilities which can hardly be surpassed at some other location.

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INNOVATION TECHNOLOGIES OF REGIONAL DEVELOPMENT MANAGEMENT IN RUSSIAN FEDERATION AS A BASIS OF CREATION OF COUNTRY’S GLOBAL COMPETITIVENESS

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ABSTRACT

Modernization of the country's economic system is aimed at increasing of its development efficiency in the global economic environment. At the same time because of the length of borders and heterogeneity of territorial structure strengthening of competitive advantages of the country can be achieved by the use of regional factor in the totality of resources involved in the process of expanded reproduction domestically, as well as in international reproductive process. In this connection cluster approach, providing innovative technologies of regional development management based on the structural adjustment of industrial complex to global trends is especially important.

Key words: global competitiveness, region, innovative technologies, cluster policy.

INTRODUCTION

The past global economic crisis, being actually structural by nature led to the change in technological structures and shaped the parameters of effective socio-economic development for all stakeholders of the global economy. The basis of these parameters is the concept of modernization of national economies, taking into account the paramount importance of structural dynamics and the search for effective management decisions on the basis of innovation. Resulting vector of modernization changes in national economies is to maintain the global competitiveness of the country and its businesses, as measured by the method of World
Economic Forum, Global Competitiveness Index and the competitiveness of the business [7]. Within the latter the factors "business development level" and "innovations" are crucial for transition to the development stage.

The content of the concept of modernization in Russia is aimed at ensuring sustainable economic dynamics, a decent standard of living and intensive innovative development [1]. With the development of federalism in Russian Federation, every parameter defined on the national level is implemented through differentiation and delegation of authority to regional and local levels. Simultaneously, significant importance is attributed to regions-'locomotives' in the "frame" model of regional development of RF [2].

As a result, the current post-crisis development of Russian economy is shaped in the form of pentagon: "Strategy for Socio-Economic Development - frame policies for regional development - regional industrial policy - regional unit of national innovation system - the policy of maintaining competitiveness." In the center there is the regional cluster policy as a tool for ensuring implementation of these elements as a whole.

Amid growing international openness of national economies and globalization of economic relations, the concept of maintaining competitiveness becomes the basis for the strategic development of countries and their stakeholders in global economic space. Meanwhile, at national economy macro level, this concept proceeds from setting goals that reflect both the content filling of the concept of "competitiveness" and strategic development for our country in today's global economy. Among them:

- formation of "the ability of the country produce goods and services that can meet the requirements of international market in free and fair market conditions," (Commission on Competitiveness of the United States President (1985));
- while "simultaneously providing for the citizens quality of life and opportunities for its preservation in the long run" (Council on Competitiveness (1992));
- maintaining "the country's ability to achieve high rate of per capita GDP growth" (World Economic Forum report, "Global Competitiveness" (1996)) [3, 10].

It is under the auspices of the World Economic Forum, WEF the Global Competitiveness Report is published annually, which includes 134 countries, and their positions are estimated on the basis of calculation of two indexes - the Global Competitiveness Index, GCI and Business Competitiveness Index, BCI.

Global Competitiveness Index (GCI), consists of 12 factors of competitiveness (basic institutions, infrastructure, macroeconomic stability, health care, higher education, goods, services and labor markets efficiency, the level of financial market development, market size, technological development, the level of business development, innovation) which characterize in detail the competitiveness of the countries at different levels of economic development, and according to them WEF has been calculated since 2004. According to the results of 2009-2010 WEF ranking, Russia remained at line 63 of the rating between Sri Lanka (position 62) and Uruguay (position 64). Among the BRIC countries (Brazil, Russia, India and China) Russia is ranked last, positioned after China (27), India (51) and Brazil (58) [10].

In WEF report it is noted that such a balance is due to "a slight deterioration in macroeconomic stability, which was to some extent balanced by improvements in other areas, particularly in infrastructure, health and education, as well as in the technological level." Among the most serious adverse effects the experts highlighted the weakness of state institutions
(position 118), low standards of corporate governance (119) and insufficient safeguards for the protection of property rights (126), and these indicators have deteriorated in 2009. In addition, Russia has been among the outsiders by such criteria as financial market development (position 125), stability of banks (129), inflation (125), the burden of state regulation (128) [10]. All these problems prevent Russia from using its competitive advantages, such as relatively low level of public debt and budget deficits, large market size, high capacity for innovation and quality higher education.

However, fundamental postulates of the content of global competitiveness have been formulated by Russian Government within the Strategy of Socio-Economic Development for the period up to 2020. Among them: recovery of Russia as the world's technological leader, the fourfold increase in productivity in key sectors of Russian economy, increase in the share of middle class to 60% -70% of the population, reducing the mortality rate by half and increasing the average life expectancy to 75 years. Three problems of Russian economy are recognized as the key ones requiring concentration of efforts of the authorities for their resolution: "to create equal opportunities for people; to create motivation for innovation and radically increase the efficiency of the economy, based primarily on productivity growth" [1].

Foundation for achieving the goals is the policy of modernization of national economy through its transition from the inertial and resource-based scenario to an innovative direction.

At the same time, the economic space of Russia makes an "image", arranged of "puzzlez" – there are regions with different potentials. As a result, the real function of the declared in "Strategy 2020" actions is transferred to the regional level and is summarized in the Concept of Strategy of Socio-Economic Development Regions of Russian Federation, focused on "carcass" strategy of regional development [2].

And one of the strategic objectives of the state regional policy is said to be the provision of global competitiveness of Russia and its regions based on the "detection and monitoring the situation of economic clusters development at the territorial level, including identifying the cluster structure, territorial localization of its individual units, implementation of programs for the development of economic clusters ..." [2]. Thus, a tandem of industrial and innovation policy is implemented at the regional level and focused on the formation and functioning within a cluster of regional policy units of the national innovation system.

The main distinguishing feature of the cluster is an innovative orientation. Based on the breakthroughs in scientific and technological sphere and intellectualization of the major factors of production developed countries which have taken a policy of clustering of their economies, could provide the GDP growth in the range of 75 to 90%.

Another feature of clusters is the geographic location. With the increased competition between countries and regions for investment and deployment of the most promising activities on their territories it became apparent that the unique competitive advantages are not formed at the national level, but at the level of specific businesses that operate in the regions with the highest concentration of related industries. According to many economists, such regional innovation and industrial clusters have several advantages over conventional industrial and branch forms of business organization.

Firstly, the importance of prevailing of stable system of distribution of new technologies knowledge and products in the region, the so-called technological network, which relies on the joint scientific base.
Secondly, the companies of the cluster have additional competitive advantages through the ability to carry out internal specialization and standardization and minimize the cost of innovation.

Thirdly, the availability in the system of innovative and industrial clusters of flexible business structures - small businesses, competing in the production of creative ideas, identifies the innovative point of economic growth in the region.

Fourthly, the regional industry clusters are critical for the development of small businesses: they provide a high degree of specialization in servicing specific business niches for small firms, as this facilitates the access to the capital of the industrial enterprise of other resources. And there is an active exchange of ideas and knowledge transfer from professionals to entrepreneurs.

The effectiveness of cluster approach is defined by the fact that the branch-wise vision of the region's economy is overcome. In contrast to the branch approach, which actually distorts the competition by lobbying for the interests of a particular industry or company and, as a consequence, "spillover" the benefits in one of the industries, clustering allows to generate a comprehensive view of public policy development in the region, taking into account the capacity of regional economic entities.

European Commission experts on monitoring the development of small and medium-sized enterprises on the basis of studies of different types of clusters, including the investigations by M. Storper [9], developed and proposed a scheme of "ideal" regional cluster, which includes six stages:

1) formation of pioneer firms, based on local specific skills of production, the process of "spin-off";
2) creation of specialized suppliers and labor market;
3) formation of new organizations (often the government ones) to support the firms;
4) involving in the cluster the outside firstly domestic and then foreign firms with highly skilled workforce as a stimulus for the organization of new clusters of firms;
5) creation of implicit assets (information) between the firms, which would stimulate the diffusion of innovation, information and knowledge;
6) possible period of decline of the cluster due to the exhaustion of its innovative capacity and closing to outside innovation.

At the same time, the "regional" cluster may expand beyond the region, which is justified in the concept by J. Humphrey and H. Schmitz [7 - P.16.]. The main idea of this concept is to combine the connections locally with the value chain, considered at the global level. By the said compound of local and global relationships, researchers have explained the process of improving the competitiveness of countries and regions in the world economy.

At the same time, in accordance with the concept by K. Freeman [6] in each cycle of the world economy there is a technical and economic paradigm, which determines the priority position of one of the industries in the global economy. Each paradigm is undergoing a phase of formation, blooming, and sunset. In the period of changing the technical and economic paradigm the countries which are on the lower level of development, get an opportunity (window of opportunity) to catch up with more developed countries in technological equipment and go directly to a higher level of development (the process of «catching up »).

The statement “cluster” was mentioned by American economist A. Portrer, he restricted
its formation by branch limits and presented it like an informal community of branch and mixed companies, which can afford the improvement of competitive abilities. [8] The other American economist M. Enright has found the "theory of region cluster" as an industrial complex, based on concentration of special suppliers, producers and consumers [5].

Such process was like a new vector in the world economy development. So now about 50% of the countries are under the cluster process.

The main point in cluster process is economy relations consolidation. Thanks to such economic relations in cluster there is an increase of productive capacity, because of the innovations in technology and organization fields, and because of the intensive organizing of the new business.

So, the cluster is high capacity, oriented on the new technology form of cooperation (cluster- to grow together), that unites companies, science and education departments, suppliers, finance institutes and the state departments.

The concept of "cluster" was first introduced into the economy by American economist, M. Porter, who limited its formation by industry framework, and presenting it as an informal community of industrial and mixed companies, characterized by the ability of mutual gain competitive advantage [6]. Another American economist, M. Enright developed the theory of "regional cluster" as the industrial complex, formed on the basis of territorial concentration of networks of specialized suppliers, main producers and consumers of the technological chain [5]. In the short period clustering has proved itself as a new vector of world economic system development and became the embodiment of the objective tendency of meso-integration. By present, about 50% of the economies of the world leading countries are covered by clustering [4].

The major substantive point of clustering is that in the center is strengthening of the network of relationships between economic agents - members of the cluster. The emergence of interactions in the cluster is associated with increased productivity through innovation in technological and organizational spheres and stimulation of new businesses creation, expanding the boundaries of the cluster.

Thus, the cluster is a highly productive, focused on advanced technologies form of cooperatives (cluster literally means "to grow together"), which combines a flexible system of independent members of production process in a particular industry: companies, research and educational institutions, suppliers, equipment and services, financial institutions, government bodies.

CONCLUSIONS

Summarizing the above mentioned, it is the cluster approach that makes an innovative management tool at the regional level in order to maintain the competitiveness of the country, region, industry, businesses and products, as well as the transition from one technical and economic paradigm to another one in the light of global vector of branch-wise development.

Moreover, the regional development of Russian Federation is aimed at:
- Innovative development;
- Development of public-private partnership;
- Deepening of cooperation of businesses;
Interaction of small and large businesses;
Expansion of relations of science, education and production;
Exchange of technology and information;
Entering the world market –
this ultimately shapes and positions the country in general and the position of Russian business in the ranking of global competitiveness.

As a result it forms the country and Russian business position in the global competitive rate.

Getting the planned effects is only possible on the basis of an effective cluster policy, which essentially can be regarded as a system of institutional relationships between the public authorities and economic entities of the region on the improving of their competitiveness through innovative technologies management of regional development - formation and development of clusters. According to its contents the cluster policy includes a set of elements which are reflected in Table 1.

So, this system allows getting economy increase and diversification of region economy due to competitive ability increase and improvement economy relations between the state and business.

As a result, the intensification of social-economic and innovative processes in regions will afford modernization of Russian economy.

Table 1 - Key elements of cluster policy in the region

<table>
<thead>
<tr>
<th>Cluster policy content of the elements</th>
<th>Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects</td>
<td>Federal Government</td>
</tr>
<tr>
<td>Functions</td>
<td>- Development of a common position on the cluster;</td>
</tr>
<tr>
<td></td>
<td>- Distribution of powers in the field cluster policy;</td>
</tr>
<tr>
<td></td>
<td>- Development and support of pilot projects to develop national clusters</td>
</tr>
<tr>
<td></td>
<td>- Support for regional cluster initiatives at the municipal level;</td>
</tr>
<tr>
<td></td>
<td>- Creation of communication platforms for cluster members;</td>
</tr>
<tr>
<td></td>
<td>- Assistance in developing the technical infrastructure of the cluster</td>
</tr>
<tr>
<td>Tasks</td>
<td>- The diagnosis of clusters</td>
</tr>
<tr>
<td></td>
<td>- Maintaining the cluster projects</td>
</tr>
<tr>
<td></td>
<td>- Promote the development of clusters</td>
</tr>
<tr>
<td></td>
<td>- Monitoring</td>
</tr>
<tr>
<td>Methods</td>
<td>- Methods for identification of national and regional clusters, method of selection of priority clusters;</td>
</tr>
<tr>
<td></td>
<td>- Assessment of competitiveness clusters and areas of &quot;adding on&quot;;</td>
</tr>
<tr>
<td></td>
<td>- Formation of the portfolio of the business cluster initiatives in the region;</td>
</tr>
<tr>
<td></td>
<td>- Ranking of clusters of priority in terms of regional development;</td>
</tr>
<tr>
<td></td>
<td>- Appointment of the organization-facilitator and encouragement of its efforts to create a cluster;</td>
</tr>
<tr>
<td></td>
<td>- Promotion of the establishment of the group of leaders;</td>
</tr>
<tr>
<td></td>
<td>- The institutionalization of the cluster initiative;</td>
</tr>
<tr>
<td></td>
<td>- Development of the point of view on the cluster areas activity, strategic activities plan to be implemented;</td>
</tr>
</tbody>
</table>
Cluster policy content of the elements | Elements
--- | ---
| | • Development of a system of indicators of cluster and methods of data collection and analysis;
| | • Evaluating the effectiveness of the cluster as a whole and its individual members;
| | • Assessment of socio-economic efficiency of the cluster in terms of regional development;
| | • Evaluating the effectiveness of cluster policy in the region

Forms

| - Provision of conferences, round tables, working meetings with the facilitator, the group leaders, representatives of the authorities;
| - Adoption of resolutions on the establishment of Coordinating Council on the formation and development of the cluster in the region, etc.;
| - State order for research to develop the strategy for cluster development
| - Organizing a series of meetings, consultations cluster members;
| - Allocation of funds within the framework of regional socio-economic programs for the cluster infrastructure development;
| - Promotion of the implementation of measures to develop the cluster:
| • Organizational support in coordination of cluster members;
| • Support of the creation and infrastructure development;
| • Assistance in training and education;
| • Tax and other benefits for the members of the cluster, etc.
| - Organization in the regional learning centers, involvement of consultants and others;
| - Adoption of ANP on tax and other benefits for the members of the cluster

REFERENCES

ASSESSING THE IMPACT OF GLOBAL CRISIS ON EUROPEAN TRANSITION ECONOMIES: THE ROLE OF INSTITUTIONAL VULNERABILITY AND RESILIENCE

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ABSTRACT

With a 6.2 percent decline of real GDP during 2009 and a cumulative loss of 22 percent of GDP growth since 2008, European transition economies (TE) were hit the hardest by the global crisis. This contrasts sharply with initial forecast that TEs would be affected less due to lower direct exposure to toxic assets and weaker links with global financial markets. Analytic reports now recognize that TEs were more sensitive to the collapse of trade and finance, but still fall short of explaining why the subset of worse affected countries includes some of the most advanced TEs (like the Baltics) along with Russia, Ukraine and Montenegro; and why the least affected countries include an equally diverse set of reformers (Albania, Poland, Belarus and Macedonia). This paper aims to provide the missing dimension by focusing on the susceptibility of TEs to external and domestic shocks, defined as a balance between institutional and policy vulnerabilities inherited from the past non-market economy or triggered by the process of market reforms, and the accompanying institutional, regulatory, and policy resilience needed to secure stability, respond to new risks and challenges, and manage systemic risks. Based on limited available data, a composite net vulnerability index was constructed capturing four dimensions of the vulnerability-resilience pair: (a) the quality of macro-economic fundamentals both on the monetary and fiscal side, (b) progress of institutional reforms and the quality of the regulatory framework, (c) dependence on foreign trade, both on the import side (energy, technology, knowledge) and the export side, and on external finance (remittances, foreign credit, and capital
flows), and (d) the rigidity of social commitments to sustain real pensions, social services (in health and education), and control unemployment rate. Preliminary panel regression results for 20 European TEs over the 2004-2010 period confirm that pre-crisis net institutional vulnerabilities explain an important part of the slowdown in GDP growth since 2008, while present vulnerabilities affect future FDI and growth prospects.

**Key words:** transition, impact analysis, vulnerability, resilience.

**ACKNOWLEDGMENTS**

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**1. INTRODUCTION**

With a 6.2 percent decline of real GDP during 2009 and a cumulative loss of more than 20 percent of GDP growth during 2008-2010 period, European transition economies (TE) were hit the hardest by the global crisis. This contrasts sharply with initial forecast that TEs would be affected less due to lower direct exposure to toxic assets and weaker links with global financial markets. Analytic reports now recognize that TEs were more sensitive to the collapse of trade and finance, but still fall short of explaining why the subset of worse affected countries includes some of the most advanced TEs (like the Baltics) along with Russia, Ukraine and Montenegro; and why the least affected countries include an equally diverse set of reformers (Albania, Poland, Belarus and Macedonia).

This paper aims to provide the missing dimension by focusing on the susceptibility of TEs to external and domestic shocks, defined as a balance between institutional and policy vulnerabilities inherited from the past non-market economy or triggered by the process of market reforms, and the accompanying institutional, regulatory, and policy resilience needed to secure stability, respond to new risks and challenges, and manage systemic risks.

Based on limited available data, a composite net vulnerability index was constructed capturing four dimensions of the vulnerability-resilience pair: (a) the quality of macro-economic fundamentals both on the monetary and fiscal side, (b) progress of institutional reforms and the quality of the regulatory framework, (c) dependence on foreign trade, both on the import side (energy, technology, knowledge) and the export side, and on external finance (remittances, foreign credit, and capital flows), and (d) the rigidity of social commitments to sustain real pensions, social services (in health and education), and control unemployment rate.

The remainder of the paper is organized as follows: section two develops a typology of growth models followed by European TEs during the second decade of transition. Section three develops a GDP loss as a possible measure of the impact of the global crisis. Section four uses panel regressions to attribute GDP loss to various policy and institutional variables. Section five concludes.
2. PRE-CRISIS GROWTH MODELS IN EUROPEAN TEs

European transition economies (TEs) followed different policy and reform patterns during the second decade of transition. During the 2000-2007 period, former Soviet Union (FSU) republics\(^1\) achieved markedly higher average GDP growth (8 percent per annum) than the remaining European TEs (4.8 percent).

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\(^1\) The FSU states include Belarus (BEL), Moldova (MOL), Russia (RUS), Ukraine (UKR) and three Baltic states: Estonia (EST), Latvia (LAT), and Lithuania (LIT).
The above figures depict three-to-four country clusters with respect to four dimensions of critical relevance for economic growth: financial openness and availability of foreign capital (figure 1a), trade liberalization (figure 1b), fiscal stability (figure 1c), and price / monetary stability (figure 1d). Among high growth countries, we found two clear subsets: Baltics and other FSU countries.

In the case of Baltics, high GDP growth rates were achieved under solid macroeconomic stability (low inflation and small fiscal deficits), but at the same time associated with large current account deficits and high levels of external debt enabled by the early completion of reforms, full trade liberalization and close integration with the global financial markets.

By contrast, other FSU states in our sample achieved high growth rates with substantially smaller capital inflows. They also followed less tight macro policies (resulting in somewhat higher inflation and fiscal deficits), while sustaining substantially smaller current account deficits (or even surpluses in the case of Russia and Ukraine) due to strong export performance.

The modest growth rates in other European TEs were accomplished with varying degrees of foreign financing: levels of external debt ranged from as little as 25.8 percent of GDP (Albania), to over 100 percent (101.1 in Bulgaria and 100.6 in Slovenia). Similarly, fiscal position varied from a large deficit (2.7 percent annual deficit in Bosnia) to a notable surplus (0.7 percent in Croatia).
With few exceptions, the Central and South European countries liberalized trade and prices early, but also kept current account deficits and inflation under reasonable control. Reliance on external resources remained quite strong for most non-FSU TEs (see Figure 2 below). This confirms EBRD (2008) findings and sharply contrasts with positive relationship between GDP growth and CA deficit found in most countries including Russia, Ukraine, and Belarus.

In short, European TEs followed different growth models which were critically determined by historical factors (i.e. the received structure of the economy, availability of energy and natural resources), nature, speed and extent of institutional reforms, policy choices, and prevailing external factors (for more detailed discussion see Atoyan 2010, p.15). Similar growth outcomes in the 2000-2007 period were achieved with markedly different levels of capital flows and external indebtedness, under different institutional arrangements, and with different trade and macro policies. Aside from being a huge setback, the 2008 global crisis provided a test of the range of growth models that emerged during the second decade of transition.

3. MEASURING THE IMPACT OF THE CRISIS: GDP LOSS DUE TO SLOWER GROWTH PATH

The initial forecasts following the breakout of the global crisis in September 2008, predicted that TEs would be affected much less by the financial crisis due to significantly lower (known) direct exposure to toxic assets, weaker links with global financial markets, large foreign exchange and, generally, strong macro fundamentals. Over the coming nine months these forecasts became increasingly less optimistic. When the second and third wave of the crisis created global credit crunch and stalled foreign trade, it became abundantly clear that TEs may be affected more than anybody expected.

It turned out that European TEs were hit the hardest by the global crisis with a 6.2 percent decline of real GDP during 2009 and a cumulative loss of more than 20 percent of GDP growth during the 2008-2010 period (ranging from a low 2.1 percent GDP loss in Poland to the huge 50.5 percent GDP loss in Latvia). As detailed in figure 3, there is a strong association between average rate of economic growth in the pre-crisis period and GDP loss caused by the crisis.

Clearly, the pre-crisis growth path was not sustainable. It increased vulnerabilities to external shocks and exposed fast growing countries to huge risks associated sudden stop in capital flows and collapse in world trade and finance. The Baltics and Ukraine were hit the hardest.

More modest growth achieved by the TEs in Central and South Europe provided only limited shelter as these countries also experienced a 15 percent GDP loss after the onset of the crisis.

---

1 The exceptions are Bulgaria (BUL), Bosnia (BIH) and Montenegro (MNE) with higher CA deficits, and Serbia (SRB) and Romania (ROM) with higher inflation.

2 GDP loss is computed as the difference between GDP growth path for the 2008-2010 period that would have occurred at the 2000-2007 trend growth rate, and the actual growth path realized in the 2008-2010 period.
A negative relationship between growth rates before the onset of the crisis (2000-2007) and after (2008-2010) clearly exists, but “growth fatigue” is not particularly strong (see figure 3 below). In the next section we turn other factors which might have affected growth outcomes before and after the crisis.

**Figure 3: Pre-crisis GDP Growth and GDP Loss during the Crisis**

![Graph showing the relationship between pre-crisis GDP growth and cumulative GDP loss during the crisis.](image)

**Figure 4: GDP Growth before and after the Crisis**

![Graph comparing GDP growth before and after the crisis.](image)
4. ATTRIBUTING GDP LOSS TO MACRO POLICIES AND INSTITUTIONAL VULNERABILITIES

We ran a set of panel regressions for twenty TEs in the 2004-2010 period. Annual GDP growth rates were the dependent variable, while independent variables included: fiscal deficit, external debt, inflation, and current account balance. The values of the regression coefficients obtained at 5% confidence level and other regression statistics are summarized in table 1 below and detailed in Annex 1.

Expectedly, in line with their definitions, all regression coefficients have negative signs. Fiscal deficit was the most significant variable in explaining the robust dynamics of GDP growth rates in the 2004-2010 period. Regression D, which combined two aspects of internal balance (fiscal deficit and inflation), external balance (CA), and external financial position (external debt) explained more than 65% of variability in GDP growth rates.

More importantly, panel regression using net vulnerability index demonstrated an exceptionally strong explanatory power of institutional and policy net vulnerabilities before the crisis. Based on limited available data, a composite net vulnerability index was constructed on the basis of Briguglio et.al (2008) capturing four dimensions of the vulnerability-resilience pair: (a) the quality of macro-economic fundamentals both on the monetary and fiscal side, (b) progress of institutional reforms and the quality of the regulatory framework, (c) dependence on foreign trade, both on the import side (energy, technology, knowledge) and the export side, and on external finance (remittances, foreign credit, and capital flows), and (d) the rigidity of social commitments to sustain real pensions, provide social services (in health and education), and control unemployment rate. The details of the methodology, the input data set used, and numerical results obtained for net vulnerability index are presented in Vujovic et. al. (2011).

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Panel Regressions</th>
<th>GDP growth rates; 20 countries; 2004-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;deficit&quot;</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>annual fiscal deficits (in percent of GDP)</td>
<td>-1.514419 (-11.02)</td>
<td>-1.156533 (-8.24)</td>
</tr>
<tr>
<td>&quot;external_d-t&quot;</td>
<td></td>
<td>.1548279 (-6.03)</td>
</tr>
<tr>
<td>annual levels of external debt (in percent of GDP)</td>
<td></td>
<td>.1380190 (-1.21)</td>
</tr>
<tr>
<td>&quot;inflation&quot;</td>
<td></td>
<td>.1766424 (-2.58)</td>
</tr>
<tr>
<td>annual inflation rates in percent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;CA&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>annual current account deficit (in percent of GDP)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;NV&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Summary of Panel Regression Results¹

¹ All regression coefficients are obtained at 5% confidence level.
As further detailed in figure 5 below, net vulnerability index captured well the huge institutional and policy risks that led to large GDP contraction in 2009 and the loss of GDP growth in the 2008-2010 period. Increases in net vulnerability can be caused either by: (a) policy and/or reform induced increase in vulnerability that has not been matched by appropriate regulatory and institutional improvements (resilience); or (b) lack of policy improvements and/or reforms needed to step-up resilience in line with prevailing developments and new risks in global trade and financial markets.

5. CONCLUSIONS

Most policy makers and analysts alike overlooked open and hidden vulnerabilities contained in the growth models followed by European TEs. The global crisis proved otherwise. European TEs were hurt most with huge 6.2 percent average decline in GDP during 2009 and more than 20 percent loss in GDP growth during the 2008-2010 period.
Reasons for such a heavy impact are varied due to diverse growth models followed by specific subsets of countries. In the case of Baltics and some advanced Central European TEs open vulnerabilities included heavy dependence on global markets and capital flows, and a large buildup of foreign debt. On the other hand, hidden vulnerabilities emerged in the lack of adequate regulatory reforms and prudential controls to match the growing risks associated with fast and deep integration with the EU and world markets. This exacerbated sudden stops and exposed these countries to unexpected risks of asymmetric reduction in access to credit and uneven availability of government policy and fiscal support during the crisis. Clearly, the lesson learned goes in favor of more balanced trade openness and more robust CA position, as well as well balanced institutional and policy reforms addressing the new vulnerabilities and risks generated through greater trade and, especially, financial integration with the European and global markets.

In the case of fast growing FSU countries, the lessons from the global crisis are that there is no safe place since external shocks can be transmitted through a variety of channels, including trade and partially hidden financial and portfolio flows. The best way to address those risks is to allow full policy and institutional reforms and manage associated regulatory risks. Partial reforms or absence of reforms may create a false sense of security, but cannot withstand real external shocks.

Finally, in the case of modestly growing Central and South Europe economies, the lessons are that growth based on domestic aggregate demand and asymmetric trade liberalization (with heavy imports of consumer goods and large CA deficits) is not sustainable in the longer run. These countries must complete reforms and adopt a viable export-led growth strategy anchored in productive investments and sound government policies.

The analysis presented in this paper speaks strongly in favor of strong export orientation, gradual, well designed and balanced reforms and key policies affecting GDP growth and competitiveness. It also underscores the dynamic concept of net vulnerability that can emerge either due to (a) unbalanced advances in policies and reforms unmatched by adequate regulatory and institutional improvements; or (b) lack of policy and institutional adjustment in response to wider global policy and real developments.
Annex 1: Panel regression results:

A. GDP growth / Fiscal Balance

1. \texttt{xtset idpanel time, yearly}
   \texttt{panel variable: idpanel (strongly balanced)}
   \texttt{time variable: time, 2004 to 2010}
   \texttt{delta: 1 year}

2. \texttt{xtreg growth deficit, fe}

\begin{verbatim}
Fixed-effects (within) regression
Number of obs    =      140
Number of groups =       20
R-sq: within      =   0.5051
                Obs per group: min =   7
                avg =   7.0
                max =   7
overall          =   0.3357

corr(u_i, Xb)    =  -0.5985
F(119)           =  121.48
Prob > F          =  0.0000

\begin{tabular}{l|cccc}
  \hline
  growth & Coef. & Std. Err. & t     & P>|t|  \\
  \hline
  deficit  & -1.514419 & .1374043 & -11.62 & 0.000 \\
   _cons   & 6.788621 & .4602213 & 14.75 & 0.000 \\
  sigma_u & 3.2646081 & .4294606 & 7.59 & 0.000 \\
  sigma_e & .3662263 & & & \\
  rho     & .3662263 & & & \\
  \hline
\end{tabular}

\text{F test that all } u_i=0: \ F(19, 119) = 2.60 \quad \text{Prob } > F = 0.0009
\end{verbatim}

B. GDP growth / Fiscal Balance, External Debt

1. \texttt{xtset idpanel time, yearly}
   \texttt{panel variable: idpanel (strongly balanced)}
   \texttt{time variable: time, 2004 to 2010}
   \texttt{delta: 1 year}

2. \texttt{xtreg growth deficit external_debt, fe}

\begin{verbatim}
Fixed-effects (within) regression
Number of obs    =      136
Number of groups =       20
R-sq: within      =   0.6296
                Obs per group: min =   5
                avg =   6.8
                max =   7
overall          =   0.3998

 corr(u_i, Xb)    =  -0.7379
F(2114)          =  96.87
Prob > F          =  0.0000

\begin{tabular}{l|cccc}
  \hline
  growth & Coef. & Std. Err. & t     & P>|t|  \\
  \hline
  deficit  & -1.156133 & .1403598 & -8.24 & 0.000 \\
   external_debt & -1.348279 & .0295554 & -5.63 & 0.000 \\
   _cons   & 16.05967 & 1.630189 & 10.13 & 0.000 \\
  sigma_u & 4.3645176 & 3.7891422 & 1.20 & 0.228 \\
  sigma_e & .37022136 & & & \\
  rho     & .37022136 & & & \\
  \hline
\end{tabular}

\text{F test that all } u_i=0: \ F(19, 114) = 3.68 \quad \text{Prob } > F = 0.0000
\end{verbatim}
C. GDP growth / Fiscal Balance, External Debt, Inflation

1. xtlse "C:\Documents and Settings\desktop\panel103.xml", doctype(excel) firstrow (spaces converted to underscores for variable name: external_debt)

2. xtset idpanel time
delta: 1 unit

3. xtreg growth_deficit_inflation external_debt, fe

Fixed-effects (within) regression
Number of obs = 136
Group variable: idpanel, Number of groups = 20

R-sq: within = 0.6343 between = 0.5286 overall = 0.4017

corr(u_i, Xb) = -0.7348 F(3, 113) = 65.33 Prob > F = 0.0000

| growth    | Coef.     | Std. Err. | t     | P>|t|     | [95% Conf. Interval] |
|-----------|-----------|-----------|-------|---------|----------------------|
| deficit   | -1.202927 | 0.1452106 | -8.28 | 0.0000  | -1.490683 to -0.915223|
| inflation | -1.320199 | 0.1139688 | -1.12 | 0.2878  | -0.3639474 to 0.028095|
| external_d-t | -0.1558196 | 0.2165015 | -0.72 | 0.4726  | -0.586092 to 0.27446|
| cons       | -1.004717 | 5.376225  | -0.19 | 0.8510  | -2.596241 to 1.586812|

F test that all u_i=0: F(19, 113) = 3.74 Prob > F = 0.0000

D. GDP growth / Fiscal Balance, External Debt, Inflation, CA Balance

1. xtlse "C:\Documents and Settings\desktop\panel104.xml", doctype(excel) firstrow (spaces converted to underscores for variable name: external_debt)

2. xtset idpanel time, yearly
delta: 1 year

3. xtreg rastben inflation external_debt ca deficit, fe

Fixed-effects (within) regression
Number of obs = 136
Group variable: idpanel, Number of groups = 20

R-sq: within = 0.6548 between = 0.5379 overall = 0.4469
corr(u_i, Xb) = -0.6954 F(4, 112) = 53.12 Prob > F = 0.0000

| rastben  | Coef.     | Std. Err. | t     | P>|t|     | [95% Conf. Interval] |
|----------|-----------|-----------|-------|---------|----------------------|
| inflation| -0.2655175| 0.1217025 | -2.18 | 0.0311  | -0.506608 to -0.024374|
| external_d-t | -0.1441253 | 0.0524645 | -2.70 | 0.0083  | -0.252644 to -0.035605|
| ca        | -0.1714646 | 0.0843268 | -2.01 | 0.0453  | -0.339988 to -0.002941|
| deficit   | -1.086147  | 0.2184525 | -5.01 | 0.0000  | -1.513206 to -0.659088|
| cons      | -0.1808032 | 1.848005  | 0.80 | 0.4195  | 12.4191 to 19.74232 |

F test that all u_i=0: F(19, 112) = 3.59 Prob > F = 0.0000
E. GDP growth / Fiscal Balance, External Debt, Inflation, CA Balance

1. `xmluse "C:\Documents and Settings\s\Desktop\pane kr1.xml", doctype(excel) firstrow` (spaces converted to underscores for variable name: `growth_GDP`)

2. `xtset id panel time, yearly`  
   `panel variable: idpanel (strongly balanced)`  
   `time variable: time, 2004 to 2010`  
   `delta: 1 year`

3. `xtreg growth_GDP NV, fe`  
   Fixed-effects (within) regression  
   Number of obs = 140  
   Number of groups = 20  
   \[\text{R-sq: within} = 0.5642 \quad \text{obs per group: min} = 7 \]
   \[\text{between} = 0.0345 \quad \text{avg} = 7.0 \]
   \[\text{overall} = 0.4810 \quad \text{max} = 7 \]
   \[\text{corr(u_i,xb)} = -0.2851 \quad F(1,119) = 154.04 \quad \text{Prob > F} = 0.0000 \]

| growth_GDP | Coef.  | Std. Err. | z     | P>|z|  | [95% Conf. Interval] |
|------------|--------|-----------|-------|------|---------------------|
| NV         | -36.21847 | 2.918223 | -12.41 | 0.000 | -41.99684 to -30.44009 |
| _cons      | 6.901256 | .428734  | 16.10  | 0.000 | 6.05232 to 7.750193  |
| sigma_u    | 2.0076862|          |       |      |                     |
| sigma_e    | 4.0304106|          |       |      |                     |
| rho        | .19880546|          |       |      |                     |

F test that all u_i=0:  \[F(19, 119) = 1.60 \quad \text{Prob > F} = 0.0680\]
REFERENCES:

TRANSFER OF KNOWLEDGE IN THE CONTEXT OF GLOBAL INNOVATIVE DEVELOPMENT OF THE COUNTRIES CENTRAL AND EASTERN EUROPE

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ABSTRACT

Development of scientific and technical revolution and requirement of application of new technologies, deepening of the international division of labor in sphere of scientific researches and developmental workings out, the further internationalization of economic life were occurrence preconditions in the world market of qualitatively new subject for trade.

At a today's stage of development of mankind the phenomenon of economy of knowledge gets global character. The countries open borders for free movement of the goods, services, labor, the capital and knowledge.

Now knowledge has turned to independent object of the external economic transactions, and acts as the standard form of the international cooperation. Today the developed countries declared a course on transition to economy of the knowledge which concept consists in a main role of innovations and knowledge as factors of growth of economy, and as in definition of competitiveness of the country in global space.

The research objective consists in that on the basis of studying and generalization of a theoretical and practical material to investigate concept of a transfer of knowledge, activity experience, development and prospects of a transfer of knowledge of Ukraine and abroad.

Object of research are process of an exchange and transfer of knowledge in a context of global innovative development and organizational-economic aspects of functioning of a transfer of knowledge in a context of their influence on the global market of scientific and technical production.

For achievement of an object in view and the decision of problems are used: a dialectic method of scientific knowledge, complex, historical and logic approaches. In the course of research general scientific methods of scientific knowledge also were used: is abstract-logic; economic-statistical; the system analysis; methods of the statistical analysis.

Key words: new technologies, innovation, international cooperation, transfer knowledge.

The level of technology development is one of the most important factors which determining the degree of socio-economic development, its economic and political independence. Transformation to sustained development in high-income countries such as USA,
EU, Japan and several countries of South-East Asia was achieved through increasing of innovation activities in the real economy.

Over the last 15 years number of workers which were involved into the innovation activity in the USA and Western Europe was increased in two times, in some countries of South-East Asia in four times.

The quantity of EU innovation active enterprises was 53%, although within the EU, this figure varies considerably, for example: Ireland - 73%, Germany - 69%, Spain - 29%, Poland – 16.9%)

There are about 300 scientific parks in the USA, more over 300 in Germany. Japan began to establish 19 technological cities with a strong potential of the most advanced technologies development in priority areas. There are about 60 scientific parks in Russian Federation parks and a few technoparks in Obninsk, Dubna, Pushchino, Arzamas-16, Tomsk etc.

In all developed countries the main element of the national innovation system is accelerating high-tech areas. Combining the mutual interests of developers, manufacturers and consumers of innovative products they have led to a rapid increase in the number such areas and especially their core – scientific and technological parks. According to the statistics of International Association of Science Parks there were more than 800 parks in 2005 in the world [1].

Nowadays in developing countries most part of resources is directed into the sphere of building and knowledge transfer and this quantity is more than the traditional capital. This is an evidence of the efforts of leading countries in the world to increase the number of scientists and engineers which involved in science and technology process in these countries, as well as permanent growth in research funding.

In the USA on these purposes were spent 2.68% of GDP, in Sweden – 3.6%, in Finland and Korea - 3.47% in 2008. According to these statistics Japan occupies the third place, the USA – 6th, Germany – 9th, France – 10th, Russia – 21st. In Ukraine is spent in recent years less than 1% of GDP [2].

Science support in the high developed countries in 2008 has reduced. R&D expenditure as a percentage of GDP did not exceed 1.5% in all of represented countries (table 1).

### Table 1


<table>
<thead>
<tr>
<th>World rank</th>
<th>Country</th>
<th>R&amp;D expenditure, % of GDP</th>
<th>Workers which employed in R&amp;D, per 1 million people in 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>Norway</td>
<td>1.7 1.64</td>
<td>1-2</td>
</tr>
<tr>
<td>1-2</td>
<td>Iceland</td>
<td>3 2.75</td>
<td>1-2</td>
</tr>
<tr>
<td>3</td>
<td>Australia</td>
<td>1.7 2.01</td>
<td>3</td>
</tr>
<tr>
<td>37</td>
<td>Poland</td>
<td>0.6 0.57</td>
<td>37</td>
</tr>
<tr>
<td>43</td>
<td>Lithuania</td>
<td>0.8 0.81</td>
<td>43</td>
</tr>
<tr>
<td>44</td>
<td>Estonia</td>
<td>0.9 1.1</td>
<td>44</td>
</tr>
<tr>
<td>45</td>
<td>Latvia</td>
<td>0.8 0.59</td>
<td>45</td>
</tr>
<tr>
<td>64</td>
<td>Belarus</td>
<td>0.6 0.77</td>
<td>64</td>
</tr>
<tr>
<td>67</td>
<td>Russia</td>
<td>1.2 1.07</td>
<td>67</td>
</tr>
</tbody>
</table>
The greatest research potential is concentrated in the five countries: USA, Japan, Germany, France and England. They control over 80% of world market of high technologies. The part of Ukraine does not exceed 0.1% of the global technology market.

Table 2

The most innovation-active companies in the world, 2009 [4]

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Revenue growth,%</th>
<th>The profitability of shares, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Apple</td>
<td>47</td>
<td>83</td>
</tr>
<tr>
<td>2</td>
<td>Google</td>
<td>73</td>
<td>53</td>
</tr>
<tr>
<td>3</td>
<td>Toyota Motors</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>General Electric</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Microsoft</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>Tata Group</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>Nintendo</td>
<td>37</td>
<td>77</td>
</tr>
<tr>
<td>8</td>
<td>Procter &amp; Gamble</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>9</td>
<td>Sony</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>10</td>
<td>Nokia</td>
<td>20</td>
<td>35</td>
</tr>
<tr>
<td>11</td>
<td>Amazon.com</td>
<td>29</td>
<td>28</td>
</tr>
<tr>
<td>12</td>
<td>IBM</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>Research in motion</td>
<td>56</td>
<td>51</td>
</tr>
<tr>
<td>14</td>
<td>BMW</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>15</td>
<td>Hewlett-Packard</td>
<td>10</td>
<td>35</td>
</tr>
<tr>
<td>16</td>
<td>Honda Motors</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>17</td>
<td>Walt Disney</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>18</td>
<td>General Motors</td>
<td>-2</td>
<td>-11</td>
</tr>
<tr>
<td>19</td>
<td>Reliance Industries</td>
<td>31</td>
<td>94</td>
</tr>
<tr>
<td>20</td>
<td>Boeing</td>
<td>9</td>
<td>21</td>
</tr>
</tbody>
</table>

In all high developed countries, extra-budgetary funding for research and development significantly exceeds the budgetary allocations. In OECD countries in average it has been increased from 65% in the 90's, up to 75% in the 2000s. The main source of extra-budgetary funds is the business sector, which is represented by large national and multinational corporations. Corporations of the business sector in high developed countries have been a historical part of the structure of national innovation systems. They finance the research and production of real products, technologies and scientific achievements of the present invention at the same time assume the economic responsibility for the main directions of scientific and
technical progress. The business sector is and will remain in the future the greatest performer either R&D financing funds or quantity of scientists and engineers which is involved in research. There is a lot of various privileges and preferences for stimulation of innovative activity which are absolutely necessary for the development of high technology products. They run flexibly, selectively in the form of delays, tax credits and accelerated depreciation.

**Table 3**

<table>
<thead>
<tr>
<th>Country</th>
<th>The ratio of tax deductions for expenses</th>
<th>The maximum amount of tax deductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>Large companies are 8 - 10%, small and medium-12%</td>
<td>Large companies - 30% of the amount of tax payments, small and medium size to 100% of tax payments</td>
</tr>
<tr>
<td>USA</td>
<td>3-5% of the total, 20% for expenses that exceed the norm</td>
<td>25% of the amount of tax payments</td>
</tr>
<tr>
<td>Canada</td>
<td>20% of the total</td>
<td>Absent</td>
</tr>
<tr>
<td>UK</td>
<td>8,4% of the total</td>
<td>Absent</td>
</tr>
<tr>
<td>France</td>
<td>10% of the total</td>
<td>EUR 16 million</td>
</tr>
<tr>
<td>China</td>
<td>15% of the total</td>
<td>Absent</td>
</tr>
</tbody>
</table>

In the market economic, innovations permeate the entire economy, as a prerequisite for development of production, expansion of production possibilities of the enterprise, improving product quality, new products and services appearance, as well as the means by which organizations adapt to changes in the external environment and change its own interests in the most.

Thus, we conclude that the market environment of innovation permeates the entire economy, as a prerequisite for development of production, expansion of production possibilities of the enterprise, improving product quality, new products and services, as well as the means by which organizations adapt to changes in foreign environment and modify it for their own benefit the most.

Economic growth in the Ukrainian economy is mainly based on extensive, as evidenced by the technology of those investments that are invested in fixed assets, where the predominant third technological system (83%), and the fourth is only 10%. Higher technological system (the 5th and 6th) is about 4%, and the 6th mode, which determines the prospects of high-tech development in the future, in Ukraine is almost absent (less than 0,1%) [5].

Due to the all this circumstances Ukraine occupies only 0,1% of the world high-tech market, while Germany - 16%, Japan - 30%, USA - 40%.

If we look at level of innovation development of Ukraine from position of the high technology export we find out that our country ranks between countries as Kenya, Italy, Lebanon, Russia, Slovenia, Sri Lanka, Spain, etc., where high-tech export does not exceed 10%. In Ukraine this indicator is 3,2% of total export and it shows that we have low R&D potential with negative trend.
More over 90% of companies run R&D for their own expense. It is almost three-quarters of total spending in the country – about 8,0 bln. UAH. There were 145 enterprises which have received 2,0 bln. UAH loans.

There were 23 companies which have received 0,3 bln. UAH of foreign investment or only 3.0% of the total. And only 44 companies have received the support of the state budget and 13 - local budgets (152,1 mln. UAH. or 1,4%).

![Figure 1. The distribution of the funding of innovation activities in Ukraine in 2007-2009, by source, % [6]](image)

Thus, we can see that the volume of loans for innovation in 2007 - 2009 has not critically changed, but the share of own funds. It demonstrates that the interest of enterprises in innovation has recently increased, due to high competitiveness on the world markets.

Summarizing, we can conclude that in high developed countries the economic backbone is represented by the industry of the 5th technological system, and in developing countries such as Ukraine, still dominate the industry of the 3rd and 4th technological system. To be among the technological leaders, Ukraine must focus its efforts on the creation of new areas, which are the mainstream of the knowledge economy (i.e. the 5th and 6th technological system), financing them through the development of unique technologies which is available in the 3rd and 4th technological system.

REFERENCES:


SHIFTS OF COMPARATIVE ADVANTAGES WITHIN THE EUROPEAN UNION

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Assistant professor, PhD

* Tsenov Academy of Economics,
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ABSTRACT

International trade patterns are determined by the country specific comparative advantages and the trade frictions (trade policy, transport costs etc.). The EU internal market is considered to be the closest to free trade setting, which rises the importance of a countries comparative advantages, thus the intra-member trade patterns are not affected by the individual member’s trade policy. This paper aims to investigate if the enlargement of the EU in years 2004 and 2007, caused a significant change of members comparative advantages. Comparative advantages are evaluated with the RCA index, proposed by Balassa. The time span of the data is 1999 – 2010.

Key words: International trade; Comparative advantages; Trade specialization; Free trade; EU intra member trade.

I. INTRODUCTION

The European Union is the largest economic and political block in the world, consisting of 27 member-states with total population of over 500 million inhabitants. For almost 50 years (between 1957 and 2004) the EU has been a relatively homogenous community – in that period the EU included 15 countries with free-market economies and similar level of economic development. In the last decade the EU grew in size by the accession of 12 new member-states, which are significantly different in terms of income levels, factor abundance and structure of their economies. Almost all of the new members (except Malta and Cyprus) are former socialist countries, which were just finished the transition from central planning towards free market economies.
Free trade between partners with different levels of economic development is believed to cause severe impact on the structure of their exports\(^1\) and probably on the gains from trade\(^2\). Free trade within the EU-27 is expected to induce significant shift of the comparative advantages of individual states due to factor endowment differences between “Old Europe” and “New Europe”. The 12 new member-states are assumed to specialize predominantly in the primary sectors (such as agriculture, fishing, forestry and mining), whereas the 15 earlier members are expected to increase the share of secondary sector commodities in their exports (such as chemicals, machinery, consumer goods etc.).

The main purpose of this paper is to investigate if the enlargement of the EU in 2004 and 2007 has caused significant shifts in the comparative advantages of member-states. Main focus in this study is put on the new member-states, which all have relatively smaller economies, hence are more susceptible to external influence. Another reason for focusing on the new members is the possibility that trade liberalization may cause negative effects on their export structure. The EU-15 member-states have more diversified economies, but they are also included in the study as a reference case.

II. TRADE LIBERALIZATION AND EXPORT SPECIALIZATION

Trade liberalization and trade specialization have been the central issues in the studies since the dawn of international economics as a science. Adam Smith\(^3\) and David Ricardo\(^4\) found that trade specialization is an important prerequisite for international trade and also that trade itself causes specialization of the partners. The concept of comparative advantages of nations developed by Ricardo is still widely accepted by economist\(^5\), although it is not always backed up by empirical data. Comparative advantages explain the export specialization of countries and the patterns of international trade with the differences in the relative costs and technologies.

According to Heckscher and Ohlin’s 2x2x2 model\(^6\), comparative advantages are derived from the differences in the relative factor endowments across countries and relative factor intensities across industries. The Heckscher – Ohlin model assumes identical technologies across countries and frictionless trade while the Ricardian model assumes different technologies and allows trade frictions. In an extensive synopsis of contemporary studies, Harrigan\(^7\) reports that both – technologies and factor endowments influence comparative advantages. He states that both models may be considered as confirmed with empirical data, but he also identifies many unsolved problems related with trade frictions and measurement issues.

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Trade frictions (tariffs, transactional costs, transportation costs etc.) diminish the comparative advantages of nations\(^1\), thus preventing export specialization. Therefore trade liberalization enhances national comparative advantages and increases specialization. According to Krugman trade liberalization increases both exports and imports (intra-industry trade) in the sectors with differentiated commodities and increases specialization in less differentiated sectors\(^2\).

The EU is a customs union, thus all of its members are granted free access to the common market. The trade liberalization under the rules of EU legislation is expected to yield all the specialization effects described earlier through the trade creation effect\(^3\). In addition of free trade trade among member-states the customs union requires a common tariff, which increases trade and therefore specialization through the trade diversion effect\(^4\). The EU inter-member trade benefits not only from the abolishment of the tariffs, but also from the reduction of other trade frictions as transactional costs (most of the members have joined the EMU or pegged their currencies to the Euro – hence no exchange risk), they also enjoy the geographical proximity and therefore relatively low transportation costs.

For the earlier members of the union (EU-15) the free trade agreement and the common tariffs have been a fact for decades. They have already adjusted their export structure according to the intra-community comparative advantages. For the 12 new members on the other hand have to enter the existing customs union and they have to alter their export structure to match the newly acquired (respectively lost) advantages. The most of the new member-states experienced a long and painful transition period from centrally planned to market economy (therefore they were dubbed “transition economies”), during which they suffered a significant drop of in their exports. At the end of the XX century the transition economies share many economic problems\(^5\): old and inefficient technologies, high unemployment, poor intellectual property protection (which prevents technology transfer). All these problems of the transition economies are a reason to expect, that in the new context of EU’s free market, they will specialize predominantly in the exports of primary sectors’ commodities.

III. METHODOLOGY AND DATA

Comparative advantages arise from the national differences in the employed technologies (Ricardo) or differences in the factor endowments (Heckscher-Ohlin). This paper is focused on measurement of the change in comparative advantages of EU members in time, regardless its causes. The aim of the study could be accomplished through direct observation of international trade patterns. The most suitable and widely applied instrument in similar task is the “Revealed

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comparative advantage index” (RCA Index). The simplest form of the RCA Index is proposed by Leisner\(^1\) in 1958:

\[
RCA = \frac{X_{ij}}{X_{nj}}
\]

where:
- \(X\) – exports;
- \(i\) – commodity;
- \(j\) – country;
- \(n\) – set of countries.

Leisner’s index is a simple share of a country’s export in a given industry in the export of the complete set of countries in the same industry. The most recognized and widely accepted form of the RCA Index is proposed by Balassa\(^2\) as an improvement of Leisner’s index:

\[
RCA = \frac{(X_{ij}/X_{it})}{(X_{nj}/X_{nt})}
\]

where:
- \(X\) – exports;
- \(i\) – country;
- \(j\) – commodity;
- \(t\) – set of commodities;
- \(n\) – set of countries.

The index of Balassa compares the share of a country’s industry in its total exports with the share of that industry in the total exports of the selected set of countries. When the value of the index is higher than 1, this means that the country has comparative advantage in the industry (commodity). The RCA index that will be used in this paper is the Balassa’s index for its straightforward interpretation and application.

The data for the study is extracted from the UN commodity trade statistics division\(^3\). The disaggregation level of the data is 2 digit SITC, which yields 6 commodity groups in 10 sections\(^4\). The last section “Commodities and transactions not classified elsewhere in the SITC” is omitted\(^5\) leaving us with 63 commodity groups in 9 sections. Commodity export data is acquired for all 27 current EU member states for the years 1999 (pre-integration); 2004 (first wave of EU enlargement), 2007 (second wave of EU enlargement) and 2009 (latest year with complete data).

IV. RESULTS

The year 1999 has been chosen as a pre-integration reference point. The first five sections from the classification are labeled “Primary sectors” (Food and live animals; Beverages and tobacco; Crude materials, inedible; Mineral fuels, lubricants and related materials; Animal and vegetable oils, fats and waxes), and the next sections are selected as “Secondary sectors”


\(^{3}\) http://comtrade.un.org/

\(^{4}\) See the complete list of commodities at: http://unstats.un.org/unsd/publication/SeriesM/SeriesM_34rev4E.pdf

\(^{5}\) Because it is too heterogeneous and does not provide any useful information.
(Chemicals and related products; Manufactured goods by material; Machinery and transport equipment; Miscellaneous manufactured articles).

The number of commodity groups with comparative advantages for each EU-27 country in 1999 is presented in table 1. High heterogeneity is observed in both groups – EU-15 and “New Europe”. EU-15 member-states are not completely specialized in secondary sector exports. Some of the EU-15 countries have more groups with comparative advantages in the primary than in the secondary sector (Belgium, Netherlands, Denmark, France, Spain and Greece). This phenomenon is explained with the Leontief paradox – these countries are endowed with natural resources and technologies, which make their primary sectors competitive in the international market. Also their international competitiveness may be enhanced by the Common agricultural policy of the EU. All of the rest 9 members of EU-15 are predominantly specialized in the secondary sector exports. Germany – the most industrialized country in the EU possesses comparative advantages only in two primary sector industries: group 26 Textile fibers other than wool and group 43 Animal or vegetable fats, oils and waxes.

Table 1. Number of commodity groups with RCA Index higher than 1 by EU 27 member-states in 1999

<table>
<thead>
<tr>
<th>EU 15</th>
<th>Number of commodity groups with RCA &gt;1</th>
<th>New Europe</th>
<th>Number of commodity groups with RCA &gt;1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>primary</td>
<td>secondary</td>
<td>total</td>
</tr>
<tr>
<td>Belgium</td>
<td>17</td>
<td>16</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>26</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>22</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>22</td>
<td>46</td>
</tr>
<tr>
<td>Austria</td>
<td>6</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>15</td>
<td>37</td>
</tr>
<tr>
<td>Greece</td>
<td>13</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>Sweden</td>
<td>6</td>
<td>14</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>14</td>
<td>34</td>
</tr>
<tr>
<td>Germany</td>
<td>2</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Luxembu</td>
<td>4</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>16</td>
<td>31</td>
</tr>
</tbody>
</table>

The 12 future members of the EU or the “New Europe” are specialized predominantly in the primary sector exports. Only the Czech Republic, Slovenia, Slovakia and Malta have more commodity groups with comparative advantages in the secondary than in the primary sector. Malta is also the country with the least diversified exports in the EU with comparative advantages in only 11 industries. Cyprus is also a country with very narrow export specialization.

1 The complete table with the RCA Index values is too large to be presented here - 1701 data points for each year.
with only 14 internationally competitive industries. Cyprus is notable for having the highest specialization in one industry compared with the whole selection (EU 27). The share of “group 12 – Tobacco and tobacco manufactures” in total exports of Cyprus is 34 % compared to share of 0,64 % for the EU, yielding a RCA Index of 78. Latvia also has exceptionally narrow specialization – “group 24 Cork and wood” is responsible for 30% of its total exports, compared to 0,04 % for the EU (RCA=65).

High specialization of the New Europe countries in the primary sector is not a surprise (as discussed above), but the results are notable for the high diversification and the balanced export structure for most of the New Europe countries. The changes in the number of commodity groups with comparative advantages for the New Europe countries are presented in Graphs 1 and 2.

Graph 1. Number of **Primary sector** industries with RCA Index higher than 1 by countries and by years

In the primary sector the results are mixed – 4 countries have increased the number of industries with comparative advantages; 6 countries have lost comparative advantages in several industries and 2 have maintained the number of commodities with RCA>1.

**Poland’s** primary sector has lost its advantages in 3 industries (22-oil seeds; 27-crude fertilizers, 28-metalliferous ores and metal scrap) but gained 4 new industries (02-dairy products and eggs, 04-cereals, 09-miscellaneous edible products, 12- tobacco). The best performing export industry of Poland group 326-coal, coke and briquettes has reduced its RCA Index value from 31 to 10, but retained its first place.

**Bulgaria’s** primary sector has lost its advantages in 5 industries (01-meat and meat preparations, 11-beverages, 21-hides, skins and furskins, 23-crude rubber, 24-cork and wood) and gained 2 new industries (26-textile fibers other than wool, 35- electric current). The best performing export industry of Bulgaria – group 22-oil seeds, retained its first place and increased its RCA index from 19 to 22.

**Estonia’s** primary sector has lost its advantages in 4 industries (01-meat and meat preparations, 23-crude rubber, 26-textile fibers other than wool, 43-animal or vegetable fats, oils and waxes) and gained 5 new industries (00-live animals, 09-miscellaneous edible products, 11-
beverages, 25-pulp and waste paper, 42-fixed vegetable fats and oils). The best performing export industry of Estonia – 24-cork and wood, retained its first place but reduced its RCA Index value from 25 to 10.

**Czech Republic** has lost comparative advantages in 3 groups – 23-crude rubber, 26-textile fibers other than wool and 27-crude fertilizers. The top export industry is still 32-coal, coke and briquettes but with reduced RCA Index value from 13 to 6.

**Slovenia** its advantages in the top performing export industry – group 21-hides, skins and furskins (RCA dropped from 2.6 to 0.98). It also lost advantages in 12-tobacco and 25-pulp and waste paper. Slovenia’s best exporting industry became group 35 with RCA rise from 1.36 to 4.29, it also gained advantages in 8-feeding stuff for animals and 28-metalliferous ores and metal scrap.

**Slovakia** lost advantages in groups: 25-pulp and waste paper, 28-metalliferous ores and metal scrap and 33-petroleum, petroleum products and related materials. The industries with newly acquired advantages are 00-live animals, 06-sugars, sugar preparations and honey, 43-animal or vegetable fats and oils, waxes.

**Lithuania** lost advantage only in group 34-gas, natural and manufactured, and gained advantages in groups: 00-live animals, 05-vegetables and fruit and 06-sugars, sugar preparations and honey. All industries which in 1999 had high RCA Index decreased their competitiveness significantly.

**Hungary** lost its advantages in 4 groups 05-vegetables and fruit, 24-cork and wood, 28-metalliferous ores and metal scrap and 42-fixed vegetable fats and oils, and gained in 2 groups 06-sugars, sugar preparations and honey and 08-feeding stuff for animals.

**Romania** lost its advantages in group 21-hides, skins and furskins and 42-fixed vegetable fats and oils, the industries with newly acquired advantages are 12-tobacco and 26-textile fibers other than wool.

**Latvia** lost its advantages in 09-miscellaneous edible products and 33-petroleum, petroleum products and related materials but gained advantages in 8 different groups, while reducing the RCA Index for its top exporting industry from 65 to 27.

**Cyprus** also decreased the RCA Index for its top exporting industry from 78 to 14 and lost advantages in 3 groups 11-beverages, 41-animal oils and fats and 42-fixed vegetable fats and oils but gained advantages in groups 3-fish, crustaceans, mollusks and 25-pulp and waste paper.

**Malta** lost its advantages in 12-tobacco and 33-petroleum, petroleum products and related materials but gained advantage in group 3-fish, crustaceans, and mollusks.

The general conclusion for New Europe countries is that they didn’t increase their specialization in the primary sector. Most of the countries in the selection reduced the value of RCA Index for specific primary sector industries, while gaining advantages in other commodities. This means that the countries in the group reduced the concentration of their exports in some of the industries and diversified their export structure within the primary sector. Even the countries, which lost their advantages in several industries didn’t increase the concentration of exports in the other primary sector exports – hence there is no reason to claim excessive specialization in the primary sector of the New Europe countries.

The changes in the comparative advantages for the secondary sector industries of the New Europe counties are presented in Graph 2 below. Half of the countries in the selection (6) have increased the total number of export industries with comparative advantages and five of
them have reduced it. The strongest comparative advantage within the group of countries is found in Lithuania’s fertilizer export – RCA Index of 31.

Graph 2. Number of Secondary sector industries with RCA Index higher than 1 by countries and by years.

Poland has experienced a major shift in its export structure. It lost advantages in 6 industries (52-inorganic chemicals, 61-leather, leather manufactures, 65-textile yarn, fabrics, 67-iron and steel, 84-articles of apparel and clothing accessories, 85-footwear), while gaining competitiveness in 8 commodity groups (55-essential oils and perfume materials, 58-plastics in non-primary forms, 64-paperboard and articles of paper pulp, 66-non-metallic mineral manufactures, 71-power-generating machinery and equipment, 76-telecommunications and sound-recording equipment, 77-electrical machinery and appliances, 78-road vehicles). Poland significantly improved its overall export structure and in the same time gained additional advantages in its international trade.

Bulgaria also increased the total number its competitive industries trough restructuring of its exports. It lost advantages in 3 groups (55-essential oils and perfume materials, 73-metalworking machinery, 83-travel goods and handbags) and gained in 4 (52-inorganic chemicals, 65-textile yarn, fabrics, 77-electrical machinery and appliances, 82-furniture and parts thereof). The most competitive export industry shifted from 84-articles of apparel and clothing accessories towards 68-non-ferrous metals.

Estonia restructured its exports but decreased its total number of competitive industries. It gained advantages in 3 groups (53-dyeing, tanning and coloring materials, 62-rubber manufactures, 77-electrical machinery and appliances) but lost 4 (52-inorganic chemicals, 65-textile yarn, fabrics, 68-non-ferrous metals, 85-footwear).

The Czech Republic lost its comparative advantage only in group 79-other transport equipment and gained in 3 industries (58-plastics in non-primary forms, 75-office machines, 76-telecommunications and sound-recording equipment).

Slovenia reduced the total number of its competitive industries from 19 to 16. It lost comparative advantages in 5 industries (52-inorganic chemicals, 67-iron and steel, 84-articles of apparel and clothing accessories, 85-footwear, 87-professional, scientific and controlling
instruments) and gained in 2 (55-essential oils and perfume materials, 74-general industrial machinery).

**Slovakia** experienced significant drop in the total number of competitive industries. It lost comparative advantages in 6 industries (57-plastics in primary forms, 65-textile yarn and fabrics, 66-non-metallic mineral manufactures, 68-non-ferrous metals, 73-metalworking machinery, 84-articles of apparel and clothing) and gained only in 2 groups (76-telecommunications and sound-recording equipment, 77-electrical machinery and appliances).

**Lithuania** raised its international competitiveness slightly by gaining advantages in 2 groups (57-plastics in primary forms and 81-sanitary plumbing, heating and lighting fixtures) while losing its advantage in group 61-Leather and leather manufactures. The narrowest export specialization in New Europe is observed in Lithuania which had RCA Index 31 in fertilizers exports in 1999, by 2009 the value of this industry’s index was reduced to 21.5.

**Hungary** is the second country with significant worsening of its export performance (after Slovakia). It lost its comparative advantages in 6 out of 10 industries (63-cork and wood manufactures, 68-non-ferrous metals, 81-sanitary plumbing, heating and lighting fixtures, 82-furniture and parts thereof, 84-articles of apparel and clothing, 85-footwear) and gained advantages in only 2 groups (62-rubber manufactures, 87-professional, scientific and controlling instruments).

**Romania** is the country with the highest increase in the total number of industries with comparative advantages. It has lost its advantages in 3 groups (52-inorganic chemicals, 68-non-ferrous metals, 83-travel goods, handbags) but gained another 7 industries (61-Leather and leather manufactures, 62-rubber manufactures, 65-textile yarn and fabrics, 76-telecommunications and sound-recording equipment, 77-electrical machinery and appliances, 78-road vehicles, 81-sanitary plumbing, heating and lighting fixtures).

**Latvia** maintained its total number of export industries by losing advantages in 2 commodity groups (56-fertilizers, 68-non-ferrous metals) and gaining again in 2 (76-telecommunications and sound-recording equipment, 81-sanitary plumbing, heating and lighting fixtures).

**Cyprus** is interesting case because of its almost complete restructuring of the exports. By 2009 Cyprus lost comparative advantages in 3 out of 4 export industries (81-sanitary plumbing, heating and lighting fixtures, 84-articles of apparel and clothing, 85-footwear). Cyprus gained advantages in 4 new export industries (77-electrical machinery and appliances, 79-other transport equipment, 87-professional, scientific and controlling instruments, 89-miscellaneous manufactured articles).

**Malta** gained new comparative advantages in only two groups (54-medicinal and pharmaceutical products, 65-textile yarn and fabrics) but list in 4 (83-travel goods, handbags, 84-articles of apparel and clothing, 85-footwear, 88-photographic apparatus, equipment and supplies).

The secondary sector dynamics is radically different from the primary the New Europe countries gained comparative advantages in many high technology industries, some of the countries restructured their exports completely and rarely lost competitiveness. Actually 2009 was the top year for the automobile exports of Romania and Poland in their entire history. We should not forget that the observed period includes the worst part of the world financial crisis
and the recession that followed. It influenced both primary and secondary export sectors by contracting the consumer markets and limiting the access to finance.

V. CONCLUSIONS

The main purpose of this paper was to trace the shifts in the comparative advantages within the EU with particular focus on the new member-states. The central a priori hypothesis is that trade liberalization within the EU may hurt the new members of the community, forcing them to specialize in primary sector industries. The results of the study do not confirm this assertion. The enlargement of the EU in 2004 and 2009 was beneficial for the majority of the new member-states, by improving their exports structure and even helped them to gain comparative advantages in new industries. The effects from trade liberalization within the EU may be defined as damaging only for Slovenia, Slovakia and Hungary, which reduced their comparative advantages in both primary and secondary sectors. It is important to mention that that the observation period coincides with the biggest recession since the Great depression. This paper is a part from a larger project and will be extended by identifying the factors of the shifts in the international trade patterns.

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ENERGY IN RUSSIA: PROSPECTS

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ABSTRACT

The article deals with integration of energy sector into more powerful and extensive energy systems which has become its main feature in the 21st century. The rapid capacity growth and areas of power systems with their union not only within countries but also of entire continents (North America, Europe, northern Eurasia, and others) up to full globalization (as happened with the global oil supply system) is preserved.

Key words: energy, integration, energetics, investments.

INTRODUCTION

New processes of inter-system integration are to appear (for example, joining of gas, power and heat supply systems is being in the process), these processes create more capacious and diverse environment to meet the main objective of the scientific and technical advance: cheaper energy for consumers with mitigating resource and ecological limitations on its use. Neither world nor domestic statistics provides the full-scale data about the size and the proportion of funds which the society spends on its energy supply. There are conflicting trends: price reduction of each stage of energy production due to the technical advance is at some extend covered with deteriorating geological conditions of production, exploration of remote fuel bases, tightening environmental requirements and, what is most important, increase the proportion of higher quality (and therefore expensive) energy, primarily electricity.

Energy sector itself will be more and more integrated with the main consumers, gradually forming unified technological chains oriented on producing final product. Mixed companies (coal-, energy and metallurgy, gas and chemical, etc.) have started this process. Territorial production complexes will start developing again with energy companies using low transportable but rich in supply local energy resources - lignite, hydro resources, biomass, etc.

Expanding system environment stimulates such traditional trends of science and technology as growth of unit capacity of energy facilities and link capacities to reduce the
production cost and energy distribution, raising energy used in pressure and temperature, concentration and intensification of energy flows, the growth of automation and accuracy management of energy, etc.

The most important is that the development of energy system promotes the creation of qualitatively new energy - superconducting electrical generators, drives and power transmission lines, nuclear power, etc.

Together with victorious march of the system energetics in the 21st century, the new trends of science and technology reviving individual energy supply of an individual (family) in households and in small business, removing archaic power plants and becoming less dependent on centralized power supply have become stronger.

Population's mass motorization firstly in the US, then in other countries together with spreading of trucks, tractors and other vehicles and mechanisms of individual application started this process (2). Millions of small devices of individual application (cameras, video cameras, mobile phones) became widespread in the late twentieth century, they work on chemical elements or accumulators and due to it provide independence of small consumers from big energy systems with maximum personification of volumes and regimes of energy use. They form a person's individual energy sphere that serves his/her life style and economic interests.

The spread of diesel and gas turbines of medium and low-power, high-heat generators and other means of electricity and heat individual homes and small businesses contributes to the autonomy of consumers intensive development Are of fuel cells for direct conversion of chemical energy of fuel (hydrogen and methane) into electricity, as well as a variety of battery power, including using the effect of superconductivity. The fuel elements for direct conversion of chemical energy of fuel (hydrogen and methane) into electricity, as well as a variety of battery power, including using the effect of superconductivity are being developed intensively. Consequently it is possible to create a powerful and cost-effective technical base for further individualization of energy supply with strong impact on peoples' resettlement

Individual power typically provides a more economical use of energy, while total power of plants serving people increases substantially. Such "exchange" of bigger power into less consumption can result into energy-efficient life style and stabilization, if not reduction of energy consumption per capita. At the same time it will be good for the environment, as each person strives to prevent his/her habitat from being spoilt with energy resources controlled by an individual. In addition, an individual user will take care of safety of his/her energy sphere, demanding reliability and security of energy equipment.

The Soviet Union was the recognized leader in energy system, which had created mostly in Eurasia, the world's largest electric power systems (from Japan to the Baltic and Black Seas) and the Unified Gas Supply System (from Western Siberia to Germany and Italy) and a system of oil pipeline from Eastern Siberia to Czechoslovakia and Yugoslavia. After 1991, the size of these systems fell to Russia's borders and their connectivity was broken, but in recent years they have gradually restored as the technological core of the CIS energy sector.

Taking into account the new world trend Russian energetics must combine the improvement of its unique energy systems with rapid development of individual energetic. For the country with the world's biggest and extremely unevenly populated territory, the transition from heating ovens and the most primitive diesel-generators to advanced individual energy
devices will allow to align the conditions for energy supply for the people erasing the notorious difference between village and town. This is a task of great social and environmental values.

It is not possible to change the technological base of the Russian energetics in a single leap, the transition to the optimal symbiosis of system and individual energetics will be realized gradually. On the first stage (up to 2010) due to shortage if investments the existing production basis of the "big energetics" was being restored and partially modernized. But even on this stage people and companies (and the strategy is to encourage it) were aimed at use of advanced means of individual energetic. On the second stage "great energetics" and, that is more important, fuel and energy consumers will transfer to energy-efficient technologies preferably locally produced.

However, since "great (system) energetics" provides qualitative growth and an individual one is responsible for its quality, the strategy predicts the significant increase in energy consumption which results in further domination of big energy systems in Russia with slower (compared with other countries) growth of personal energetics.

Neither world nor domestic statistics provides the full-scale data about the size and the proportion of funds which the society spends on its energy supply.

There are conflicting trends: price reduction of each stage of energy production due to the technical advance is at some extend covered with deteriorating geological conditions of production, exploration of remote fuel bases, tightening environmental requirements and, what is most important, increase the proportion of higher quality (and therefore expensive) energy, primarily electricity.

According to energy strategy (1) growth of domestic consumption and exports of energy resources demands increase the production base of energy sector (Table 1).

<table>
<thead>
<tr>
<th>Table 1 - Production of energy resources</th>
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<tbody>
<tr>
<td><strong>Indicators</strong></td>
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<tr>
<td>Production</td>
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<tr>
<td>Total, mln. t. f</td>
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<tr>
<td>Total by 2000, %</td>
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</tbody>
</table>

- Natural gas billion cubic meters.  | 584      | 608-615  | 635-665  | 660-705  | 680-730  |
- Oil and condensate, million tons     | 324      | 420-447  | 445-490  | 455-505  | 450-520  |
- Coal and so on. solid, m.            | 258      | 270-280  | 310-330  | 340-360  | 375-430  |
- Atomic energy, billion kWh.          | 129      | 157-160  | 180-200  | 210-265  | 230-300  |
- Hydro power, billion kWh.            | 165      | 162-163  | 173-180  | 185-195  | 195-215  |
- Renewables, million t. f             | 1        | 5        | 6-7      | 10-12    | 15-20    |

The t. f. - tons (ton of fuel) - adopted in Russia, the primary unit of measure (i.e., extracted from the environment) the energy equivalent of 7000 Gcal 29.3 TJ.
80% of resource base and at least 70% of the existing equipment of fuel and energy complex are to be replaced as there will be massive outflow of everything that was created in the flourishing years of 1960-s -1970-s.

Therefore from 540 up to 630 billions of dollars are to be invested in the fuel and energy complex within two coming decades that is 27% of all investments in the Russian economy.

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PRIORITY DIRECTIONS OF REGIONAL INNOVATIVE SYSTEM’S DEVELOPMENT

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ABSTRACT

The article deals with the priorities contributing to the development of regional innovation economy, which determine the efficiency of interaction between the main actors of the regional innovation system, government and business.

Key words: Region, innovative infrastructure, science and innovation system, regional economy.

INTRODUCTION

Regional innovative system is an integral set of the organizations and institutions in the region, united with each other in order to generate new knowledge, its diffusion and usage by transformation into products, technologies and services. The offered matrix is the effective tool of maintenance of interaction of the basic subjects of regional innovative system with the help of systematization of process of achievement of particular arrangements and definition of duties of interested parties. In case of involving of the additional parties (for example, noncommercial organizations, innovative funds, etc.) the given matrix can be expanded to the necessary structure of participants.

The current stage of socio-economic development of Russian regions is characterized by the urgent necessity for their transition to the innovative type of economy. The practical solution to this problem requires the formation of a coherent system of views on the formation and functioning of regional innovative systems after their initial stages of its development in many regions of Russia. But there is still very low in efficiency. The development of the further measures in the regional policies and improvement of the regional innovation systems in this situation involves improving the efficiency of interaction of their key subjects, so additional research is required.
Regional innovative system is an integral set of the organizations and institutions in the region, united with each other in order to generate new knowledge, its diffusion and usage by transformation into products, technologies and services.

The key importance of regional innovative system is to maintain a high potential willingness of economic entities to use emerging "windows of opportunity", which are changes in markets, technologies, organizational forms, etc. Such willingness (mobility) is defined as a continuous stream of innovations and the ability of their perception (implementation into new products, production processes, institutional and organizational changes, etc.). Another system function of the regional innovative system is reducing the technological barrier between a group of high-tech industries and engineering industries of the "second tier", focused on the massive demand of the economy.

On the whole the innovative system in the region should include the following subsystems: generation of new knowledge and research, commercialization of high-tech products, innovative infrastructure, legal support to innovations, planning of the economic development, regional and international cooperation.

Formation of a regional innovation system involves, first of all, the development of applied science and R & D, implying a significant increase in expenditures on research and development, and creation of the system of innovation’s implementation, including scientific, technical and industrial components (companies, research centers, specialized firms, etc.). The system of dissemination of technology and information, mobility of capital and labor should be developed for efficient operation of regional innovation systems. The obligatory condition for innovative development is a legal provision, assuming, first of all, an adaptation to the legal basis of the emerging innovative system of the Russian Federation and the establishment of appropriate legal instruments, providing the full and effective functioning of the innovative activity in the region.

A special role in the structure of regional innovative systems belongs to the authorities because not only the effectiveness of the developed and implemented innovative investment policies, but also the direction vector of socio-economic region as a whole depends on their competence.

An important factor in the innovative development is an education - a source of qualified personnel to meet the demand in the labor force of the regional innovative system (the results of innovative educational activities are specialists with such areas of competence that are in demand outside the region, as well as innovative educational technologies and products).

One of the main elements of the innovative system is the science that ensures the establishment of the base and foundation for the future production of competitive products. The scope of academic science is realized both in the high school and in academic state institutions, and serves as a generator of ideas for innovation. With regard to applied science, it is actively commercializing its developments, and sells them outside the territories where they have been developed, as well as provides various kinds of scientific and technical services.

Among the smaller forms of organization aimed at the intensification of the innovative process, the implementative sector is of a great importance. Innovative firms contribute to the development of the innovation process, and tend to specialize in the implementation of patent holder’s unused technology, to promote licenses of promising inventions developed by
individual inventors, bringing inventions to the industrial stage, as well as to the production of small experimental batches of industrial property and subsequent sale of the license.

One of the most pressing problems of innovation activity is fund-raising. Restriction of the Russian sphere of innovation is a significant share of public funding of innovation, which resulted in "separation" of research on the needs of industry. In the support of innovative activity role of extra budgetary funds: bank loans, non-budgetary funds, venture capital funds is quite modest for strategic partners.

As shown by several studies, management of the innovation system should be based on the principle of combining government regulation and self-organization of innovative enterprises and institutions. This management system should involve a clarification of priorities of innovative development, the formation of a generalized representation of innovative community about the current state of scientific and technical sphere and its potential benefits. In its turn, the priorities should be developed taking into account the opinions of experts in the field of foreign policy, national security, economics and business, ecology, health, etc.

In the region with the innovative-oriented industry, being actively involved in promoting and shaping the profile of technological advance, which in its turn provides a significant share of innovative products at the enterprise, small, medium and large businesses can be distinguished (depending on what prevailing in this subject of the federation). For the transition of the economy onto the path of the innovative development, the interaction of these businesses between each other is important, because constant contacts of the participants in the innovation process for adjusting the R & D and manufacturing process are required. With the same purpose social organizations of investors are set up to establish a direct contact between entrepreneurs, inventors, authors of innovative products and investors interested in financing new and promising business ideas.

If we analyze the basic classic forms of partnership between the state and the private sector, we can distinguish different forms of interaction, which mainly differ in the level of responsibility that the public sector as public authority charges to the private sector (Table 1).

The common thing is that in all forms the public power reserves a supervising role and watches that the consumers to be satisfied. In some cases operation (and the property right) remain in state hands, and the private sector participates in designing and infrastructure building. In other cases private partners participate in management of fixed capital, their operation and/or financing. Thus conditions on which power state structures enter into agreements with a private sector, influence management structures, investment processes and distribution of possible risks.
Table 1 - Matrix of responsibilities between public and private sectors in various forms of public-private cooperation

<table>
<thead>
<tr>
<th>Ownership of fixed assets</th>
<th>Capital investments</th>
<th>Design and construction</th>
<th>Operation</th>
<th>Collecting payments</th>
<th>Supervision of results and rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully State</td>
<td>Full state</td>
<td>Passive private</td>
<td>Contracts for services</td>
<td>Joint Ventures</td>
<td>Build, Operate, Transfer</td>
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<td></td>
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<td>investment</td>
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</table>

- state responsibility
- responsibility of the state and the private sector;
- Responsibility of a private sector;

In case of transformation of state-private partnership in the form of tripartite agreements in coordinates"business-power-science" it is possible to offer following forms of interaction (tab. 2).

Presented in Table 2 version of distribution of responsibility between the basic participants of regional innovative system, certainly, is only approximate. In particular cases distribution versions can be changed in conformity with the reached by the parties arrangements. In particular, both private, and scientific sectors can participate in formation of standards of innovative activity, and capital investments to be carried out only at the expense of a private sector, or together with regional authorities, but without participation of scientific sector. Conditions of distribution of profit can also be changed, for example, it can go only to a private sector (in case capital investments are carried out only at the expense of private sector), and the scientific sector obtains reward in the form of the fixed salary.

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Table 2 – the Matrix of distribution of responsibility between state, private and scientific sectors in the process of realization of innovative activity in region\textsuperscript{1}

<table>
<thead>
<tr>
<th>Elements of responsibility</th>
<th>Private sector</th>
<th>Regional authorities</th>
<th>Scientific sector</th>
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</thead>
<tbody>
<tr>
<td>Definition of standards of innovative activity</td>
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<tr>
<td>Property on fixed capital of the innovative enterprises</td>
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<tr>
<td>Capital investments</td>
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<tr>
<td>Acquisition and expansion of material resources of innovative activity</td>
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<tr>
<td>Operation of fixed capital of the innovative enterprises</td>
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<tr>
<td>Profit distribution</td>
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<tr>
<td>Acquisition of an innovative product</td>
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<tr>
<td>Introduction of an innovative product</td>
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<tr>
<td>Maintenance of reliability of capital investments</td>
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</table>

CONCLUSIONS

Thus, the offered matrix is the effective tool of maintenance of interaction of the basic subjects of regional innovative system with the help of systematization of process of achievement of particular arrangements and definition of duties of interested parties. In case of involving of the additional parties (for example, noncommercial organizations, innovative funds, etc.) the given matrix can be expanded to the necessary structure of participants.

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VIRTUAL ECONOMY: THE FUTURE OF ECONOMY OR A PHENOMENON OF A MODERN SOCIETY

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ABSTRACT

In this paper to contain questions connected with occurrence and functioning of virtual economy. Since to Kevin Kelly in 1997 has written “Twelve Principles of the Virtual Economy”1 much has changed. The last economic crisis has shown that the virtual economy is rather steady in the given conditions. We will try to open features of functioning and a role of virtual economy in a modern economic development of a society.

Key words: Economy, virtual economy, modern economy.

INTRODUCTION

In this paper, we examine the economic systems revolving around production and exchange of virtual property. From our viewpoint, the central forms of virtual property include e.g. virtual items in community sites, and virtual goods and characters in online games. Production of virtual property often requires significant time inputs from the users, and the users also trade it for real money. We treat these economic systems, called virtual economies, as sufficiently separate economies whose macro- and microeconomic properties can be discussed.

The characteristics of virtual worlds and the economic phenomena inside them make direct comparisons between a real-world economy, e.g. some national economy, and the economy of some virtual world tempting. These economic systems have many things in common, but likely also differ in important respects.

The economic agents are, however, the same human beings in both real-world and virtual economies. Therefore, the user behavior should reflect the same basic principles as the behavior of agents in a real-world economy. On the aggregate level their behavior sums up to an economic system.

The economic systems of virtual worlds could also be studied from completely other viewpoints. For example, they can be seen as one part of the system of revenue collecting for the operating firm, and their functioning and connections to the real-world economy can then be optimized with respect to the operating firm’s profits. Or they can be studied as platforms of economic behavior, on which the plausibility of assumptions regarding economic behavior could be tested. Or they could be viewed as platforms of competition between groups of users, the organizational efficiency of which could be investigated.

According to Kevin Kelly, the emerging new economy represents a tectonic upheaval in our commonwealth, a social shift that reorders our lives more than mere hardware or software ever can. It has its own distinct opportunities and its own new rules. Those who play by the new rules will prosper; those who ignore them will not.

Kelly argues the new rules governing the global restructuring submit to four principles:
1) Wealth in this new regime flows directly from innovation, not optimization; that is, wealth is not gained by perfecting the known, but by imperfectly seizing the unknown.
2) Ideal environment for cultivating the unknown is to nurture the supreme agility and nimbleness of networks.
3) The domestication of the unknown inevitably means abandoning the highly successful known - undoing the perfected.
4) In the thickening web of the Network Economy, the cycle of "find, nurture, destroy" happens faster and more intensely than ever before.

The following 12 principles of the Virtual Economy were supposed to provide New Rules for the Internet Age:

The Law of Connection - Embrace the dumb power: Of the collapsing microcosm of chips and the exploding telecoms of connections

The Law of Plentitude - More gives more: Mathematicians have proven that the sum of a network increases as the square of the number of members. In other words, as the number of nodes in a network increases arithmetically, the value of the network increases exponentially.

The Law of Exponential Value - Success is nonlinear: During its first 10 years, Microsoft's profits were negligible. Its profits rose above the background noise only around 1985. But once they began to rise, they exploded.

The Law of Tipping Points - Significance precedes momentum: In epidemiology, the point at which a disease has infected enough hosts that the infection moves from local illness to raging epidemic can be thought of as the tipping point. The contagion's momentum has tipped

from pushing uphill against all odds to rolling downhill with all odds behind it. In biology, the tipping points of fatal diseases are fairly high, but in technology, they seem to trigger at much lower percentages of victims or members.

The Law of Increasing Returns - Make virtuous circles: Value explodes with membership, and the value explosion sucks in more members, compounding the result. An old saying puts it more succinctly: Them that's got shall get.

The Law of Inverse Pricing - Anticipate the cheap: Through most of the industrial age, consumers experienced slight improvements in quality for slight increases in price. But the arrival of the microprocessor flipped the price equation. In the information age, consumers quickly came to count on drastically superior quality for less price over time. The price and quality curves diverge so dramatically that it sometimes seems as if the better something is, the cheaper it will cost.

The Law of Generosity - Follow the free: Now, giving away the store for free is an applauded, level-headed strategy that banks on the network's new rules. Because compounding network knowledge inverts prices, the marginal cost of an additional copy (intangible or tangible) is near zero. Because value appreciates in proportion to abundance, a flood of copies increases the value of all the copies. Because the more value the copies accrue, the more desirable they become, the spread of the product becomes self-fulfilling. Once the product's worth and indispensability is established, the company sells auxiliary services or upgrades, enabling it to continue its generosity and maintaining this marvelous circle.

The Law of the Allegiance - Feed the web first: The distinguishing characteristic of networks is that they have no clear center and no clear outer boundaries. The vital distinction between the self (us) and the nonself (them) - once exemplified by the allegiance of the industrial-era organization man - becomes less meaningful in a Virtual Economy. The only "inside" now is whether you are on the network or off.

The Law of Devolution - Let go at the top: The biological nature of this era means that the sudden disintegration of established domains will be as certain as the sudden appearance of the new. In the Network Economy, the ability to relinquish a product or occupation or industry at its peak will be priceless.

The Law of Displacement - The net wins: The question “How big will online commerce be?” will have diminishing relevance, because all commerce is jumping onto the Internet.

The Law of Churn - Seek sustainable disequilibrium: The Network Economy moves from change to churn. Change, even in its toxic form, is rapid difference. Churn, on the other hand, is more like the Hindu god Shiva, a creative force of destruction and genesis. Churn topples the incumbent and creates a platform ideal for more innovation and birth. It is "compounded rebirth." And this genesis hovers on the edge of chaos.

Some words are necessary to tell about concept “virtual economy”.

A virtual economy is an emergent economy existing in a virtual persistent world, usually exchanging virtual goods in the context of an Internet game. People enter these virtual economies for recreation and entertainment rather than necessity, which means that virtual economies lack the aspects of a real economy that are not considered to be “fun” (for instance, players in a virtual economy often do not need to buy food in order to survive, and usually do not
have any biological needs at all). However, some people do interact with virtual economies for “real” economic benefit\(^1\).

Virtual economy observed in the virtual world. Virtual worlds exist in a niche of what is commonly called cyberspace: the metaphorical space consisting of the network of online services in which e.g. web pages, instant messaging accounts and messages and other immaterial entities can be thought to exist.

The first virtual worlds that emerged were textual multiplayer games (MUDs\(^2\)), the first of which was run in the late 1970s in a computer network of Essex University\(^3\). In MUDs, the world, characters, and events are represented textually, and the users take part in the world by reading descriptions and typing in commands to control their character. What the users actually do depends on the particular MUD; some of them being more gameplay-oriented while others focus on social activities.

Be the focus of the MUD on socializing or not, the social part, or the sharing of the same virtual space with many other users and the possibility of interaction, is an important part of all of them.

The most popular virtual worlds today can simplistically be described as a crossover of MUDs and graphically impressive computer or video games. Many of them are represented in 3D graphics. The users control a character much like in any computer game: by using a combination of keyboard and mouse commands. Unlike offline computer games, the virtual worlds are often very large, in order to accommodate potentially thousands of simultaneous users. Like in MUDs, human beings control a large part (if not all) of the characters present in the world. The characters may interact with each other e.g. by graphical gestures and written or spoken language.

Today’s virtual worlds can be roughly classified as either multi-user online social worlds or multi-user online role-playing games. These two classes differ in their objective setting. The social worlds do not usually have set objectives as such. The users participate in social worlds mainly to do similar things that people do in their spare time in real life: they socialize, have social relations with other users, chat, and organize and participate in events. The users may gain reputation, wealth and fame inside these worlds, but they are not objectives as such.

In the real world, the term “economy” means the system that determines what is produced, who produces it, and who consumes the products, all choices taking place subject to scarcity. The products need not be physical, as services are also produced and consumed. Economies are often thought to exist inside certain geographic boundaries: for example, it makes sense to talk about the Finnish economy as an economy of a nation.

A virtual economy, then, is a system that determines what, by who, and for whom is produced. The products are virtual property or services, and the production happens in an online service, though may not always make sense where the production actually, physically, happens, as the user physically exists somewhere while participating in production\(^4\). There are no geographic boundaries that determine the extent of a certain virtual economy. Instead, there is an

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\(^1\) Nelson, John: “The Virtual Property Problem: What Property Rights in Virtual Resources Might Look Like, How They Might Work, and Why They are a Bad Idea”, Boston University, 2010

\(^2\) Multi User Dungeon / Dimension / Domain

\(^3\) Bartle, Richard: STUCK IN THE MUD - http://www.mud.co.uk/richard/vernari85.htm

architectural boundary: the scope of one virtual economy is the extent of the context in which the virtual products can be consumed.

Each virtual world contains an economy, since the time of the world’s participants is always allocated somehow. It is easy to think up an online service in which the users could own virtual property but not exchange it. In the real world such a prohibition would be hard to enforce, but in a virtual world, it would be just a matter of coding. An economy of sorts could still exist inside the virtual world: the users could trade services for services.

Virtual economy a system that has the following qualities: first, the users are able to own or control virtual property. This feature is implemented in practically every multiplayer online game world, and the same likely applies to online social worlds also. Second, the users are able to exchange virtual property. This enables trade on a larger scale. The possibility to exchange only services for services makes trading highly inefficient, and such systems are rare in practice. Third, the users are able to employ inputs to create outputs, either goods or services. Some of the inputs are real world inputs: particularly, the users’ time and human capital inputs. Other inputs exist virtually: virtual goods that can be used as virtual capital, and the characters skills that to some extent resemble the human capital of the real-world production.

Participating in a virtual economy cannot fulfill biological needs that a user necessarily has. On the other hand, there are usually no needs corresponding to biological ones in a virtual economy. This implies two things: first, a user does not have an exit option in the real-world economy, and second, a user always has an exit option in a virtual economy. These two observations place a limit on the severity of consequences, risks, and the extent of participation in virtual economy.

The virtual property and the spaces in which they can be found are digital, and exist completely inside Internet services. When assessing economic value, this should be irrelevant: willingness to pay and sacrifice time should be seen as the ultimate arbiter of this significance. Despite the fact that many of the popular virtual worlds are called games and despite the connotations of trivial or negative effects on ‘real’ life the label game has, there should be no doubt about the actual, real value that some virtual objects inside these games carry. Based on the discussion above, there would seem to be grounds for using methods of economics in investigating the platforms where such property is exchanged.

Three motivations for economic analysis of virtual economies can be identified. These approaches are obviously intertwined, and not intended mutually exclusive.

First, a working and sufficiently stable economy is likely critical to a satisfactory user experience, and is hence linked to the size of the user base and the profits collected by the operator. This calls for economic analysis of the systems as such from a development perspective. The architecture-level rules of virtual economies are determined by the operators, differ from economy to economy, and can be modified at will. Poor design of e.g. the transaction system of a virtual world with respect to individual user incentives can lead to severe problems in the economic environment, potentially diminishing the satisfaction derived by the users.

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1 The gifts in Facebook (or Russian analog – Vkontakte) are one example. The users can purchase a gift from the operating firm and then give it to another user, but the gifts cannot be exchanged beyond this.
Second, the behavior of the economic agents in these platforms may turn out to be a fruitful source of information on economic behavior. Efficiency-wise, the virtual world economies have some obvious advantages in terms of economic and social experimentation. Such experiments, from the point of view of testing how legal rules concerning tax policy, tort, or property regimes affect economic success, have been proposed. Basic economic laboratory experiments have been conducted in one virtual world. Cost-effective experimentation is an area where the study of users’ economic behavior in virtual economies can contribute to mainstream economics.

Third, the virtual economies, as platforms of economic interaction, can be a subject of economic analysis as such. The users, operating through accounts and characters, are human beings. From a social science point of view, the interactions the users take part in can be studied as any other form of social interaction.

CONCLUSIONS

The widespread adoption of Information and communications technologies in everyday life has given rise to a massive new market for digital goods and services. Addressing the business opportunities in this market has traditionally required significant skills and infrastructure, putting them out of reach for most people in the developing world. However, new marketplaces and value chains have emerged that provide digital earning opportunities for semi-skilled and unskilled workers with access to relatively basic digital infrastructure.

A growing number of crowdsourcing and “microwork” platforms employ unskilled workers in digital tasks ranging from pattern recognition to data input.

According to World Bank the gross revenues only of the third-party gaming services industry were approximately $3.0 billion in 2009, most of which was captured in the developing countries where these services were produced. This suggests that the virtual economy can have a significant impact on global and local economies despite its modest size.

This “virtual economy” of digital goods and services, and its potential for economic and social development, are the subject of future studies.

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MODERN TENDENCIES OF INTEGRATION INTERACTION OF THE CENTRAL EASTERN EUROPE REGIONS IN THE ECONOMIC SECURITY MAINTENANCE ASPECT

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ABSTRACT

Development of modern world economy is characterized by strengthening of the international competition, improvement of productive forces on the scientific and technical progress basis which predetermines of internationalization processes deepening, optimization of national economies integration to the system of the international division of labor and formation of regional integration associations. They are aimed at creation of local environments which assist increase of national competitiveness and improvement of economic and political positions of the separate states on the world scene.

At the present stage, integration of the countries Central and the Eastern Europe on the example of Ukraine’s integration to modern economic space is a vital topic of economic researches. The successful problem decision of Ukrainian economy internal development is necessary condition for making country’s external strategy and solving problems of participation in regional integration processes and associations. Ukraine economic integration to the European economic space is a priority geographical direction and practical means of occurrence in the world economy.

The research objective are the improvement of the participation mechanism of the Central and the Eastern Europe countries in regional integration processes on the basis of theoretical and methodical positions development. The problem is overviewed in the context of integration processes optimization and an estimation of social and economic consequences of integration interaction in aspect of maintenance of economic security.

Object of research is the process of national economic systems interaction in the context of regional integration processes development.

The research methodology is based on a dialectic method of scientific knowledge and general scientific methods of genecology: theoretical generalization, the system analysis and synthesis; the statistical and mathematical analysis.
Key words: integration, region, financial crisis, economic cooperation.

In modern conditions the defining characteristic of the global economy is the development of economic integration in Europe. The largest and the most powerful integration association in the world is the European Union, which occupies 36.7% of regional groupings world exports. The EU's objective is to promote economic prosperity, Europe inhabitants’ living standards, peace and freedom and the creation of stable union of the peoples of this region. Now the EU comprises 27 countries, from 2007, with Bulgaria and Romania.

European Economic cooperation is essential for enduring strategic priorities of Ukraine state policy, which is also a tool for creating of the Ukrainian nation and state, maintenance a modern competitive economy and adoption to high social and humanitarian standards.

We consider problems and benefits of the EU membership that are available for Eastern Europe such as:
1. The geographical proximity of these countries, due to the small size of Europe.
2. The problem of resource constraints.
3. The development of transportation facilities.
4. The possibility of capital interpenetration.
5. Tendency to create a powerful economic bloc, able to withstand competition from the U.S. and Japan.

Ukraine's integration to the EU is a multidimensional problem, the scientific development of which is to consider both the macro and micro level. The beginning of the Ukraine and the EU partnership can be considered in 1993. Cooperation with the EU is a process that is under mutual interest. This is due to the geopolitical position of Ukraine and the level of its cultural, economic and political potential.

The key moments in the history of relations between Ukraine and the EU are:
1. Signing the protocol agreement between the EU and the CIS regarding the program TACI in Ukraine (1992);
4. Approval of "Strategies for integrating Ukraine into the EU" (1998);
5. Adoption of the EU Common Strategy on Ukraine (1999);
7. Negotiations for the manufacture of a new enhanced agreement between Ukraine and the EU (2007-2008)
8. Ukraine's entry into ETS (02/05/2008 was) [1, p.214].

In recent years, foreign trade transactions between the EU and Ukraine are characterized as dynamic, export to these markets has increased, and this is a sign of rapid reorientation of the export sector and foreign trade to the West.
In 2010 the foreign trade of goods between Ukraine and EU Member States showed a decrease in the volume of both export and import of goods, services and foreign direct investment. Exports of goods to EU countries amounts 9504,4 million U.S. dollars and in relation to 2009 it was 52,4%, import – 15392,7 million dollars and 53,3% respectively. The negative balance was 5888,3 mln. against the negative figure of 10738,9 million dollars in 2009. The coverage ratio of export import in 2010 amounted to 0,62 (in 2009 – 0,63) [2].

European countries was carried out 26,9% of exports in value terms. Moreover, the main consumer of Ukrainian goods was the European Union (25,4% of total exports) in 2010. The growth of export flows to the region being analyzed for the period 2005-2010 totaled 27,05%. Regional leaders in Europe in terms of goods imported from Ukraine in 2010 were Italy (17,4% of regional exports), Poland (12,9% of regional exports) and Germany (10,8% of regional exports) [2].

Analyzing the dynamics of monetary value of merchandise exports in general, attention should be drawn to an export sharp reduction in 2009-2010 from Ukraine in all major trade routes.

Leading economists emphasize the main reasons for this situation [3]:

1) unfavorable external economic conditions and prices for the products of major export industries (metallurgy and chemical industry),
2) increasing of international competition from developing countries in the markets of traditional Ukrainian exports,
3) limited availability of credit for exporting companies,
4) the global decline in effective demand, as a consequence of international financial and economic crisis (2008-2009).

Post-crisis recovery of Ukrainian economy in 2010 was characterized by steady growth of export flows of all trading areas. High intensity pre-crisis recovery process was characterized
by high volumes of commodity exports to CIS countries, but up to 2010 the value of merchandise exports has not reached crisis level and amounted to 78,7% of the corresponding period of 2008, more slowly recovery was seen in the export trade flows to Europe and Asia. However, in 2008 exports to Europe accounted for 70,1% from the 2010, the export of the same period in 2008 for pre-crisis level of exports to Asia was almost reached in 2010 (90% of the index in 2008). Insufficient development of farms in Ukraine to other countries and regions identified a slight decrease and slow recovery of the pre-crisis volume of merchandise exports. The exception was the U.S. trade area, exports of which fell by more than 3,68 times in 2009 compared with 2008 due to lack of demand and adverse financial conditions in the region's leading economies - the United States.

The share of imports of goods from Europe in 2010 was 32,9% (including the EU-31,4%). The growth rate of import goods deliveries for the period 2005-2010 amounted to 157,9%. The main trade partners of Ukraine in the region in 2010 were Germany (23% of regional imports) and Poland (13,9% of regional imports).

There was decrease cost of imports of goods in 2009-2010 on all trade routes due to the following factors:
1) rise in imports due to devaluation of the currency,
2) reduction in domestic demand and low purchasing power of households and firms, and
3) increases in energy prices,
4) limited access to credit caused by the crisis in the national banking sector, and
5) the use of temporary restrictive government measures. The consequence of these factors was not only a decline in merchandise imports, but also changes its structure in the direction of increasing the share of CIS countries by 11.1% [3].

Total exports of services to EU countries in 2009 amounted at 2551,8 million USD, import - U.S. $ 2369, trade surplus – 182,8million U.S. dollars against 229,5 million dollars in 2008. The main partners, which account for more than half of total trade, are Germany and United Kingdom.

The largest share in total Ukrainian exports to the EU is engaged in transport services (81,8%) and professional and technical services (5%). In the EU imports of services is a financial services (34,5%), various professional and technical services (22%). Among the other EU member countries important trade partners are Austria, Belgium, Italy, Sweden, and France.

In the investment area, the EU are working closely with Ukraine, in the aggregate they have more investors than the Russian Federation and the United States in general. In 2009 total volume of foreign direct investment from EU countries amounted at 31510,1 million U.S. dollars representing 78,8% of total investments to Ukraine. At the same time one of the largest investors include such EU countries as Austria – 2596,8 million USD (8,2% of total investment from the EU), Cyprus – 8928,5 million U.S. dollars (28,3%) Netherlands – 3956,5 million U.S. dollars (12,6%), Germany – 6599,7million U.S. dollars (20,9%), United Kingdom 2305,9 million USD (7,3%). The largest amount of foreign direct investment in 2010 accounted for the industry (33,1%), namely the production of fabricated metal products (13,9% of total foreign direct investment). The second priority for investment of foreign capital in 2010 was financial activities (31% of foreign direct investment). In trading in the same period received 10,8% of foreign direct investment, in activities related to real estate, renting and engineering - 10,7%. The share of other activities in the amount of received investment to Ukraine in 2010 was negligible [4].
Thus, from the above data we can conclude that since the beginning of the partnership between Ukraine and the EU in 1993 was not the example of efforts to liberalize foreign trade with EU countries and observed negative balance of foreign trade.

The development of Ukraine's foreign trade with the EU, as well as its largest trading partners, the EU member states indicates the existence of a number of important issues that are slowing its efficient and dynamic development. Real, not declarative process of European integration of Ukraine connect with the withdrawal of foreign trade between Ukraine and the European Union to qualitatively higher level, and also with deeper structural reforms of the Ukrainian economy.

The global financial crisis has accelerated the search for new ways to expand the EU. Must be taken into account the geopolitical dimension of its expansion and its dynamics in the context of global transformations. Events in the Middle East greatly accelerated the process of strengthening the EU's geopolitical process and the prospects of becoming Europe as a recognized leader in global civilizing process. The leading forms of economic cooperation between Ukraine and the EU are seen increasingly in trade, investment and technical assistance. Trade belongs to a central place in the overall system of economic interaction [5].

There is a whole series of arguments in favor of cooperation with the EU:

1. The economic potential of the EU and the dynamics of its development make it possible to conclude that the EU is a large market for products and meet the needs of power in Ukraine. Moreover, the trade with the EU is an important source of hard currency, which allows find restrictions to the problems that we can face in conditions which today threatens not only increase the negative impact of the global crisis on Ukrainian economy and economic security and the EU as a whole.

2. Ukraine's cooperation with the EU is necessary for technological renovation of Ukrainian industry. Production technology of Ukrainian companies lag behind those of their use of advanced European countries, Ukraine does not have the capital necessary to upgrade existing and build new modern enterprises. And without modernization of production structures of the USSR Ukraine can hardly hope to enter the path of stable economic development and overcome the growing gap between the economically developed countries, which define the direction and magnitude of the dynamics of the global economy. In other words, it is about creating industrial-technological system, comparable to European.

3. For decades, Ukrainian enterprises have been effectively cut off from the world market. Therefore, their entry into the European market is of great importance as a source of experience and practical skills in order to compete with producers in other countries develop and implement a strategy for industrial and commercial activity, oriented to the global situation of the markets. We should separately indicate that the ability to operate successfully in international markets leads to higher living standards and quality to meet the needs of national consumers.

4. The development of cooperation with the EU will support Ukraine's potential use as a transit country, an increase of exports of transport services and the development of relevant industries.

5. One of the tendencies of modern industrial development is the formation of industrial and commercial chain, which includes the firms and enterprises from different countries. The integration of the Ukrainian producers of such chains will provide an opportunity to expand into new promising markets, streamline their own production, more
flexible response to changing international economic environment to ensure the stable development of the production.

6. European Union - is the source of the experience of a market economy oriented towards social and public regulation of economic processes. Obviously, this is where Ukraine can gain knowledge on the development and implementation of competition policy and monitoring the concentration of economic activity, and regulation of the stock market, employment policy in the context of economic security.

7. The development of cooperation with the EU inevitably means the need to introduce appropriate rules and standards for making and implementing economic policy, the primary behavior of economic agents. This, in turn, will facilitate the formation of a transparent business environment in the domestic market, which is of great importance for Ukraine.

8. Development of international cooperation in general and economic relations and in particular with the EU has a direct impact on better allocation of resources, improving the efficiency of economic processes, i.e. has positive consequences in the long run.

How to cooperate with the EU and Ukraine to be or not be it an EU member - will depend primarily on what will happen in the most united Europe. Will be important and how to be prepared Ukraine's relations with influential regional associations.

In bilateral relations, Ukraine is expecting from the EU granting the status of the state with market economy in the context of anti-dumping legislation and the introduction of preferences under the EU's Generalized System of Preferences, which would reduce import tariffs on Ukrainian goods and allowed local enterprises to take full advantage of the benefits provided by EU accession states of Central Eastern European region.

In December 2009, during the summit Ukraine - European Union was not signed the Association Agreement. Talks about its signing the last 2 years (since the end of the Agreement on Partnership and Cooperation Agreement). The main reasons for failure - high corruption, the slow pace of implementing reforms, increasing foreign debt, ongoing conflicts in the government.

The Association Agreement provides for a commitment regarding the implementation partner of the political, economic and trade reforms and reforms of law. For its part, the EU agrees to give preferential access to their own markets, to provide financial and technical support. The document envisages cooperation between the parties in various directions, although priority is given to the economic sphere.

Ukraine is a strategic partner for the EU in terms of energy security. Since Ukraine's accession to the Energy Community, the EU will be a regular contributor to the common European energy security. The first decisive step was the signing of the EU Declaration on the modernization of the Ukrainian gas transport system in March 2009. Through the Ukrainian system supplied 80% of the gas from the Russian Federation, which represents 20% of the total energy supply of EU countries. The present crisis has demonstrated that Ukraine should not be left by herself. It is not just about energy security, but also about economic ties. Technical and financial support for Ukraine's EU is very important. Financial aid comes from both the EU and from EU member states separately. Ukraine became the first former Soviet republics, which have been implementing projects Twinning program. In September 2009, the program consisted of 37 projects [6,7].
Economic cooperation between Ukraine and the EU could lead to increased competition among Ukrainian producers and enterprises new EU member states in the single EU market. This will mainly affect the enterprise sector of ferrous metallurgy. However, this effect may be limited in connection with the adoption of new EU member states of European social standards and environmental protection.

Ukraine could even strengthen its competitive advantages in sectors that are particularly sensitive to competition from goods price parameters, because in the new EU member states will increase the cost of production. The positions of the Ukrainian manufacturers of products with high value-added in the short to medium term does not substantially change given the small amount of this current exports to candidate countries. In the long term would depend on the achievement of Ukraine's European technical standards and European standards of quality.

Thus, in order to facilitate the implementation of common foreign policy and a focus of activity with respect to the generation of the integration process in the context of globalization the necessary directions to improve methods of state support of foreign trade, taking into account the interests of all participants of foreign economic activity of Ukraine. Furthermore, the implementation of projects will allow Ukraine to improve the form of international economic activities and improve efficiency in cooperation with the EU.

Moreover, for the effective functioning of the Ukrainian economy as a part of the world economy required a package of measures aimed at strengthening the competitiveness of the state, a clear national policy that would ensure improvement of negative effects of liberalization and support for domestic producers. Being a member of European economic cooperation opens new prospects for cooperation between Ukraine and the developed countries of the continent, economic development, social intellectual progress, strengthening the Government's position in the international system of coordinates for the European integration of Ukraine - is the way of modernization of the economy, attracting foreign investment and advanced technologies to improve the competitiveness of domestic producers, opportunity to enter the single EU Internal Market. In the political aspect of European integration determines the modernization of the legal framework of the Ukrainian state, the democratization of the political and institutional systems. Cooperation with the EU will support approximation of the social conditions of Ukraine to the highest European standards, higher standards of living and welfare. However, in the process of Ukraine's rapprochement with the EU will inevitably act and negative factors of European integration among them: the inability to bear the financial burden of contributions to the EU increased competition from firms of countries - EU members in the process of liberalization and increased openness of the national economy, which will be accompanied by the elimination of uncompetitive companies with negative social consequences. However, the potential benefits of European integration substantially exceed potential losses and risks.

Based on the above we can conclude that the development of foreign economic relations is an important part of deepening European economic cooperation.
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SECTION 3.

Competitiveness Management: Response of National Entities to Economic Downturn
BUSINESS GROUPS IN RECENT ECONOMIC CRISIS:
KEIRETSU IN JAPAN – AND BEYOND – AS A LOCAL/GLOBAL CONCEPT

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ABSTRACT

The Japanese business groups – *keiretsu* – in the global recession is examined; how they are coping with this crisis at present. For this, the *keiretsu* relationships, between suppliers and principal companies, are highlighted to examine how they are united and struggling against the crisis. They are united as an organic whole based on the principles, which are trust and dependence. To identify the principles of *keiretsu* as such we used a structuralism approach. This approach is further applied for the relationships between the Korean *business groups – the chaebols* – and SMEs to find out how they are related as a whole. It is found out that Confucianism is at a base of their relationships as core values. This finding shows to a degree the distinctive features of the relationships between the *chaebol* and SMEs in Korea from their counterparts in Japan. The *keiretsu* relationships may be more advantageous than the relationships between the *chaebols* and SMEs in coping with the present crisis.

**Key words**: Global recession, Japanese business groups-*keiretsu*, structuralism approach, principles of *keiretsu* - trust and dependence, Korean business groups- *chaebols*, Confucianism.

INTRODUCTION

*Keiretsu* has been acknowledged as a symbol of Japanese business strategy over the decades, and regarded as the basic strategy to fulfil successful performance in Japanese economy. *Keiretsu* consists of horizontal and vertical networks. However, the vertical *keiretsu* is more important in performance, which consists of SMEs as suppliers and LEs (large enterprises) as assemblers.

With regard to the relation between SMEs and LEs in Asia, generally speaking, SMEs are basic in employment and LEs predominant in production. In fact, SMEs in India and China have played a role to a certain degree in production. Otherwise in Indonesia micro enterprises are playing a vital role in employment, while LEs have contributed to a great deal of production. In Korea SMEs are expanding their share to production in which LEs-the *chaebol* - have been central. The *keiretsu* as a vertical network of SMEs and LEs in Japan may be distinctive from...
these Asian business groups in terms of relationships and contribution to performance. However, it is basic that in vertical inter-firm relationships the level of connection between SMEs and LEs would be an important factor to control their performance. Above all, their relational levels are dependent on the existence of legal, political and social institutions (Lane and Bachmann, 1996).

The paper examines the *keiretsu* to find out how SMEs and LEs are connected and how they have worked out the global recession. This perspective leads us to identify the concept and the principles of *keiretsu* in Japan. This is important as it is to recognise a basic strength of *keiretsu*.

The global recession has had affected considerably on Japanese economy. Then the unprecedented and massive seismic disaster and nuclear reactor crisis have given enormous shock and damage to Japanese people and Japanese industry on scale and in scope. In these circumstances the principles of social solidarity in Japanese society would be recognised and appreciated. These principles may eventually result in a faster economic recovery than envisaged. In fact many damaged manufacturing enterprises are catching up with the total resumption until summer or autumn (press release of METI, 26 April 2011).

The paper is structured accordingly: 1. How the *keiretsu* – Japanese business groups – are working out in terms of relationships between SMEs and LEs in the global recession. The relationships between car maker and parts suppliers are examined. 2. The concept and principles of *keiretsu* are explored using a structuralism approach. This is the core of this paper as it is the essential task to clarify what the nature of *keiretsu* is. In reality such an attempt as this has not been carried out so far. 3. The findings, the importance of the principles and the approach, a structuralism perspective, are tried to apply for the *chaebol* and SMEs in Korea to see how they are related as a whole in terms of supplier and customer.

Part I  *Keiretsu*

1. Issues  
2. Car industry: assemblers and suppliers  
3. Principles of *keiretsu* and a structuralism approach  
4. Concluding remarks

Part II The *chaebols*

5. Issues  
6. The SMEs in Korean economy  
7. Principles of Korean society  
8. Concluding remarks

Conclusion

I.  **KEIRETSU**

Japan had been struggling for economic recovery from stagnation since the 2000s. In fact the Japanese economy is in the deeper crisis than the one in the 1990s while the global financial crisis has less affected Japan compared with the western counterparts. At present, the real economy, the Japanese machinery manufacturing industry, is suffering decline in domestic and exporting demands, latter of which has been caused by the present global recession. Furthermore, massive disasters have been added to. These are a distinction from the some
western counterparts, where financial problem has been the focus. The declining export is the serious problem particularly in the case of car industry, which has become the pivot of Japanese economy. In this context, it would be significant to examine the process about how the *keiretsu* for the Japanese car industry has been rationalised to survive, as the *keiretsu* relationships between car makers and parts suppliers have been the basic strategy in performance ever since.

1. Issues

In a stagnant business in both domestic and exporting demands, car makers and suppliers are looking at the conventional *keiretsu* relationships and modifying it for increasing sales and being more competitive in performance, in different ways. Reflecting this trend, there emerged two main aspects on the *keiretsu*; one is the *keiretsu* is dismantling and the other developing. These aspects are reviewed by examining the change in the *keiretsu* relationships in car makers and parts suppliers. In doing so it is expected that the global recession could be exposing the real asset, i.e. the principles of *keiretsu* relationships in Japanese business.

First, it is examined as to how the global recession made the impact on car makers and suppliers in terms of *keiretsu* relationships. Second, we will look at how they are challenging this pressure in managing *keiretsu* relationships. Then the concept of *keiretsu*, what the nature of *keiretsu*, will become an issue. Third, accordingly, we will discuss about the concept of *keiretsu*. While a lot of studies are carried out on *keiretsu* in terms of relationships and performance at the micro and macro level, few referred to the vertical *keiretsu* as an organic whole and to its concept so far. None the less this is an assignment to be done in order to understand the nature of *keiretsu*. This aspect will help to clarify the way of their struggle against the recession while maintaining the *keiretsu* relationships by meshing and closer exchange (Japan Small business Research Institute, 2007b).

2. Car industry: assemblers and suppliers – based on Oikawa (2011b)

The car industry is the centre of the Japanese economy. The ratio of the car industry in the total labour force in Japan is about 8 per cent, and with regard to the shipment of output in Japan, the car industry represents more than 17 per cent. If related materials are taken into consideration, it is almost impossible to find a Japanese industry not related to car making. In contrast to their western counterparts where around 70 per cent of parts are sourced in house, the Japanese car industry outsources around 70 per cent of parts, bearing in mind that a car consists of in excess of 20,000 parts. In other words, for one car maker there are 3,600 part suppliers involved in the different transactions (Japan Small Business Research Institute, 2007b). These suppliers are normally involved in *keiretsu* relationships. Parts suppliers and related industries have spread out almost all over Japan. Therefore, the global recession has hit the heart of the Japanese economy, the small and medium sized suppliers and also related producers, i.e. the vast majority of labour force in Japan.

The Japanese car industry has had a structural problem, and the global recession has contributed greatly to exposing and to deepening this problem. This problem is the gap between demand and supply: 1. Domestic demand is diminishing; 2. Many parts supplier connected with the car industry failed to properly deploy overseas. This surfaced in 2007 as net operating profit started to decline in the car industry (Nakagami and Yamaura, 2009).
Nissan and Toyota

During the early 1990s, the CEO of Nissan dismantled *keiretsu* and got rid of most of Nissan’s *keiretsu* suppliers. Some 40 per cent of the parts suppliers were cut and the share of the rest were mostly sold. Cost reduction was the prime objective for the CEO of Nissan. In the short time span, this was successful in reducing costs of parts, and sales increased. However, Nissan recently changed track, and reconsidered the importance of *keiretsu* transaction relationships with suppliers for reasons of quality and innovation (Nikkan Kogyo Shinbun, 2009). It is said that Nissan focused too much on cost reduction which particularly hurt R&D, and also that the dismantlement of the Nissan *keiretsu* resulted in the loss of suppliers who themselves nurtured quality improvement and innovation of parts. The extent to which Nissan will restructure its *keiretsu* relationships remains to be seen.

Toyota is in contrast to Nissan in terms of its *keiretsu* transaction relationships. In the same year - 1999 - when Nissan declared the dismantlement of the Nissan *keiretsu*, Toyota declared that they would maintain the Toyota *keiretsu*. Further, the president of Toyota remarked that the Toyota *keiretsu* might be strengthened (Nikkei bijinesu, 2001). This was based on the perception that technology for parts production may be lost if *keiretsu* transaction relationships were dismantled, and that the identity of Toyota in terms of technology and differentiation would be lost as well.

Suppliers

Parts suppliers suffered an unprecedented serious impact resulting directly from the recession in the car industry. They have been most influenced by the hovering car market in the United States. In relation to this, further selection or cuts of suppliers could be happening. Otherwise, supplying parts is indispensable for assemblers; therefore principal assemblers may move to rescue them (Fuji Sankei Business, 2008).

In fact, major manufacturing capacities have been strategically based in Japan since, - in spite of hollowing out - 1 half of the total output is still produced in Japan, a half of which is exported overseas. This fact may reflect the reason why parts suppliers are relying on domestic demand. Under such circumstances, the suppliers themselves have been trying to expand their relationships with new customers. While still guarding their traditional exclusive *keiretsu* relationships with existing customers, they have been seeking and creating new patterns of transactions (Tomita, 2001; Shōkōchūkin chōsabu, 2006).

Car assemblers are examining again their manufacturing system and transferring some production bases overseas. This could force structural change in parts suppliers in Japan. Large-sized suppliers of parts are to transfer their production following their customer’s development overseas in order to maintain business transactions. In doing this, they require financial power, or they could go bankrupt losing customers.

Two opposing ways have existed among suppliers in terms of developing overseas (Mochizuki, 2005; Japan Small Business Research Institute, 2006). Some 58.4 per cent of suppliers have no transacting business relationships overseas and the rest, around 40 per cent of them, do. Some 72.0 per cent of the former group have a policy consisting in not fulfilling overseas production, whereas the latter group plans further production expansion overseas.

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1 The following discussion is to a large extent based on the study by Okuto Hajime (2007).
2 Globalisation and structural problems propelled suppliers to develop overseas.
However, it is important to suggest that the consistency of the *keiretsu* relationships between suppliers and principal car makers in both domestic and overseas transaction business may be common.

**Prospect**

As a general trend, *keiretsu* are expanding their networks and ‘meshing’ for survival and development (Japan Small Business Research Institute, 2006). This is shown in figure 1 below. The figure shows a change, from a transaction relationship dependent on a small number of business partners to a multifaceted transaction relationship.

**Fig 1. “Meshing” of transaction relationship**

![Meshing diagram]

Notes: 1. The solid lines indicate vertical links.
   2. The thickness of the lines indicates the strength of the business and marketing ties and level of dependence between enterprises.


It is noted that 57.1 per cent of small and medium-sized enterprises are still under traditional *keiretsu* relationships, *i.e.*, they belong exclusively to their long-term customers. This pattern is increasing (Japan Small Business Research Institute, 2006).
There are four aspects underlying as to how the *keiretsu* relationships can be reorganised (Nakagami and Yamaura, 2009). Each aspect is dependent on which sector will play the leading role in it; these are: 1. Principal assemblers 2. First tier suppliers 3. External sponsors like funds 4. Bank or municipality.

From the viewpoint of assemblers, e.g. Toyota, it is expected that assemblers will rearrange *keiretsu* transaction relationships (Nakagami and Yamaura, 2009). The 2009 White Paper on SMEs expects that small and medium-sized enterprises (SMEs) will get over the crisis by creating and developing markets through innovation, and the study claims that these SMEs should discern potential needs and provide the products and services that society demands accurately in areas such as food safety and security, environmentally safe products and services. In fact, SMEs are trying to explore new products in parallel to expanding their network, and about 80 per cent of these firms think that keeping up with the current or increasing the level of development is within the capabilities of their current business (Japan Small Business Research Institute, 2006). The *keiretsu* relationship, although propelled to be reorganised, does look like a *de facto* ruler in management. Thus what the nature of *keiretsu* is arises as the central issue to be clarified.

3. **Principles of *keiretsu* and a structuralism approach – based on Oikawa (2011a).**

Granovetter (1992) argues that it is important to recognise how economic action is constrained and shaped by the structure of social solidarity in which all real economic actors are embedded, such as Emile Durkheim and Max Weber, who regarded economic action as a subordinate and special case of social action. From this perspective the concept of business groups comes into focus. Granovetter (1994: 454-465) clarifies *business groups* (original emphasis). They have three main features: (1) they are bound in formal and/or informal ways; (2) they are tied up personally and operationally with all the firms; (3) they are distinguished from those, which are united by common financial origins as in American conglomerates, in the existence of social solidarity and social structure among component firms. It is important to note that Granovetter distinguished *business groups* through the existence of the principles of social solidarity and social structure among them from other business groups. These principles can be based on region, political party, ethnicity, kinship or religion. Granovetter (1992) stressed the contingencies associated with historical background, and of social structure and collective action and their corresponding constraints, and claimed that his aim was to find general principles that are valid for all times and places. Granovetter’s stress as such leads us to a structuralism approach to identify the principles of *keiretsu*.

**Principles of *keiretsu*: A structural linguistic approach**

The object is not given in advance of the viewpoint: far from it. Rather, one might say that it is the viewpoint adopted which creates the object (Saussure, 1983, p.8).

Structural linguistics originated from Saussure’s *Cours de linguistique générale* published in 1916.

Accordingly, the works of Sapir (1949) and of Whorf (1952) as structural linguists are briefed in relation to the linkage between language and thoughts.

Sapir (1949, pp.68-90) states that language conditions our observation and thinking, which build up the ‘real world’. We live in the ‘real world’ very much at the mercy of the
particular language. This position was extended by Whorf (1952, pp.167-88) who declared ‘This study (of language) shows that the forms of a person’s thoughts are controlled by inexorable laws of pattern of which he is unconscious [His] thinking itself is in a language – in English, in Sanskrit, in Chinese. And every language is a vast pattern-system, different from others [it] channels his reasoning, and builds the house of his consciousness’. We will compare and contrast the Japanese language with English, following Whorf’s suggestion, in order to clarify the distinction between the two languages in terms of thought and values, and to demonstrate Saussure’s axiom that it is the viewpoint adopted which creates object.

Based on these viewpoints, we will explore how the principles of *keiretsu* are identified with the Japanese language. ‘The self ‘ in terms of language and thoughts will be the central point in this context.

**Language and thoughts**

**Keiretsu**

The word ‘*keiretsu*’ is a common noun in Japanese and commonly used in Japanese society. *Kei* in Japanese means ‘a line, lineage, blood to connect or to be connected’ such as a group of interrelated elements and *retsu* means a line or a row, or an array of people or things lined up organically (Japanese dictionaries). Nakane (1973) described that each group is known informally as ‘of the line of A’ or ‘descended from A’, and the word *kei*, signifying descent or genealogical relationship, symbolises the Japanese social system. This indicates that *keiretsu* is an institution at the national level. The principle of *keiretsu*, therefore, should be considered at a national level.

Thus we suggest that the predominant meaning of the word ‘*keiretsu*’ may be an organic relationship between a group of interrelated elements or of an array of people. This aspect could even imply that all members of such a *keiretsu* group would collapse without trust and dependence upon one another. Such argument refers to individualism and collectivism. As a historical fact, the word ‘individualism’ was imported; there is no root of this word as a concept in Japanese culture. There is also no concept or word for privacy (Kin’daichi, 2002) – a point that confirms the Sassure/Whorf approach to language. Therefore how the self is viewed in the Japanese language will be the focus in evaluating *keiretsu* as the principles in social solidarity.

**Self**

Doi (1981) discussed how psychological *dependence* is structured in both personal and social solidarity in Japan. Anthropologists (Cole, 1979; Rohlen, 1974; Vogel, 1975) have remarked on the *dependence* peculiar to Japan, seen in the family, couples and in the workplace.

With regard to the relation between culture and the self, Markus and Kitayama (1991) contrast America and Asia. In their study, two construals of the self are distinguished: the *independent construals of the self* in the west and the *interdependent* in the non-west. These studies suggest that the relation to the self – which distinguishes Japan from America – indicates distinctive core values of social solidarity. In the following we focus on the self in the Japanese language to examine the principles of *keiretsu*.

**The Japanese language and self**

The study of Suzuki (1984) demonstrates the contrastive distinction of first and second personal pronouns between the Japanese and English languages, and shows a striking contrast in core values between two languages. The basic difference is seen in the use of self-reference and
address. The Japanese language has no first- and second- person pronouns equivalent to those found in English. Japanese terms of self-reference and address serve to specify and confirm the concrete roles of the speaker and the addressee within a given social context. In English, the speaker designates himself/herself by means of a first-person pronoun and then calls the addressee by a second-person pronoun – *I* and *you*. Thus, the function of first-person pronouns is to designate the user explicitly as the speaker. The meanings of the act of using *I* in English is to express verbally that the one who is speaking at this moment is nobody else but me. In contrast, *self-designation* in Japanese is relative and other-orientated. Other-orientated self-designation is the assimilation of the self, who is the observer, with the other, who is observed, with no clear distinction made between the positions of the two. It can be called ‘empathetic identification’. They are accustomed to identifying with, and depending on one another. As Whorf (1952) comments, every language is a vast pattern-system, different from others.

English is quite structured compared with the Japanese language, in the way of thinking and expressing logic, concepts and abstraction. In this context, *I* is the axis in the centre of the speaker’s own world, restructured through his/her own perception. His/her perceived world should be logical and distinctive from the others because of the fixed and stable dimension of *I*. Such an *I* can be described as independent – individualist, egocentric and autonomous. In this way there should be no room for ambiguity or blurring. By contrast, the Japanese language indicates that Japanese people have no concept of an individual in a western sense, and what is more they view the self as being immersed with the other, and thus regard an empathetic identification in order to overcome the distinction between the self and the other. Such values of the self symbolise the social solidarity in Japanese society. This may be connected with the essential implication of the term *keiretsu* – trust and dependence – in terms of social solidarity. For Saussure, what counts as ‘object’ is always dependent on the linguistic framework that creates a ‘view’ of that which constitutes the world. ‘Viewpoint’ and ‘object’ for Saussure are interdependent.

4. **Concluding remarks**

The examination of the Japanese business groups-the *keiretsu* relationships in the global recession confirmed the importance of the principles of *keiretsu*, which are based on the core values of trust and dependence in social relations in Japan. Because of this nature the *keiretsu* principles have hardly changed and could continue as a base of the relationships between SMEs and LEs. It is important to note that business groups are united by the principles. A structuralism approach could make it possible to explain; it is universal that business groups are united based on a variety of principles depending on their particular core values in their own particular country.

**PART II. THE CHAEBLOS**

Hofstede and Bond (1988) remarked that the East Asian countries have common cultural roots in the teachings of Confucius, and under the world-market conditions of the past 30 years, this cultural inheritance has given a competitive advantage for business. This remark may be exactly for the case in Korea.
Korean society seems to be more strongly Confucian than China (Shim, Kim and Martin, 2008) and the chaebols seems to have benefited from the social values derived from Confucianism in different ways. Korea has achieved a remarkable economic growth, which was described a “The Miracle of Han River”. And the chaebols have been the backbone of Korean economic growth.

After the World War II, Korea was one of the world’s poorest countries. With strong government leadership, sound economic planning, and hard work on the part of her people, Korea has achieved a real annual growth rate of over 9 per cent in GNP. In 1985, Korean exports ranked the 13th in the world and the 10 chaebols (Korean business conglomerates) were ranked in “The Fortune International 500” list (Yoo and Lee, 1987). It would be said that the efforts of the chaebols, in particular, have been the catalysts for Korea’s economic development (Yoo and Lee, 1987). This is the effect the government initially intended.

The Korean chaebols are classified in three categories based on the timing of their formation: the late 1950s, the 1960s, and the 1970s. The chaebols of the late 1950s – such as Hyundai, Samsung, and Lucky-Goldstar – were established by self-made founders through governmental support such as preferential allotment of grants, disposal of government-vested properties, and preference in taxation and finance. In fact ‘Korea’s military leaders who served in the Pacific War were familiar with the model of zaibatsu1, and the extensive wartime coordination between the Japanese state and big business, with highly centralised finance as the linchpin, appealed to them...The idea was to graft the zaibatsu onto Korea (Woo-Cumings, 2001: 349).’ Thus they created the Korean zaibatsu by industrial policy, with financial repression as the core mechanism for shifting resources from savers to producers, which created hugely leveraged firms as the carrier of Korean capitalism (Woo-Cumings, 2001).

However the chaebols are different considerably from Japanese zaibatsu in many aspects. In particular ownership and management are strongly controlled by family of chaebols. With regard to ownership, most Korean chaebols employ one of the following three, unique structure of it: ● sole possession by the owner – the founder or his/her family members and relatives own all affiliated enterprises; ● domination by the core company – the founder or his/her family members or relatives own the core company, which in turn, owns other affiliated enterprises; ● mutual possession – the founder or his/her family members or relatives own the core company and/or some kind of foundation, which in turn, owns other affiliated enterprises (Yoo and Lee, 1987). Accordingly, the owner or his/her family members’ influence on management is very strong. If the structure of ownership is sole possession by the owner, the owner or family members’ influence on management is enormous and the most important posts usually belong to the owner’s family members. Thus top-down decision making is common in many Korean chaebol groups. There are twenty-one marriages between the family members of the top 10 chaebols (Lee, Yoo and Lee, 1991).

In fact self-made founders, management by family, and close government relationships are the most unique features among numerous distinctive management characteristics in the chaebols (Yoo and Lee, 1987). The close government-business relationship in Korea is

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1 The chaebol mean the same thing in Chinese characters as the pre-war Japanese zaibatsu. ‘Zaibats refers to the conglomerate corporate group that existed until the post-World War II reform. These groups were controlled by holding companies exclusively owned by founding families such as Iwasaki (Mitsubishi), Mitsui, Sumitomo and Yasuda (Aoki, 1988 ).
distinctively different from the one in Japan. In Korea, the government sets the policies and businessmen follow. The government’s strongest weapon is its control of credit.

5. Issues
A lot of studies were carried out about the the chaebols, and much less studies on SMEs as suppliers in relation to the the chaebols so far. However, the latter’s aspect seems to deserve focused since the chaebols and their suppliers have made up a whole as the Korean export-oriented structure. It is important to assess the level of vertical inter-firm relationships in terms of successful performance as a whole. While the importance of fostering of small and medium-sized firms has been pointed out (Yoo and Lee, 1987), the government has been trying to help the growth of them. However, it looks still on the way. The issues for the government are ‘how we can foster SMEs in Korea?’ or rather ‘how we can learn the way that large enterprises, i.e. Toyota, and SMEs as their suppliers have maintained compatible relationships with each other in Japan? (新宅, 2007). These issues derived from the structural problems of the relations between the chaebols and SMEs, which are resulted in the chronic trade deficit with Japan. In reality, Korea has been dependent parts, materials, and production equipment on imports from Japan (JETRO, 2010). Thus the Korean government has been making a great effort concerned on the reduction of the trade deficit with Japan. These issues and problems point the importance of SMEs in structural relation to the large enterprises.

In the next section SMEs in Korea are described in terms of relations with the chaeblos and governmental policy. Further, the principles of Korean society are explored.

6. SMEs in Korean economy
A strong influence of Confucianism teachings on the Korean society may suggest that the teachings are penetrated into the relations between SMEs and the chaebols. This section will highlight that Confucianism could have contributed to a major hindrance to developing their supplier-user corporate relationships.

The incredible growth of Korea was steered by the government as it is shown in the case of the chaebols. In addition to the receipt of the basic benefits, the government’s control of the banking system has made it possible to steer the chaebols into the industries that the government wanted to develop. These have resulted into the economic structure which relies on the chaebols in economic growth, and SMEs in Korea have lagged far behind in terms of development. In the process SMEs have suffered disadvantaged position in resource related allotment by the government, in contrast to the chaebols which were far more benefited by, obtaining loans during the period of development (1960-early 1970s), designation of General Trading Companies and export financing during the take off period (1970s), preference for taxation and financing; and inclusion in the five-year economic development plans of the government. The Korean SMEs have suffered these one-sided resources allotment and this has resulted in the backwardness of SMEs. In this point the Korean case of SMEs is peculiar. It is universal among the advanced countries that compared with large enterprises SMEs have difficulties in financing. However, it went rather too far in the case of Korea. More than 60 per cent of bank funds was allocated for large enterprises in the name of financial policy. (権, 2005).
The SMEs in Korea have also suffered from their relationships with large enterprises, *i.e.* the *chaebols*. There is a report of the frequencies of various problems for SMEs on a contract with the *chaebols* (Nugent and Yhee, 2002). The most frequent identified of these problems is too low a price for the work. Moreover the frequency of such reports has increase between 1986 and 1997 from 40 percent to over 60 percent. The second and even more rapidly growing problem is delay in payment, having risen from 18.5 percent of the firms in 1986 to 53.3 percent in 1997. Other increasingly cited problems are “demand for too high quality,” “inconvenient timing of orders,” and “too short delivery times.” These circumstances may explain in a way that SMEs could hardly afford to develop technology or innovation. They were better off with importing parts, materials and production equipment mostly from Japan. This could partly explain that the Korean enterprises are good at product innovation but not at process innovation (Jang and Chang, 2008).

These aspects could indicate that SMEs in Korea have been segregated from in terms of governmental aid and separated from large enterprises in terms of cooperative relationships.

**7. Principles of Korean society**

The SMEs and the *chaebols* in Korea are separated institutionally. This is the difference from the *keiretsu* in Japan, where large enterprises and SMEs are united organically and institutionally based on the principles. By contrast, it looks that the *chaebols* have nothing to share the principles of social solidarity with the SMEs. With legacy of being more Confucian than Chinese, Koreans traditionally see power in highly personal terms. Confucian values are based on family unit. Under these circumstances, the basic tenets of Confucianism emphasise the right and obligations of personal relationships within an established societal hierarchy. Based on family-tie values as such, Korea is a group-oriented society where there is a strong distinction between in-groups and out-groups in behavioural intentions of persons, exploitation of out-groups is common. In Korean society the family, schools, companies or businesses, regions, rank or position, wealth, scholarly pursuits, can all function as in-groups. What is notable in Korean culture is the rigidity of these distinctions between in-groups and out-groups. Family is the basic unit of in-groups. For example, Koreans often use the concept of “limited good”, which assumes that “good” is limited, and thus if an out-group gets it, that is a threat to the in-group. With this view, Koreans are more competitive, even hostile, when they are dealing with outsiders (Shim, Kim and Martin, 2008).

The relationships between the *chaebols* and SMEs could be explained as the division of them between ‘in-groups’ and ‘out-groups’ based on Confucianism. Such relationships could have been a hindrance of corporate or cooperative strategy for the *chaebols* with SMEs and the other way round. Most significantly the Korean government has installed the foundation of industrial structure based on the Confucian ethics.

**7. Concluding remarks**

We tried a structuralism approach, to explain the peculiarity of the relationships between SMEs and the *chaebols* in Korea. Distinct from the application of a structural linguistics for the *keiretsu* in Japan, Confucianism was focused on to explain the peculiarity in the relationships between them and to grasp the principles based on these relationships in Korea. It is also distinctive from the *keiretsu* that the *chaebols* are separated from SMEs in terms of the principles
of social solidarity. The principles in Korean society are firmly based on the Confucianism. These principles have worked practically for separation and competition between SMEs and the chaebols in Korean economic performance. This could be one reason why SMEs in Korea is still on the way to be really effective in relation to LEs for the contribution to economy, despite the fact that government has been trying to develop an effective and co-operative relationships between them.

CONCLUSION

The global recession has challenged the strength of business organisations in Japan, Korea as well as in the rest of the world. Reviewing the struggle and effort in the car manufacturing industry in Japan, it became clear that it is basic to indentify the principles of keiretsu to assess their strength with regard to corporate or co-operative strategy. With regard to the principles, Granovetter’s definition of business groups has led us to a structuralism perspective. This allows us to realise the basic differences of principles among different business groups in different countries or regions, and at the same time to unify the differences as such into an universal concept of business groups in terms of principles.

It could be suggested that it is important to realise the relationships between SMEs and LEs as an organic whole. In doing so, we could find alternative aspect or the strength of particular business organisations in particular region or country as seen in the cases of keiretsu and chaebols.

The concept and the principles of keiretsu may be local, but their significance of any business groups in any region or country could be universal.

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CORPORATE SOCIAL RESPONSIBILITY: BEST PRACTICES AND PROSPECTS IN POST-CRISIS ECONOMY

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ABSTRACT

Global financial crisis clearly showed that traditional factors of growth of the business are not more as effective as before. So, firms should look for new factors that could attract and retain customers and counterparties. One of the most effective among them is corporate social responsibility (CSR) as CSR is intended to produce the social good and thus can improve corporate profits and guard against reputational risks.

Key words: Corporate social responsibility, corporate social reporting, CSR, risk management.

INTRODUCTION

Our objective in this abstract is to explore best practices of CSR (worldwide and in Russia), compare the state of CSR before and after the crisis and conclude whether CSR may really influence the financial performance of the businesses in post-crisis situation.

In recent years, academics in fields of several business administrations have studied the economic and managerial implications of corporate social responsibility (CSR). CSR may be defined, consistent with McWilliams and Siegel (2001), as actions on the part of a firm that appear to advance the promotion of some social good beyond the immediate interests of the firm/shareholders and beyond legal requirements. The European Commission defines Corporate Social Responsibility as a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis.
That is, CSR activities of companies are those that exceed compliance with respect to, e.g., environmental or social regulations, in order to create the perception or reality that these firms are advancing a social goal.

It is not surprising that some firms choose to be socially responsible in this sense. Most large multi-national companies encounter extensive pressure from consumers, employees, suppliers, community groups, government, non-governmental organizations (NGOs), and institutional shareholders to engage in CSR. Such CSR activities might include incorporating social characteristics or features into products and manufacturing processes (e.g., producing aerosol products with no fluorocarbons or making greater use of environmentally-friendly technologies), striving to reach higher levels of environmental performance via recycling or pollution abatement (e.g., adopting an aggressive stance towards reducing emissions), or promoting the goals of community organizations or NGOs (e.g., United Way or Greenpeace). From an economics perspective, companies would be expected to engage in such activities if the perceived (measured or unmeasured) benefits exceeded the associated costs in the view of the decision-making entity.

Recent theories of CSR (Baron, 2001, McWilliams and Siegel, 2001, Bagnoli and Watts, 2003) thus conjecture that companies engage in “profit-maximizing” CSR, based on anticipated benefits from these actions. Examples of such benefits might include reputation enhancement, the potential to charge a premium price for its product(s), or the enhanced ability to recruit and retain high quality workers. For a CSR action to be undertaken by a company, the benefits of engaging in this activity must offset the higher costs associated with the additional resources that must presumably be allocated for the firm to achieve CSR status. Due to rising pressures for and visibility of CSR activities in the increasingly socially aware climate of developed countries, the end result has been a substantial increase in investment in such activities in all OECD nations.

Based on the profit-maximization CSR hypothesis, most academic studies of CSR have focused on a narrowly-defined business-oriented research question: do socially responsible firms achieve higher, lower, or similar levels of financial performance than comparable firms that do not meet the same CSR criteria (Griffin and Mahon, 1997, Dowell, Hart, and Yeung, 2000, McWilliams and Siegel, 2000, and Orlitzky, Schmidt, and Rynes, 2003)? Financial performance is typically defined in such studies in terms of either (short- or long-run) stock prices or accounting profitability (e.g., return on equity, return on investment, or operating profit). Such studies also tend to use the firm rather than the establishment or sector as the unit of observation for empirical analysis, both because they are advancing a “business case” for CSR and due to the ready availability of company-level financial data (e.g., accounting data from Standard and Poor’s Compustat or stock price data from the Center for Research in Security Prices).

Although the business administration perspective of this body of research justifies an exclusive focus on financial measures of performance, from an economic perspective this is unfortunate. A more salient issue in this context is the relationship between economic performance and CSR activities, where economic performance involves technological and economic relationships between output production and input demand, recognizing opportunity costs of inputs and capital accumulation. For example, economic performance may be defined as the amount of (good or marketable) output producible from a given amount of inputs (productivity), the deviation of output produced from that implied by “best practice” production (technical efficiency), or the input/resource use required to produce a given amount of output.
(cost effectiveness). Because such measures are based on evaluating marketed outputs and inputs, this raises questions about whether conventional productivity/performance estimates are biased from not recognizing environmental or other social externalities, and how economic performance might be affected by reducing such externalities.

For public policy makers, clarifying such relationships helps to identify the resource costs of CSR, or “market failures” with respect to CSR (Siegel, 2001). Such information in turn provides guidance on optimal levels of “social responsibility” regulation. For managers, information on such relationships is useful because it helps to inform resource allocation decisions regarding CSR activities. That is, empirical evidence on the magnitude of the tradeoff between cost or productivity and CSR facilitates determining the amount of CSR expenditure that is economically justifiable.

World financial crisis occurred in 2008 had dual impact on development and implementation of CSR policies. On the one hand, companies in crisis conditions had to exercise cost-cutting policy (e.g. reduced all unproductive overheads in order to remain afloat). On the other hand crisis conditions clearly showed that strong relationships within the company (e.g. with employees) and outside (e.g. with customers, suppliers, other counterparties and institutions) built within the frame of CSR allowed to retain personnel and customers and thus effectively face all threats of the crisis. So Corporate Social Responsibility became more relevant than ever in the context economic crisis. It can help to build (and rebuild) trust in business, which is vital for the health of social market economy. It can also point the way to new forms of value of creation based on addressing societal challenges, which may represent a way out of the crisis.

In March 2010 (just after the end of the crisis) the European Commission made a commitment to “renew the EU strategy to promote Corporate Social Responsibility as a key element in ensuring long term employee and consumer trust”. This fact demonstrates growing importance of CSR in the current (post-crisis) conditions and confirms CRS as an integral part of overall strategy for smart, sustainable and inclusive growth. Moreover CSR can help to shape the kind of competitiveness model that new economic situation requires.

The notion of corporate social responsibility first appeared in 70th years of XX century and in developed countries are already elaborated unique social standards and forms of social reporting.

World best practice demonstrates that reasonable social costs may not only be completely compensated, but even bring significantly greater benefits. Idea of corporate social reporting first appeared about 25 years ago but gained particular popularity after first corporate scandals. For example, when Nike corporation was exposed in use of children’ labor in Southeastern Asia only issuance of corporate social reports with special attention paid to problems of labor safety allowed to clear itself. As a result Nike could even increase sales. Petrol companies usually issue such reports after ecological scandals.

So, nowadays it is not a secret that corporate social reporting is an effective way to increase loyalty of the society to the company and its products. According to research performed by KPMG in 2005 52% out of 250 biggest world companies prepared corporate social reports. According to International institute of market research (MORI) in 1998 30% of Britons bought products of socially responsible companies and 28% refused products of socially irresponsible companies. American Conference Board proves that socially responsible
companies have higher return of capital employed (ROCE) by 9.8%, profitability of assets by 3.55%, profit by 63.5% as compared to socially irresponsible competitors.

In Russia corporate social responsibility was long considered as useless spend of money. However many companies (especially those who plan to work worldwide) begin to apply CSR policy in their work and this way increase company’s capitalization and sales volume. For CSR development in Russia was created a special committee within the Russian Union of manufacturers and entrepreneurs (RSPP) which is assigned to promote CSR ideas in business environment, to perform independent audit of corporate social reports, to inform the society of social initiatives of the business.

Most companies issue social reports in free form (in Russia and worldwide). This is usually presented by illustrated booklets with description of company’s charity activities, of education, health or sport support. This form is very easy-to-use for companies but cannot assure reliability of data. Moreover it is not comparable with reports prepared by other companies according to international standards and thus not recognized by the international organizations.

In the world practice are implemented several standards of corporate social reporting. However in Russia reports prepared according to these standards are unique as their strict rules are not welcomed by the majority of Russian companies.

Currently in world practice are implemented four essential standards:
- AccountAbility AA 1000 (is based on assessment of companies success in economical, ecological and social areas);
- GRI (describes company’s social, economical and ecological advance);
- ISO 14 000 (is based on company’s compliance with ecological requirements in production);
- Responsibility standard SA 8000, elaborated by the Social Accountability International, which makes point on human’s rights and health and sets requirements to social aspects of HR policies of companies.

Competent combination of the above stated standards creates synergetic effects. In the world practice may be found examples of simultaneous use of several standards: for example, performance indicators may be taken from GRI and description part may be based on AA 1000.

Corporate social reports should include not only gains of the company but also problems and threats as well as possible ways out. More bigger is company and its influence on the society and environment, more important becomes corporate social reporting for it and independent confirmation of its reliability. So, the company must disclose its problems in the reports as nobody can get over the difficulty if does not know and understand it. In such situation lack of disclosure of problems and difficulties in the report may indicate that company’s management either does not understand it or conceals it. Moreover problem approach is more favorably welcomed by the society and enhances confidence.

So, the majority of well-done social reports contain the essential events of the reporting period (both positive and negative). For example, in BP’s report there are sections “Progress” and “Troubles”; in LUKOIL’s report – “Main results and challenges” etc.

What is more important – that the company discloses not only troubles that it faced but also measures that were taken or are planned to minimize possible damage. Presence of such section in the report confirms that social responsibility policy in the company has consistent and
controllable character that is the one of the most important factors for investors and for business assessment as a whole.

Open social information allows also making image of attractive employer. Socially responsible companies usually attract best employees which are the most significant factor of business growth. Moreover corporate social reporting raises reputational gains: enhances investors’ and stakeholders’ confidence, attracts and retains best human resources.

So, for example, tobacco and petrol companies use corporate social responsibility to demonstrate their participation in environment protection activities. Moreover, corporate social responsibility has significant risk-management function as disclosure of non-financial information reduces long-term risks (e.g. may decrease cost of capital, increase confidence, shows company as a “good” counterparty, demonstrates that the company not only does right but does right things).

World experience shows that regular corporate social reporting brings explicit financial benefits. This is confirmed by both investors and companies. According to research performed by KPMG in 2005 74% of companies prepare social reports based on future economical benefits. The results of self-analysis and self-control allow discovering weak points of business and adjusting business processes in accordance with obtained information. This allows achieving more economical effectiveness in its turn.

Corporate social responsibility of the companies is also important for rating agencies. Many rating agencies consider non-financial indicators stated in corporate social reports, especially for corporate governance ratings. Shareholders’ rights and relationships with interested persons as well as transparency, disclosure of information and audit are very important for assessment of influence of non-financial reports on ratings.

Almost all leading rating agencies (Moody’s, Standard & Poor’s, Fitch and others) and leading auditors (KPMG, PricewaterhouseCoopers, Ernst & Young and Deloitte) in their researches and recommendations accentuate on social responsibility of the business. For example, methodology of transparency rating of S&P provides requirement of disclosure of both financial and non-financial indicators. Within the framework of this component assessment is performed analysis of content of disclosed information and mandatory review of reports about social policies and environmental protection. Lack of completeness of non-financial information disclosed directly influence rating.

All of the above stated corporate social responsibility “bonuses” are not gratis. CSR is a long-term initiative and requires significant costs but then brings more significant dividends.

Preparation of corporate social reports is laborious and takes time; so many companies prefer prepare social reports biyearly or rarer. This is explained by large volumes of information which is not easy to process. However the regularity of social reports issuance may be itself an indicator. That is why companies address to professional consultants who may prepare complete report. Costs of large companies for consulting and audit services in CSR area may exceed hundreds thousands of dollars.

Instability of Russian market made companies to look for quick or one-time sources of profit that often led to irresponsible behavior. Progressive stabilization of market allowed transferring of business interests in long-term area. However development of CSR initiatives in Russia is very low and instable.
Special organizations in Russia are intended to promote CSR ideas and make business environment understand that CSR is not an unprofitable action but a long-term factor of success and effective instrument of non-financial risk management. In this view it is very important that CSR becomes basic norm of ethical behavior (not a marketing action with short-term aims).

Companies may perform CSR actions in different areas but in order to gain maximum profit it should be standardized. CSR is an effective way to inform investors, stakeholders and clients that the company acts socially responsible. Social report from this point of view is an instrument which makes available all relevant information in respect of such actions and the ways how the company realizes its mission and strategies in respect of economical stability and social prosperity.

CONCLUSION

So, only system approach to social activities (e.g. preparation of non-financial reports according to international standards, informing of the society about social programs, collaboration with specialized organizations etc) may bring not only benefits to the society but also financial and economical effect. Positive image of the company and its activity to create conditions for successful development of the society finally increase company’s market capitalization.

REFERENCES

DEVELOPMENT OF RISK MANAGEMENT SYSTEM
AS A COMPETITIVE ADVANTAGE IN CRISIS CONDITIONS

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ABSTRACT

Competitive advantages and efficient management became more significant in economic crisis conditions. Developed risk management system enable enterprises to achieve higher profitability and stability level, lower bankruptcy probability then ones without regular risk management. Many estimatory and regulatory risk techniques are engineered in banking, insurance and trading. However, lack of complex risk management enterprise systems improvement researches is felt.

In this paper advantages of corporations providing systematic risk management are considered. Essence and peculiarities of the risk genesis in the context of economic agents are studied. Paper contains authors’ conceptual model of companies’ risk management system, building on cybernetic and process basis.

The paper comprises the authors’ technique developed for identifying risks and accomplishing risk management system being invariant to the enterprises’ economic activities and size. This technique allows to engineer and re-engineer a risk management system on the basis of grouping enterprise risks and its’ statistical measurement for the management purposes. Also technique provides coherent integration of risk management in the corporations’ business administration structure, to increase its effectiveness.

Keywords: Risk, risk management system, business administration, statistical measurement

1. INTRODUCTION

Economic crisis provides new requirements for enterprises. Most of them are related with creating competitive advantages. According to many analyses, risk management system could be the strong advantage in crisis conditions. Enterprises become more resistible to the shocks and more profitable in a long-term period.

In general, all the economic risks could be divided into two large groups. First is connected with tactical business activity and involves the regular risk structure and risk level.
Second is linked to long-term economic tendencies, cycles and concomitant macroeconomic events. Even very successful business will inevitably reduce in economic crisis situation. An enterprise with advanced risk management system will be ready to such condition changing and will easily adapt to recession.

That is why regular risk management is very important for all companies. In spite of number or studies on risk management, e.g. on the concept of Enterprise Risk Management (ERM) [1, 2], nowadays there are no universal techniques of risk management system development.

2. PURPOSE AND SCOPE OF THE PAPER

The purpose of the paper is an introduction of Risk Management system developing technique based upon author’s view of risk genesis in economic systems. The Russian enterprises risks in post-crisis conditions are within the scope of the paper.

3. PROBLEM STATEMENT

3.1. The basic Risk Management problems in post-crisis Russia

Understanding of necessity to improve enterprise Risk Management is among the significant consequence of economic crisis. Companies with developed Risk Management systems are more competitive, flexible and stable, despite of their economic activities and size.

Russian economy being developing and unstable as itself is liable to different internal and external shocks. Risk Management history in Russian enterprises is not very long. Some of corporate executives try to develop Risk Management systems. But there are many obstacles during this process:

− Shortage of experience and skilled personnel.
− “Non-progressive” attitude to risk (considering risk not as essential part of every business but something “bad” and “dangerous” to avoid).
− Lack of understanding Risk Management system necessity and reluctance to invest in its improving.
− Deficiency in methods and techniques of world experience adaptation.

Because of all of these problems there is a necessity to improve Risk Management culture in Russia.

Economic crisis led to renewal in certain business spheres. Some companies collapsed but they are going to be replaced by the new ones. Risk Management is necessary both for the enterprises survived in crisis and the ones set up after it. The first could use their crisis experience, and the second could avoid some mistakes.

3.2. Standards in Risk Management

Nowadays there are some standards in Risk Management. They have their advantages and disadvantages, and could be used in different situations. The main disadvantage is their non-universality. When certain standard is claiming to be universal it usually means some difficulties in usage. It is connected with risk problem complexity.
There are three well known standards in Risk Management. First are a couple of International Standards ISO/FDIS 31000 “Risk management – Principles and guidelines” and IEC/ISO 31010 “Risk management – Risk assessment techniques”. Although these standards are declared to establish a number of principles that need to be satisfied to make risk management effective, there practical usage is rather difficult because of high generalization level and lack of concrete recommendations.

Second is referred as a part of Project Management Standard “Project Management Body of Knowledge”, PMBOK. According to it Risk Management is one of the essential Project Management processes.

Project Risk Management includes the processes concerned with identifying, analyzing, and responding to project risk. It includes maximizing the results of positive overview of the following major processes [3]:

− Risk Identification – determining which risks are likely to affect the project and documenting the characteristics of each.
− Risk Quantification – evaluating risks and risk interactions to assess the range of possible project outcomes.
− Risk Response Development – defining enhancement steps for opportunities and responses to threats.
− Risk Response Control – responding to changes in risk over the course of the project.

These processes interact with each other and with the processes in the other knowledge areas as well. Each process may involve effort from one or more individuals or groups of individuals based on the needs of the project. Each process generally occurs at least once in every project phase [3].

This standard is widely used in Project Management, but its Risk Management part appears to have difficulties in practice. Risk Management process separation seems to be the main disadvantage of this approach, as will be shown below.

The last Risk Management standard is Enterprise Risk Management, ERM. It is most progressive and promising standard, but there are many ways to improve it including different Risk Management system development techniques, risk grouping and estimation.

One of the most encouraging trends is the global acceptance of ERM as the best-practice standard for risk management. Research (Lam, James, 2010) [4] shows that 80-90 percent of global organizations with more than $1 billion in revenue are at some stage of planning or implementing ERM. Approximately one-quarter of these organizations have fully implemented ERM. As a management framework, ERM has been adopted widely compared with other management frameworks (e.g., reengineering, balanced scorecard and total quality management) [4].

James Lam [4] suppose, that in the aftermath of the global financial crisis, corporate executives and board members – as well as key stakeholders such as regulators, investors, and rating agencies – recognize that the efficacy of ERM must be improved. He is marking seven key trends and critical challenges for ERM in the next several years [4]:

1. Board risk governance and reporting.
2. ERM policy with explicit risk-tolerance levels.
3. ERM integration.
4. Risk analytics and dashboards.
5. Assurance and feedback loops.
6. Culture and change management.
7. Risk and executive compensation.

Although there are some difficulties in using an ERM concept, not only on young and unadapted to most risk management principals Russian enterprises.

In Economist Intelligence Unit Report, The Bigger Picture, on a survey of 316 executives from financial services companies around the world in July 2008 [5] there are some empirical facts. Respondents were asked what were the three main challenges of adopting an ERM strategy and the replies were:

− Embedding risk management within company culture 47%
− Difficulty in quantifying risks 45%
− Timeliness and quality of information 44%
− Difficulty integrating risk management with other business processes 39%
− Lack of necessary knowledge and skills within the organization 37%
− Corporate priorities are often conflicting 33%
− Availability of information 33%.
− It’s not clear who is responsible for managing risk 13%.

However, as companies move forward in their implementation of enterprise-wide risk management strategies, their approach will not stop at supporting risk infrastructure and processes. Executives interviewed for report [5, pg. 12] say that in order for ERM to be successful it must be deeply embedded in the culture of the organization. While the development of methods, infrastructure and risk tools to support an ERM strategy are in place in many companies, much work needs to be done to ensure that these are put into practice [5, pg 15].

Most of this work is linked with Risk Management methodology improvement.

4. METHODOLOGY DESCRIPTION

4.1. Methods used
While developing the Risk Management technique we used several methods, such as: probability analysis, modeling, cybernetic and business process approaches.

4.2. Risk genesis model
Before developing Risk Management technique we have to describe the risk genesis in economic system (e.g. enterprise).

In Risk Management practice in the so-called "non-stress" situations (without shocks) we can consider that we are dealing with an enterprise as a stochastic system. It means that system outputs stochastically depend on its inputs. This assumption makes it possible to develop the following model.

Changing the economic characteristics of the object (enterprise or its department), both in space and in time, is usually regarded as moving in phase space (state space).

It is a “conditional mathematical space whose dimension is determined by the number of parameters that characterize the state of the system during its transformation” [6].
Suppose we consider an economic system that has \( s \) parameters (degrees of freedom). In other words, the system is described by \( s \) different variables denoted \( q_t \), where \( t = \overline{1, T} \). The values of the variables tend to change within a short period of time. Types of changes are regular and they form some short-term trend, unique for each variable. It depends on previous changes, their intensity and associated with the inertia of economic processes. Its strength can be estimated by the autocorrelation coefficient. We denote this "unit" trend by \( w_t \). The system state at any moment is characterized by the pair \( q_t \) and \( w_t \). Various states of the system can be mathematically represented by points in phase space.

Note that each economic system has its own phase space. The number of dimensions is equal to twice the number of degrees of freedom.

Every point of the phase space (phase point) represents a specific state of the economic system. It describes by definite values of the coordinates \( q_t \) and "unit" trend \( w_t \). Over time, the state changes and, accordingly, the phase point of the system will move and circumscribe a particular line, referred to as the phase path.

Due to extreme complexity of both external and internal processes of the economic system, we can say that over a long period of time it will be in a large number of its possible states. We denote \( \Delta q_t \Delta w_t \) a small part of the "volume" of phase space corresponding to the values of its coordinates \( q_t \) and "unit" trend \( w_t \), lying in some small intervals \( \Delta q_t \) and \( \Delta w_t \). Let \( \Delta T \) is the part of the total time \( T \), during which the system was located in this part of phase space \( \Delta q_t \Delta w_t \) (i.e. in states that represent the phase points in this space part). With an infinite increase of the total time \( T \) the ratio \( \frac{\Delta T}{T} \) will tend to some limit.

This value can be regarded as the probability of the economic system at some moment to be in the \( \Delta q_t \Delta w_t \) phase space part.

Proceeding to the infinitesimal element of phase volume

\[
dqdw = dq_t dw_t \quad \text{d}q dw
\]

we can introduce the probability \( dp \) of states represented by points in this element. It is the probability of \( q_t \) and \( w_t \) have values in infinitely small intervals between \( q_t \), \( w_t \) and \( q_t + dq_t \), \( w_t + dw_t \). This probability \( dp \) can be written as

\[
dp = f(q_1, q_2, \ldots, q_s; w_1, w_2, \ldots, w_s) dq dw
\]

where \( f(q_1, q_2, \ldots, q_s; w_1, w_2, \ldots, w_s) \) – the probability density function in phase space. Obviously, it must satisfy the normalization condition

\[
\int f(q_1, q_2, \ldots, q_s; w_1, w_2, \ldots, w_s) dq dw = 1
\]

(integral is taken over the whole phase space), which reflects the fact that the sum of the probabilities of all states must equals unity. The density function does not depend on the initial state of the economic system, as well as on the initial states of other systems with which it interacting (its environment).

At any given time some operations take place in a system. During operation the control Subject makes decisions as a choice of one of several possible actions. His decision based on a plan or forecast of future system state. However, in the goal moment it can be anywhere of phase space, near or far from the goal phase point. And the exact point is being unknown. We don’t know what phase path the economic system will move.
This difference between forecasted (planned) and actual phase path creates uncertainty which is the essential cause of the risk in the economic system. But the risk is realizing through the control Subject. Therefore, to the external observer, the decision-making uncertainty is added to internal and external uncertainty.

It tends to rise under a high level of information uncertainty. Thus risk is connected with stochastic essence of the economic system and with direct involvement in its functioning individuals as the decision making subjects.

### 4.3. Principals of Risk Management

The stochastic essence of risk leads to complexity of Risk Management. Although Risk Management is based upon the universal management principals, it has some features to study.

![Fig. 1. Risk control at the feedback basis](image)

Fig. 1. Risk control at the feedback basis

1. Risk management is always a part of the general company management.
2. Risk as itself could not be a separated control Object; it is always mediated by an economic situation and specific object. Risk is not a physical object; it is a special characteristic of the situation.
3. Equal risk parameters could be differently interpreted by different risk control Subjects.
4. One risk Object could have many risk sources that makes risk control more complicated.

Risk management system has to be developed on the feedback basis (see fig.1).
4.4. The cybernetic and business process approach

The technique of development risk management system is based on both cybernetic and business process approach. Cybernetic approach supposes Risk Management system consisting of two parts: risk control Subject and Object. The main condition of stable control process is the feedback.

Risk control is an iterative process. In each cycle the information about the Object comes to the risk control Subject that develops and implements the control action. The next stage is evaluation of changes occurred in risk characteristics of the Object. Using this information risk control Subject produces new corrective control actions. For a general scheme of the Risk Management process see Fig. 2.

Note that in special case when the risk parameters are the basic or weakly connected with the others, the other Object characteristics could stay unchanged. But since the risk is a special feature of economic object, its parameters are the derivatives from others. Therefore changing in Object control state will lead changes in a certain set of parameters.

Thus Risk Management is part of the overall enterprise management aimed at risk minimizing.

Risk Management separating as a process seems to lead to its ineffectiveness. Every management functions and control actions have a risk management features, because we could not find business process without any risk. We can control a process not controlling the risk, but we cannot control risk without controlling the business process underlying.
For Risk Management purposes traditional business process modeling method is supplemented with cybernetic elements, such as control subject (see Fig. 3).

Risk points could be linked with process input or output. The development of risk management system technique includes the following elements:

- Process notation of risk management.
- List of risks to control.
- Risk control subjects (for every process).

Process notation of Risk Management is based on the main principals of business process modeling. It is an IDEF-like risk control graph (see Fig. 4). Adding risk control subjects allows...
realizing the feedback principal. The depth of process notation nesting is connected with subordination and responsibility of enterprise managers.

The scale of risk consequences is also important. We obviously needn’t to control all the possible risks, but only that have a scale of consequences larger than some threshold limit value.

That is why the important part of risk management system development technique is the risks grouping. Grouping bases are the following:

- Scale of risk consequences.
- Risk type (financial, property, moral, etc.).
- Risk management subject.

Inside these groups we can try to evaluate risk using statistical methods. Risk measurement could be relied on the accounting information and forecasts made by statistic and econometric models.

This technique allows constructing the risk management system having the following main principals:

- We tactically managing only the basic risks.
- We have a long-term strategic plan which includes all trend and cycle economic tendencies.
- Every risk we manage has a Subject to control.
- Risk control is a part of every business process management.

4.5. Statistical risk measurement approach

Risk measurement is one of the most important problems in nowadays risk researches. It is known that the best risk measure is probability. It is associates with stochastic risk essence. But in practice we often could not obtain relevant information for probability calculation. So we need to use the other risk measures.

Statistical risk grouping provide opportunity to evaluate risks within groups that helps to control it. We have basic risk groups with clear identified risks. Value of risk consequences is the basis of its estimation. Risk is caused by the probable variation of business process inputs and outputs that associated with moving in phase space.

Although every business process risk could be related to its input, control and mechanism as well as output, but developing risk management principals allow to take into attention only output. It’s because of the feedback basis and exact risk control Subject (see Fig.3). Cybernetic approach gives an opportunity to consider business process to be a “black box”. It means that business process can be viewed solely in terms of its input and output without any knowledge of its internal workings. As process output is usually an input of other process (see Fig.4) we can pay our attention only to outputs.

For the purpose of risk estimation we have to forecast the difference between planned and actual process output value. For regular enterprise business process we usually have statistics of output variation from desirable (planned of forecasted) values. It could be used as a risk measure.

Thus, the essentials of statistical risk measurement approach are:

- Risk is estimated within risk groups.
- The main risk measures (besides probability if we can estimate it) are value of risk consequences and forecasted variation between actual and planned output values.
- These measures could be estimated using enterprise business process statistics.
Note that within this technique we going to estimate only risk itself, not its causes. Estimated risk gives information for appropriate risk control.

5. CONCLUSIONS

Although crises are the integral part of economic development, only a few companies running business in assuming and waiting the finish of current cycle wave and recession start. It is a part of normal human thinking – “not to wait the bad”. But everybody knows that every growth will stop sometimes, because of limited resources. In these conditions Risk Management system is very important and useful. It provides possibility of preventive, “automatic” reactions on crisis challenges, excludes as possible human factor in management and considerably increases long-term stability and profitability of the enterprise. General principals of developing risk management system proposed in the paper, allow Russian companies to achieve a necessary competitive advantage on unstable crisis market.

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POSSIBLE TOOLSETS FOR RESOLVING WEAKLY-STRUCTURED ISSUES

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ABSTRACT
The last few decades saw the rise of processes and phenomena that cause problems, with non-existing mechanisms for their solution. These issues could be called emerging, or more precisely – weakly-structured. They emerge from company, state, integrative and world levels. Therefore, the authors rethink and offer toolsets for structuring these processes and phenomena.

Keywords: weakly-structured issues; resolving mechanisms; structuring toolsets

1. FORMULATION
This matter will be delivered through the following grading: Philosophical view → Conceptual view → Empirical view.

Philosophical view. Paul Feyerabend wrote: "The consistency condition which demands that new hypotheses agree with accepted theories is unreasonable because it preserves the older theory, and not the better theory. Hypotheses contradicting well-confirmed theories give us evidence that cannot be obtained in any other way."  

Today, when "flourish difficult times" the quoted thought contains a very large charge. It suggests that there is a need for new knowledge, expressing in hypotheses and conceptual views. It’s the only way the emerging diversified processes can be explained. And yet, as the same

1 Authors’ participation is as follows: Prof. Atanas Damyanov D.Sc. – section 1 and 2, Head Assistant Margarita Marinova PhD. – section 3, and Assistant Ivaylo Petrov –section 4.
author points (P. Feyerabend)\textsuperscript{1} we can use hypothesis that contradict to the established theories and/or established experimental results.

We can act productively, but also counterproductively.

\textbf{Conceptual view.} Certainly, we will agree that issues surround the whole development of the human beings. We will probably assume that they (the problems) have a different scope and hierarchy. In a past period\textsuperscript{2} as head of the budget organization I was faced with a different type of problems. This provoked me to elaborate my own approach, especially for those I called weakly-structured. To this approach we will be back later in the statement.

In 2000 a study of Prof. Shoichi Hyakkai\textsuperscript{3} was popularized by me. In this study the Japanese scholar focuses on what is a problem, types and structure of the problems, etc.

In considering the nature of the problem, it indicates that there is vacuum (gap) between the target and the current state of the system, or \textit{“something that should be decided, this is a problem”} (See Figure 1).

\begin{center}
\begin{tikzpicture}
  \node (purpose) {PURPOSE};
  \node (current) {CURRENT CONDITION} at (0,2);
  \node (empty) {EMPTY SPACE} at (0,1);
  \draw[very thick] (purpose) -- (current);
  \draw[very thick] (current) -- (empty);
\end{tikzpicture}
\end{center}

\textbf{Figure 1. The Problem}

It is very important how to fill in this empty space.

Further, looking at different types of problems, Prof. Hiakay highlights the following two: regular (normal, traditional) and irregular (abnormal, unusual) problems. The first are interpreted as the structured and the second are the unstructured problems.

In comparative plan we can present them in the following way (see: Table 1):

\begin{itemize}
  \item \textsuperscript{1} Ibid., p. 51.
  \item \textsuperscript{3} Shoichi Hyakkai is professor at Kanagawa University, Japan. See: Hyakkai, S. Problem Structuring. Narodnostopanski arhiv. Year LІІІ. Book 4. 2000, pp. 41 – 46.
\end{itemize}
<table>
<thead>
<tr>
<th>PROBLEMS</th>
<th>Structured</th>
<th>Unstructured</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Their structure was known beforehand</td>
<td>1. Have obscure structure.</td>
<td></td>
</tr>
<tr>
<td>2. The causal link is evident.</td>
<td>2. Lack of identified causal links.</td>
<td></td>
</tr>
<tr>
<td>3. Familiar action can be taken.</td>
<td>3. New types of action should be developed.</td>
<td></td>
</tr>
</tbody>
</table>

As far as the structuring of problems, it is a creative process that borders the hidden (tacit) knowledge.

**Empirical view.** The process of transition, respectively of transformation of Eastern European economies can be defined as weakly-structured. Sure, they can be called also unstructured, but we insist on the first, because there is always a minimum of knowledge. Moreover, in weakly-structured problems and situations the legislation that would help us solve them is almost absent.

Therefore, we propose a procedure which can be followed in solving this type of problems\(^1\). It includes the following phase actions:

**Phase № 1:** Defining the objective and the outcome that need to be achieved. They might be set by the management institution of the company; they also might be set by entities outside the state; might be new, emerging, etc.

**Phase № 2:** Analytical work: identifying the components of the problem, its elements, the processes that take place.

**Phase № 3:** Outlining the stages and activities that must be conducted on each of them.

**Phase № 4:** Preparation of written regulations, rules, directives, which should be guiding principles in time.

**Phase № 5:** Identification of organizational, institutional units which will carry out formulated actions.

**Phase № 6:** Identification of key individuals who will make decisions at their level.

**Phase № 7:** Preparation of the budget - total and for each phase.

The implementation of all these model phases must be managed by a senior manager - organization, institution, etc.

The identified phases are based on our practical experience and without claims of explicitness. They can be enlarged or reduced.

I would afford to list a series of questions, which have characteristics of weakly-structured problems.

For the Republic of Bulgaria they are: the accession process for EU membership, the absorption of EU funds, EU membership itself, etc.

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\(^1\) This procedure was empirically tested by the author during 1992 – 1997.
Within the EU: financial and banking crises that require a change in the fundamental document - the Lisbon Treaty and others.

In global terms it is the world economic balance, etc.

Certainly the path to move from weakly-structured to structured problem has its internal and external logic. Is it possible, however, the reverse process? In our opinion – yes, and that is based on the following assumptions:

HYPOTHESIS № 1: In full or partial depletion of legislation - the state constitution, the different laws that govern and regulate a matter. In this case we are facing a situation of obsolete, outdated or duly constructed new integration, government and company documents.

HYPOTHESIS № 2: In disregard to the normative base – which is inherently paradoxical, but seemed to be considered "normal". Furthermore, we apply the approach for legislature gap. For example, the case when the ownership of a company is being transferred to poor, financially insolvent persons. And then the government faces a weakly-structured situation.

HYPOTHESIS № 3: In the reluctance to change at government and especially at company level, respectively a construction of “private rules”, which are far from what the law requires.

All three hypotheses are confirmed in real political and economic practice, making life harder for domestic and foreign investors – not only those who are already operating in the country, but also those who are considering investment strategies in Bulgaria.

2. WORLD ECONOMIC BALANCE

The imperative of economic balance is valid for any system - human being, firm, sector, national economy.

“Establishing and maintaining a balance means: establishing and maintaining a connection to the proportions of balances, an equivalent development.” At global level, which is not only acceptable but necessary, the establishing and maintaining an effective balance, respectively proportional development, is strictly relevant. At this level it is confronted with many barriers, difficulties and interests of different nature.

The problem “world economic balance” is a weakly-structured problem. According to the Systems theory it holds high complexity - billions of individuals, hundreds of countries, economic unions and dozens of different formats by groups of countries. Furthermore, it is a multidimensional one - external economic, financial, environmental, psychological, and more dimensions. And yet, the world economy has a strong and probabilistic nature.

Should we outline, in the context of all that is stated above, the proposed balance, we will find at least the following:

It is difficult to imagine the desire of the individual to drink water from the Pacific Ocean or to move the Himalayas. But surely one could have such desire.

Translated into economic language, this means an imbalance between consumption and accumulation, respectively savings. Globally, the imbalance between these two pillars is reinforced by the economic behavior of the two giants → the USA and China (PRC).

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In this sense, and to capture shades of knowledge of analytical insight into the world economic balance, we suggest using a combination of ideas for structuring the problems, together with the matrix approach.

This combination between the two approaches is likely to occur in the following order:

I. Construction of a matrix named: Matrix "Consumption - Savings"

II. Philosophy of the Matrix: In Search of Balance, In Search of Excellence.

III. Vectors of the matrix: For now, the matrix will be two-dimensional, namely:

   Vector № 1: Consumption of a country’s population.
   Vector № 2: Savings of a country’s population.

IV. Scale of measuring the vectors - low, average, high importance / value.

V. Possible range in the formation of different meanings of the vectors. Given the complicated nature of both vector and difficulties in providing information, the ranges will be variable.

Thus, we accept:

A. The first vector - Consumption: Low → up to $10,000; → Average $10,001 to $25,000; and High → more than $25,000. Final consumption expenditure is equal to the amount of household spending on final consumption (private consumption) plus total public final consumption expenditure (total government spending).

B. The second vector - Savings: Low → to $1,000; Average → $1,001 to $5,000; and High → more than $5,000. Gross savings are equal to gross national income minus gross consumption plus net transfers.

VI. Graphical representation of the matrix.

Based on the assumed two vectors and their measurement scale a matrix with nine quadrants could be designed. (See: Fig. 2).
### Consumption

<table>
<thead>
<tr>
<th>Low</th>
<th>Average</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Antigua and Barbuda</td>
<td>- Republic of Korea</td>
<td>- Canada</td>
</tr>
<tr>
<td>- Saudi Arabia</td>
<td>- Kuwait</td>
<td>- France</td>
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<tr>
<td></td>
<td></td>
<td>- USA</td>
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<td></td>
<td></td>
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<tr>
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<td></td>
<td>- Austria</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Germany</td>
</tr>
</tbody>
</table>

Savings

<table>
<thead>
<tr>
<th>High</th>
<th>Average</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>- China</td>
<td>- Czech Republic</td>
<td>- Albania,</td>
</tr>
<tr>
<td>- Mexico</td>
<td>- Estonia</td>
<td>- Gulf,</td>
</tr>
<tr>
<td>- Poland</td>
<td>- Slovakia</td>
<td>- Egypt</td>
</tr>
<tr>
<td>- Brazil</td>
<td>- Slovenia</td>
<td>- Bulgaria</td>
</tr>
<tr>
<td>- Russia</td>
<td>- Portugal</td>
<td>- Armenia</td>
</tr>
<tr>
<td>- Turkey</td>
<td>- Latvia</td>
<td>- Moldova</td>
</tr>
</tbody>
</table>

*Letters A to I indicate the quadrants in the matrix and the respective countries, using average data for five years – from 2005 to 2009.*

**Figure 2. Matrix „Consumption – Savings”**

### 3. INTERPRETATION OF THE MATRIX

Here are some possible initial arguments on the structural elements of the matrix "Consumption – Savings”.

- **Analysis of quadrant „A”: Low consumption – High savings.**
  This combination - high levels of savings and low consumption, leads to an economic growth below the potential. As mentioned earlier, the savings are part of the income which is not used for consumption and their high level slows the growth in consumption, production and income, respectively. Accumulated financial resources lower the price of credit and encourage investment. Companies are searching for foreign markets.

  From the perspective of the world economic balance this quadrant is very important, in particular when a large country with considerable economy gets into it. Coupled with production and accumulation, things get complicated for the world. Arguably, China is the boundary between quadrants A and D and contributes to the global imbalances.
Analysis of quadrant „B”: Average consumption – High savings.
The presence of a country or countries in this quadrant is associated above all with their population’s national psychology. Republic of Korea’s enormous and long-standing investment in education gives a strong push for its development and overall role in global economy.

Analysis of quadrant „C”: High consumption – High savings.
Here come the countries of the G-7 format, which are an internal balanced core. In global terms, however, their impact on the global balance is different. USA tends to reduce savings and there is a threat for it to fall into quadrant "F" or "I".

These countries may act stabilizing or destabilizing. Germany has a significant contribution in the search for integrated balance within the EU.

Analysis of quadrant „D”: Low consumption – Average savings.
It highlights two groups of countries. The first group includes countries from BRIC (Brazil, Russia and China). The second group presents new emerging markets → Poland, Turkey, Kazakhstan and others.

Both groups of countries have a promising future importance to the economic equilibrium. Here, however, along with the size of the population, we can identify specific factors, processes that drive countries to progress.

There is a desire for balance in the inner personality, respectively in the country, that would apply to the world. There are different ways to achieve that.

First, for China: Achieving growth of the proportions is done through reforms. Typically, they are made by the active involvement of political/party system (the phenomenon Deng Xiaoping). The Chinese thesis of 1990 that reforms must be affordable for both people and businesses is strictly applied.

This is one possible approach of achieving comparability without any disturbances.

Second, for Turkey: The civilization-religious aspect has been imposed in this country during the last decade. The religion is "harnessed" to search for individual balance, to discover a serious attitude towards work, to achieve a synthesis between modernity and Islam. Religion also has an indirect impact on Poland and Croatia.

Third, for Russia: The country is currently working on the concept: National culture as system-forming factor. This is a serious time with a high potential as it goes towards spirituality. Perhaps, the role of the three factors may be exaggerated, but they should not be neglected.

Analysis of quadrant „E”: Average consumption – Average savings.
All the Central European countries and part of the Baltic Republics fall in this quadrant. The first are characterized with the preservation of industrial memory and their inclusion in the economic development. The influence of the countries from this quadrant is not quite strong, but it holds power of attraction and entry of other large countries can be expected. This quadrant owns steady force.

Analysis of quadrant „F”: High consumption – Average savings.
This sector operates unbalancing, irregularly in regional and integrative aspect. As noted, countries from 'C' can move here, and current countries can go into other quadrants.

Analysis of quadrant „G": Low consumption – Low savings.
This quadrant includes the biggest number of countries in the world, from all continents. This formation is quite heterogeneous – ex-socialist countries, states from the third and fourth
world, and even EU members, a troublesome group because it leads to a sharp increase in the world economic imbalances. This formation of vectors acts destabilizing.

And here we must identify a specific phenomenon - the contradictions in the structure of generations.

As a conceptual basis we have the Bruce Tulgan’s\(^1\) study. It outlines:

a. Generation Schwarzkopf, born in the ‘30s and ‘40s of the twentieth century;
b. Generation Baby Boomers, from 1946 to 1964 onwards;
c. Generation X, born from 1965 to 1977;
d. Generation Y, born from 1978 to 1990;

The last two generations, "Y" and "Z" are extremely different from all previous ones. They have enormous potential and won’t be treated as “useless people”.

When they dominate in quantitative aspect in one country, it may lead to a political and economic turmoil and imbalance. A typical example is the Arab Republic of Egypt. It has a population of 80 million, of whom 60% are under 35 years of age, or about 48 million people! Then rebellion is logical.

In smaller countries by population, young people of Generation "Y" and "Z" just emigrate.

In conclusion of this part of the study, we can point out at least these few conclusions:

Conclusion № 1: In the future, it is appropriate to enhance dynamic interpretation of the matrix, i.e. the transition of individual countries from one quadrant to another.

Conclusion № 2: To achieve depth in the study of world economic balance/imbalance, it is probably necessary to introduce a third dimension/vector in the matrix, such as external debt or the accumulation of the investments, perhaps.

4. POTENTIAL OF THE STATE FORMATS TO RESOLVE WEAKLY-STRUCTURED ISSUES

The existing system of global governance is increasingly confronted with a series of critical moments in the early 21st century. The problems of the international environment become increasingly complex, perplexed and comprehensive; existing sovereign states and multinational organizations are losing their significance; changes in political systems and economic doctrines in the developing world, the redistribution of the axis Consumption-Savings lead to strengthening the role of new countries, which recently were factors only in their region; the redistribution of power raises competing ideas for new priorities and responsibilities.

A series of financial crises that started in late 1990's launched a broad debate on the effectiveness of the existing global financial architecture. To support the efforts to prevent future global financial turmoil and to reform the international financial institutions, new organizations have been created, some of them informal in nature, to converge and catalyze the reform visions of the leading economic countries. A decade later, and an even broader in scope economic crisis, forced the active participation of these formats in the form of measures to tackle the financial meltdown. Member participants in these formats can play an important role in the timely

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resolution of outstanding issues and for setting a new agenda, as well as to facilitate cooperation between developed countries and new world powers.

An article by B. Stark\(^1\) shows a model of the last century’s global political system, regarded as a dynamic system in the context of biological and ecological systems (see Fig. 3). The author presents the political models for 1914, 1940, 1975, 2000 and a projection for 2050. Unlike the bio-model, in the political system the role of key figures (hemostats) is taken by the nations, possessing the greatest power. Factors are the main ingredients of the strength of a nation and presented with an arrow between the periods. These factors of power are:

1) GNP as an indicator of economic power;
2) Population;
3) Military manpower;
4) War technology and during the nuclear age, the number of nuclear weapons;
5) Environmental degradation and deterioration of governance capacity

The logic of the system of strong nations is characterized by a growing deficit in the management and ecology, as well as lack of movement towards self-organized criticality. This system is reproduced again and again after two world wars and the Soviet Union disintegration, it lacks self-organization and self-regeneration. Transition from the maladaptive system of strong nations as a model of global governance is expected not before the second half of the 21st century. If this transition is realized, this would represent a fundamental change in the internal and external priorities of leading nations. A necessary condition for change is these nations to take the burden of the potential changes resulting from both ecological and governance degradation.

![Figure 3. A Model of the Strong Nation System](https://example.com/figure3)

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2 Ibid, p. 3.
Change will come mostly from the ambitions of the few countries that already outgrow their positions of regional players and seek their role in the world - countries such as China, India, Brazil and Russia. For them, existing regulators of the Bretton Woods system - the IMF, World Bank and WTO, are more inhibiting factors to their development, because of the cumbersome mechanism for change and their underestimated role within the current global situation.

Will the new powers try to impose their influence in these organizations on behalf of former leaders - the U.S., Western Europe and Japan? Will they gain back their rightful privileges together, or look after their own respectful interests? If they fail, will they try to create their own structures? What questions will be high-priority ones, and what will be the mechanism for solving them?

A multipolar system generates demand for collective management of common problems. According to research groups such as the Madrid club, global governance has entered a phase of intensive adaptation to changing international relationships and balance of power. Efficiency and legitimacy are the two vectors of the new formula that a reform in global governance will have to resolve. In a world of interconnected risks, segmented institutions are not sufficient for effective management. In a system in which the growing power of developing countries increases their influence, existing frameworks and formats that are not adequately represented, would lose their meaning and representation.

However, it will be more and more difficult to reach an agreement on the process and substance of the international cooperation, and this status quo is likely to continue in the foreseeable future. First, in the post-hegemony of the individual countries world, no single party or coalition will be able to lead the reform of the future multinational architecture in which to replicate itself, its values and interests, as largely USA and Western Europe failed after the World War II in the institutions of Bretton Woods. Instead, the new architecture will be a matter of constant compromise between countries with different historical experience, level of socio-economic development and structure of political systems.

The weakly-structured problem to locate the global economic imbalance, represented by matrix "Consumption-Savings" in the second part of the paper, can be further analyzed by the following statement. Figure 4 shows a model for grouping of existing multilateral and regional agreements and blocks, regardless of their degree of integration (customs union, trade bloc, political alliance, etc.) because they can evolve or stagnate through time with different levels of sufficient political will. Leading in the model are the level of representation of groups of countries and political organizations (such as number of countries, population, economic power), compared with the impact that these entities can and have on the global situation (the legitimacy of decisions imposed by economic, political, legal and military actions and measures). The aim is to find the next policy-makers, to be included in solving both the pressing and forming global emerging problems and situations.

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The Group of 20 (G-20) is only one of the international institutions that were created in recent years to supplement or take over management of the world in the 21st century, still not to compete with established international organizations or replace new forums for cooperation that have emerged in the past years. It is an expression of desire for dialogue of the quadrants C and D of the matrix (see Fig. 3), the lead example of efforts to harmonize the framework for cooperation to meet the new global context, a formula that must return expected results.

The Forum is the result of a pragmatic approach to create a variety of formats that put together on a single table the leading factor-states that deal with both current and emerging challenges, such as the financial crisis, the unification of international accounting standards, nuclear security and climate change. This format of countries, representing over 90% of global GDP, 80 percent of world trade and two thirds of world population\(^1\), while numbers that much facilitate the adoption of common measures, any further expansion could bother this process, is

\(^1\) [http://www.g20.org/about_what_is_g20.aspx](http://www.g20.org/about_what_is_g20.aspx)
still in the process of acquiring legitimacy, and seeking ways to increase its efficiency (moving from Quadrant E to Quadrant I of Figure 4).

However, the G-20 and the spreading of other informal alliances and coalitions show that key stakeholders will accept the imperative of cooperation to deal with anticipating and managing future crises. Displacement in the center of power and interdependencies shape a new multipolar system, which should go the way of legitimacy by addressing the challenges and weakly-structured problems.

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8. http://www.g20.org/about_what_is_g20.aspx
SYSTEMS ENGINEERING AS AN EFFICIENT TECHNOLOGY
OF ANTI-CRISIS MANAGEMENT

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Sarov, Russia

ABSTRACT

The paper discusses a system engineering approach to the identification of complex laws governing the functioning of high-tech industry in a crisis the economy. It has been discussed a new index of resiliency using as a calculation base rates of system engineering and statistical model of high-tech enterprise sustainable development. It’s introduced an example of technological realization of this approach using the proactive indicators of anti-crisis management.

Key-words: creative system engineering, high-tech enterprise, proactive indicators, technology of anti-crisis management

INTRODUCTION

In a crisis the economy a key factor in accelerating the innovation process is the creation of an efficient technology of anti-crisis management. The new way of problem solving is associated with the emergence of such a phenomenon as system engineering, where the focus is transferred to the real-time business process, to the full set of actions, which creates something of value to the customer. Systems engineering approach is used extensively today in best practice anti-crisis management, combines the existence of market mechanisms for measuring and evaluating the economic efficiency of enterprises. Companies use this approach for modeling and analysis of the linkages between product requirements, functional subsystems, complex structures and components, as well as optimizing critical business processes across the enterprise architecture. According to the forecasts of most system engineers, closure of feedback loops for large enterprises will be possible after 10-12 years, but active research and development in this direction has been going on now. System design innovative productions, which have a high added value, determines the success of new product in terms of cost and delivery dates, as well as the ability to meet resiliency requirements.

By D. Hitchins (Hitchins, 2003), in a classic cycle of system engineering to establish different levels of knowledge of the system, from the most high – institutional engineering to
elementary – design and testing of individual elements. The hierarchy of requirements to understand the system is the basis of its functional architecture for simulation of action for creating a unique product and determining the list of critical technologies needed to implement the desired functionality. System design is implemented using the methods of scientific knowledge and simulation customers and markets. Tested in real conditions, the model can be used for logical grouping of functions and components manufacturing subsystems, as well as the physical implementation of logical structures.

In the domestic economy, such a mechanism is still emerging; however, additional empirical study of the possibility of adapting foreign experience in the Russian economic conditions is necessary. Specifics of high-tech industry, due to the complexity of R & D, the nonlinear dynamics of business processes and the uncertainty of demand for technical and scientific products, requires clarification of characteristics of existing relationships between elements of anti-crisis management. On the existing problems in understanding the dynamics of economic entities and the report indicates the National Academy of Sciences of the USA (Haltiwanger et al., 2007).

The emphasis in the western statistical system has traditionally placed on inter-sectoral aggregation, whereas in this approach is not possible to accurately measure the business activity of enterprises and individual enterprises and assess their role in global dynamics. In the understanding and managing systems that are characterized by complex behavior, the key role played by the factor of time. If the perception and presentation of problem situations in the managerial environment is too slow or the solution is generated too late, the response in the high-tech industry may be inappropriate and counterproductive. On the other hand, when there are delays in dynamical systems, there may be an imbalance in which the reactive responses are exaggerated. For example, in controlling high-tech enterprise, as a rule, there is a delay between the time of the release of new products and the time when the production cycle reaches a target value. Lack of understanding of the nature and duration of such delays can be perceived in the management environment, as the lack of systemic response, and lead to a change in the appropriate configuration of business processes, which may require additional efforts and lead to large delays. In this situation, reactive responses can destabilize the system.

Designing systems eventually forms the structure that links into the single unit requirements to functional subsystems, the organization of production processes and product structure. Such a symbiosis of projects / products and processes / operations is a key success factor for sustainable development of production systems and directly connects the high-level product strategy with operational plans of action. Integration of current and future processes is a key element in the development of digital strategies for systems engineering. It provides an opportunity to test the designed business processes and products through the closure of the technological cycle at the time of development and the cycle of continuous improvement. This is crucial for initiatives to improve the efficiency of production, such as lean production, and reduce wastage.

The introduction of lean production did not and does not aim to get instant control over business innovation, moreover, is often complicated by a lack of trust between management levels and the lack of uniform information space. Lean production implementation – a process-oriented cycle, which requires careful and time-consuming, material and human resources. While the actual outcome of a successful system integration techniques of lean manufacturing can be
Companies often act proactively in crisis because they’re under pressure to move very quickly. But setting many strategic priorities does not have to take a long time: in our experience, an initial transformation program can be planned in a month, and a fully integrated and balanced one can be launched-and begin to deliver results-in one year. To move both effectively and proactively, high-tech enterprises doing a special emphasis on the implementation of the strategy to reduce the time-scale business processes. Nevertheless, even a system of real-time control does not guarantee today a sustainable competitive advantage in an aggressive high-tech environment. In such circumstances, is necessary to seek system engineering innovations to improve performance real-time systems.

Meeting the challenges of systems engineering requires the use of proactive indicators. Fundamentals of proactive management laid down in Lorne Plunkett and Guy Hale (Plunkett and Hale, 1982). The authors introduced the concept of «proactive» management or control, based on the prediction of potential problems and proactively developing ways to address them. Today, this area of management has become widespread and has even become a separate sphere of scientific knowledge in the form of engineering, proactive support systems of varying difficulty with appropriate methods, models and tools (Marquez, 2007).

The results of the research team of scientists at the Massachusetts Institute of Technology in the supply chain have shown the vulnerability of the business processes of leading global corporations, to various kinds of failures: budget overruns, variations in consumer demand, a break in the performance of suppliers, failure of management information systems (hardware, software, networks), hardware failures (explosions of boilers, demolition industrial sites, fire), economic downturn, uncompetitive cost structure, fluctuations in interest rates and exchange rates, adverse changes in the rules of corporate law, etc. (Sheffi, 2007). The same study shows an interesting example from Toyota. The earthquake in Kobe on Jan. 17, 1995 at the plant Sumitomo Metal Industries stopped supply of water and gas. This plant was the sole supplier of brake pads for all domestic cars Toyota. Because Toyota was guided by the principles of lean manufacturing, it had no stockpile of parts. Due to lack of brake pads on most automotive manufacturing plants throughout Japan Toyota has stopped because stocks of components to quickly dried up. Toyota lost production due to lack of parts and components according to rough estimates amounted to about 20 000 vehicles (which meant a revenue loss of approximately $ 200 million). This example proves once again the hypothesis that the “lean processes” without fine-tuning is no longer the subject of an absolute competitive advantage for their implementation. Need a comprehensive indicator of the production system engineering, which integrates the key factors affecting the cost of new product development. Such an index could be built in the shape of the resiliency index of production (manufacturing resilience index, MRI):

$$MRI = T_p \times (T_c - L_t)$$

where

- $T_p$ – process takt time;
- $T_c$ – time cycle process;
- $L_t$ – lead time;
- $n$ – number of periods in which the cycle time of the process (without delay) is the tact of the process.

MRI index includes new indicators derived from the principles of systems engineering and time-based value added new product. In addition, this index provides an opportunity to link...
the rate of operative \( T_p \) and strategic \( L_t \) anti-crisis management. The combination of the two indicators is the flexibility of the enterprise system and its ability to automatically recover in crisis with the maximum economic effect.

To measure the delay in the system management of enterprise can use the index of the target run-time processes (Gerst, 2004).

\[
L_i = \frac{Q_i}{C_p}
\]

where
- \( L_t \) – lead time;
- \( Q_t \) – number of transactions in a process;
- \( C_p \) – throughput process.

This indicator measures the time required to perform all of the new product development.

As a general rule, reducing the lead time increases the speed of system response to changes in customer requirements, requires less working capital, helps to reduce overheads and the number of failures/disaster. For example, to shop floor for computer assembly, at the required load of 3 units, with a «bottleneck» 20 seconds to assemble a computer and installed capacity of 6 computers per minute, lead time of 30 seconds.

At each stage of new product development is measured by relevant cluster metrics:

\[
T_s = \frac{T_{mu}}{S_c}
\]

where
- \( T_s \) – system planning takt;
- \( T_{mu} \) – response time;
- \( S_c \) – system capability.

\[
T_r = \frac{ERI}{R_c}
\]

where
- \( T_r \) – research takt;
- \( ERI \) – early research involvement;
- \( R_c \) – research capability.

\[
T_d = \frac{EDI}{D_c}
\]

where
- \( T_d \) – design takt;
- \( EDI \) – early design involvement;
- \( D_c \) – design capability.

\[
T_f = \frac{E_t}{D_p}
\]

where
- \( T_f \) – technological takt;
- \( E_t \) – available machine time;
D_p – instruments demand.

\[ T_t = \frac{T_w}{D_w} \]

where
\( T_t \) – closed-loop production takt time;
\( T_w \) – working hours;
\( D_w \) – consumer demand.

\[ V_p = \frac{T_{TT}}{VAT} \]

where
\( V_p \) – open-loop production takt time;
\( T_{TT} \) – available working time;
\( VAT \) – value added time.

Indicators of creative system engineering (Sobkiw, 2008) correspond to the seven basic requirements by Michael Hammer on developing relevant metrics (Hammer et al., 2007): the unique identity of the object of measurement; high accuracy; focus on timely response to customer needs; low cost measurement process; robustness; system integration into an organization of business processes; promotion of corporate culture dimensions. The new index of sustainable development, reflecting the proactive criteria for resilience of the production system, can be used as a tool for strategic analysis. Given its multi-dimensionality, we can build profiles of high-tech enterprise strategy.

**Graph 1.** High-tech enterprise strategy profile based on index of resiliency
Graph 1 shows the dynamics of the index MRI in stages of new product development in a large high-tech enterprise for the period 2008-2010 years.

Initial data for calculating the index of «resilience» was:

• manufacturing indicators: output, sales volume, work time losses, production capacity;
• voice of the customer metric: time of first contact with the customer, requirements engineering time, early research / design involvement;
• information technology infrastructure metric: CPU utilization, queue time, downturn time, time of process delivery;
• lean production metric: loading equipment, planned downtime, the specification of parts and assemblies, parameters of the production operating model;
• r&d performance metric: design-time prototypes, the number of product models, research design time, the rate of innovation.

Obviously, the “out of crisis” strategy for high-tech enterprise should focus on reducing the time delay at each stage of new product development. During the period from 01.01.2008 to 31.12.2010 the minimum cycle time of process delivery observed at the stage of the «Plan». The share of delays in the planning cycle for the period under review amounted to only 4.83 %. In addition, continuous improvement of IT-governance procedures by introducing elements of anti-crisis management for end-users allowed to dramatically reducing planning takt and organizing documentation in a management information system «just in time». On the other hand, for the same period, the delays in closed-loop and open-loop cycles amounted to more than 57 %, and the time of the design cycle of almost 2 times higher than the production cycle. Thus, huge potential for improving process performance and reduce cycle time in the high-tech enterprise system exist, respectively, in the production and research. Strategic focus of the ideal profile converges to one point and corresponds to the operation without delay, the whole anti-crisis management system high-tech enterprise, organized in real time. Such a state can only be achieved through continuous improvement in the capacity of business processes and reduce the time of their delivery.

<table>
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<th>Indicators</th>
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<th>2010</th>
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<tr>
<td><strong>Plan</strong></td>
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<tr>
<td>Processing time (Tₚₚ), min.</td>
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<td>9.00</td>
<td>8.00</td>
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<td>System capability (Sₚ)</td>
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<td>41</td>
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<td>System planning takt (Tₛ), min.</td>
<td>0.34</td>
<td>0.23</td>
<td>0.20</td>
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<td>Time cycle of “Plan” (Tₚₚ), min.</td>
<td>1.80</td>
<td>1.70</td>
<td>1.62</td>
</tr>
<tr>
<td>Lead time of “Plan” (Lₚₚ), min</td>
<td>0.06</td>
<td>0.06</td>
<td>0.04</td>
</tr>
<tr>
<td>Number of periods in which Tₛ = Tₚₚ-Lₚₚ</td>
<td>390</td>
<td>428</td>
<td>450</td>
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<tr>
<td>MRI of “Plan”</td>
<td>234.00</td>
<td>157.93</td>
<td>138.73</td>
</tr>
<tr>
<td><strong>Research</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Early research involvement (ERI), min.</td>
<td>26.00</td>
<td>33.00</td>
<td>19.00</td>
</tr>
<tr>
<td>Research capability (Rₚₚ)</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Research takt (Tₛ), min.</td>
<td>5.20</td>
<td>6.60</td>
<td>4.75</td>
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<tr>
<td>Time cycle of “Research” (Tₛ), min.</td>
<td>16.02</td>
<td>16.00</td>
<td>9.00</td>
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### Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
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<tbody>
<tr>
<td>Lead time of “Research” ($L_t$), min</td>
<td>3.19</td>
<td>5.00</td>
<td>3.00</td>
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<td>Number of periods in which $T_e = T_c - L_t$</td>
<td>6</td>
<td>7</td>
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<tr>
<td>MRI of “Research”</td>
<td>399.98</td>
<td>508.20</td>
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### Development

<table>
<thead>
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<th>Indicator</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
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<tbody>
<tr>
<td>Early design involvement (EDI), min.</td>
<td>30.00</td>
<td>29.00</td>
<td>20.00</td>
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<td>9</td>
<td>10</td>
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<tr>
<td>Design takt ($T_d$), min.</td>
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<td>15.00</td>
<td>13.09</td>
<td>13.00</td>
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<td>Lead time of “Development” ($L_d$), min</td>
<td>4.05</td>
<td>3.85</td>
<td>2.10</td>
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<tr>
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<td>18</td>
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<tr>
<td>MRI of “Development”</td>
<td>492.75</td>
<td>535.92</td>
<td>501.40</td>
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</tbody>
</table>

### Instrumentation

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available machine time ($E_t$), min.</td>
<td>60.00</td>
<td>60.00</td>
<td>60.00</td>
</tr>
<tr>
<td>Instruments demand ($D_p$)</td>
<td>25</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>Technological takt ($T_i$), min.</td>
<td>2.40</td>
<td>2.14</td>
<td>2.00</td>
</tr>
<tr>
<td>Time cycle of “Instrumentation” ($T_c$), min.</td>
<td>6.86</td>
<td>5.99</td>
<td>5.70</td>
</tr>
<tr>
<td>Lead time of “Instrumentation” ($L_i$), min</td>
<td>3.05</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Number of periods in which $T_i = T_c - L_i$</td>
<td>45</td>
<td>54</td>
<td>60</td>
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<tr>
<td>MRI of “Instrumentation”</td>
<td>411.48</td>
<td>345.99</td>
<td>324.00</td>
</tr>
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</table>

### Closed-loop production

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working hours ($T_w$), min.</td>
<td>492.00</td>
<td>550.00</td>
<td>560.00</td>
</tr>
<tr>
<td>Consumer demand ($D_w$)</td>
<td>145</td>
<td>167</td>
<td>175</td>
</tr>
<tr>
<td>Closed-loop takt time ($T_t$), min.</td>
<td>3.39</td>
<td>3.29</td>
<td>3.20</td>
</tr>
<tr>
<td>Time cycle of “Closed-loop production” ($T_c$), min.</td>
<td>7.00</td>
<td>8.00</td>
<td>7.00</td>
</tr>
<tr>
<td>Lead time of “Closed-loop production” ($L_t$), min.</td>
<td>4.57</td>
<td>3.26</td>
<td>3.30</td>
</tr>
<tr>
<td>Number of periods in which $T_t = T_c - L_t$</td>
<td>50</td>
<td>38</td>
<td>46</td>
</tr>
<tr>
<td>MRI of “Closed-loop production”</td>
<td>412.26</td>
<td>593.21</td>
<td>544.64</td>
</tr>
</tbody>
</table>

### Open-loop production

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available working time (TTT), min.</td>
<td>492.00</td>
<td>492.00</td>
<td>492.00</td>
</tr>
<tr>
<td>Value added time (VAT), min.</td>
<td>167.00</td>
<td>155.00</td>
<td>221.00</td>
</tr>
<tr>
<td>Open-loop takt time ($V_p$), min.</td>
<td>2.95</td>
<td>3.17</td>
<td>2.23</td>
</tr>
<tr>
<td>Time cycle of “Open-loop production” ($T_p$), min.</td>
<td>11.00</td>
<td>9.00</td>
<td>7.00</td>
</tr>
<tr>
<td>Lead time of “Open-loop production” ($L_p$), min.</td>
<td>4.00</td>
<td>4.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Number of periods in which $V_p = T_c - L_p$</td>
<td>19</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td>MRI of “Open-loop production”</td>
<td>391.83</td>
<td>349.16</td>
<td>347.29</td>
</tr>
</tbody>
</table>

Each indicator provides systems engineering performance metrics, which signals that achieved a certain goal. This metric can be measured only after the fact and, therefore, called an indicator of delay. In addition, the composition of indicator systems engineering is the metric of efficiency, indicating that perhaps a general goal. This metric can be measured to give results, and, therefore, is called «dead indicator». According to the theory of system dynamics, the set of variables that exist in complex systems, have a causal link in the chain of feedback, continuously
interacting. Searching for new patterns in the anti-crisis management high-tech enterprise with a lot of feedback involves the formulation of a new hypothesis of its development. System capacity is constantly increasing as the synergies of the factors of influence (Graph 2).

**Graph 2. Cyclogram of anti-crisis management high-tech enterprise**

Systemic relationship between feedback loops make up the structure of the system, which is a major determinant of behavior throughout the organization as a whole. For example, research and industrial organization attracted to innovative development of subcontracting in the early stages of manufacturing layouts - this allows the maximum shorten a new product that contributes to the continuous sliding planning the next development on the basis of successful product analogs and new markets. Thus, the variables measure planning ($T_s$), while early involvement of the customer in designing (EDI) and the capacity of the production process ($C_p$) are connected in a circuit gain of positive feedback. If during production on the market an innovative product demand exceeds supply, it will lead to even greater growth in high-tech production cycles and increase the influence of factors on each other. Graph 2 shows the five loops of positive feedback, the order of interaction which leads to a rigorous structuring of high-tech industry around the life cycle of new product development.

The purpose of this representation structure of the system is to provide anti-crisis management capabilities is premature to understand the complex patterns of development to ensure the functioning of the production system without delays at each stage of the life cycle of new product development in the framework conditions target systems engineering. Framework should be set taking into account the specificity and nature of the interaction of all the key components of the system architecture with the exception of those which do not affect the behavior of the system. After that, it is assumed that all significant fluctuations occur in the interaction of the components inside the system boundaries. Within these same boundaries may be new loop of positive or negative feedback, as well as unique substructure. It is important to
note that the nomenclature of controlled system parameters may change over time as the transformation of elements. Empirical study show that the total of 50 scientific and technical projects the average delay time of high-tech enterprise during the observation period 2008-2010 was 4.8 min. with a standard deviation of 3.827 and has a strong tendency to decrease (Graph 3).

Graph 3. Histogram of throughput production processes of scientific and technical projects

A deep understanding of the laws of the functioning of complex systems and probabilistic nature of the innovation opens new horizons for the anti-crisis management of resources and capabilities of companies, as well as the development of recycling programs, high-tech industries. Difficulties associated with the development of such programs lead to the need to provide the desired pattern in the language of system dynamics using simulation models. Such models will clearly define what the feedback loops are critical for the life of the system and anticipate the negative impact of any type of delays that may occur in the system. During the simulation experiment, managers can assess the impact of possible interference in the functioning of the system under which they may directly influence it for maximum return in terms of organizational goals. Sometimes it may require, for example, violations of the existing links or adding new feedback loops.

Using as a parameter to optimize the time delay makes it a great success dampen cyclical fluctuations in the system of knowledge-intensive production (Graph 4), but also opens up new possibilities for in-depth study of hidden regularities of its functioning on the basis of high-performance machine learning algorithms. These algorithms in real time analyze retrospective and prospective data to predict, prioritize, and optimize critical processes in the high-tech industry.
CONCLUSION

At the present stage of Russian high-tech production system development response time is one of the fundamentals of engineering systems, this measure is intended to help decision maker to initiate a system of anti-crisis management of scientific and industrial organization, timely response, an adequate clock frequency of the development of an innovative product. It’s especially important when using the new generation of control systems that can fully exploit the potential of cognitive distributed business processes. In a crisis, high-tech enterprises are not ready to invest in the development of strategic management, focusing on solving current problems in the restoration of financial balance. Thus, considering the lean production as a crisis measure in the short term, we can conclude that the introduction of systems engineering management is a prerequisite for sustainable innovation development. In the long term we can speak about the use of systems engineering as anti-crisis technology, and as a result – on success of innovation.

REFERENCES

SUSTAINABLE TECHNOLOGY AND INNOVATION MANAGEMENT

Levi-Jakšić, Maja
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University of Belgrade
Belgrade, Serbia

ABSTRACT

The paper deals with the imperative of introducing innovativeness and sustainability principles in development strategies at all levels of the economy and society today. The situation in Serbia is presented and designated as the «Serbian paradox» with indicators of investments into R&D, fundamental and applied research, rising, but direct practical results have been missing according to traditional economic and sustainable development indicators.

The paper further focuses on the sustainability dimensions and principles of sustainable management of technology and innovation. More specifically, an overview of the principles of sustainable development is presented correlated to the principles of sustainable technology innovation development.

The new model of open and sustainable innovation (OSI) is presented and it is argued that OSI strategy and management is at the core of sustainable development of the economy and society.

The research is based on theoretical as well as empirical results, with the efforts and results focused at introducing the new perspective of sustainability into traditional models and approaches to R&D and innovation management at the micro and macro levels of the economy.

Key words: open innovation, sustainability principles, strategy

1. INTRODUCTION

The paper deals with managing innovation for sustainable development emphasizing the imperative of innovativeness and sustainability as the crucial demands for continuous economic and social development.

Open and sustainable innovation (OSI) with entrepreneurial action results in new business ventures enabling sustainable development of the economy and society. Crucial responsibility and starting point for sustainable development lies within technology and innovation management of the firm, with emphasis on the importance of actions and guidance provided in the external environment - legal, economic, political, social, technological, and...
ecological in achieving sustainability goals. Managing technological dynamics and innovation lies at the core of sustainable competitiveness of business operations.

Sustainable technology innovation management relies heavily on the environmental approach to sustainability and has been developed as a scientific field that has multiple tracks.[Marinova, D., Annandale, D., Phillimore, J. (2006)] One track is oriented at engineering aspects of investigating and developing ecological technology, or technology that is safe and does not in any respect represent a threat to the environment, often called «green technology». Ecology management explores links between ecology with business. Sustainable business is the new concept that integrally views all the relevant aspects of modern business taking into account the complex demands and factors, among which the environmental dimensions play a crucial role. Sustainable technology and innovation management is specifically oriented at the aspects of efficient and effective technology and innovation management linked to sustainable business competitiveness, growth and overall sustainable development of economy and society.

Traditionally, valuable, rare, non-substitutable and non-imitable resources represent key factors that create and maintain an advantageous position with respect to competitors. [Barney, J. B. (2004), pp. 99-120.] The sustainable development perspective adds the sustainability as the fifth significant resource attribute.

The core objectives of sustainable society, as defined so far in the political and scientific discourse, include greater social cohesion, more and better jobs (social dimension); economic competitiveness and stability (economic dimension); declining resource use and economic development, safeguarding biodiversity and ecosystem health (environmental dimension); and an open, participatory approach based on equality and non-discrimination, justice and solidarity (institutional dimension). These specifics are, to a large extent, already a part of the sustainable society models. Building and maintaining such a system requires that policies and strategies are developed based upon these principles and resulting in a mixed economic system justified by “value mix”: based on a market economy with its inherent drive towards efficient and productive resource allocation, but correcting the distributional (social), environmental and institutional blindness of the market by means of public policies. [Spagenberger, J., Mesicek R., Metzner A., Luks F. (2002)]

2. OPEN INNOVATION STRATEGY FOR SUSTAINABLE DEVELOPMENT

Vicious circle (circulus viciosus) emerges when the external firm environment is not supportive to innovation due to economic difficulties and crisis. The modern, turbulent and very often unpredictable environments in which firms operate today are viewed also as unsupportive and unstimulating to innovative initiatives and activities and are potential generators of the vicious circle.

The firms generally respond to crisis by responsive strategy, avoiding risks and innovation, which then multiply the negative effects and deepen the crisis. The answer to unpredictability is to decrease all creative activities, which decreases firm's innovativeness and the adoption of the strategy "wait and see what happens to others" and "let the others take the initiative". The strategy of the "follower", or "the second best" is not the best choice in situation of crisis and highly discontinuous, turbulent environmental changes.
The risks of taking new technological steps and entering higher technology levels for firms are most often very high and it does not always mean that this change is also good policy from the economic point of view. The performance of new technology and hence the efficiency of its application is lower to start with than the mature, older technology. The change of one technology level to another not only causes high investment costs, but also reduces earnings and profits. This is why the change to a higher technology level is not only determined by development time and R&D costs, it has to be a strategic decision involving all aspects of the firm and asking for close interrelations and high integrativeness of its internal resources and capacities, as well as strong cooperative relations with external actors in the macro environment that is built upon a strong innovative infrastructure. One overriding feature of the "innovative organization" is its integrativeness, openness and flexibility with dedication to strategic management goals.

2.1. Vicious circle of economy in crisis

When unfavourable external conditions for business increase in the economy, the vicious circle emerges in the relations between organizations and the environment synergetically multiplying the negative effects and transforming them into a cycle which is hard and takes long time to break up even when the overall economic situation in the environment changes positively.

**Figure 1.** The vicious circle of economic crisis, decrease in innovations and rise of threats to the environment
The ways to break up the vicious circle are viewed primarily as the need to initiate, stimulate at all levels of the economy and society entrepreneurial incentives, creativity, and innovativeness.

Figure 1 shows the vicious circle represented as an interrelated chain: the economic crisis and slowdown in all economic activity (economic system in crisis, turbulent changes in all domains highly unpredictable) results in business environment which is unsupportive to innovations - low dynamics of financial capital, technology, markets - defensive firm strategies, "waiting for better times" - decrease of investments, rejecting all risky projects - avoiding risky innovation projects – decrease in new «green» technology solutions – increase of ecological threats - decrease of capacities - decrease of output - decrease of overall efficiency - rising costs - rising prices - decrease of sales - decrease of profits - decrease of national wealth - further aggravation of economic system problems.

2.2. Open and sustainable innovation strategy for breaking up the vicious circle

The breaking up of the vicious circle is found to be possible by enhancing creativity and developing open and sustainable innovation OSI strategy as the only path towards sustainable development.

Open and sustainable innovation (OSI) management deals with the efficiency and effectiveness of knowledge base dynamics. Knowledge entrepreneurship, based on OSI, is oriented at optimizing the sources of knowledge, creating and sustaining the optimal knowledge base and activating all the components of the knowledge base in the effort to create value for the customer. At the company level, it is aimed at providing the right knowledge at the right time in order that the company goals are achieved.

Sustainable development principles are the key principles of knowledge entrepreneurship introducing sustainability conditions at the early stages, i.e. idea generation phases of R&D, all through to the end of the technology/innovation life cycle [Levi-Jakšić, M., Trifunović, M., (2010), pp. 784-793.].

Knowledge entrepreneurship implies strong knowledge base, knowledge management and the additional entrepreneurial components to further develop the knowledge base in order to generate more innovation, opportunity and new ventures leading to the economic and social welfare increase which enables more research and development giving rise to new entrepreneurial cycles, often cited as the new waves of development.

The strategy of open innovation is viewed as the turnaround strategy of positive change within the firm, which will positively effect the environment, vitalizing its parts and breaking up the vicious circle.

The «good circle» is presented on Figure 2. as an interrelated chain: proactive firm strategies of innovativeness and entrepreneurship - more creativity in firms - intensifying of R&D activities - more technological innovations/new green technology - finding new sources of financing (creative financing) - new investments - rising efficiency of all company resources - increase of capacities - increase of output - decrease of costs - rise in sales and profits - increase of national wealth - new technology, organization and market life cycles - revitalizing of the economic system - dispersion of innovative climate, entrepreneurial spirit and stimulation of innovations in the broader economic system context - further incentives to innovative firm strategies.
Figure 2. Breaking up the «vicious circle» with OSI strategy and turnaround towards the «good circle»

The model of open and sustainable innovation strategy is based on the following assumptions:

1. Strategy focused on open and sustainable innovation (OSI) involving the complete “cradle to grave” life-cycle approach;

2. Entrepreneurship guidance with opportunity orientation in the early idea generating phases of innovation and throughout the process of exploration and exploitation to the «End of Life» phase;

3. Focus on soft elements in the form of intangible assets, as well as management principles and practices, entrepreneurship, leadership and emergence of technological rather than technical dimensions at the focus of competitiveness [Levi-Jakšić, M., Marinković, S., Petković, J., (2010)];

4. Open and sustainable innovation (OSI) involves knowledge entrepreneurship related to activities at the level of the global international community, national economies, regions, companies and individuals;
5. OSI means developing strong cooperation links, networks, strategic alliances and other forms of bonds and relations, at international and national levels, that synergetically contribute to emergence of new technologies and ventures contributing in a direct way to sustainable business development and growth;

7. OSI focuses on the use of input from outsiders to improve internal innovation processes, searching for outside commercialization opportunities for what has been developed internally and integrating customers in the innovation process [Huizingh, Eelko K. R. E. (2011)];

8. OSI means developing the infrastructure that supports and stimulates innovation and entrepreneurship, i.e. creating the effective national innovation system, introducing policy incentives for entrepreneurs, developing education system that stimulates individual creativity, leadership and entrepreneurship, etc.;

9. OSI is based on creativity, innovativeness and entrepreneurial culture and climate enhancement in society, economy and companies with well developed knowledge base;

10. OSI involves motivating individuals to gain further knowledge and qualifications with further developing their capacity to manage their own career oriented at innovation and entrepreneurship.

3. INNOVATION STRATEGY INDICATORS - THE CASE OF SERBIA

Evidence from the case of Serbia clearly points to the very explicit roles of entrepreneurship and OSI that are missing in a country where resources are invested in scientific research but not effectuated in the economy and society. The indicators presented below show that although the investments in public R&D have been rising in Serbia, practical results are poor. The links between research phases and concrete development is lacking, innovation lacks entrepreneurship.

In more detail it is shown that there is very low correspondence between fundamental, applied research and patent activity.

3.1. Budgetary funds for science in Serbia and comparative analysis

The European Council has in March 2000 given directive that in Europe the expenditures for R&D are to be increased from 1.9% to the level of 3% of GDP until 2010. Two years later, in Barcelona, an Action plan was adopted related to the increase of funds for R&D.

In Serbia, after a difficult period in the nineties, budgetary expenditure for science increased in gross amounts, from 28 million euro in 2001, to about 100 million euro in 2008. (Table 1).

<table>
<thead>
<tr>
<th>Year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D expenditure (mln €)</td>
<td>27.9</td>
<td>42.8</td>
<td>60.5</td>
<td>56.9</td>
<td>55.5</td>
<td>68.5</td>
<td>86.3</td>
<td>100</td>
<td>86.2</td>
</tr>
<tr>
<td>R&amp;D expenditure (% of GDP)</td>
<td>0.22</td>
<td>0.26</td>
<td>0.35</td>
<td>0.30</td>
<td>0.27</td>
<td>0.29</td>
<td>0.30</td>
<td>0.29</td>
<td>0.28</td>
</tr>
</tbody>
</table>

Source: Budgetary legal act of Republic of Serbia
For international comparisons, budgetary R&D expenditures as percent of GDP in international perspective are presented in Table 2.

Table 2. Expenditures for science in 2007, % of GDP in different countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Expenditure for science (% of GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>3.8</td>
</tr>
<tr>
<td>Finland</td>
<td>3.5</td>
</tr>
<tr>
<td>Japan</td>
<td>3.3</td>
</tr>
<tr>
<td>USA</td>
<td>2.6</td>
</tr>
<tr>
<td>Germany</td>
<td>2.4</td>
</tr>
<tr>
<td>France</td>
<td>2.2</td>
</tr>
<tr>
<td>Great Britain</td>
<td>1.7</td>
</tr>
<tr>
<td>China</td>
<td>1.4</td>
</tr>
<tr>
<td>Spain</td>
<td>1.1</td>
</tr>
<tr>
<td>Hungary</td>
<td>0.9</td>
</tr>
<tr>
<td>Turkey</td>
<td>0.7</td>
</tr>
<tr>
<td>Poland</td>
<td>0.6</td>
</tr>
<tr>
<td>Greece</td>
<td>0.5</td>
</tr>
<tr>
<td>Serbia</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Distribution of the budget for science and development in Serbia is shown in the next Table 3.

Table 3. Distribution of the budget for science in Serbia by sectors in 2009

<table>
<thead>
<tr>
<th>Sectors of Science (according Serbian government official classification)</th>
<th>Distribution of budget between science by sectors – % of total budget for science in 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fundamental research</td>
<td>50.2%</td>
</tr>
<tr>
<td>2. Technological development</td>
<td>39.2%</td>
</tr>
<tr>
<td>3. Development of scientific researchers</td>
<td>5.2%</td>
</tr>
<tr>
<td>4. International development</td>
<td>5.4%</td>
</tr>
<tr>
<td>5. Nuclear and radiation safety</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

Source: MNTR, Serbia

In the document presented in 2010 by the Ministry of science and technological development of the Republic of Serbia (MNTR), «Strategy of Scientific and Technological Development of the Republic of Serbia», it is cited that one of the most serious problems of science in Serbia is the fact that a small amount of funds, from mainly one source, invested in scientific research are distributed over more than 1000 projects that were financed by the Ministry in 2009, i.e. 501 projects of fundamental research for which 50.2% of the budget was allocated.
(see Table 3.) and 471 technology development and 129 innovation projects for which 39.2% of the Ministry funds were invested.

### 3.2. Patent activity in Serbia

According to their main definition and goal, the projects of technological development as result are expected to generate applied technological solutions, patents, pilot plants, new sort innovations, technological advancements and results with direct applicability. In the past period, 2003-2007, in the technological development field, over 3400 technical solutions have been realized. But, in spite of the high number of technical solutions, the number of patent applications from research and development institutions in the period of 2003-2009 has been extremely low, only 54. With these results Serbia has the lowest position in Europe.

The situation seems even worse when it comes to registered patents from public R&D organizations with total of 18 for the period 2003-2008. The structure of patent applications in Serbia is presented in Table 4.

Patents, as indicators of entrepreneurship, show «low patent fertility» of fundamental research institutions, research and development organizations, where most funds are allocated. Companies are in a slightly better position, while the fact that most applications for patents originate from individuals calls for new measures and considerations. One stream of measures are to be expected from the level of the government and ministries that need to develop consistent policy shifting the focus from fund allocating and planning activities to more feedback and control over the results, as well as to the encouragement of entrepreneurship oriented R&D and new ventures. The entrepreneurship missing link is seen as the new focus that is to overcome the wide gap between scientific research potentials and their practical realization for the benefit of the economy and society.

#### Table 4. Structure of patent applications from domestic sources in Serbia

<table>
<thead>
<tr>
<th>Year</th>
<th>Source</th>
<th>Institutes and faculties</th>
<th>Companies</th>
<th>Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>10</td>
<td>24</td>
<td>346</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>4</td>
<td>26</td>
<td>466</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>3</td>
<td>18</td>
<td>351</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>13</td>
<td>29</td>
<td>390</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>2</td>
<td>19</td>
<td>376</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>4</td>
<td>15</td>
<td>370</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>18</td>
<td>24</td>
<td>198</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>54</td>
<td>155</td>
<td>2,497</td>
<td></td>
</tr>
</tbody>
</table>

Source: Agency for intellectual property protection of the Republic of Serbia

The Serbian paradox is the situation where the state investments research projects of public research organizations are rising, but the most patent applications come from individuals.

The entrepreneurial roles have been found to be missing at all the levels – at the level of the state that does not provide entrepreneurial guidance and support all through the project phases and is not giving attention to developing national innovation systems as the necessary
infrastructure, at the level of R&D institutions lacking entrepreneurial orientation and actions, as well as companies lacking entrepreneurial and innovation leadership in searching for new opportunities and strengthening cooperative, networking entrepreneurial competencies and strengths.

4. SUSTAINABLE TECHNOLOGY/INNOVATION MANAGEMENT AND DEVELOPMENT PRINCIPLES

Sustainable management is a concept of strategic management oriented at the achievement of sustainable competitiveness. Sustainable competitiveness is based on appreciation of strategic goals emphasizing competitive co-evolution, networking and partnering, long-term perspective, synergies, satisfaction, high quality of life standards. The emphasis on sustainable technology and innovation management is related to the role of technological innovation and its position at the core of all the business operations, and with focus on primary operations delivering value in the form of products and services to the customers, but also in satisfying the goals of the society, economy, local community, while simultaneously developing profitable business results. [Levi-Jakšić, M. (2006), pp.28-38.]

The underlying principles of sustainable development basically integrate economic, social, industrial and environmental issues in decision and policy making, at all levels of the society. [Mitic and Levi-Jaksic (2006)].

The next table shows the results of the effort to relate the proclaimed principles of sustainable development [Rainey, D. (2006), pp.37.] and sustainable technology innovation management .

Table 5. Transforming the principles of Sustainable Development (SD) into principles of Sustainable Technology Innovation Management (STIM)

<table>
<thead>
<tr>
<th>SD</th>
<th>STIM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coexistence (the right to)</td>
<td>Strategic enterprise thinking, “cradle to grave“ approach, balanced objectives; strategies leading to followers approaching leaders; reducing technological gap; life-cycle thinking; value-chain approach; competency approach.</td>
</tr>
<tr>
<td>Recognize interdependence</td>
<td>Technological cooperation – vertical and horizontal relations; in-sourcing R&amp;D; R&amp;D consortia; technological fusion; competitive co-evolution.</td>
</tr>
<tr>
<td>Respect relationships</td>
<td>Value networks – business environment and natural world; Strategic technological alliances and networking-synergistic effects</td>
</tr>
<tr>
<td>Accept responsibility</td>
<td>Social responsibility – Integrity, Honesty, Enterprise Management; Leading technological change with environmentally sound options, ecologically conscious innovation - ECI, finding the right measure of technological change in relation to political, economic,</td>
</tr>
</tbody>
</table>
Create long-term value

Eliminate wastes

Rely on balanced solutions

Design limitations

Continuous improvement

<table>
<thead>
<tr>
<th>SD</th>
<th>STIM</th>
</tr>
</thead>
<tbody>
<tr>
<td>social, technological and ecological factors - PESTE.</td>
<td>Value creation Create operations based on technologies that offer products and services satisfying the needs of all the stakeholders.</td>
</tr>
<tr>
<td>Create long-term value</td>
<td>Improve operations based on technologies that offer products and services satisfying the needs of all the stakeholders.</td>
</tr>
<tr>
<td>Eliminate wastes</td>
<td>Continuous innovativeness and creativity; Life-cycle assessment–LCA; sustainable technological products and processes.</td>
</tr>
<tr>
<td>Rely on balanced solutions</td>
<td>Openness, transparency, balanced scorecard thinking; Strategic fit as balancing of strategic and operational technological goals.</td>
</tr>
<tr>
<td>Design limitations</td>
<td>Risk mitigation; LCA; Risk assessment; Managing technological risks and threats at the same time accepting the chances and challenges; technological forecasting.</td>
</tr>
<tr>
<td>Continuous improvement</td>
<td>Technological forecasting as the base for short-term/long-term plans and technological strategies.</td>
</tr>
</tbody>
</table>

5. CONCLUDING REMARKS ON DYNAMIC BALANCING FOR SUSTAINABLE TECHNOLOGY INNOVATION MANAGEMENT AND DEVELOPMENT

The complexity of forces active externally and inside organizations, the goals and principles of different domains, functions and processes, often generate the background of confronted and conflicting goals demanding solutions and complex managerial decisions. The need to bring the conflicting goals and interests together in relation to the overall, common interests of company survival, development and growth, poses complex tasks of managerial decision making oriented at constant search for the optimal solutions in terms of „trade-offs” and balances. The balances are particularly important for companies to be able to “adapt quickly to an ever-changing business environment, while being able to seize opportunities to shape that very environment”. [Oliver, D. et al. (2000), pp.3]

The complexity of the nature and problems of sustainable business development is found in:
- multiple goals that businesses have to accomplish today in order to be considered successful and in order to “stay alive”;
- goals are to be determined according to the multiple needs of the broad set of stakeholders;
- multiple business goals corresponding to various needs of the economy, society, legal environment, technological “push” opportunities, ecological, political and legal demands, often are opposed, confronted and demand special attention in order that priorities and goal hierarchies are established based on different methods, models- e.g. “trade-off”s, game theory, the least loss approach, etc.;
- the multiplicity of factors influencing modern business operations;
- various interdependencies and relations of the factors influencing business;
- the very specific nature and various combinations of the influence and relationships of factors towards the achievement of overall business goals;
- the dynamics of change in the established relations meaning that frequently and very often radically, business operations, strategies, goals are to be reconsidered, reengineered and redefined.

The model of open and sustainable innovation management is presented as the approach that contributes to sustainable development.

**LITERATURE**

THE BASIC DIRECTIONS OF MODERNIZATION OF SYSTEM 
OF GRANTING OF HOUSING-AND-MUNICIPAL SERVICES

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ABSTRACT

The Estimation modern theory management and theory of the neoclassical school of management, evolutions of the development of the economy of the public sector in modern post-crisis economic condition allows to form economic mechanism of the regulation of the modern sphere of the public services - housing-public utilities. The Efficient regional regulation market housing-public utilities possible to build on: organizing-administrative and economic method, using as instrument private-state partnership; the principle "gold sections" in structure of the property of the enterprise, in structure of the costs on housing-and-municipal services consolidated budget RF, regional budget and budget of the municipal formation; use the system of management quality in accordance with international standard ISO 9001 (authentical him national standard - a GUEST R ISO 9001-2001).

INTRODUCTION

The work purpose consists in working out of conceptual model of the institutionally-economic mechanism of management and regulation of sphere of housing-and-municipal services, expansion and specification of conceptually-methodological bases of the theory of management by service hierarchical system of granting of the socially-significant blessings, presented by housing-and-municipal services, definition of methods, algorithms and technologies of acceptance of administrative decisions, creation of the effective organizational-economic mechanism of regulation of the market of housing-and-municipal services at all levels of a hierarchical control system.

Object in view achievement has predetermined logic of conducting research and necessity of the decision of following problems:

1. To expand and specify from a position of the system-structural analysis theoretical approaches to management of hierarchical service social and economic system of granting of housing-and-municipal services, for what:
- To investigate teoretiko-conceptual bases of management of sphere of services in a cut of housing-and-municipal services in frameworks client the approach and conceptually to prove a role and a place of housing-and-municipal services in the general system serves a complex;
- To reveal imperatives and to show the social importance of regulation of sphere of housing-and-municipal services at various hierarchical levels of economic relations of economy of Russia;
- To define economic basis and the institutional environment and to develop the organizational-economic mechanism of regulation of modern sphere of the housing-and-municipal services, based on customer process of granting of services.

2. Conceptually to prove regulating influence of federal controls on functioning of the market of housing-and-municipal services by means of the decision of following problems:
- To reveal and investigate tendencies of formation, a condition of granting and system housing-and-municipal services regulation at federal level and to analyse evolutionary dynamics of processes of reforming of a housing-and-municipal complex of Russia;
- To reveal effectiveness of decisions of administrative structures of federal level from a position the approach to an efficiency estimation.

3. To investigate organizational-economic, methodical and administrative aspects of regulation of housing-and-municipal services at regional level and to prove methodical approaches to an estimation of efficiency of granting housing-and-municipal services as a result of influence of the operating decision, for what:
- To develop from a position the approach methodical approaches to an estimation of efficiency of granting housing-and-municipal services at level of the subject of Federation;
- To define methods and principles of regional regulation of processes of granting gazo-electro-and heat supplies in the regional markets.

4. To develop the economic mechanism of management of sphere housing-and-municipal services at municipal level:
- To develop and prove methods of planning and strategy of management of the named sphere and to develop the economic mechanism of regulation of sphere housing-and-municipal services, considering character of influence of multilevel controls.

5. To offer the mechanism of increase of efficiency of activity of the enterprises, rendering housing-and-municipal services in the local markets, a way:
- To create the organizational-economic mechanism of intercompany interaction of business structures in such markets;
- To prove innovative organizational structure of the administrative companies in local market housing-and-municipal services and to define prospects of development of small-scale business in housing and communal services sphere.

Object of research is the granting system housing – the utilities, regulated by administrative structures of different hierarchical level: federal, regional and municipal, mediated by activity of the institutes promoting improvement of quality of housing-and-municipal services, and efficiency of economic interaction between the enterprises-service providers and consumers.

Object of research - the organizational-economic and institutional bases of interaction of market subjects and subjects of regulation of sphere of housing and communal services, the precondition, principles, methods and mechanisms of management and regulation of system of
granting of housing-and-municipal services from authorities of all levels and resulting this mutual relation between suppliers and consumers of services.

As theoretical and methodological basis of research positions, concepts and the hypotheses formulated within the limits of the theory of management (including its classical and neoclassical schools) have served, to the general theory of systems (the system analysis), to the theory of the organization, a choice of strategy, public service, a sustainable development of social and economic systems, institucionalism and neo-institucionalism, to the theory of marketing, state regulation (a state policy of granting of socially significant services), stated in works of domestic and foreign authors on a problem of development of sphere of services, management methods.

Following methods of research were thus used: logic, the analysis and synthesis, comparative comparison, expert estimations, modeling, heuristic, graphic, analytical, economic-mathematical modeling and grouping, construction of "a tree of the purposes", the analysis macro- and microeconomic dynamics, the situational, structural and dynamic analysis. In work programmno-look-ahead, settlement-analytical, programmnno-target methods, tabular and graphic interpretation empiriko-faktologicheskoy information are used also. Adresno-selective use of is functional-heuristic potential of private methods has provided reliability and validity of results of dissertational work.

Instrumentalno-methodical the device is based on use of the systemic-functional approach to object of the analysis. The substantiation of theoretical positions and the argument of conclusions of dissertational research were carried out on the basis of general scientific, special methods of the analysis: system, structurally functional, situational, monographic, parametrical, combinations of a qualitative and quantitative estimation, the economic, logic, statistical analysis, and also toolkit of economic modeling, forecasting, marketing and state regulation.

Information-empirical base of research official statistical given Rosstata and bodies of the state statistics of regions of the Russian Federation, including the Rostov region, statistical collections, year-books, bulletins, the departmental directories make, containing official actual materials across the Rostov region, materials of the sociological inspections spent by the author in Taganrog, and also materials of monographies, articles of the Russian and foreign economists in periodicals on fundamental questions of management, marketing, the market,

Theories of services, practice of functioning of sphere housing – municipal services.

The is standard-legal base of research is presented by a number of acts: the Constitution of the Russian Federation, the Civil code of the Russian Federation, decrees and orders of the President of the Russian Federation, the governmental orders and laws of the Russian Federation and its subjects, is standard-legal certificates of legislative and executive power of the Russian Federation and the Rostov region, the state and regional programs of social and economic development. The representativeness of the information used in the dissertation and is standard-legal base, along with application of analytical toolkit, is the argument confirming validity of teoretiko-methodological results of research and presented practical recommendations.

INVESTIGATION

The urgency of a theme of research is defined by increasing requirement of formation of qualitatively new administrative systems, technologies and the tools of regulation adapted for
postcrisis development of economy of Russia. Extremely important it for sphere housing-and-
municipal, the developed administrative and regulating which system is represented ineffective.

As a result of research following results have been received:

Are necessary:

- Tools of the state intervention in activity of the enterprises of housing and communal
services that proves to be true the information on dynamics of an index of volumes of the given
services to the population and dynamics of change of relative density of expenses of house
economy on payment of housing-and-municipal services; and also considerable relative density
of sphere housing-and-municipal services in structure service complex;

![Graph](image_url)

**Fig. 1.** Dynamics of indexes of volumes of the given services to the population on an
electrical supply, gas supply and the water supply, the housing and communal services provided
with structures, operating on makro - meso- and municipal level in the Russian Federation

Tools of interaction with clients and principles of segmentation of the market of housing
and communal services, principles of intercompany interaction in the market of housing-and-
municipal services.

Formation of the institutionally-economic mechanism with a view of regulation of
modern sphere of housing-and-municipal services on makro - meso- and microlevel which
would include in itself components: substantiations and formations of tariffs; establishments of
specifications of consumption of housing-and-municipal services and expenses; regulations of
sphere of housing-and-municipal services of municipal union and the mechanism of interaction
with clients.

The following problem has shown that practice of transition from administrative methods
of regulation of social and economic system of granting of housing-and-municipal services, to
market, hasn't given a positive effect. It has defined necessity of the further perfection and
development of the mechanism of regulation and modernization of system of housing and
communal services, first of all at federal level.

As a result:

- Use the approach of an estimation of efficiency of administrative and regulating
decisions of managing subjects of sphere of housing-and-municipal services of macrolevel as a
result of adaptation of additive function of utility on following key quantitative indicators is
possible: number of housing and communal services working in sphere; a share housing and municipal services in the cumulative total added cost; housing and communal services share in cumulative mid-annual number of the working; the size of available housing per capita; relative density of shabby and emergency structures; the average size of the tariff on housing and utilities on one person; the size of grants for granting of privileges and grants for a family.

Research have shown that the following problem consists available weak links in hierarchical system of granting housing-and-municipal services - regional and municipal levels owing to insufficiency, and sometimes and total absence of theoretically well-founded and effectively operating mechanisms and tools of regulation of processes of granting of services elektro - warmly - gas supply.

Therefore it is necessary:
- The mechanism of regulation of system of granting housing-and-municipal services at municipal level;
- System of methods of regional regulation of process of granting of housing and communal services: organizational-administrative - creation of federal tariff committee, coordination of activity of regional and municipal bodies on regulation of tariffs, formation клиентоориентированной quality management systems, and economic - use of the differentiated tariffs on regions, introduction of a principle of "golden section" in system of interbudgetary relations and structure of patterns of ownership of the enterprises.

Also the technique step-by-step klient pricings on housing-and-municipal services which would be adapted for regions is necessary, depending on type of a climatic zone and would consider city size, a kind of housing-and-municipal services, a consumer category, capacity of the enterprises of housing and communal services of municipal union, level of the income of consumers, a house site, degree of deterioration of available housing. Results of use of the given technique are presented in tab. 1.

<table>
<thead>
<tr>
<th>Service</th>
<th>Operating tariff, RUB</th>
<th>Offered tariff, RUB</th>
<th>Economy, RUB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold water supply</td>
<td>170,08</td>
<td>72,8</td>
<td>97,28</td>
</tr>
<tr>
<td>Heat supply</td>
<td>11,52</td>
<td>1,48</td>
<td>12,23</td>
</tr>
<tr>
<td>Maintenance service</td>
<td>11,79</td>
<td>3,87÷9,29</td>
<td>7,52÷2,50</td>
</tr>
</tbody>
</table>

**CONCLUSIONS**

Market segmentation housing – utilities, in particular, a big city allows to allocate groups of consumers for which services of corresponding assortment, quality and a price level are necessary. The segmentation technique realizes customer the approach in granting housing-and-municipal services which includes: carrying out of analytical work, including with use of a polling method; revealing of "niche" of the concrete enterprise in market housing-and-municipal services; definition of possible volumes of rendering of services taking into account geographical, demographic, behavioural and other principles of segmentation; the organization of rendering of services according to the revealed requirements and forecasts; working out of
strategy of their sale. It creates possibility of regulation and development of the local market of housing-and-municipal services.

The offered institutionally-economic mechanism of regulation of activity of the enterprises giving housing and communal services at municipal level as the component of management of municipal union, includes use of private-state partnership,

Allowing to keep the municipal property on objects of housing and communal services and to involve long-term investments into this sphere, pricing system on housing-and-municipal services, taking into account a climatic zone, level of social and economic development of municipal union, degree of development of housing and communal services, an accomplishment of available housing, competition level in the local market and the average size of the tariff for housing-and-municipal services in the country.

The program-no-design management method at municipal level provides with system of granting of housing and communal services integrated approach, sistem and scientific character of planning of development of system of granting of housing-and-municipal services, and moving, a social and economic condition, is standard-legal base of federal, regional and municipal level, a condition building and power supply sources, a state of environment, a manufacture intensification, scientific and technical progress, national projects and plans for development of housing and communal services of the country, and also – a condition and development of an engineering infrastructure, the municipal union general layout, housing and communal services condition, activity of Federal Agency of tariffs, the Federal commission on tariffs allows to form approach model of development of housing and communal services of municipal union which efficiency is influenced by fuel and energy resources, Enforcement authority of regional level on regulation of tariffs and to realize administrative decisions on a basis: unities of planning of development of national economy, region, a city and a municipal economy that will allow to develop effectively to system in the conditions of the postcrisis period of national economy.

Increase of efficiency of development of sphere of small-scale business probably as a result of realization of model of system of housing service of the population of a city with allocation of the initiating module including the institutional environment of federal level,

Forming is standard-legal base for development of the favorable environment for small-scale business at level of the state, development of sphere of services in system of spheres and branches of an economic complex, strategy of social and economic development of municipal union, strategy of development of system of housing and communal services at municipal level and an estimation of tendencies of development of system of housing and communal services on makro - meso- and municipal level and resultant, allowing to allocate national priorities of development in housing and communal services sphere, creation of the favorable environment for small-scale business development, regional tendencies and laws of development of small-scale business at municipal level, formation of the environment of small-scale business in the local market of housing-and-municipal services and realization of effective models of development of small-scale business in sphere of the local market.

REFERENCES:
REGIONAL ASPECTS OF BIOPHARMACEUTICAL CLUSTER’S FORMATION
IN THE SOUTHERN FEDERAL DISTRICT

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ABSTRACT

The article describes the effect of using a cluster approach to economic development in
the region, signs of its formation, advantages of clustering.
It also covers with general provisions and benefits of creating the biopharmaceutical
cluster in the Rostov region.

Keywords: regional economy, the pharmaceutical cluster, competitiveness, industry.

INTRODUCTION

The transition of the Russian economy from the export of raw materials to an innovative
type of development, which is characterized by the leading role of «knowledge industries» and
high-tech industries, is possible as long as the diversification of the economy, improve the
innovation performance of corporations, including through the creation of new forms of business
organization inherent in the postindustrial economy. The modern model of economy in our
country is connected with the necessity of optimum structure formation. Development of new
high-tech industries due to the formation of numerous feedbacks and the appearance of a
synergistic effect, which may be account using the cluster approach. With the traditional industry
analysis, this approach allows more adequately address the main features of the different
economic sectors and to identify their competitive advantage.

Cluster or industrial group - a group of geographically interconnected companies and
associated organizations operating in a certain area, shares a common activity and
complementing each other [1].

Clusters are the backbone of almost all industrialized countries. By the Russian
government cluster policy is regarded as one of 11 key investment initiatives, which are
instruments to diversify the Russian economy. According to international studies, the most stable
potential operation in the related industries, that is potential clustering possess pharmaceutical and processing industries.

A distinctive feature of the cluster is the emergence within it a number of positive effects, especially the economies of scale of production. Its basis is the availability in the face of one of the firms core innovation cluster for the production of a certain type of product or service.

The second positive effect, characteristic of the cluster is the effect of coverage. In general, the effect of coverage occurs when there are factors of production, which can be used simultaneously for the production of several types of products. This factor is characterized by multi-functional nature. Grouping of firms in the cluster effect of the coverage is greatly enhanced, since there is a possibility to use multi-factor on a variety of enterprises, while minimizing transaction costs associated with its transmission.

The third positive effect of cluster is a synergy effect, which arises in the case of common product standards. Under the action of these three effects (scale, scope and synergy) non-profit enterprise of cluster can overcome the lower limit of profitability with the help of expertise, providing increasing productivity and reducing costs of producing goods.

Thus, the enterprise of cluster gain additional competitive advantages.

In the modern world the state of the national health system depends on the future of the nation. And pharmaceutics play in the overall health system one of the leading roles. The constant availability of a specific set of drugs is a key link in national security.

Modern pharmaceutical industry can be attributed to the most technology-intensive sectors of the global economy, and most of all relates to the development of new drugs.

INVESTIGATION

The Russian pharmaceutical market is one of the most promising among the countries of Central and Eastern Europe, due to its size, continued economic growth and improvements in protecting intellectual property rights. Introduction of high-tech pharmaceutical manufacturing, new technologies lead to higher output and enhance the integration of the industry in the world market. The global pharmaceutical market at present is a tough competition to drugs as a vegetable, and synthetic-based. Thus, the volume of world pharmaceutical market now exceeds $250 billion, four fifths of which are synthetic drugs.

Relevance of the use of cluster approach to modernizing the economy is connected with state-supported areas, sustainable growth of innovation activity.

The formation of cluster policy is aimed at the choice of a competitive model of the economy, the identify the factors and elements that affect the degree of development of competitive relations and mechanisms [2 Some Russian regions have been using a cluster approach for their own economic development. But it takes a clear position of the Government's priorities for industrial development in the context of growing international competition and the entry of Russia into the WTO. Otherwise, the clusters formed by the regional authorities did not survive the competition, even in the domestic market. As shown by Western experience, the cluster policy is based on the doctrine of national science and education, promotion of innovation processes in the economy.

Pharmaceutical market - one of the two branches of the consumer market, where there was not a rise in prices last year, and even watch their decline. According to marketing agency
DSM-group, which specializes in studies of the domestic pharmaceutical market in 2010, drug prices in Russia have fallen by 2-4%. At that time, such as food, according to the Federal State Statistics Service, rose by almost 13%. Stagnation in drug prices - the result of government regulation in this market. Tight control of drug prices the state was at the beginning of last year, after the crisis cost of pharmaceuticals in the country rose by one third, and in some regions - and one hundred percent. The reason for the sharp price rise has served a total import dependence of the domestic pharmaceutical industry. Almost 90% needed for the production of substances delivered to us, so the prices of medicines are directly dependent on fluctuations in currency exchange fees and customs regulations.

Government attention to the pharmaceutical industry is associated with health care reform, the names of important social projects of the decade. In the past few years in the country there are new legislative initiatives to develop pharmaceuticals. First of all, it is a project of the Ministry of Industry and Energy, "Pharma 2020", which is over ten years is expected to create a competitive pharmaceutical industry. In this population should be ensured not only affordable and quality medicines for the treatment of socially significant diseases, but also innovative tools, manufactured in the Russian Federation in accordance with the highest standards. In the Russian Federation to establish the legal basis of the subjects of the drug market is a major task as the Federal Law of 22 June 1998 N 86-FZ "On Drugs" and the Principles of Legislation of the Russian Federation on Health Protection of July 22, 1993 N 5487-1.

The strategy of development of pharmaceutical industry to 2020 and the corresponding federal program is to target program by a public-private partnership to bridge the gap in the innovation cycle between the sphere of scientific research and experimental development and commercialization and launch mechanism of the reproduction industry. The draft federal target program as one of the most important mechanisms for implementing this goal is called the formation of industrial clusters, which represent a group of localized and interconnected developers and manufacturers of products, research and educational centers, equipment vendors [3, pp. 6].

Statement on the establishment of pharmaceutical clusters, which recently made a number of Russian regions, due to changes in government policies towards the Russian pharmaceutical industry. Determination of medical and pharmaceutical industry as one of the priorities of modernizing the Russian economy led to the industry appeared in the scope of measures to stimulate innovative economic development. Development Strategy of the Russian pharmaceutical industry is based on the investment scenario, which assumes a guaranteed quality and affordable drugs to ensure the population of Russia.

The main aim at the production of drugs - generics, is a system of production, marketing, and promotion of generic products prior to the date as will their own innovative products. The next step is the establishment of licensed production in Russia much of the needed innovative drugs purchased by the state and do not have generic equivalents.

At the production of new foreign drugs for the domestic market is the development and production of domestic patentable drugs for topical pharmaceutical directions.

At the final stage of the production of innovative drugs, is assumed the appearance of a large number of domestic developments to bring about the realization of finished products or license its production abroad. A key element of the implementation of this stage is to create an
effective scheme of financing development of innovative drugs, as well as the establishment of research centers to develop innovative products.

As a result of the implementation of measures to modernize the domestic pharmaceutical sector by 2020 the share of domestic drugs sold on the Russian market should exceed 50%, of which at least half should make their own innovative drugs [1, pp. 8].

In the early stages of cluster, efforts of the Government is advisable to improve on the infrastructure and the removal of unfavorable conditions for competition, in the later stages - to remove obstacles to innovation.

Clusters provide a more efficient set of the factors of production, acting as an alternative to vertical integration of companies, which has its negative sides. On the territory of the clusters location ability to attract qualified personnel and other high quality resources is much broader than in other places.

Studying the demand for specialists of pharmaceutical companies revealed the following trends:

- an overall increase in the labor market in this sector,
- the demand for skilled production staff,
- most companies are experiencing a shortage of personnel for scientific and technological and engineering units.

In the coming years, value of highly qualified specialists for the pharmaceutical market will only grow.

At the Plenary Session of the Council of Rectors and the board of the Union of Employers of the Rostov region, held in April this year, discussed the formation of an effective innovation framework. To modernize the economy of the Rostov region should be created innovative, conducting medium. As said the vice-governor: "Today the main aim of the regional economy - the business development of innovative technologies."

"By 2015, half of the most important for the Russians drugs will be made within the country" - said a while ago, Prime Minister Vladimir Putin, mean that in the coming years Russia will have recreated the pharmaceutical industry. The pharmaceutical industry is one of the most important and technologically sophisticated.

In the area of development in biotechnology local companies remain competitive, but they need to grow. Interest of the authorities in the pharmaceutical industry is associated with the course of modernization of the economy, which involves the creation of knowledge-intensive industries with high added value [4, c. 44].

To do this in the coming years in some regions will be established pharmaceutical clusters, where the company will provide full technological cycle - from production of substances to finished dosage forms. One of the points of growth for the revival of the pharmaceutical industry in the country can and should become a project to establish in the Rostov region pharmaceutical cluster.

Relevance of the use of cluster approach to economic modernization of the Rostov region due to the presence of significant prerequisite for a consistent intensification of innovation.

The primary purpose of a pharmaceutical cluster in the Rostov region is to help revive the domestic pharmaceutical industry through the organization in the region of production of innovative drugs and substances, as well as expanding the production of high-quality affordable medicines – generics and biologically active additives under a closed production chain. Rostov
Region has a unique combination of natural resources, industrial and scientific-technical potential for the development of the biopharmaceutical industry.

Resource potential of the Rostov region allows to develop pharmaceutical production on a new level. The goals of the pharmaceutical industry with raw materials of assured quantity and quality and rational use of plant resources in the presence of the Rostov region of sufficient agricultural land and favorable soil and climatic resources do actual cultivation of valuable medicinal plants on an industrial scale.

Center of the future of the cluster should become the city of Rostov-on-Don, a number of businesses which are focused on the production of pharmaceuticals. In the vicinity of the city there are many producers of agricultural goods - suppliers of raw materials for pharmaceutical cluster.

Feature formed by a cluster will consist of three components: chemical-pharmaceutical industry, biopharmaceutical manufacturing and food production with desired useful properties. Natural competitive advantage of the cluster will Biopharmaceuticals and bioparapharmaceuticals, directions, based on the use of natural climatic conditions of the Rostov region. Points of growth in the pharmaceutical cluster in the Rostov region can serve as a small company started by teams of scientists with the involvement of the business.

To create a pharmaceutical cluster has all the bases, as in the city are required for its development segments: the scientific basis for the development of new and reproduction of substances and drugs, the base of preclinical research, development, clinical base in all areas of modern medicine, a system of training qualified personnel.

Rostov Region is able to carry out training for the pharmaceutical industry, using a network of educational centers: Southern Federal University, Rostov State Medical University, Don State Technical University.

Target structuring companies in the pharmaceutical cluster single system would be a logical continuation of an innovative model of urban development.

Development of research directions should be a priority for a cluster of Rostov region, as the city of Rostov-on-Don is one of the largest scientific and medical centers in the south, preclinical and clinical studies of drugs, represent a potentially large market, creating significant multiplier effect.

CONCLUSIONS

Cluster policy development of the pharmaceutical industry in the region involves the coordination of goals and objectives of cluster members to achieve a cumulative effect in promoting the products of the cluster in the pharmaceutical market of the Russian Federation and abroad.

Cluster policy is definitely needed, as it essentially focuses on solving urgent problems of the Russian economy:

First, during the cluster policy raises the question of development and maintenance of competition as the economy of Russia at present has a high monopolization of regional and local markets, which reduces the overall competitiveness of the economy.

Second, the cluster policy on key accounts Microeconomics - Analysis of local markets and companies, and primarily produced by the factors of production (highly skilled workforce, available infrastructure, etc.)
Third, holding a cluster of policies based on the organization of interaction between state authorities and local government, business and science to coordinate efforts.

Fourth, the implementation of cluster policy is aimed at development and capacity building especially for small and medium-sized businesses, which in the Russian economy are still poorly developed.

The Mediated aim of the formation of high-tech cluster is to develop fundamental and applied areas of research centers at no additional cost the federal and regional budgets. This is achieved through the implementation of research projects and provide direction on the part of the revenue modernization of logistics facilities.

The pharmaceutical industry as one of the most technology-intensive industries, should become one of the drivers of innovation development of the region.

Thus, we can expect the following results from the creation of biopharmaceutical cluster in the Rostov region:
1. A significant contribution to the national security of health;
2. Innovative development of pharmaceutical and food processing industries based on natural biological materials produced in the Rostov region;
3. Creation of a radically new, not existing in Russia today, the market of food products with desired useful properties;
4. Reorientation of producers of agricultural commodities to grow medicinal plants on an industrial scale and their primary processing;
5. Production of quality affordable medicines, replacing imported products based on production of primary substances;
6. Health development, health resort and tourism, increased employment in rural areas;
7. The implementation program of replacing imported drugs and the national project "Health";
8. Creation Science and Innovation Center (pharmaceuticals, balneology, technical innovation), with corresponding development of interregional and international contacts and access to external markets.

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CONCEPT OF UTILITY SERVICE GOVERNMENT CONTROL EFFICIENCY IN POST-CRISIS PERIOD

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ABSTRACT

Concept of complex assessment for utility service government control efficiency in post-crisis period is formulated. Necessity of “compromise efficiency” concept introduction for federal government bodies and local authorities as subjects of state regulation is proved. Indicators to reflect efficiency of utility service government control in post-crisis period are proposed.

Key words: efficiency, government control, utility service, utility service provision.

INTRODUCTION

Municipal utility service (MUS) – is a complex social-economic system that involves in its economic relations every household, commercial company, non-profit organization, federal government bodies and local authorities. Every agent of economic relations (AER) in MUS possesses its own controversial, sometimes antagonistic, goals and tends to maximize efficiency of its own functioning.

The purpose of this article is to formulate the concept and on the identification a set of indicators of the comprehensive assessment of the effectiveness of state regulation of MUS of Russia in the post-crisis period.

Theoretical and methodological basis of research were works by domestic and foreign scholars of theory of the effectiveness, of state regulation, economics and governance MUS, the compromise-equilibrium analysis.

INVESTIGATION

The main idea is based on the theory of Professor V.A. Kardash. As professor V.A. Kardash in its monograph puts it: “... any economic world as a wholesome, purposeful, evolutionary system complies with the fundamental law of economic compromises…”1.

Sphere of utility service provision (USP) is not an exception. For its sustainable efficient functioning it is necessary to achieve some kind of interest compromise of all SERs in the given sphere. Whereas the main conflict of USP services providers and consumers lies in the estimation of service rates (tariffs), quantity and quality ratio.

If we exclude from our analysis the interests of federal government bodies and local authorities and methods of utility service government control, the search for compromise rates for USP and “compromise” efficiency will come to the key idea of basic market model design, described by V.A. Kardash.

However, today this definition of the main task is unlikely to be adequate. Withdrawal of the state from the sphere of USP will lead to catastrophic consequences not only for USP services providers and consumers, but to the country as a whole. It calls for effective utility service government control in Russia, and the urgency is higher for the utility complex, where utility services companies (USC) are the subjects to local natural monopoly.

Necessity of government price control for MUS natural monopolies subjects’ activities, in our opinion, is proved by, on one hand, the economic practicability and reasonability of USC monopoly functioning preservation, on the other hand, by economic policy’s social orientation conservation in the given sphere and in Russia as a whole, that is to provide UPS accessibility for population and people’s welfare growth. Obviously, all that is not possible without budget means allocation to cover the negative profits of MUS organizations that arise due to the difference between economically justified rates and utility rates for people.

That is why utility service government control includes two constituents:

- Creation and development of institutional environment for utility complex functioning;
- Determination of optimal budget expenses allocation to USC needs financing and to measures of social protection of population.

In fact, efficiency of this function realization mostly depends on budget means allocation efficiency, i.e. budget efficiency. Efficient activities of federal government bodies and local authorities concerning budget means allocation must provide financial aims acquisition and maximum aggregate effect (economic, ecological, social, political) for municipality, region and the country as a whole provided maximum cover of expenditure.

Budget means allocation to finance USC needs and people’s social protection measures depends on federal government bodies and local authorities’ strategic goals and developed business culture of the region or municipality. For example, budget means allocation to subsidies for USC to cover of expenditure arisen from the difference of economically justified rates and utility rates for people.

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utility rates for people is aimed at price growth control and as a result at people’s social protection, is part of administrative type of business culture.

Budget means allocation to finance modernization and expansion of municipal communal infrastructure aims at USC efficient functioning improvement (lowering the losses, USP quality improvement, environmental friendliness, etc.) implies receiving cumulative effect for the municipal (regional, federal) budget and is a feature of entrepreneur type of business culture.

Thus, utility service government control will be determined by optimal ratio at budget means allocation to:

- Subsidies for USC to cover the difference between economically justified rates and utility rates for people;
- Subsidies for people that are proved by lowering the maximum allowed share of expenses spent on utilities in the aggregate income of a family;
- Repair and / or replacement of destroy and ultimate limit state objects of utility infrastructure;
- New construction and / or modernization of utility infrastructure;
- Capital / major repairs of housing facilities;
- Etc.

Municipal budget means are not enough to finance all needs mentioned above. That is why it is necessary to improve instruments of optimization process economic modeling in budget means allocation to finance these tasks.

Obviously, absolute efficiency of federal government bodies’ and local authorities’ activities in MUS management is impossible. So, in our point of view, the concept and notion of “compromise” efficiency of their activities must be introduced taking into consideration both budget means allocation for MUS needs and their readiness to lower some specific components of cumulative effect in favour of some others and / or budget expenditure growth in case of substantial growth of cumulative effect at relatively low expenditure growth.

Utility service complex government control is a compound process directed to achieve balance of interests of all the AER (Agents of Economic Relations) interconnected with a great deal of social, economic, ecological and at times political risks.

That’s why to get an integrated assessment of the USC state control efficiency it’s necessary to solve quite serious problems connected with the substantiation of the choice of indices and criteria determination of different efficiency components. Not least important task is negative phenomena risk assessment for the utility service complex as well as external impacts for the municipal units, region and the whole country (for their social and economic development, ecology, political background).

When making choice of ecological efficiency indices of management decisions made by agencies of federal government bodies and local authorities it should be taken into account that the damage caused by the USC injuries irreparable harm lives and health of all the inhabitants of the municipal district and sometimes surpasses its bounds. Consequently, ecological criteria priority at budgeting apportionment is high enough.

Moreover, the total impact may cover not only one time period but may be distributed (and not always uniformly) in different time periods (a so called suspended impact), i.e. not only the static (current) efficiency but the dynamic (time period prolonged) one will take place as well.
Particularly, the USC functioning has serious impacts on the housing market and housing affordability evaluation, living standards and life quality of the population, demographic settings, etc.

Now, we shall analyse the USC functioning impact on the demographics of the country as an illustration.

It’s a well-known fact that the USC quality influences health and length of lifetime. Human exposure consequences of water harmful bacterial pollution, heavy metal salts water pollution, excess of amount chlorine in water have been described on several occasions. The low quality of heat supply impact (except for direct decrease of temperature in housing units), gas supply as well as maintenance and repair services are less evident. In particular at insufficient heat supply people use different additional kinds of heaters that not always have a positive impact on micro climate of a dwelling. At that the worst self-supporting persons have no possibility to pay additional heaters and electrical fan heaters electricity demand, etc. That’s why they heat their dwellings by gas-stoves causing chemical pollution of living quarters with gas incomplete combustion products.

The USC economic availability even now influences a household decision to change quarters. It determines amount of available cash of a household that is available after the utilities having been paid and, consequently, influences the quantity and quality of the goods to be used (including foodstuff) and other services (including paid medical and educational services). The above mentioned facts in their turn influence birth, infection and mortality rates. And then the utility rates are also one of the factors determining the inflation rate in the country.

In short, the utility services availability influences the living standards and life quality of the population, the development of human potential as well as demographic settings of the country.

In the modern Russia rather strict measures are involved to control the USC functioning. But the efficiency of these measures is an open question.

In our opinion, one of the USC governmental control most important indices acting as a citizen right guarantor to have an affordable housing is cost distribution of a standard one-roomed flat expanses in terms of an average salary value of an employee according to the decile groups and the proportion of these shares in the first and the tenth groups.

So, according to the statistic information, the utility services rate per 1 m² of a dwelling in Russia in 2007 was about 51.95 rub./m² (varying from 26.7 rub./m² to 205.78 rub./m²)¹. Thus to pay for a standard one-roomed flat of 32 m² total area it was necessary to spend about 1662.58 roubles in Russia. Having calculated the share of expenses for payment of such a flat in terms of an average salary of employees in accordance with the decile groups (See Table 1) we can see that the workers of the first four groups living alone in a standard one-roomed flat are not able to pay the utility services on one’s account². The simple computation demonstrates the “optimistic”

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¹ On an average for Russian Federation regions except for autonomous provinces and districts. Estimation has been realised by the author on the grounds of official statistical information published by FSSS of RF (Federal State Statistic Service of Russian Federation) [Central Base of Statistic Information // Federal State Statistic Service of RF (Official site). URL: www.gks.ru (date of request: 15.09.2010)].

The poorest inhabitants of Russia who belong to the first decile group according to their salary level have to spend for utility service payment 22 times more than the richest citizens that belongs to the tenth decile group.

Table 1. Expenses Share for Standard One-roomed Flat according to Salary of Employees and Decile Groups, 2007, %

<table>
<thead>
<tr>
<th>Decile Groups of Employees</th>
<th>Expenses Share for Standard one-room Flat according to Average Salary of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>84.96</td>
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<tr>
<td>2</td>
<td>45.79</td>
</tr>
<tr>
<td>3</td>
<td>32.92</td>
</tr>
<tr>
<td>4</td>
<td>25.65</td>
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<tr>
<td>5</td>
<td>20.65</td>
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<tr>
<td>6</td>
<td>16.86</td>
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<tr>
<td>7</td>
<td>13.8</td>
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<tr>
<td>8</td>
<td>11.06</td>
</tr>
<tr>
<td>9</td>
<td>8.28</td>
</tr>
<tr>
<td>10</td>
<td>3.84</td>
</tr>
</tbody>
</table>

It should be taken into consideration that grouping of the population is realized according to the value of a nominal gross payroll. Consequently, even after the TIPI (Tax on Individual Person's Income) been paid the disposable personal income of an employee will amount only to 87% that are taken into account (Table 1). Therefore specific of the economic situation in Russia is that having paid the income tax and utility services for a least comfortable dwelling (within the limits of the social norm of the region) to ensure their biological survival a working individual from the first income group will have only 2.14% of his nominal gross payroll left!

Social assistance to the population concerning payment for the utility services and destined to reduce the burden of payment for utility services for the disadvantaged population hasn’t resulted to be an effective measure because of a complex formalization of rent subsidies and extremely insufficient amount of the subsidy as compared with the total sum of the payment for utility services.

CONCLUSIONS

Concept of complex assessment of government control efficiency for MUS in post-crisis period was formulated in resulting from study. This concept consist in that effectiveness of state regulation is largely determined by of the optimal allocation of the budget means (budget request: 01.02.2010); On Provision of Rent Subsidies and Subsidies for Payment for Utility Services: Governmental Regulation of Russian Federation of 14.12.2005 N 761/ Volume of Legislation of RF. – 2005. – N 51 – Art. 5547).
efficiency) to achieve the aims of financing and maximum aggregate effect (economic, ecological, social, political) for municipality, region and the country as a whole provided maximum cover of expenditure cost.

Impossibility of simultaneously achieving the optimum values all components of a comprehensive evaluation of the effectiveness of government bodies and local government in managing the MUS requires finding a compromise in the ratio criteria for management purposes, the costs of their achieving and risks that may appear negative phenomena.

Complexity and riskiness of the decisions that are to be approved by agencies of federal government and local authorities require further enhancement of prior integral assessment methods of “compromise” efficiency of utility service complex state regulation, in particular expansion of methods containing different effectiveness indices, development of methods to pass to dimensionless coefficients or indices to be grouped after in a unified integrated coefficient.

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LOGISTICS INFORMATION TECHNOLOGIES AS IMPORTANT TOOL FOR EFFICIENT WORK OF ENTERPRISE IN POST-CRISIS PERIOD

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ABSTRACT

Logistics actively uses advance of scientific progress, information technologies in particular. This article shows the logistics IT market in the period from 2007 to 2009. Global financial crisis affects world economy, but how does it affects condition of IT sphere? This article shows main vendors of information systems. The characteristics and functional capabilities of the most used software products are described. Also this article shows economic efficiency of technologies’ adaptation for a large business and SMB sector to. ERP and CRM are the most widespread technologies of the logistics IT market. At the same time these technologies are a cost-based. Using of these technologies helps to achieve success in business. But it is possible because of understanding technologies’ functioning in enterprise. In conclusion this article shows a forecast for the World and Russian logistics IT markets in the next years with a glance of economic influences.

Keywords: ERP, CRM, information technologies, logistics

INTRODUCTION

Logistics is closely connected with use of the information technologies (IT). Scientific and technological advance of XX century has strongly changed conception of enterprises' performance. For the last decades use of the information technologies became a guarantee of successful performance of companies in many spheres of economy.

The World Financial Crisis of 2008 has forced many firms to revise a business activity through the cost reduction. Many enterprises have doubt the efficiency of information technologies. There is a logical question: how it is important to use IT in unstable conditions of the modern world economy?

Use of the computers and the modern software raises speed and improves a quality of managerial decisions. The current state of logistics was formed because of active development and adoption of the information technologies. Realization of the majority logistics concepts, such as SDP (System of Delivery Planning), JIT (Just-In-Time), DDT (Demand-Driven
Techniques/Logistics), is impossible without use of a high-efficiency computers, local computer networks, telecommunication systems and special software.

Various information flows, which circulate within and between elements of a logistic system, make logistic information system. This system can be described as interactive structure which consists of a staff, equipment and technologies. These elements are combined by information which used by logistic management for a planning, control and analysis of a logistic system.

The role of information technologies in multifarious industries of economy is different. Information technologies can be subdivided into two types:

1) Organizations where information technologies is a technology of a basic production (for example, telecommunication companies). For these organizations IT system is an active part of basic production assets, i.e. a direct factor of productive/operational activity.

2) Organizations where information technologies is a tool for perfection or development of management activity. In this case information technologies promote the better operation of a business, reduce price and raise efficiency of accepted management decisions and thus promote competitiveness increase. For these organizations IT is the factor which promotes development of main activity, but not participates in it directly.

As of today adoption of information technologies is a cost-based event. Investments for the IT system form from a capital expenditure for it forming and development, and also from long-term investments for circulating capital which is necessary for system maintenance.

Today ERP and CRM are the most popular IT conceptions and it is a very good example of the logistics IT. This article will make a synopsis of the main CRM and ERP products in the World market and Russian market.

ERP systems (Enterprise Resource Planning) are general name of corporate information systems which automate a resource management in a firm. However the term ERP means a set of many separate applications. Name ERP has occurred from the two concepts - MRP (Material Requirement Planning) and MRP II (Manufacturing Resource Planning). In 1990 the analytical company Gartner has entered the ERP concept for a designation of all key functions on production which managed by these systems, irrespective of belonging to certain industry and business scales. Accordingly, ERP can be developed not only for industrial enterprises, but also for government departments or off-the-shelf solutions companies.

The primary goals which are implemented by use of an ERP system are reduced for integration of corporate information into a uniform management system, and also for planning and analysis this information, which helps to form further business strategy. It is important that the corresponding personnel of the company must have an access for necessary information, for example, financial plans for the commercial director and the general director; sales results for marketing department. In turn stated employees can have rights to change or enter a new data into ERP system. The system must provide them conducting and accounting functions of material resources and operations which are necessary for a production of goods, and also storage of a various specifications which describe kinds of goods. The ERP system helps to estimate and predict requirements of firm (raw, accessories, workers) with indicating of concrete volumes and purchase terms by analyzing the available resources in the organization. Data organization from the logistic systems provides maintenance the equilibrium of stock resources and accounting it, planning of purchase amount from suppliers. It is important to count how
equipment will be maintained in a situation of production expansion. ERP systems are capable to estimate prospective utilization of an enterprise facility (for example, to relocate optimally employees in branches). The positive effect of adoption the administrative systems is attainable in financial accounting sphere too because company executives can visually compare possibilities of firm with a real indicators. They can correct a financial plan and supervising its execution if it will be necessary.

ERP systems are subdivided into 3 groups:


2) Medium integrated systems – for manufacturing enterprises of medium and large scale (Galaxy ERP, Business Lux CAS, IFS Applications, Infor ERP SyteLine, Infor ERP COM, Epicor iScala, Epicor 9, Microsoft Dynamics AX, Microsoft Dynamics NAV);

3) Large integrated systems (Infor ERP LN (Baan v.6), Oracle E-Business Suite, SAP Business Suite).

Galaxy ERP product is intended for military enterprises and it has required tools for a work with state secret data. Also this vendor produces the lite version – Galaxy Start for SMB companies.

Microsoft Dynamics NAV Express solution is suitable for fiscal accounting and inventory accounting in SMB companies.

SAP Business ONE system is suitable for retail companies, service-companies and distributors. This system has short term of adoption (not more 60 days) and easy-to-use interface which combines logistics and account modules.

Compass ERP system has suitable tools for developers. It helps to create special solutions which are organized in a form of a three-level system (parameterization/visual wizards/wizards for programmers).

Addition information about ERP products can be founded in table 1.

Adoption the ERP system allows (at the average by Russian industries):

1) To cut down transaction costs and management costs by a 15%;
2) To reduce a lead time by a 25%;
3) To cut down selling costs by a 35%;
4) To cut down an insurance level of stock resources by a 20%;
5) To cut down an accounts receivable by a 12%;
6) To accelerate a stock of materials turnover by 30%.

Now it is necessary to describe the changing of Russian ERP systems market in the period from 2007 to 2009. The market size was equal to $579,34 million in 2007. This result is conditioned by a stable growth of Russian Economy and raise of investments in IT. ERP solutions were actively adopted by SMB companies on a level with large-scale enterprises. Growth has continued in 2008, the market size was equal to $606,56 million that corresponds to increase per 4,5%. But the market size in 2009 has decreased per 23,2% and was equal to $492,18 million. This downturn has occurred because of the world financial crisis and accordingly cutting of IT budgets of large clients. A demand for ERP systems has decreased in SMB sector too.

Top vendors of the Russian ERP market by a profit margin in 2007:
1) **SAP**: $287,35 million;
2) **Oracle**: $86,32 million;
3) **1C**: $83,42 million;
4) **Microsoft Dynamics**: $45,19 million;
5) **Galaxy**: $27,23 million;
6) Other: $49,82 million.

Top vendors of the Russian ERP market by a profit margin in 2008:
1) **SAP**: $326,94 million (+13,78% as compared with 2007);
2) **1C**: $113,43 million (+35,97%);
3) **Oracle**: $50,95 million (-40,98%);
4) **Microsoft Dynamics**: $41,85 million (-7,39%);
5) **Galaxy**: $24,87 million (-8,67%);
6) Other: $48,52 million (-2,61%).

Top vendors of the Russian ERP market by a profit margin in 2009:
1) **SAP**: $246,58 million (-24,58% as compared with 2008);
2) **1C**: $109,76 million (-3,24%);
3) **Oracle**: $47,25 million (-7,26%);
4) **Microsoft Dynamics**: $34,94 million (-16,51%);
5) **Galaxy**: $19,2 million (-22,8%);
6) Other: $34,45 million (-29%).

Next task consists in analysis of ERP customers’ structure. Nonstop Production Sector was the biggest ERP systems customer in 2007 (32,2%). Retail Sector took the second place (14,2%): progress and consolidation of large distribution networks, their advancement in regions, consolidation of independent SMB sector players – all these points helped to increase a demand on ERP systems. Further (by decrease of investments in ERP) was Energy Sector (13,1%), Discrete Production Sector (9,6%) and Telecommunication Sector (5,3%).

Enterprises of Nonstop Production Sector remained major customers of ERP systems in 2008 (34,9%). Retail Sector held the second place (16,1%). Discrete Production Sector (9,7%) has risen on the third place in list of the most profitable industries for ERP vendors. Wholesale Trade Sector and Business Service Sector were located on the fourth and the fifth positions. They have entered in the group of five major customers of ERP systems because of activity of SMB sector companies.

The three major ERP customers in 2009 still remained Nonstop Production Sector (32%), Retail Sector (11%) and Discrete Production Sector (10%).

**CRM (Customer Relationship Management)** – it is a special sort of the information systems which helps to control customer relationship processes. It is necessary to collect information about enterprises’ customers such as purchase history, methods of payment, time of purchases, guidelines of choice a good with same characteristics etc.

CRM systems are urgent for large companies with a large quantity of customers. But these products are urgent for SMB sector companies too. CRM systems help to make clear portrait of a buyer/customer, to diverse goods and a service portfolio, to choose a strategy of market behavior in specified time. These systems are necessary for decision-making in special cases, for example improving an answering service.
Major serving rate of use CRM systems consists in sharp step-up in sales by clear market positioning, by optimization marketing effort and economic use assets for advertising campaign. CRM solutions help a company to unite marketing resources with communication resources, to provide right information for customers. Enterprises can control efficiency of own advertising campaigns.

Also CRM systems support production and procurement. Information about customers, their preferences and activity can be used for analysis a flow of goods and an efficient filling of warehouses and sales areas. Managers can test suppliers by the history of their work with the company. It helps to decrease risk of making contracts with unfair companies.

One more effect from adoption of CRM system is automatization of information storage. Integration of all information within integrated repository in compliance with business demands brings a positive effect for companies of any scale.

CRM systems can be subdivided by the level of information processing from customers. There are operational and analytical CRM systems. The first type can helps to achieve customer’s loyalty in a course of a direct interaction with him (a dialog with sales engineers, marketers and service stuff). The second type use collected information for making the marketing development strategy. Examples of operation CRM:

**1C:Enterprise.CRM.** The advantage of it product is universality, i.e. it can be used as a separate platform for the relationship management automatization and as add-on for other 1C products such as 1C:Enterprise 8. Sales Management and 1C:Enterprise 8. Manufacturing Enterprise Management. In addition 1C:Enterprise.CRM has a program interface for interchange with popular account systems – 1C:Enterprise Accounting 8 and 1C: Accounting 7.7.

Similar product is called **Index.CRM.** It has extra modules which manage stock accounting and workflow.

**NauCRM** uses all fundamental functionality of such software products, but it is embodied in a cross-platform development with web-interface. It means that a company can run the CRM system on any platform.

Example of analytical CRM system is **Monitor.CRM,** which works on a Microsoft platform. This solution has modules, which make an analytical calculating by data from accounting systems, marketing information systems and service.

**Oracle** and **Microsoft** products are suitable for SMB companies. **Microsoft Dynamics CRM** is integrated with **Microsoft Office** and provides easy-to-use control interface. **Oracle Siebel Customer Relationship Management,** one of the most powerful CRM systems in own class; this product has ready integration solutions.

**XRMS** is open-source CRM system. It is a product with web-interface, which is developed by **PHP** language. Basic version has sales management modules and business analytics tools. Extra modules are developed by the open-source community and it help to extend functionality of the system (for example an integration with a call center or PBX (Private Branch Exchange)).

SugarCRM product has a web-interface and is able to finding data from external web-sources such as social networks.

**Monitor.CRM by Business Navigator** is a rare analytics CRM system among the Russian products. This solution has a marketing analysis module and a business analytics module. Last version of this product is 4.0. This solution is compatible with **Windows 2000/XP** and **Windows**
Server 2000/2003 with installing DBMS Microsoft SQL Server 2000/2005, including MSDE 2000/ SQL 2005 Express Edition. Monitor.CRM helps to organize work with contractors, suppliers and customers, helps to organize advertising campaigns (including offers posting, etc), helps to correspond with customers, helps to work with projects (under multilevel selling). An analytical facility of this product is ABC-analysis of customers, stock accounting and advertising campaigns. The results can be reflected in the form of diagrams, graphics and bar charts including three-dimensional representation of employees’ progress.

Addition information about CRM products can be founded in table 2.

It is important to review the World CRM market. It has risen from $8130 million in 2007 to $9147 million in 2008. The major stimulus for this growth was investment of corporate sector in keeping customers technologies, analytics and software on demand. In spite of economic problems the World CRM market rises because companies still invest to these technologies.

Top vendors of the World CRM market by a profit margin in 2007:
1) SAP: $2072 million;
2) Oracle: $1320 million;
3) Salesforce.com: $676 million;
4) Amdocs: $419 million;
5) Microsoft: $332 million;
6) Other: $3311 million.

Top vendors of the World CRM market by a profit margin in 2008:
1) SAP: $2055 million (-0,8% as compared with 2007);
2) Oracle: $1475 million (+11,8%);
3) Salesforce.com: $965 million (+42,7%);
4) Microsoft: $581 million (+75%);
5) Amdocs: $451 million (+7,6%);
6) Other: $3620 million (+9,3%).

CONCLUSION

ERP and CRM systems are the serious source of competitive advantage for enterprises even in spite of the World Financial Crisis. Unconditionally these systems demand a large financial expenditure for the preparatory period, adoption period and maintenance period. But these technologies showed oneself to good advantage. Prospects for Russian and World logistics information technologies markets are very optimistic. IDC and Gartner forecast a rapid growth of these markets for the next 5 years. It is necessary to emphasize next fact: logistic information technologies in post crisis period are the important tool for increasing a competitiveness of enterprises. So companies should not cut down investments in this sphere - companies should optimize it. Therefore choose the optimum IT solution is very important for enterprises.

All these points indicate that the future of world economy is associated with use of logistics information technologies.
REFERENCES:

1. IT-Expert №11 (175) 2009
2. IT-Expert №12 (176) 2009
### Table 1. Comparison characteristics of different ERP systems

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<th>Galaxy ERP</th>
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EDUCATIONAL CHOICE IN MODERN RUSSIA: SOCIAL AND GENDER IMPACT

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Dr., Professor

Grishin, Mikhail*
student

*Rostov State University of Economics
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ABSTRACT

The paper holds the analysis of key factors that influence individual decisions to take part in the higher education system (in accordance with human capital theory) in modern Russian society. The hypothesis that are checked in the research are: the importance of individual factors (such as schooling abilities); social and welfare background; parents' educational level; gender inequality; the impact of the region of dwelling. The analysis is focused on the estimation of social and gender impact.

The influence of factors is analyzed using the models of binary choice, the analysis is based on the database "RiDMiZH - 2004". The results are compared with the probability of getting higher educational grade in European countries and the USA, the special features of obtaining higher education grade in the Russian Federation are highlighted. Gender inequity is examined through the social roles formed in the post-soviet society.

Keywords: human capital, higher education, gender asymmetry.

I. INTRODUCTION

Since the early works of A. Smith and W. Petty specific individual knowledge and practical skills has been regarded as one of the main parts of national welfare. Modern economic theory states such individual characteristics to be a part of nation’s “human capital”. Full definition of human capital is given by T.Schultz: “all useful skills and knowledge…that is part of deliberate investment” [Schultz, 1961]. The intense development of human capital theory began in the middle of 20th century in the works of G.Becker, T.Schultz and other economists, that found statistically significant link between the quality of human capital and the level of worker’s productivity [Becker,1964; Schultz 1981].
As reviewed in human capital theory, knowledge is supposed to be relevant: knowledge should be adequate to outer world. Further, we can divide knowledge and information; latter should be regarded as knowledge after examining its appropriateness. In the society, as a whole, there are special institutions, carrying out those functions: universities, independent institutes for different studies, and so on. It means that individual can improve his knowledge level by participating in the educational system. Besides, there is a long-going tradition to divide knowledge into theoretical and applied. Then the higher educational institutions play a special role in society’s science system, tending to combine both types of knowledge. Such statement can be referred both to natural sciences and humanities.

In overwhelming majority of developed countries primary and secondary education is obligatory; on the contrary higher education can be reviewed as a result of rational choice. According to human capital theory approach, individual willing to maximize his wellbeing should attempt to receive higher-education grade. But time spent on additional education has its own opportunity cost: instead of receiving additional grades one can work and receive real money for his efforts (we assume that individual participating in higher education system spends all his time on education). But we can see that scientific progress requires more and more qualified workers, especially in economically developed countries. As shown in [Marzinkevich, Soboleva], in economically developed countries investments in human capital are higher than investments in means of production.

Above mentioned conclusions are appropriate for developed, balanced countries. But what we can find if we turn for developing countries, particularly to Russian Federation? We need to answer the question whether political and social transformations in modern Russian history have affected the question of educational choice.

The paper is constructed in a following way: part II examines some prior assumptions affecting educational choice, part III reviews the data source, part IV contains the results of the analysis and conclusions.

II. BASIC FACTS

As explained above, individual needs motivation to make an educational choice. We have formed some prior assumptions about factors, affecting educational choice:

1. Abilities of the individual. We consider this factor to be one of the most important, but it is unobserved. Of course, there are special capability tests, allowing getting some quantitative estimates, but their use is rather arguable.

2. Value orientation is another unobserved factor of great importance. For example, individual with a high time preference will not participate in the system of high education because it means refusing from some part of current consumption. Similarly, individual who’s utility from leisure is incomparably high, won’t refuse from it due to higher education grade.

3. Parent’s educational level. As marked in [Ermisch, Pronzato], the empirical analysis made in Norwegia the level of father’s education is more important, because more educated women tend to work more and spend less time at home (in economic terms, substitution effect is greater than income effect). Close results are received in [Plug]. On the contrary, as mentioned in [Cooray, Potrafke] due to gender roles in family, mothers seem to transmit their human capital to children relatively greater, than fathers.
4. The quantity of siblings. We have assumed that individual in higher education system devotes all his time to education, so the costs are paid by his family (at least in his youth). We can use the following statement from [Becker, Lewis]: “the cost of an additional child, holding their quality constant is greater, the greater the quality of children is…similarly, the cost of an unit increase in quality, holding number constant is greater, the greater is number of children”

5. The region of dwelling. According to the regional asymmetry in modern Russian society, for individuals living in the cities it is much more easier to obtain a higher education grade, compared to those, who live in the rural areas.

6. Established gender roles are also important. For example, if the traditional masculine role is “breadwinner”, then men will have more expected utility form participating in the labor force, than spending time on education. Due to official statistics1, we can see that in 2010 the share of women receiving higher education was 57%.

In our analysis we shall focus on the social and gender aspects of educational choice in Russian Federation. To carry it out, we shall use the binary choice model to estimate the influence of that aspects on educational choice.

III. DATA AND ESTIMATION METHOD

The analysis is based on the results of the "Parents and Children, Women and Men in Family and Society" ("RiDMiZH") survey in 20042. The initial sample was reduced to observations with full available data. Descriptive statistics are shown in table 1.

First, we shall estimate the influence of social and gender factors on the holding higher education grade. To be able to do that, we need to specify regression model, where probability of holding higher education grade \( P(y = 1|X) \) is dependent from some linear form \( \beta X \) [Ayvaziyan, Mchitaryan]. The functional form should be restricted on the segment from zero to one, we shall use logit specification. If we introduce new variable \( Z \), which is the linear function of selected explanatory variables, the probability can be obtained by:

\[
P(y = 1|X) = P(Z) = \frac{1}{1 + e^{-Z}}
\]

By taking the first derivative we can estimate the marginal effect of \( Z \) on probability:

\[
f(z) = \frac{dP}{dZ} = \frac{e^{-Z}}{(1 + e^{-Z})^2}
\]

The estimates are obtained with Maximum Likelihood method, by maximizing the log-likelihood function.

We can expand our model by permitting dependent variable to take more than just two values.

Then if have \( M \) possible outcomes, the probability that dependent variable \( y \) will take the value \( m \) relative to reference category is specified as:

\[
P(y = m|X) = P(Z_m) = \frac{e^{\beta X_m}}{1 + \sum_{k=1}^{M-1} e^{\beta X_k}}
\]

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1 http://www.gks.ru/bgd/regl/b10_13/lsWWW.exe/Stg/d2/07-50.htm
2 More information is available on http://www.socpol.ru/research_projects/proj12.shtml
A rather full and more detailed review of models of binary choice can be found in [Greene]. The list of explanatory variables due to prior assumptions is presented in table 2.

IV. ESTIMATION RESULTS

We have estimated the logit model for described sample, the results are presented in table 3. The model is significant due to Likelihood Ratio test (p-value < 0.000), pseudo-coefficient of determination is about 0.2. Marginal effect shows the change in logit function in the sample mean point of due to independent variable change. Marginal effects for binary variables are computed as a function change due to variable change from zero to one. According to received estimation results, we can draw a conclusion about importance of parent's level of education on their children educational choice, significant impact of regional asymmetry and gender inequality. We can also conclude that father's level of education is more important, though estimated coefficients are close to each others, linear restriction test doesn't allow us to accept such a hypothesis. Speaking about marginal effects, the highest impact has parent's education and individual's cognitive abilities, measured as the number of finished classes.

So we can assert that the probability to have a higher education grade for a woman of 25, dwelling living in Moscow agglomeration, who's both parents have a higher education grade, is equal to 0.7, by raising her age to 35 probability raises to 0.84. Similar accounts for a man, ceteris paribus, changed the probabilities to 0.64 and 0.8.

Talking about the quality of the model, we need to say that the model predicted possession of the higher education grade correctly in 68.5% of observations, and predicted its absence correctly in 73.1% of cases, total share of correct predictions is 71.5%. We can also use a ROC-curve to check estimation adequacy, which is presented on graph 1. Theoretically, an ideal ROC-curve would pass through the upper left corner, and the diagonal line represents the "useless" classification. So, at least the area under the curve would be equal to 0.5< in our case it is equal to 0.8, so we can indicate the fair quality of estimation.

We can expand our model by using multinomial logit model. The estimates are presented in table 4. The model is significant due to Likelihood Ratio test (p-value < 0.000).

The results should be interpreted in relative terms to reference category - professional courses. We can see that women are more likely to continue their afterschool education, it is especially highlighted when choosing arts or pedagogical institution. Father's higher education grade tends to be more important, but when choosing technical or professional education it doesn't seem to play any significant role. Dwelling in the city tends to rise the probability of selecting the level of education other than professional courses.

V. CONCLUSION

Based upon the results of the analyses, we can conclude that the level of father's educational grade is more important than mother's. But in transition economy particularly in Russia, educational grade can be interpreted not as the measure of one's human capital, but as the "social capital", representing fixed social links. Besides we can say that individuals tend to choose partners with the similar educational level, but it shouldn't mean that the educational grade is the only feature of potential partner. Results, received in [Plug] for the USA reflect the
same tendency: "more capable parents produce more capable children", besides from 10 to 30 percents of father's capabilities are transferred genetically. We can expand this tendency to describe the social environment as the self-reproducing system: traditions and habits of former generations have a significant impact on the behavior of present ones.

We can conclude that there is a regional asymmetry in Russian Federation, dwelling in Moscow agglomeration raises the probability of receiving higher education grade by 12 percent. According to official statistics\(^1\), in 2009 the share of students joined Moscow universities was 15.8\% from the overall indicator. Besides, in the rating of applicants quality\(^2\) 6 from 10 to universities are located in Moscow. If we suppose individuals to be rational and to maximize their human capital stock, we can find a rational explanation to migratory process conditional on educational choice.

According to estimation results, men have fewer chances to receive a higher educational grade. One of the plausible explanations is the gender role of "breadwinner", which impels men to start their professional career earlier than women.

REFERENCES


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\(^2\) [http://www.rian.ru/ratings_multimedia/20100902/271380235.html](http://www.rian.ru/ratings_multimedia/20100902/271380235.html)
Appendix.

Table 1. Descriptive stats of analyzed sample.

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Table 3. Logit estimation results

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</tr>
<tr>
<td>Constant</td>
<td>-11.704***</td>
<td>-</td>
</tr>
<tr>
<td>(0.856)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Levels of significance - *** - 1%, ** - 5%, * - 10%.
Table 4. Results of Multinomial Logit Estimation.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Professional education</th>
<th>Technical education</th>
<th>Arts or pedagogical institution</th>
<th>Higher Education</th>
<th>Scientific grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>0.76** (0.3)</td>
<td>1.074*** (0.24)</td>
<td>0.97*** (0.22)</td>
<td>1.38*** (0.22)</td>
<td>1.76*** (0.66)</td>
</tr>
<tr>
<td>Classes</td>
<td>-0.52*** (0.14)</td>
<td>-0.55*** (0.12)</td>
<td>-0.32** (0.12)</td>
<td>0.31** (0.12)</td>
<td>0.32 (0.32)</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.48* (0.29)</td>
<td>-0.51** (0.24)</td>
<td>-1.46*** (0.22)</td>
<td>-1.27*** (0.22)</td>
<td>-0.69 (0.43)</td>
</tr>
<tr>
<td>Siblings</td>
<td>0.004 (0.011)</td>
<td>0.012 (0.001)</td>
<td>0.004 (0.01)</td>
<td>0.007 (0.009)</td>
<td>0.02 (0.01)</td>
</tr>
<tr>
<td>FHE</td>
<td>0.36 (0.44)</td>
<td>0.11 (0.38)</td>
<td>0.7** (0.35)</td>
<td>1.54*** (0.34)</td>
<td>2.23*** (0.55)</td>
</tr>
<tr>
<td>MHE</td>
<td>0.18 (0.42)</td>
<td>-0.07 (0.35)</td>
<td>0.21 (0.33)</td>
<td>1.04** (0.32)</td>
<td>1.72** (0.52)</td>
</tr>
<tr>
<td>Agglomeration</td>
<td>-0.38 (0.51)</td>
<td>-0.21 (0.41)</td>
<td>-0.26 (0.37)</td>
<td>0.3 (0.4)</td>
<td>0.924* (0.53)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.08 (0.07)</td>
<td>-0.05 (0.06)</td>
<td>-0.04 (0.05)</td>
<td>0.06 (0.05)</td>
<td>0.22** (0.11)</td>
</tr>
<tr>
<td>Age-sq.</td>
<td>0.0004 (0.0008)</td>
<td>-0.0001 (0.0007)</td>
<td>.0002 (0.0006)</td>
<td>-0.0006 (0.001)</td>
<td>-0.002 (0.001)</td>
</tr>
<tr>
<td>Constant</td>
<td>7.11*** (2.11)</td>
<td>7.91*** (1.8)</td>
<td>6.04*** (1.7)</td>
<td>-3.26** (1.76)</td>
<td>-13.12** (4.34)</td>
</tr>
</tbody>
</table>

Levels of significance: *** - 1%, ** - 5%, * - 10%.
Graph 1. ROC-curve for Logit Model

Area under ROC curve = 0.79
ORGANIZATION QUALITY AND SUSTAINABLE DEVELOPMENT MANAGEMENT BOARD: STATISTICAL MODEL & ITS REALIZATION

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Rostov-on-Don, Russia

ABSTRACT

The manual performs the results of organization self-assessment model application, which allows to make a full statistical outlook on the organization. Such an outlook consists of indicator boards on the different management levels of process-oriented organization and looks like an operating panels in order to correct and prevent system mistakes and discrepancies by the leaders and top-management. This organization quality and sustainable development self-assessment model corresponds to JIS/TR Q 0005:2005 and GRI-forms for the organization sustainable development.

Key words: Self-assessment model, organization quality

INTRODUCTION

In practice of Russian enterprises crisis management is mostly connected with bankruptcy and reorganization proceedings while the best world practice builds its tools into the constantly acting management models of modern organizations by carrying the emphasis to the valuation models and a continuous monitoring of functioning and sustainable development.

Nowadays there is an obvious gap in development and application of modern statistical models for assessment of organization activity in general that would not only join the accounting, analysis and managerial systems but also represent a well-shaped statistical but not an expert tool for updating both elements, connections and subsystems of an organization’s management, change of its quality defining its sustainable development.

Variety of forms and methods of modern organization management together with acting assessment models requires, on the one side, a balanced connection of the economical theories, concepts and statistical tools in the sphere of the organizations modeling and, on the other side, creation of some particular statistical models meeting the demands of all concerned parties in an organization’s activity.
The research objective is to develop and realize the methodology of statistical modeling for organization quality together with generating of corresponding tools providing the statistically valid organization sustainable development.

**METHODOLOGY**

“Quality” as a complex universal category when taking form of a strongly marked statistical nature displays a wide variety of its own definitions determined by its many-sidedness in new economics. When referring to the analysis of such a concept as “life quality” it is easy to notice that it is more general in respect of such concepts as an “organization quality” and a “product quality”. Even taking into account the width of views on “life quality” almost all the researchers at its bottom see the human needs and rarely the level of their satisfaction. It’s quite obvious that even in new economics the majority of needs are met by means of production or relations (processes) supplied by different organizations. In this case “life quality” bases itself on the “product quality” and the “organization quality”. By meeting the modern needs the emphasis transfers from the product to the organization and then “product quality” and “organization quality” become equal and form the basis of the concept “life quality” and here appears a quality triangle (Picture 1). It appears that namely the quality triangle and its shape reflect most of all the modern ideas about the “quality” category, clarify its essence, make it clear for management at different levels of economics. The triangle has a base that allows talking of its stability and its corners display the agreed objectives with a defined priority. If the “life quality” is a universal goal it can be reached by means of subgoals – “organization quality” and “product quality” that impart stability for it. Besides, as the “life quality” is mostly connected with the human needs the concept of sustainable development today concentrates the more agreed ideas of needs on a global basis and also of the “life quality”.

![Picture 1. Quality triangle](image)

We are suggested the author’s definition of the organization quality: “Organization quality – is a degree of conformity of a system of inherent characteristic being a subject of an independent estimation to the demands of all parties concerned in the organization activity”.

To realize an indicative and integrated management by the organization quality there are two management levels – processes network or the organization in general and a process as it basic element. In the author's opinion, when studying the tasks of management in the process for a long period of time there is a conflict of demands of the concerned parties resulting in the necessity to separate one more level of management in this process. The reconstruction of the process itself indirectly points to it according to the standards GOST R ISO 9001 and 9004 as they separate the process owner (section 8) and a process manager (section 5) in the group of workers. Referring to the concerned parties both of organization and the process the following division of management levels acc. to their demands for statistical provision is made (Table 1).
Table 1.

Grouping of concerned parties by the management levels

<table>
<thead>
<tr>
<th>Management level</th>
<th>Kind of management</th>
<th>Statistical cards users</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 level</td>
<td>Strategic</td>
<td>End consumers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Owners</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personnel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outside suppliers and partners</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Society</td>
</tr>
<tr>
<td>2 level</td>
<td>Tactical</td>
<td>Process owner</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inner consumers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inside suppliers and partners</td>
</tr>
<tr>
<td>3 level</td>
<td>Operative</td>
<td>Process manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Process team</td>
</tr>
</tbody>
</table>

Statistical analysis at different levels of management is actual in different extents: at strategic and tactical levels the panel analysis would be more adequate but at tactical and operative ones – a complex analysis. In this case the statistical model of the organization quality has the form of a cascade stream of statistical cards for the processes network with the detached organization quality management panels and every process by three main characteristics. In the research the tactical level is realized at the intersection of strategic and operative management levels as it is it, acting as a buffer, quite adequately characterizes the process in network at the strategic level providing its statistical consistency and at the operative level reflects it briefly and succinctly allowing rolling its entire statistical image. The panel form of performance of main organization characteristics provides a snapshot of the organization state in a researched period. It easily provides the results of the organization activity, the level of efficiency of reaching of this result and a forecast of a possibility to reach the closes result and effectiveness in the next period through its stability. We believe that such an analysis is comfortably carried out on the basis of the cascade principle of a gradual unfolding up to the basic unit of a statistical monitoring – process – herewith observing consistency and uniformity (Picture 2). For this purpose the groups of process are unfolded up to the processes in the same basic characteristics (Card 9. Form 9.2, 9.8) and further the process can be estimated through the panel (Card 8. Form 8.1.1). But by the operative management it is much more comfortable to visualize the basic characteristics of a process in a form of a dashboard and an unfolded process analysis panel by all identified process indicators (Card 4. Form 4.1.1). It is a cascade realization of a complex analysis that allows make managerial decisions quickly and at the same time in different combinations. In accordance with the levels and kinds of management the demands of the concerned parties there have been 9 cards formed providing panels and analysis tables.

Card 9. Organization quality control panel is meant for application by the owners, end users, outside suppliers and partners, entire organization’s personnel and the society’s representatives. Indicative panels predominate in the card reflecting various aspects of the organization’s activity in general that intrinsically more likely provides monitoring of the entire organization’s activity. The card in no way excludes the application of different kinds of

<table>
<thead>
<tr>
<th>Process Group</th>
<th>Effectiveness</th>
<th>Efficiency</th>
<th>Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process Net</td>
<td>RezNet(...)</td>
<td>EffNet(...)</td>
<td>StNet(...)</td>
</tr>
<tr>
<td>Basic Processes</td>
<td>RezB(...)</td>
<td>EffB(...)</td>
<td>StB(...)</td>
</tr>
<tr>
<td>Management Processes</td>
<td>RezM(...)</td>
<td>EffM(...)</td>
<td>StM(...)</td>
</tr>
<tr>
<td>Support Processes</td>
<td>RezS(...)</td>
<td>EffS(...)</td>
<td>StS(...)</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Process number</th>
<th>Process Code</th>
<th>Process Name</th>
<th>Effectiveness</th>
<th>Efficiency</th>
<th>Sustainability</th>
</tr>
</thead>
</table>
| Basic Processes
| 1             | B1           | Process 1    | RezB1(...)   | EffB1(...) | StB1(...)     |
| N             | BN           | Process N    | RezBN(...)   | EffBN(...) | StBN(...)     |
| Management Processes
| 1             | M1           | Process 1    | RezM1(...)   | EffM1(...) | StM1(...)     |
| M             | MM           | Process M    | RezMM(...)   | EffMM(...) | StMM(...)     |
| Support Processes
| 1             | S1           | Process 1    | RezS1(...)   | EffS1(...) | StS1(...)     |
| K             | SK           | Process K    | RezSK(...)   | EffSK(...) | StSK(...)     |

Card 8. Form 8.1.1. Control panel of the process basic properties

<table>
<thead>
<tr>
<th>Effectiveness</th>
<th>Efficiency</th>
<th>Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rez,……(...)</td>
<td>Eff,……(...)</td>
<td>St,……(...)</td>
</tr>
</tbody>
</table>

Card 4. Form 4.1.1. Detailed analysis of the process implementation

<table>
<thead>
<tr>
<th>№</th>
<th>Process Part</th>
<th>Indicator Name</th>
<th>Plan Value</th>
<th>Act Value</th>
<th>Best Practices</th>
<th>Result Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inputs from other processes</td>
<td>I(...)</td>
<td>ValIPlan(...)</td>
<td>ValIAct(...)</td>
<td>ValIBest(...)</td>
<td>RezI(...)</td>
</tr>
<tr>
<td>2</td>
<td>Product</td>
<td>I(...)</td>
<td>ValIPlan(...)</td>
<td>ValIAct(...)</td>
<td>ValIBest(...)</td>
<td>RezI(...)</td>
</tr>
<tr>
<td>3</td>
<td>Personal</td>
<td>I(...)</td>
<td>ValIPlan(...)</td>
<td>ValIAct(...)</td>
<td>ValIBest(...)</td>
<td>RezI(...)</td>
</tr>
<tr>
<td>4</td>
<td>Infrastructure</td>
<td>I(...)</td>
<td>ValIPlan(...)</td>
<td>ValIAct(...)</td>
<td>ValIBest(...)</td>
<td>RezI(...)</td>
</tr>
<tr>
<td>5</td>
<td>Work environment</td>
<td>I(...)</td>
<td>ValIPlan(...)</td>
<td>ValIAct(...)</td>
<td>ValIBest(...)</td>
<td>RezI(...)</td>
</tr>
<tr>
<td>6</td>
<td>Information</td>
<td>I(...)</td>
<td>ValIPlan(...)</td>
<td>ValIAct(...)</td>
<td>ValIBest(...)</td>
<td>RezI(...)</td>
</tr>
<tr>
<td>7</td>
<td>Suppliers &amp; Partners</td>
<td>I(...)</td>
<td>ValIPlan(...)</td>
<td>ValIAct(...)</td>
<td>ValIBest(...)</td>
<td>RezI(...)</td>
</tr>
<tr>
<td>8</td>
<td>Natural resources</td>
<td>I(...)</td>
<td>ValIPlan(...)</td>
<td>ValIAct(...)</td>
<td>ValIBest(...)</td>
<td>RezI(...)</td>
</tr>
<tr>
<td>9</td>
<td>Financial resources</td>
<td>I(...)</td>
<td>ValIPlan(...)</td>
<td>ValIAct(...)</td>
<td>ValIBest(...)</td>
<td>RezI(...)</td>
</tr>
<tr>
<td>10</td>
<td>Outputs to other processes</td>
<td>I(...)</td>
<td>ValIPlan(...)</td>
<td>ValIAct(...)</td>
<td>ValIBest(...)</td>
<td>RezI(...)</td>
</tr>
</tbody>
</table>

Picture 2. Cascade form of organization's quality economic and statistical model
established accounting forms. It serves as a common methodological approach to the integration of different types of analyses of the entire organization together with their accounting bases, beginning with the mostly established – accounting and ending with the more modern ones – open reports in the sphere of the organization’s sustainable development. It is quite obvious that the statistical card doesn’t depend on any of its components and that’s why it has a predeterminedly bigger potential than all acting assessment and self-assessment models of the organization’s activity.

Card 8. **Process quality control panel** is meant for application by all parties concerned in the organization and some specific process as it is at the intersection of a strategic and operative management levels. Strategic management level concerned parties have an ability to detail data by some specific process but the operative management level concerned parties have an ability to position the process in the organization adequately not only in terms of their management but also development. That’s why the unfolded process quality management panels are emphasized. This process by its features is comparable both with the strategic level panels and also with the operative analysis tables. The card functioning as a buffer between the strategic and operative management provides their statistical harmonization and comparability. It statistically supports the mechanism of delegation of powers through the process owner and inner consumers and suppliers. This card also has a doubtless advantage over any process models as the previous one it doesn’t depend on its components that allows using new developments in the sphere of process modeling without changing the general analysis construction.

Cards 7-1 give an indication of the process relating to its main properties and their development. They base themselves on the initial information about the process and are meant for a manager and his team. All the cards are unfolded not only up to the process indicators but also up to the initiating demands and that’s why they are introduced with a wide range of analytic tables. Both unfolded panels and analytic tables, when grouping the indicators in various shapes, form the fullest basis both for the process development and innovations implementation. The panels of main animated properties play here a key role. They allow making forecasts with a parallel analysis of changes in process. All the panels of cards 1-7 form both the unfolded and indicative panels of cards 8-9 that allow forecasting of the organization development. Rejoining to the organization of a complex statistical analysis its width and depth was determined by using a grouping method. Referring to the width of the complex analysis they have determined some indicators separately characterizing the following:

- organization’s strategy;
- demands of every concerned party;
- results, resources and process connections;
- customer’s satisfaction, product quality, quantity and cost (price);
- main process properties and correspondingly the organization network properties.

The analysis depth is determined by the spectrum of a statistical reflection of the process components and also by the number of the process states and correspondingly by the processes network or by the number of reproducing periods together with the statistical tools of its identification. As a part of the study we’ve marked four ways of statistical reflection of the process components that should be used simultaneously: quantity, cost, time and quality. We’ve also introduced differences by the quantity of the process changes in time:

- one period – statics;
• more than one period – dynamics.

The peculiarities of the supposed statistical tools as applied to the dynamics give the other grouping:
• up to 5 periods – by the deviation of the process resources from its results;
• more than 5 periods – by the connections of a result with the process resources.

In statics the following methods of calculation of the process properties indicators are suggested:

**Effectiveness** – is a geometric average by all the process indicators:

\[
PrRez = \sqrt[n]{\prod_{i=1}^{n} (RezI(...))} \quad PrRez (...) = \frac{ValAct (...)}{ValPlan (...)},
\]

where
- \(PrRez\) – process effectiveness;
- \(RezI(...)\) – process indicator productivity;
- \(ValIAct(...)\) – real or achieved indicator’s value;
- \(ValPlan (...)\) – planned/standard/target indicator’s value;
- \(n\) – number of the process indicators.

**Efficiency** – is an absolute value of difference of the mean-square deviations of the productivity values for all the result indicators (product) and the process resources (workers, infrastructure, occupational environment and financial resources):

\[
PrEff = \frac{1}{7} \sum_{r=1}^{7} (100\% - |PrProductDev - PrResDev(r)|),
\]

where
- \(PrProductDev\) – mean-square deviation from 100% productivity values «Product» by all its indicators;
- \(PrResDev\) – mean-square deviation from 100% productivity of the process resources by all its indicators;
- \(PrResRezI\) – indicator productivity of the “Product” process result;
- \(PrResRezI\) – productivity of the indicator for the process resource;
- \(m\) – number of the process result indicators;
- \(k\) – number of the process resource indicators;
- \(r\) – number of resources.

In case of a literal application of the standard definition as related to the efficiency the correlation between the result and the process resources can be expressed in terms of relationship of the product and resources productivities. But such an overall evaluation of the efficiency is not a basis for the further development both of the process and the organization. It is recommended to use a more delicate tool - standard deviation from 100% indicators’ values reflecting the process components – resource and result. First, it itself characterizes the component variation giving an idea of its state as a system. Second, by constructing a difference of standard deviations from 100% indicators of products and resources a numerical value appears characterizing disbalancing or alternatively a possibility to enter the resonance between two...
systems. Third, it is quite easy to find a reverse value of such a relation that already reflects the synchronization of the result and resources states.

**Sustainability** – relation of the process entropy by the productivity values of all process indicators to its maximum value:

\[
PrSt = (1 - \frac{HRez(p)}{HRez_{max}(p)}) \times 100\%
\]

where \( HRez(p) = -\sum_{j=1}^{N} p_j \log_2 p_j \), \( p_i = \frac{C_i}{N} \)

\[
HRez_{max}(p) = -\sum_{j=1}^{N} p_j \log_2 p_j \quad p_1=p_2=...=p_N =1/N
\]

\( PrSt \) – process sustainability;
\( HRez(p) \) – process entropy by the values of all indicators of the process productivity;
\( HRez_{max}(p) \) – a maximum value of the process entropy providing that the values of all indicators of the process productivity differ (every interval of the productivity values scale has only one value or an equal number of values);
\( p_i \) – possibility of appearance of the productivity value in the interval of the process productivity value scale;
\( i=1...N, N \) – number of the process productivity indicators;
\( C_i \) – frequency of appearance of the productivity indicator value;

*Productivity indicators value scale* – scale of intervals of values for the productivity indicators where the interval can be calculated by Sturge’s formula and set up 5%, 10% and so on.

Systems stability and management systems as well are frequently regarded mathematically. Engineering systems are described in the fullest content including their dynamic characteristics and in the form of systems of linear differential equations which stability is reflected in necessary and sufficient conditions of existence of their unique decision. But linear presentation of economic phenomena is extremely limited and it is hard to consider it as an adequate. Entropy approach in economics has been discussed for a long time and it already has some statistical tools. But there is still no any prevailing point of view in it. To estimate the stability of the process and the entire organization we’ve chosen a classical Shannon formula

\[
H = -\sum_i p_i \log_2 p_i
\]

as a more clear from the point of view of its application. By Shannon entropy is a measure of uncertainty but in the other similar studies it is frequently connected with evolution and development of a researched system. We consider such a statistical estimation as a more promising as it meets the demands of the most progressive economical tendency in the modern organization management – stable development.

Effectiveness, efficiency both as the groups of processes (management processes, basis processes, support processes) and the networks of processes are recommended to be calculated as the geometric averages by the same process indicators. In this case sustainability is calculated directly acc. to the values of all indicators or a group of processes or the entire processes network

---

providing in so doing a higher level of accuracy by means of a direct but not an averaged values accounting.

In dynamics the process connections are statistically accounted by using the following method of calculation of the process properties indicators:

Effectiveness – is a geometric average by all the process indicators (as in statics);

Connections efficiency – is a geometric average of the empiric correlation relations between all the productivity indicators for the process (product) result and its resources (workers, infrastructure, occupational environment, information, suppliers and partners, natural resources, financial resources) for the examined period of time:

\[
PrEff = \frac{P_0 \times (P_1 + P_2 + \ldots + P_7)}{\sqrt{\prod P_0 \times (P_1 + P_2 + \ldots + P_7)}}
\]

where

\[
\eta = \sqrt{\frac{\delta^2}{\sigma^2}}, \quad \sigma^2 = \delta^2 + \bar{\sigma}^2
\]

\[
\delta^2 = \sum \frac{(ProductMRez;I - ProductMRez;J)^2}{\sum l_j} \quad \bar{\delta^2} = \frac{\sum \delta_j^2 \times l_j}{\sum l_j}
\]

\[
\sigma^2 = \frac{\sum \left( \left( \text{ProductRez;I} - \text{ProductRez;J} \right)^2 \right)}{\sum l_j}
\]

In this case the significance of the calculated empiric correlation relation \( \eta \) is estimated by Fischer criterion.

Connections sustainability – relation of the process entropy by the connections efficiency values to its maximum value:

\[
PrSt = \left( 1 - \frac{iCorrEff(p)}{iCorrEff_{max}(p)} \right) \times 100\%
\]

where

\[
iCorrEff(p) = - \sum_{j=1}^{N} p_j \log_2 p_j, \quad p_j = C_j \times N \quad N = P_0 \times \sum_{i=1}^{7} p_i
\]

\[
iCorrEff_{max}(p) = - \sum_{j=1}^{N} p_j \log_2 p_j, \quad p_1 = p_2 = \ldots = p_N = 1/N
\]

\( HCorrEff(p) \) – process entropy by the values of significant correlation relations of all resources indicators and all indicators of the process product;

\( HCorrEff_{max}(p) \) – maximum value of the process entropy by the values of significant correlation relations of all resources indicators and all indicators of the process product providing
that their values differ (every interval of the correlation relation value scale has only one value or an equal number of values);

\[ p_i \] – possibility of appearance of the correlation relation value in the interval of their scale;

\[ i=1...N, N \] – number of the process correlation relations;

\[ P_0 \] – number of indicators of the process-product result;

\[ P_1, P_2, ..., P_7 \] – number of indicators of the process resources;

\[ C_i \] – frequency of appearance of the correlation relation indicator value;

**Correlation relation value scale** – Chaddock scale.

**Data & Results**

In order to show the results of organization quality model performance we concentrated them in the following tables. Quality organization analysis (Table 2) shows its high level in whole & from the point of strategy in particular. This statistical form allows to characterize the quality of «NNN» organization as high enough, because the values of all strategic management system properties are rather higher, then process net values. Moreover, the sustainability of both systems is aligned, that testifies the sustainable development of this organization. Values of all properties in the dynamics reflect their positive growth in previous periods, and the difference between properties values in the static do not exceed 15%, indicating a high degree of organization controllability.

Retrospective analysis in the form 9.5.1 (Table 3) shows the difference between the effectiveness of the strategy implementation by the process net in the dynamics was greater than by the organization in the whole, indicating an inadequate reflection of the strategy at the process level, and in particular this applies to management processes.

Detailed analysis of management processes values in the form of 9.8 (Table 4) shows a serious gap in their controllability.

All this forms step by step reflect the changes & modifications that allows to prevent crisis situations long before the collapse event.
### Table 2.

<table>
<thead>
<tr>
<th>Process Network</th>
<th>Effectiveness</th>
<th>Efficiency</th>
<th>Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In whole</td>
<td>Strategy</td>
<td>In whole</td>
</tr>
<tr>
<td></td>
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### Table 3.
Card 9. Form 9.5.1. Analysis of the strategy implementation dynamics by the process net

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</tr>
<tr>
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<td>89.82%</td>
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<td>79.48%</td>
<td>59.37%</td>
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<tr>
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<td>70.35%</td>
<td>92.95%</td>
<td>78.74%</td>
</tr>
<tr>
<td>7</td>
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<td>93.39%</td>
<td>70.35%</td>
<td>92.95%</td>
<td>78.74%</td>
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Section 3

October 6-8, 2011

7th International Conference of ASECU "Recent Economic Crisis and Future Development Tendencies

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## Table 5.

<table>
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<tr>
<td><strong>Basic Processes</strong></td>
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<tr>
<td>Conclusion and maintenance contracts for the supply of goods</td>
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<td>Design and development of new products</td>
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<td>Procurement</td>
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<td>Product preservation</td>
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<td>Information, planning and control in the QMS</td>
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<td>QMS analysis by senior management and continuous improvement</td>
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<td>Definition of requirements and customer satisfaction</td>
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<td>Document management</td>
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<td>Training and competence assurance</td>
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<td>Nonconforming product management</td>
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<td>Maintenance and repair of equipment</td>
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<tr>
<td>Maintenance of software and information management</td>
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<tr>
<td>Production &amp; environment management</td>
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<tr>
<td>Process net</td>
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REFERENCES

EFFICIENCY DRIVEN ECONOMIC GROWTH: INVESTMENT IN HUMAN CAPITAL AND TECHNOLOGICAL READINESS

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Podgorica, Montenegro

ABSTRACT

Global economy faces major challenges, perhaps the highest in the last few decades. The financial crisis, initially created in the U.S., very quickly transferred to all the economies of the world. The economic recession is the rule rather than the exception in 2009 and measured by change of GDP at the global level, there was a decrease of 2.5%. Consumer demand declines, also exports, foreign direct investment is significantly reduced, but unemployment grows and the intensity of protectionist measures. In addition, financial insolvency is problem which is faced by all economic actors. Even some recovery was evidenced in 2010, issues of further development steps are still relevant.

Following path of stable economic growth, many transition countries are trying to straighten determinants which will push economy toward higher level of production, therefore higher standard of living. Assuming that South-eastern transition countries during last two decades have achieved significant results in developing institutions, infrastructure, macroeconomic stability and modest health and primary education system, their development efforts should be focused on determinants which increase production efficiency, as investment in human capital, goods and labor market efficiency, financial market development and technological readiness, as they are not competitive in these areas at global market.

Luck of improvement in listed determinants will influence decrease in productivity, therefore decrease in sales and production. The situation is more difficult knowing very high competitiveness of most European Union member countries and other developed countries in the world.

Aim of the paper is to emphasize key determinants of growth in transition countries. Research is theoretically based on new economic theory of growth while empirically on research on competitiveness provided by World Economic Forum. More detailed statistics, provided by official statistical agencies, on several economic variables will be used to estimate impact on production and income.

Key words: Efficiency, Productivity, Income, Human Capital, Technological Readiness

JEL code: E2, E 61, O15
INTRODUCTION

Although the indicators pointed to the financial crisis that will take a global scale at the beginning of the XXI century, the volume and intensity have still outperformed expectations. The financial crisis became evident in most economies in the world in late 2008. The order took on a significant scale in early 2009.

Crisis of commercial banks, which initially appeared in the U.S., and later received the outlines of the world scale, reflected in the economic and financial activities, with the following consequences:

- A decrease in lending activity of financial institutions to all users (companies and citizens);
- Recession in the capital market;
- Problem of liquidity of investment funds;
- Depreciation in values, above all, on financial assets, which creates a problem especially for insurance companies and pension funds during the upcoming payment obligations;
- The growth of public debt and total public spending, as a result of the intention of the state to mitigate the consequences of the global financial crisis;
- Depreciation of value of a number of national currency (Icelandic crown, some European currencies and the currencies of countries of South America), and the overall sensitivity and the unpredictable climate;
- Increased unemployment, investment decline and negative GDP growth.

Depending on the characteristics of the economic system, the size and strength of the economy, all countries are facing consequences of the crisis. However, it seems that the most sensitive are transition economies, for several reasons:

1. After several years of stagnation in the development, recovery has finally become a real and visible. However, the financial crisis has stopped the process and still under-developed economies face the same problems that have highly developed economies with long-standing tendency of growth and significantly higher number of instruments available;

2. Rapid economic development of the small open transition economy, such as Montenegro, was based substantially on the inflow of foreign financial, fixed and human capital (FDI, portfolio investment, know-how). The beginning of the crisis marked stagnation or in some cases the withdrawal of foreign capital. Invested capital is not yet realized to the extent to strengthen the local economy, so that a significant number of projects are still under construction or implementation, making the current situation in these economies further difficult.

3. Given that economic development has been predominantly based on the international economic cooperation, any recession or a crisis at the international level directly affects the economy of a small open economy, with no possibility to prevent adverse effects in the form of substitution or rapid changes in the structure of economic activity. The only available model alleviate the crisis is great flexibility, which in terms of the global financial crisis can not be used due to potential reduction of investment and purchasing power.
1. SHORT RUN ECONOMIC POLICIES IN RESPONSE TO THE GLOBAL FINANCIAL CRISIS

The consequences of the global financial crisis introduced doubts about the efficiency of the free market, its performance and stability. It was the signal for the revival of state intervention, and strengthening the active role of the state of the economy. Keynes theory postulates again became attractive, and policies towards the expansion of government spending, business subsidies, monetary financing of debt, are conducted in most of the economies in the world.

Are these measures necessary or not, and will have a positive impact on economic growth in the medium term? To answer this question, we must recall the following:

1. **Expansionary government spending must be financed.** There are two sources: increasing taxes or borrowing.

   In the area of taxation, any increase in tax rates will further hinder business in an already difficult economic condition. In addition, reduction of business activity that is present in all economies will reduce the tax base so that tax revenue as a basis for expansion of fiscal spending won’t have positive, but negative impact. On the basis of tax revenue, it is unrealistic to expect a rise in government spending.

   It remains another source of funding - borrowing. However, if the state borrows money in the domestic financial markets, it will reduce the potential for investment, which are already scarce in the period of crisis. In this way, additionally discourage the economic activity.

   Government borrowing on the international financial market remains the only realistic option, but here we must bear in mind that it comes only to postpone the fiscal obligations to the country, which economic agents certainly have to pay, not today, but in the future.

   If this measure of fiscal policy address current problems in the economy, will certainly make it difficult for business activities in the future, which will negatively affect economic growth in the medium and long term.

2. **Subsidizing business activities - providing support to businesses.** This measure, in part of financing of implementation, has the same negative effects on the economy as the expansionary fiscal spending. However, the survival of the company will result in preservation of tax base and maintain the purchasing power of the population growth through reduction of unemployment.

3. **Monetary financing of fiscal expenditures and maintenance of liquidity.** During the reduction of financial liquidity, increase debt and lack of investment capital, the monetary policy transmission function becomes actual. Increasing the supply of money affects the reduction of problems of insolvency, the reduction in interest rates and stabilizing the financial system. However, we have to be careful with monetary stabilization policy in order to prevent it from becoming «inflationary monetary policy»; which is certainly not a positive signal to any future contribution to economic growth.

   In the light of new developments, making economic decisions and define the strategy has become the challenge. Worldwide active role of government grows, cases of nationalization of banks were evidenced, subsidies and state intervention in the economy become practice.
Regardless of the challenges facing economists today, we should not forget the fundamental principles that have provided stable long-term growth in developed economies.

2. TRANSITION ECONOMIES

In the last 20 years, most European countries in transition have applied similar model (path) of growth, followed by the process of joining the European Union. The model combines the implementation of institutional reforms that would bring the country to EU standards and the concept of economic liberalization, primarily in the liberalization of goods, capital and part of the labor market.

At a time when this model is designed, Becker, Daianu and other authors argue that seemed a good solution for several reasons:

- Institutional adjustment of the EU system will reduce the cost of possible errors in the experiment to the appropriate institutions;
- Free trade will provide a large enough market to allow further growth in production and strengthening competitive advantage;
- Capital inflows will solve the problem of lack of technology and know-how;
- Liberalization of labor market will reduce the social costs of transition.

The model is specific in relation to the development models that introduced countries from other continents, due to more pronounced mobility of capital, the liberalization of labor markets, and intensive institutional reforms.

While this growth model showed good results in the first decades of application, the financial crisis at the end of the last decade has made necessary partly redefinition, especially in South East Europe, which showed a high dependence on foreign capital inflows and lack of power to solve the problem of external imbalances, primarily in part the high deficit in trade.

This problem is characteristic for Montenegro, with high foreign trade deficit, low domestic savings and still heavy dependence on capital inflows from abroad.

Not denying the importance of institutional reform and market liberalization, we will analyze other factors that influence economic growth.

3. DETERMINANTS OF ECONOMIC GROWTH

Analysis of the determinants of economic growth has been attractive for decades, and resulted in a number of empirical and theoretical researches.

Modern (neoclassical) growth theory explains stable long-term growth at the global level with technological progress as the result of higher levels of investment in research and production of new knowledge (P. Romer (1990), Grossman and Helpman (1991) and Aghion and Howitt (1992)). At an informal level of analysis, theories show that the growth level of knowledge has a central influence on the growth of production volume and an increase in living standards over the past few decades. A number of studies have shown that the growth of labor productivity is result of residual components, which with great probability could be attributed to

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technological progress. In this way has been seen significant contribution of new theories of growth to explain factors and quantify the contribution of knowledge to economic growth.

However, if the world-class move to the analysis of individual countries or regions in the world, the results given by models of knowledge accumulation are less applicable and less clear. If the economic growth of developing countries is viewed through the Solow's growth model postulates, D. Romer concludes that these countries do not have easy access to new technologies, and accordingly, are not able to use the benefits of new knowledge and thus accelerate economic growth. On the other hand, indicates that the problem lies in the fact that knowledge is a nonrival good, use by a company does not deprive another company to use the same knowledge. The question is: why undeveloped countries do not use modern technology as a basis for increasing output and stimulate economic growth? If knowledge is non rival, why managers and employees of enterprises in developing countries do not read the literature used by their counterparts in developed countries, and on that basis increase efficiency and effectiveness of business operations? Or, if the new knowledge (technology) is privately owned, why not undeveloped countries become developed providing the owners of knowledge adequate protection of property rights and other institutional preconditions so they will establish enterprises in developing countries, where the cost of other production inputs, especially labor, are much lower? Why the owners of new knowledge and new technologies do not invest in undeveloped countries? Certainly one of the reasons is institutional instability and uncertainty of property rights protection. However, there are many examples of developing countries, particularly former European colonies, where there are the institutional preconditions for attracting foreign investment and new knowledge, however, income in these countries does not record the enormous growth rates. Romer explanation of this phenomenon is the fact that undeveloped countries have no problem in accessing new technologies, but have the problem of how to use new technologies.

In line with these conclusions, G. Becker points to the importance of investing in human capital (education, training and development of employees) to increase productivity and income.

Analyzing the economic performance of 100 countries in the world in the period from 1960-1990. year, in a study on the factors of economic growth, R. Barro suggests strongly the existence of convergence of the determinants of growth. For a given initial level of GDP per capita growth is determined by the higher educational level and higher life expectancy, lower fertility rates, lower government spending, a stronger application of the legislation, low inflation and improved conditions of trade.

Current studies of growth factors which have been continuously carried out by the World Economic Forum (WEF), growth-source grouped three categories:\n
1. Determinants important for the economy whose growth depends on usage of factors of production (institutions, infrastructure, macroeconomic stability and health and basic education);

2. Determinants that influence growth through increases in efficiency (higher education and training, goods market efficiency, labor market efficiency, financial market, technological development and market size);

\footnote{World Economic Forum}
3. Determinants that encourage growth through innovation (Innovation (research and development) and the sophistication of the business).

The importance of these components is different in different stages of economic development. According to the classification of WEF, in the first stage of economic development (GDP per capita <2,000 $), dominant sources of growth belong to the group of factors of production. Reaching the level of GDP per capita of $ 3,000 to 9,000, the determinants of the effectiveness influence growth. Innovative factors gain strength in the economies where GDP per capita is higher than 17,000 $. Economies that are in between of the level of the defined groups are considered as transition countries.

Montenegro’s economy, with GDP per capita about 7,000 $ (2009), belongs to the countries in which crucial are components that will determine the growth in efficiency. A similar situation applies in other economies in the region.

Therefore, we will focus on the determinants that contribute to economic growth through increases in efficiency, as follows:

1. **Technological equipment and the use of technological advances.** Technological changes and innovations that contribute to productivity growth are galloping. The challenge of developing countries is to have the potential to adopt and use new technologies, and incorporate the advantages of their use in productivity and income growth.

2. **Higher education and training.** Quality higher education and training is a key factor that allows economies to shifts from the level of simple manufacturing processes and primary products. This is especially true in a globalized economy, where growth is happening in the communities in which highly qualified and educated individuals have the ability to quickly adapt to market changes constantly. Notes the importance of continuous training of employees and the concept of lifelong learning.

4. **TECHNOLOGICAL PROGRESS**

Technological progress is reflected in several dimensions¹:

1. Growth in the quantity of domestic products with a given amount of invested capital and labor, as a result of improving the production process and use of new materials and production methods;
2. The growth of the quality of existing products, which directly reflects the market position and growth in production volume;
3. Production of new products;
4. Greater diversity of existing products.

The importance of technological progress to increase production and income data suggest the rate of GDP growth and technological progress in five developed countries in the world, for the period 1950-1987.

High rates of growth of per capita income corresponding to the high rate of technological progress, an average of 4.3% and 4.4% in the period 1950-1973. year. Slower technological progress since the 70's (Blanchard explains it with the expansion of services), corresponds to the lower growth rates of GDP per capita.

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¹ Blanchard, 2005.
Table 1. Average annual growth rate of GDP per capita and technological progress in five developed countries, 1950-1987.

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP per capita growth rate</th>
<th>Technological progress growth rate</th>
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<tbody>
<tr>
<td>France</td>
<td>1.8</td>
<td>2.2</td>
</tr>
<tr>
<td>Germany</td>
<td>4.9</td>
<td>2.1</td>
</tr>
<tr>
<td>Japan</td>
<td>8.0</td>
<td>3.1</td>
</tr>
<tr>
<td>Great Britain</td>
<td>2.5</td>
<td>1.8</td>
</tr>
<tr>
<td>USA</td>
<td>2.2</td>
<td>1.6</td>
</tr>
<tr>
<td>Average</td>
<td>4.3</td>
<td>2.1</td>
</tr>
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</table>

Source: O. Blanchard, Macroeconomics, 2005.

Analysis of the compliance level of ability to use technological advances and GDP per capita, based on data of the World Economic Forum confirms the strong association between these variables.

Table 2. The correlation between the components that affect growth through efficiency and level of GDP per capita in selected countries

<table>
<thead>
<tr>
<th>Country</th>
<th>High education and training</th>
<th>Labor market</th>
<th>Financial markets</th>
<th>Technology</th>
<th>GDP per capita 2009, EURO</th>
</tr>
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<tr>
<td>Switzerland</td>
<td>5.79</td>
<td>5.92</td>
<td>5.34</td>
<td>5.60</td>
<td>45,800</td>
</tr>
<tr>
<td>Sweden</td>
<td>5.90</td>
<td>4.89</td>
<td>5.15</td>
<td>6.12</td>
<td>31,300</td>
</tr>
<tr>
<td>USA</td>
<td>5.64</td>
<td>5.63</td>
<td>4.67</td>
<td>5.10</td>
<td>32,900</td>
</tr>
<tr>
<td>Germany</td>
<td>5.33</td>
<td>4.40</td>
<td>4.62</td>
<td>5.36</td>
<td>29,300</td>
</tr>
<tr>
<td>Japan</td>
<td>5.28</td>
<td>5.08</td>
<td>4.61</td>
<td>4.87</td>
<td>25,000</td>
</tr>
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<td>Finland</td>
<td>6.06</td>
<td>4.85</td>
<td>5.38</td>
<td>5.17</td>
<td>32,100</td>
</tr>
<tr>
<td>Netherlands</td>
<td>5.63</td>
<td>4.83</td>
<td>4.71</td>
<td>5.99</td>
<td>34,600</td>
</tr>
<tr>
<td>Denmark</td>
<td>5.84</td>
<td>5.47</td>
<td>4.94</td>
<td>5.62</td>
<td>40,300</td>
</tr>
<tr>
<td>Great Britain</td>
<td>5.34</td>
<td>5.29</td>
<td>4.73</td>
<td>5.58</td>
<td>25,300</td>
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<td>Norway</td>
<td>5.59</td>
<td>4.97</td>
<td>5.35</td>
<td>5.56</td>
<td>56,500</td>
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<tr>
<td>France</td>
<td>5.36</td>
<td>4.47</td>
<td>4.96</td>
<td>5.28</td>
<td>29,600</td>
</tr>
<tr>
<td>Austria</td>
<td>5.38</td>
<td>4.75</td>
<td>4.74</td>
<td>5.09</td>
<td>32,800</td>
</tr>
<tr>
<td>Belgium</td>
<td>5.71</td>
<td>4.64</td>
<td>4.64</td>
<td>5.22</td>
<td>31,400</td>
</tr>
<tr>
<td>Luxemburg</td>
<td>4.68</td>
<td>4.71</td>
<td>5.35</td>
<td>6.11</td>
<td>76,500</td>
</tr>
<tr>
<td>Check republic</td>
<td>5.11</td>
<td>4.75</td>
<td>4.49</td>
<td>4.55</td>
<td>13,300</td>
</tr>
<tr>
<td>Poland</td>
<td>5.00</td>
<td>4.58</td>
<td>4.66</td>
<td>4.02</td>
<td>8,100</td>
</tr>
<tr>
<td>Spain</td>
<td>4.85</td>
<td>3.88</td>
<td>4.28</td>
<td>4.64</td>
<td>22,900</td>
</tr>
<tr>
<td>Slovenia</td>
<td>5.27</td>
<td>4.26</td>
<td>4.02</td>
<td>4.45</td>
<td>17,300</td>
</tr>
<tr>
<td>Italy</td>
<td>4.60</td>
<td>3.81</td>
<td>3.70</td>
<td>4.12</td>
<td>25,200</td>
</tr>
<tr>
<td>Montenegro</td>
<td>4.51</td>
<td>4.69</td>
<td>4.68</td>
<td>4.09</td>
<td>4,720</td>
</tr>
</tbody>
</table>

The ability to use technological advances and the level of GDP per capita are highly correlated (correlation coefficient is 0.75), indicating the necessity to further improve this component of the economies in transition.

5. **EDUCATION**

Economic analysis has shown that only those economies that have a high level of investment in human capital and knowledge, have had a long-term rate of economic growth. The reason is the diminishing marginal rate of return on investments in land and fixed capital which, after a certain time, do not generate growth. With investments in human capital is the opposite situation, the marginal rate of return increases, which generates economic growth in the long run. Empirical research by E. Denison (1985) show that the rise in labor education in the United States contributed by quarter to the total economic growth achieved during the period from 1929 to 1982.

Investments in knowledge are primarily motivated by productivity growth through innovations that improve existing technology, training of employees and use of information technology achievements.

OECD research shows that leaders in the field of investment in knowledge are among the most developed countries. At the same time, productivity is highest. Deviation of the productivity level corresponds to almost linear deviation from the level of income in the analyzed countries.

*This further means that productivity growth a key factor that will determine economic growth and productivity growth is not possible without investment in knowledge, either in education or investments in research that will lead to innovation and technological progress.*

Total investment, and especially in tertiary education rose in most countries in the world, noting that there are different tendencies spending on education in absolute terms and spending on education per student.

Theoretical and empirical analysis show that the growth of spending on education per student just contribute to increasing the quality of education and human capital.

**Figure 1. The rate of real growth of expenditure on tertiary education, 2000 = 100, 2005**

![Figure 1. The rate of real growth of expenditure on tertiary education, 2000 = 100, 2005](source: OECD factbook 2009)
The largest number of economies in the world increased both the number of students and expenditure on education, while the ratio (expenses / student) in less developed economies is decreasing, due to the huge expansion in student numbers which follows the growth of underfunding.

In addition to investment in tertiary education, the importance of lifelong learning and investment in workforce training has been observed. The importance of vocational training and investment in human resources has been recognized in the EU, as statistics show. On average, at the level of 27 EU member states, the number of employees aged 25-64 years participating in specialized training is 33% and 49% of companies provide attendance at specialist courses, of which 54% internally and 89% externally organized courses and training programs.

5.1. **Human capital and investment in education in Montenegro**

The achieved level of education in Montenegro\(^1\) shows a lower stock of human capital in relation to EU countries\(^2\). The key difference is visible in the part of tertiary education, where, if we compare only the data for higher education, Montenegro significantly different than the EU average.

<table>
<thead>
<tr>
<th>Table 3. Human capital in Montenegro, 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montenegro - Percentage of population over 15 years (2003 census)</td>
</tr>
<tr>
<td>No education</td>
</tr>
<tr>
<td>1-7 years of primary education</td>
</tr>
<tr>
<td>Primary education</td>
</tr>
<tr>
<td>Secondary education</td>
</tr>
<tr>
<td>Higher education</td>
</tr>
<tr>
<td>Higher Education</td>
</tr>
</tbody>
</table>

Source: Monstat (Statistical Yearbook 2010.)

It is important to note that in recent years Montenegro has upward trend of attending institutions of higher education, which affected the growth levels of human capital.

Data on expenditures for education in Montenegro are available in part related to fiscal expenditures. However, it is important to note that investments in human capital were financed from private funds and companies, although there are still no precise data on their volume.

---

\(^1\) The achieved level of education of the population is the best indicator of the level of human capital, although only analyze the achieved level of education and not the other socio-economic categories available to individuals. Level of education is widespread economic indicator of the level of relevant knowledge and skills. This indicator does not take into account changes in the level of skills and abilities that are acquired after completion of formal education, as well as other socio-economic categories that affect the economic use of knowledge and skills of individuals.

\(^2\) Data is based on the 2003 census statistics

\(^3\) In EU statistics education is divided into three categories: lower secondary education, upper secondary education and tertiary education.
Fiscal expenditure on education\textsuperscript{1} decreased in recent years, from 5% of GDP in 2009 to 4% planned for 2011. Although this is a significant amount, they are significantly lower than investment in developed countries (OECD average is 6.1%, EU - 5.2\%\textsuperscript{2}).

Table 4. Fiscal expenditure on education\textsuperscript{3}

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2010/09</th>
<th>2011</th>
<th>2011/10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total, 000 €</td>
<td>% BDP</td>
<td>Total, 000 €</td>
<td>% BDP</td>
<td></td>
</tr>
<tr>
<td>The budget of the Ministry of Education and Science</td>
<td>129,933</td>
<td>4.36%</td>
<td>116,068</td>
<td>3.84%</td>
<td>10.67%</td>
</tr>
<tr>
<td>Pre-primary</td>
<td>12,016</td>
<td>0.40%</td>
<td>11,634</td>
<td>0.38%</td>
<td>-3.18%</td>
</tr>
<tr>
<td>Primary</td>
<td>69,029</td>
<td>2.32%</td>
<td>62,486</td>
<td>2.07%</td>
<td>-9.48%</td>
</tr>
<tr>
<td>Secondary</td>
<td>33,002</td>
<td>1.11%</td>
<td>28,168</td>
<td>0.93%</td>
<td>14.65%</td>
</tr>
<tr>
<td>Other</td>
<td>15,886</td>
<td>0.53%</td>
<td>13,780</td>
<td>0.46%</td>
<td>13.26%</td>
</tr>
<tr>
<td>University of MN</td>
<td>17,033</td>
<td>0.57%</td>
<td>14,783</td>
<td>0.49%</td>
<td>13.21%</td>
</tr>
<tr>
<td>GDP</td>
<td>2,980,967</td>
<td>3.025,000</td>
<td>1.48%</td>
<td>3,170,000</td>
<td>4.79%</td>
</tr>
</tbody>
</table>


However, despite the fiscal sources, significant funds are invested from private source, which shows the constantly growing proportion of self-financed students, 53% in 2005, to 80% in 2009.

Table 5. The total number of students and financing structure\textsuperscript{4}

<table>
<thead>
<tr>
<th>Year</th>
<th>The total number of students</th>
<th>The total number of students - funding from the budget</th>
<th>The total number of students - self-financing</th>
<th>Participation of students financed from budget</th>
<th>Participation of self-financing students</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005/06</td>
<td>12903</td>
<td>6062</td>
<td>6841</td>
<td>46.98%</td>
<td>53.02%</td>
</tr>
<tr>
<td>2006/07</td>
<td>16173</td>
<td>6278</td>
<td>9895</td>
<td>38.82%</td>
<td>61.18%</td>
</tr>
<tr>
<td>2007/08</td>
<td>18009</td>
<td>4891</td>
<td>13118</td>
<td>27.16%</td>
<td>72.84%</td>
</tr>
<tr>
<td>2008/09</td>
<td>20490</td>
<td>4599</td>
<td>15891</td>
<td>22.45%</td>
<td>77.55%</td>
</tr>
<tr>
<td>2009/10</td>
<td>21799</td>
<td>4300</td>
<td>17499</td>
<td>19.73%</td>
<td>80.27%</td>
</tr>
</tbody>
</table>

Source: Monstat, 2010 Statistical Yearbook

\textsuperscript{1} Total expenditure (pre-primary, primary, secondary and university education).

\textsuperscript{2} Source: European Training Foundation, Montenegro Review of Human Resources Development, 2010.

\textsuperscript{3} Source: THE BUDGET LAW 2009-2011

\textsuperscript{4} Source: Monstat, Statistical Yearbook for 2010.
In addition to the level of financial resources invested in education, an important crucial component that will determine the final result is the quality of education attained. Assessment of employers' and the PISA study are not beneficial for Montenegro.

**CONCLUSION**

Dynamic technological progress has made the competition very challenging. Parent companies that come from developed countries for decades are being developed constantly improving technology, manufacturing processes, product quality and effectiveness of employees. Expansion of operations of multinational companies has made the know-how available in developing countries.

The willingness of acceptance and use of advanced technological achievements, the education of the workforce (not just through formal education, but also the development of the concept of lifelong learning) and improvement in the financial market, combined with macroeconomic stability, infrastructure and lowering administrative costs, are key factors that will enable economic development.

**REFERENCE:**


Research on problems in the business of Montenegrin companies, which were published in The Global Competitiveness Report 2010-11, suggests that low levels of human capital was assessed as a significant problem in Montenegro. Among other, were listed: Under-educated workforce (12.3%); Low work ethic of local labor force (7.3%). In the ranking of competitiveness at the global level, the quality of education and training is ranked at 52 place (out of 139 ranked economies), with the score 4.5 (range 1-7), while the efficiency of the labor market in Montenegro is at the 39th place, with the score 4.7. The part of the analysis that deals with quality of work force and investment in human capital, indicates the following problems (from the least competitive to most competitive determinants, rank in the world in brackets): 1. Level (volume) of training of employees (69); 2. Domestic supply of research and educational services (79); 3. Quality of business schools (48); 4. The quality of the education system (37).
9. Eamonn Butler: »The rise of Mugabenomics«, Adam Smith Institute, 2009 (www.adamsmith.org)
11. Tom Clougherty: »How to promote the free market in 2009«, Adam Smith Institute, 2009 (www.adamsmith.org)
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HAPPINESS: ITS MEASUREMENT, CORRELATES AND POLICY USES

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Rostov-on-Don, Russia

ABSTRACT

Many countries are currently implementing a strategy of minimizing the socio-economic impact of the global financial crisis. This process, in particular, government actions in the field of welfare and poverty alleviation, creates significant demand for information about the level of welfare, what factors determine it, and how it is influenced by the state action.

An important analytical tool of the state socio-economic policies is a methodology of assessing the wellbeing, as it allows to establish guidelines of state policy for the future, to make an analysis of the current level of socio-economic development of the country, to conduct cross-regional comparisons.

The paper provides an overview of the processes of formation and structure of subjective estimates of wellbeing (or more commonly known as estimates of happiness) of Russian households. We argue that the happiness is determined not only economic but also non-economic factors. We propose a panel data model that allows more robust tests and we estimate the model on a high-quality survey for Russia.

Keywords: happiness, subjective well-being, life satisfaction

INTRODUCTION

Few people have ever doubted that happiness is very important. Starting with the Ancient Greeks, the concept has been subject of unremitting debate. The breakthrough in the discussion took place in the 1950s. Within the discipline a consensus grew that self-reports on how well life is going, can convey important information on underlying emotional states, and so the field pushed ahead with measuring what is best referred to as happiness.

There are not a lot of papers investigating a satisfaction of the Russian population. And even these studies are not going further than the year of 2004.

Present research takes into consideration a period of 2007 – 2009, that allows us to determine the degree of impact of financial crisis of 2008 to change the level of happiness of Russian households.
LITERATURE REVIEW

Just note that in this paper we identify the concept of happiness and subjective well-being, understanding that individual satisfaction with their lives as a whole or some aspects of it.

Subjective well-being research in economics is pioneered by Richard Easterlin, who found that individual happiness differences among the population can be explained by difference in economic conditions. In 1970s, main focus of interest was placed on the issue of financial satisfaction or economic welfare. This focus was developed by representatives of Leyden school. Main ideas and approaches of the Leyden school could be found in van Praag, propose a methodology to assess the impact of various factors on the subjective well-being in terms of ordinal and cardinal utility theory.

Utility theory has historically been used by happiness researchers. Classical utilitarian tradition was assuming any experience to be measurable on the "pain-pleasure scale", and utility considered as a metric to assess an individual well-being.

Further theory developments raise discussions related to a possibility of happiness (utility) measurement itself, its comparability across people and other technical aspects.

Recently, a particular attention is paid to the role of individual comparisons with some reference group, individual relative position in different spheres of life (for example, individual rank in income distribution).

MEASUREMENT OF HAPPINESS

Quantitative empirical research on happiness relies on a number of concepts and assumptions that need some discussion.

Happiness is "the degree to which someone evaluates positively the overall quality of his or her present life as a whole"1. It is the ultimate objective of most, if not all people, a claim that is supported by empirical evidence2. The hallmark of happiness measures is that they are obtained through self-reports: people are asked to evaluate their lives as a whole or some aspect of it on a scale from 'completely satisfied' to 'completely dissatisfied'. An ample literature suggests that such self-reports on happiness are a valid measure of individual well-being3.

Nowadays group of satisfaction questions is widely included in surveys' questionnaires aiming to evaluate individual satisfaction with different life dimensions. Answers are coded by discrete scale, and supposed that individuals give similar responses, namely, the same level of happiness achieved, in similar circumstances. Such life-satisfaction subjective measures are proved to have biological foundations, and being able to contribute for economics research and even serve as guidelines for socio-economic policies.

MODEL AND ESTIMATION

This study performs an empirical investigation of happiness in Russia using the three waves (2007 to 2009) of RLMS data. In these surveys, the individuals are asked to report their happiness (life satisfaction) on a scale from 1 to 5 - a standard procedure adopted in most international happiness surveys. The first value on the scale is labelled as "totally satisfied" and 5 is labelled as "totally dissatisfied". These self-reported happiness scores can be treated as the values of a latent variable (where comparability is assumed to be at the ordinal level).

For that reason, we choose an ordered probit model, where the cutoff points that divide each category are estimated by the model. We also use panel data techniques. Its main advantage is that it allows for more sample variability than cross-sectional or time-series analysis, by considering both temporal and spatial dimensions. Thus, by containing information on both intertemporal dynamics and the individuality of entities, it also controls the called unobserved heterogeneity.

We assume that subjective well-being is a function of the number of economic and socio-demographic characteristics. Among them are income, age, education, employment status, marital status and others. In addition, we must take into account the regional heterogeneity.

Ordered probit models assume the distances between latent variable thresholds to be variable. Individuals interpret satisfaction scale in the same way and indicating the same level of happiness would locate two individuals on the same indifference curve. Such feature of the model helps to overcome the possible ordinarily and scaling problems in the satisfaction data (namely, the fact that different individuals could have diverse happiness scales, which in its turn leads to errors of estimation and inconsistency, in a sense of direct in comparability of the satisfaction levels across individuals).

Given a dataset is composed of several cross-sectional repeated samples, one of the possible strategies would be an estimation of separate models for each round of the survey available.

DATASET

We use panel data obtained from the Russian Longitudinal Monitoring Survey (RLMS). Modules of questions repeating from round to round contain information about personal characteristics, labor market, income, health etc. (individual level), consumption, living conditions etc. (household level). Some groups of questions are not appearing from round to round.

We make use of information contained within the annual personal and household questionnaires from the years 2007-2009 inclusive. This study includes only those people who responded to each of the three available waves of the RLMS surveys. As a result, there are 19484 observations available for analysis. On those occasions when individual records missing data for one or more variables included in the regression, all observations for that individual during that year are dropped from the regression analysis.
VARIABLES

Dependent variable – the level of happiness - is measured on a scale numbered from one to five according to each person’s response to the following question: "How satisfied are you with your life as a whole at the moment?". Answer is coded as (1) absolutely satisfied, (2) rather satisfied, (3) yes and no, (4) not very satisfied and (5) absolutely dissatisfied.

Most of the control variables consist of individual characteristics:

- marital status: a dummy depending on whether the respondent is married or not married;
- employment status: a dummy variable depending on whether the respondent is employed (including those working and on paid/unpaid leave, or self-employment) or unemployed;
- education: a set of dummies for those who graduated from professional courses or have incomplete secondary, upper secondary, basic vocational, secondary vocational, higher vocational or post-graduate education;
- health condition: an ordinal variables derived from responses to the question of how individuals assess their health: from "very good" to "very bad";
- location: a set of dummy variables for those who live in a regional center, city, pgt or in a village.

Other control variables are continuous variables. Income is defined as monthly income of the individual, deflated by the regional subsistence minimum. In addition, we included in the equation of happiness age, age squared and number of household members.

EMPIRICAL RESULTS

We begin our discussion of happiness with some descriptive statistics. Making rather standard (for happiness studies) assumptions that individual life satisfaction levels are comparable and additive across individuals, due their cardinal nature, we estimate an "average" satisfaction level. During the period from 2007 till 2009, this average level was decreasing: in 2007 it equals to 2.97, in 2008 – 2.91, in 2009 – 2.89 (satisfaction is coded by five levels from 1 to 5, where value "1" means "totally satisfied", value "5" means "totally dissatisfied". Median and mode of happiness do not change during the period under review (median corresponds to the category "yes and no"; mode corresponds to the category "rather satisfied", Table 1).

<table>
<thead>
<tr>
<th>As a whole, how satisfied you are with your life in general?</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>totally satisfied</td>
<td>874</td>
<td>7.1</td>
<td>835</td>
</tr>
<tr>
<td>rather satisfied</td>
<td>4170</td>
<td>34.1</td>
<td>4358</td>
</tr>
<tr>
<td>yes and no</td>
<td>2959</td>
<td>24.2</td>
<td>2722</td>
</tr>
<tr>
<td>not very satisfied</td>
<td>2951</td>
<td>24.1</td>
<td>2728</td>
</tr>
<tr>
<td>totally dissatisfied</td>
<td>1284</td>
<td>10.5</td>
<td>1135</td>
</tr>
<tr>
<td>Total</td>
<td>12238</td>
<td>100</td>
<td>11778</td>
</tr>
</tbody>
</table>

Table 1
If talking about the distribution of the satisfaction levels reported (Figure 1), over the three years in consideration, there are no significant differences in the distribution of population by level of happiness.

![Figure 1. Happiness answers distribution](image)

It is quite expectable from the facts cited above that the short term is characterized by a low mobility of happiness level reported.

Financial crisis of 2008 swallowed a part of the population’s savings and financial investments. Table 2 represents some economic indicators for Russia.

In 2007 the proportion of people living below the subsistence minimum was 18,7%; in 2008 the same indicator increased by 0,2 percentage points, and in post-crisis in 2009 decreased by 0,4 percentage points. In this case, per capita monthly income of the population is continuously growing during the period under review. Table 3, constructed according to the RLMS shows that only in the third quartile is a slight decrease in the average income in 2009 compared to 2008.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita monthly income, rub.</td>
<td>12602,7</td>
<td>14940,6</td>
<td>16856,9</td>
</tr>
<tr>
<td>CPI, in % of previous year</td>
<td>111,9</td>
<td>113,3</td>
<td>108,8</td>
</tr>
<tr>
<td>Economically active population, total</td>
<td>75060</td>
<td>75892</td>
<td>75524</td>
</tr>
<tr>
<td>employed</td>
<td>70814</td>
<td>70603</td>
<td>69362</td>
</tr>
<tr>
<td>unemployed</td>
<td>4246</td>
<td>5289</td>
<td>6162</td>
</tr>
<tr>
<td>Unemployment rate, %</td>
<td>5,7</td>
<td>7,0</td>
<td>8,2</td>
</tr>
</tbody>
</table>

Table 2

---

*Question posed: "As a whole, how satisfied you are with your life in general?" Answer coded as: "1"-totally satisfied; "2"- rather satisfied; "3"-yes and no; "4"-not very satisfied; "5"- totally dissatisfied.*
Table 3

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsistence minimum, rub.</td>
<td>3847</td>
<td>4593</td>
<td>5153</td>
</tr>
<tr>
<td>The ratio of per capita income of subsistence minimum, %</td>
<td>327,6</td>
<td>325,3</td>
<td>326,8</td>
</tr>
<tr>
<td>Population with incomes below the subsistence minimum, % of total population</td>
<td>13,3</td>
<td>13,4</td>
<td>13,2</td>
</tr>
</tbody>
</table>

Table 4

<table>
<thead>
<tr>
<th>Quartiles of the distribution of individual income</th>
<th>Average income, rub.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>1\textsuperscript{st}</td>
<td>2494,35</td>
</tr>
<tr>
<td>2\textsuperscript{nd}</td>
<td>4722,27</td>
</tr>
<tr>
<td>3\textsuperscript{rd}</td>
<td>8378,90</td>
</tr>
<tr>
<td>4\textsuperscript{th}</td>
<td>18424,07</td>
</tr>
</tbody>
</table>

Thus one couldn't expect a changing role of income in affecting individual satisfaction.

Round-by-round Ordered Pobit Model

At the beginning, ordered probit models can be estimated on the cross-sectional (round by round) samples. Estimation results presents in Table 4.

Table 4

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>ln(income)</td>
<td>-0,250\textsuperscript{***}</td>
<td>-0,229\textsuperscript{***}</td>
<td>-0,219\textsuperscript{***}</td>
</tr>
<tr>
<td>age</td>
<td>0,052\textsuperscript{***}</td>
<td>0,048\textsuperscript{***}</td>
<td>0,051\textsuperscript{***}</td>
</tr>
<tr>
<td>age\textsuperscript{2}</td>
<td>-0,0004\textsuperscript{***}</td>
<td>-0,0004\textsuperscript{***}</td>
<td>-0,0004\textsuperscript{***}</td>
</tr>
<tr>
<td>size of household</td>
<td>-0,016\textsuperscript{*}</td>
<td>-0,020\textsuperscript{**}</td>
<td>-0,028\textsuperscript{**}</td>
</tr>
<tr>
<td>Location (village)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>regional center</td>
<td>0,053\textsuperscript{*}</td>
<td>0,066\textsuperscript{*}</td>
<td>0,071\textsuperscript{*}</td>
</tr>
<tr>
<td>city</td>
<td>0,063\textsuperscript{*}</td>
<td>0,092\textsuperscript{**}</td>
<td>0,085</td>
</tr>
<tr>
<td>PGT</td>
<td>-0,190\textsuperscript{***}</td>
<td>-0,027</td>
<td>-0,173\textsuperscript{**}</td>
</tr>
<tr>
<td>Education (professional courses)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>incomplete secondary</td>
<td>0,018</td>
<td>0,022</td>
<td>0,011</td>
</tr>
<tr>
<td>upper secondary</td>
<td>0,022</td>
<td>0,016</td>
<td>0,028</td>
</tr>
<tr>
<td>basic vocational</td>
<td>0,023</td>
<td>0,020</td>
<td>0,017</td>
</tr>
<tr>
<td>secondary vocational</td>
<td>-0,008</td>
<td>-0,120</td>
<td>-0,075</td>
</tr>
<tr>
<td>higher vocational or post-graduate</td>
<td>-0,145\textsuperscript{***}</td>
<td>-1,097\textsuperscript{***}</td>
<td>-0,028</td>
</tr>
</tbody>
</table>

\textsuperscript{***}, **, * denote levels of significance respectively at 1, 5 and 10 per cent.
Some findings based on cross-sectional regressions are the following.

Current income has no statistically significant effect upon life satisfaction. Thus, the results appear to offer statistical support to the hypothesis that self-reported well-being depends on the comparison income.

Logarithm of income, deflated by regional subsistence minimum, was included together with the number of household members' to account for decreasing marginal utility of money for happiness level evaluation and economy of scale in households. As it was expected, increase of income conveys a positive significant effect on satisfaction evaluation (also, household size increase implies sharing of the same income by greater number of household members, which is reflected in negative coefficient before the corresponding variable). Noticeable that magnitude of the coefficient before income variable, is strongly significant, growing over 2007-2009.

U-shape of relation between satisfaction and age can be noted.

Those who are unemployed are less satisfied with life compared to those who are employed.

The negative coefficient of "Married" means that being married contributes to happiness, while becoming separated or divorced causes a reduction in life satisfaction.

Living in a city has a negative and significant effect upon life satisfaction, but living in a pgt (compared with village) on the contrary reduces the probability of choosing a graduation is "totally dissatisfied".

With regard to education level, the only higher or post-graduate education has a significant and positive effect on happiness.

Negative and significant coefficients for different categories of health variable indicates that (compared with very bad health) all the others led to increased levels of happiness (the more the better state of health).

Comparing the coefficients of ordinal probit models for years, can be seen that there is no significant change them. Therefore in the short term financial crisis has not had an impact on the level of happiness of individuals.

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health condition (very bad)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>very good</td>
<td>-1,461***</td>
<td>-1,543***</td>
<td>-1,931***</td>
</tr>
<tr>
<td>good</td>
<td>-1,195***</td>
<td>-1,387***</td>
<td>-1,795***</td>
</tr>
<tr>
<td>average</td>
<td>-0,890***</td>
<td>-1,047***</td>
<td>-1,409***</td>
</tr>
<tr>
<td>bad</td>
<td>-0,432***</td>
<td>-0,614***</td>
<td>-0,889***</td>
</tr>
<tr>
<td>Marital status (not married)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>married</td>
<td>-0,251***</td>
<td>-0,268***</td>
<td>-0,297***</td>
</tr>
<tr>
<td>Employment status (unemployed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>employed</td>
<td>-0,100***</td>
<td>-0,134***</td>
<td>-0,143***</td>
</tr>
<tr>
<td>Constant (totally dissatisfied)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>totally satisfied</td>
<td>-1,865***</td>
<td>-2,285***</td>
<td>-2,389***</td>
</tr>
<tr>
<td>rather satisfied</td>
<td>-0,438***</td>
<td>-0,740***</td>
<td>-0,995***</td>
</tr>
<tr>
<td>yes and no</td>
<td>0,271*</td>
<td>-0,062*</td>
<td>-0,361*</td>
</tr>
<tr>
<td>not very satisfied</td>
<td>1,267***</td>
<td>0,936***</td>
<td>0,605***</td>
</tr>
<tr>
<td>LR</td>
<td>1219,988***</td>
<td>1050,796***</td>
<td>908,984***</td>
</tr>
</tbody>
</table>
Random Effects Panel Model

Econometric specification estimates, based on panel nature of the data are presented in the Table 5 below. The first part of the table reports coefficients associated with each variable, their standard errors and their significance level. In the lower part of the table (constant value) cut-off points are presented, which will determine the assigned level of happiness in each case.

To assess the quality of the probit ordinal models often studied the difference between the residuals of the model under the restriction where all coefficients are equal to zero and there is only a constant, and the residual obtained without such limitations. In the model constructed such a distinction is 1674,19 and is significant at less than 1 percent level.

<table>
<thead>
<tr>
<th>Table 5</th>
</tr>
</thead>
</table>

**Estimation for Random Effects OrderedProbit Model of Happiness**

| Number of obs = 19484 | Log likelihood = -25570.372 |
| L.R chi2(18) = 1674,19 | Prob > chi2 = 0.0000 |

<table>
<thead>
<tr>
<th>happiness</th>
<th>Coef.</th>
<th>Std. Err.</th>
<th>z</th>
<th>95% Conf. Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>age</td>
<td>0.0735***</td>
<td>0.0046</td>
<td>15.87</td>
<td>0.0645 0.0826</td>
</tr>
<tr>
<td>age^2</td>
<td>-0.0008***</td>
<td>0.00005</td>
<td>-16.12</td>
<td>-0.0009 -0.0007</td>
</tr>
<tr>
<td>ln(income)</td>
<td>-0.2144***</td>
<td>0.0152</td>
<td>-14.12</td>
<td>-0.2422 -0.1847</td>
</tr>
<tr>
<td>size of household</td>
<td>-0.0274***</td>
<td>0.0084</td>
<td>-3.25</td>
<td>-0.0439 -0.0109</td>
</tr>
</tbody>
</table>

**Location (village)**

| regional center | 0.0131 | 0.033 | 0.40 | -0.0515 0.0778 |
| city | 0.0766** | 0.0352 | 2.18 | 0.0076 0.1456 |
| PGT | -0.2554*** | 0.0561 | -4.56 | -0.3653 -0.1455 |

**Education (professional courses)**

| incomplete secondary | 0.0087 | 0.0582 | 0.15 | -0.1054 0.1229 |
| upper secondary | 0.024 | 0.05 | 0.48 | -0.0739 0.1219 |
| basic vocational | 0.0585 | 0.0414 | 1.41 | -0.0227 0.1396 |
| secondary vocational | -0.0357 | 0.0415 | -0.86 | -0.1170 0.0457 |
| higher vocational or post-graduate | -0.1965*** | 0.0431 | -4.56 | -0.2809 -0.1119 |

**Health condition (very bad)**

| very good | -1.7825*** | 0.1190 | -14.97 | -2.016 -1.5491 |
| good | -1.5188*** | 0.0854 | -17.79 | -1.6861 -1.3515 |
| average | -1.1573*** | 0.0823 | -14.07 | -1.3185 -0.996 |
| bad | -0.6550*** | 0.0815 | -8.04 | -0.8147 -0.4954 |

**Marital status (not married)**

| married | -0.3301*** | 0.0272 | -12.15 | -0.3839 -0.2773 |
| Employment status (unemployed)**

| employed | -0.2094*** | 0.0348 | -6.02 | -0.2776 -0.1412 |

**Constant (totally satisfied)**

| totally satisfied | -2.4538*** | 0.1369 | -17.93 | -2.7221 -2.1855 |
| rather satisfied | -0.5126*** | 0.1362 | -3.76 | -0.7795 -0.2457 |
| yes and no | 0.3873*** | 0.1365 | 2.84 | 0.1198 0.6547 |
| not very satisfied | 1.6970*** | 0.1372 | 12.37 | 1.4281 1.9661 |
| Rho_cons | 0.4246*** | 0.0092 | 46.02 | 0.4065 0.4426 |

***, **, * denote levels of significance respectively at 1, 5 and 10 per cent.
Results obtained by model of cross-sectional data are identical to the results of panel data model. Sign of the coefficient, presented in the second column of Table 5 shows how the probability of choosing a graduation "totally dissatisfied" of the dependent variable. So, to reduce the probability that an individual will report dissatisfaction with life is:
- increasing income;
- increasing the number of household members;
- type of location "PGT" compared to the "village";
- higher and post-graduate education compared to professional courses;
- any other health condition compared to the "very bad";
- marital status "married" compared to "not married";
- employment status "employed" in comparison with the "unemployed".

Happiness is U-shaped in age. This is consistent with existing research for other countries though the age at which lowest happiness is observed varies across studies\(^1\).

Last row of Table 5 reports the value of rho, the correlation coefficient of composite errors (0.42). Rho indicates that there exists a low positive correlation in happiness levels; if we observe a downgrade, it is expectable to observe subsequent downgrades. Moreover, rho can be seen as the relative importance of the unobserved effect. Thus estimation results are indicating that the importance of the unobserved is low.

**CONCLUSIONS**

Given the nature of the crisis period under review, it would be expected that household economic situation and labor market position characteristics to be shifted on the top in the list of factors affecting individual happiness level evaluation. Dataset even if originally constructed as a repeated cross-section study, enables two styles of analysis: on round-by-round cross-section or panel samples.

Round-by-round estimation results were arguing that effect of some independent variables wasn't changing over the time.

Following the major advances in the field of happiness, much work is currently underway that evaluates the contribution it can make to shaping and appraising policy. More concretely, several ideas exist for the construction of 'a national index of happiness' or a related indicator, which would subsequently serve as a key policy goal. In addition, people are experimenting with the use of happiness data to assess the costs and benefits of policy alternatives.

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GLOBAL FINANCIAL-ECONOMIC CRISIS AND THE NEW DEVELOPMENT MODEL OF AGRO-FOOD INDUSTRY
THE CASE STUDY OF VOJVODINA

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ABSTRACT

Spill over of global financial and economic crisis effects has intensified the development crisis in Serbia - which lasts over three decades. A key factor for the recovery of development propulsion is the resolution of problems of low managerial, technological and economic efficiency of export industries and jobs. The performed analysis indicates that a key sector where something could be done on the restoring of development propulsion in the medium term – the agro-food industry. Due to the complex of natural, economic and historical factors, the national agro-food industry consists of two parts, which are geographically and administratively bounded on two macro regions – Vojvodina and the territory of the rest of Serbia. This research in this paper is concentrated on Vojvodina - based on the premise that the low developmental efficiency of its agro-food industry, primarily a macro-economic phenomenon that is caused by the disharmony between the natural conditions, human resources, production base and way of their organization and management, on the one hand, and national and regional socio-economic conditions of their use, on the other side. Accordingly, the focus of this paper is on: (1) structuring a new development model of agro-food industry in Vojvodina, and (2) analysis of the public and corporate governance effectiveness in the context of harmonization the new development model of agro-food industry in Vojvodina with the process of reforms, preparation for European integrations and overcoming the consequences of global crisis.

Key words: Vojvodina, Agro-food industry, Global financial-economic crisis, New development model, Public and corporate governance

JEL classification: O13, Q13, Q17, Q18
1. INTRODUCTION

The Serbian economy entered the do falling phase of a long economic cycle around 1980. To overcome this, three models for renewal of development propulsion were applied (Adžić, 2009). The first model (in that time under the so-called self-governing version of socialist socio-political system - note by author’s) was launched in the form of so-called long-term program of economic stabilization (LPES) in 1982/1984. The second is activated 1989/1990 in the form of so-called Marković’s (Ante Marković - Prime Minister of the former SFR Yugoslavia in which existed Serbia as a federal unit - note by authors) project of “soft” restoration of capitalism, and which has been applied with some modifications, until 2000. After the radical changes of political power holders in late 2000 was launched the third (“harder”) model of transition according to the recommendations of international political and economic organizations.

The results show that right solutions to overcome the long-term development crisis in Serbia were not found (Adžić, 2009). Without getting into detailed explanations, the national development crisis is complex and multidimensional economic, geopolitical, historical, anthropological and cultural phenomenon (Đuričin, 2008). The economic problems are consequence of delay in the realization of four characteristic processes (post) socialist transition - privatization of development, macroeconomic stabilization, institutional reforms and re-industrialization.

The spill over of the global financial and economic crisis effects has shown that a fundamental structural problem of Serbia is - a much greater consumption of goods and services than their production. This phenomenon marks Serbia from the second half of the nineteenth century. The key problem is that the gap between production and consumption after 2000 - increased from about 4 to 6% as it was an average per year over the past fifty-five years at 15% to 33% per year depending on the results of enterprising and on calculation methodology of the gross domestic product. Therefore, the creators of the institutional reforms and economic policies in Serbia should turn to more realistic solutions in designing the goals and actions of operationalization the strategy of export promotion - as the basis for creating the conditions for long-term sustainable development. A key element is the search for solutions to radically increase production investments and improve microeconomic performances in activities and branches that produce: (1) a relatively homogeneous products (meaning that a large product differentiation is not needed and not even their international recognition compared to competition in targeted segments of the global market), (2) where there are natural and with work comparative advantages (in terms of positive foreign exchange balance) and a potential price competitiveness, and (3) are (mostly) under the control of domestic factors. In the exposed context, the only branch where something could be done on Serbia export increasing at great prices (precisely, with great new added value per physical unit of production!) in the medium term is the agro-food industry.

It is indisputable that the agro-food (natural, human, production and infrastructural) Serbia resources are such that their more complete use (from the aspect of current average European technological level - note by author) will provide at least two times bigger food production than the absorption capabilities of national market (Study, 2001, Adžic, 2008b, c). Due to the complex of natural, economic and historical factors, the agro-food industry in Serbia consists of two technological and infrastructural parts with different production structures and
problems revitalization of development, which are geographically and administratively bounded on two macro regions - Vojvodina (which has a long tradition of high level of political and administrative autonomy) and the rest of Serbia territory. The ratio of the agro-food industry between Vojvodina and the other parts of Serbia is 1:1, and of population 1:2.7 (Adzic, S. & Adzic, J., 2009) Therefore, the further exposure in the paper is concentrated on Vojvodina.

In the presented context, the processed matter in this paper is in addition to introduction and conclusion divided into two parts. The first part deals with key elements for structuring the new development model of agro-food industry in Vojvodina. The second part deals with the problem of public and corporate governance effectiveness in the context of harmonization of the new development model of agro-food industry in Vojvodina with the process of socio-economic reforms, preparations for European integrations and overcoming the consequences of global financial and economic crisis.

2. THE NEW DEVELOPMENT MODEL OF AGRO-FOOD INDUSTRY IN VOJVODINA

2.1. Basic external and internal determinants of new development model of agro-food industry in Vojvodina

There is no doubt that the defining of new development model of the agro-food industry in Vojvodina according to the criteria of open market economy and needs to neutralize rigidities and distortions that have entered the agricultural policies of developed market economies, and various additional restrictions that are a consequence of the global financial and economic crisis - is a complex and complicated problem.

It is absolutely certain, and without further elaboration, that the revitalization of the agro-food industry development functions in Vojvodina, in the end, comes down to the process of global commercialization through the acquisition and maintenance of non-price and price competitiveness based on the dynamic creation and development of: (1) self-sustainable farms, cooperatives, production and transportation enterprises merged in the export macro-clusters organized by main lines of production (in the case of Vojvodina: wheat, corn, sugar, oil, bio-diesel fuel, milk, pork, chicken and beef meet), in a way that ensures effective operations in conditions of intense global competition, technological changes and the rigidity imposed by protectionist-oriented agrarian policies of developed market economies, (2) specialized circles of commercial and financial capital, whose main source of profit gains is financing a food production for export, and (3) appropriate market, physical, STIEOT (Science - Technology - Information - Education - Organization - Telecommunication) and specialized public infrastructures - with primary task to through the public and private logistics, educational, development-research, administrative and similar activities provide stimulus (and relatively stable) conditions for the smooth operation of the process of expanded reproduction by the given lines of production at the lowest possible cost (Buckwell A. et al, 1994; Gellynk, X., Verbeke, W. and Viaene, J., 2003; Lawler, K. and Lee K-P., 2003; Matthews, A., 2003).

On the other hand, in considering a new development model of agro-food industry in Vojvodina should be taken into account the specific factors that complicate this task.

The first are the unclear goals of transition the national agro-food industry, which resulted in practical destruction of all inherited (business) agro-industrial systems in Vojvodina.
But in historical context, they are the result of another, crucial factor. It is a non-economic approach in establishing a model of development, production, processing and trade of agro-food products. If eliminate the events in the period since 1945 to 1956 that are caused by different kinds of specific factors (widespread destruction in World War II, food crisis after the war, industrialization by the socialist concept of preferring the development of heavy industry at the expense of agriculture, which is de facto in the (former) Yugoslavia abandoned in 1952, because this role took over the foreign economic aid, at first non-refundable, and later in the form of soft commodity and financial loans), published in the open at the beginning of the eighth decade of last century, i.e., when the more permanent reduction of the national share in world exports of food was registered, in which Vojvodina had a dominant role, as in the period since 1957 to 1970 revitalization and significant qualitative and quantitative improvement of its agro-food industry was done, by the (then current) model of large commercial farms in the United States. The initial impulse is to eliminate the national production of meat and meat products from the market of the European Union by introducing a common agricultural policy (which has also hit other countries such as Argentina, Australia, etc.), but, from today's perspective, the point was in continual persistence on incremental behaviour of all relevant subjects in the process of reproduction, both in terms of anticipative respect to principles of economy, and in terms of development and implementation of new technologies of production, processing and distribution of food.

Therefore, the low efficiency of agro-food industry development in this paper is treated primarily as a macroeconomic phenomenon that has emerged as a result of disharmony between available natural and human resources, production base and ways of their organization and national socio-economic conditions of their use (transitional stagflation, radical deindustrialization, major political and social turbulences and institutional chaos) in a very rigid external environment – loaded by needs to overcome the global financial and economic crisis. Therefore, from the methodological point of view, the new development model of agro-food industry in Vojvodina should be structured in the context of creating a frames that will ensure a socially organized and institutionally regulated process of cooperative coordination of decisions at the macro level, on the one hand, and at the mezzo and micro level, on the other hand - as to by the privatization of development and by implementation of business and technological innovation and by introduction of new forms of social and economic organization and division of labour provide the global competitiveness of final processing products and turnover by the given lines of production.

Accordingly, the emphasis on structuring a new development model is concentrated in two areas. The first deals with the problems of determining the content of a new (scientific recommended) model of micro- and mezzo-organization of the agro-food industry of Vojvodina. In second topic, the focus is on defining the determinants of the models that should lead to improvement of global competitiveness of the agro-food industry in Vojvodina.

2.2. New model of mezzo and micro organization of agro-food industry in Vojvodina

In general, despite the former high technological and production scope, farms and businesses in food and beverages industries producing in Vojvodina have a relatively low level of economic and technological performance because of: (1) small net-added value per employee (two to ten times less than in the key competitors states in the target segments of the global market), (2) high consumption of energy, production and working capital per unit of product
(there are no reliable data about this and the estimation by author’s are in range of 20 to 50%),
(3) low quality and low environmental performance of processes and products, etc.

In this context, a key condition for the renewal of development propulsion is that a new structure of agro-food industry form farms, cooperatives, and production and trading enterprises able to deal with problems with competitiveness security in harsh and unequal international competition, according to dispose of: (1) appropriate natural and productive resources and personnel, (2) sound financial structure, and (3) system of business and corporate governance, which allows fast and efficient response to changes in the natural, internal and external socio-economic environment. Provision of listed performances is the product of overall socio-economic efforts to each entity of agro-food industry (farms, cooperative, production or trading enterprises) integrate into a complex and hierarchically structured system with five levels (layers) (Adžić, 2008c).

Zero (basic) level, should include economically self-sustainable farms (family farms and large commercial farms grew on the ruins of inherited agro-industrial systems) in a specifically institutionally arranged frames of regional and national socio-economic environment. Its main task is to, through a complex package composed of public goods and public administration services, initiate and support the process of building a globally competitive primary agricultural producers.

The first level, should include the individual subjects of the agro-food industry (economically self-sustainable farms, cooperatives, production or trading enterprises) unified in export macro-clusters according to the previously mentioned general lines of production.

The second level, should include the individual subjects of the agro-food industry (economically self-sustainable farms, cooperatives, production or trading enterprises) unified into macro-reproduction units whose core is located within Vojvodina and Serbia, and which ensure an optimal regional and national social labour division and supply of physical inputs (energy, basic reproduction materials, intermediate products, machinery and equipment) and services (business services, transport services, storage, processing and cross-border transfers) under the most favourable economic and technical conditions. In this macro-reproduction units should be included and large (agro) trading companies, both on the side of input supply, and even more on the side of marketing, storage, transport, cross-border transfers and investments in targeted segments of the global market.

The third level should include the individual subjects of the agro-food industry (economically self-sustainable farms, cooperatives, and production and trading enterprises) in the institutionally regulated frames of regional and national socio-economic environment. Its main task is a supply of human and financial capital, public goods and public administration services, in a way that will empower their behaviour in terms of satisfying the key socio-economic target – increasing the non-price and price competitiveness of products, processes, business entities, business and macro-reproduction units.

The fourth level should include the subjects of the agro-food industry (economically self-sustainable farms, cooperatives, and production and trading enterprises) within selected segments of European and global market of agro-industrial products. Its task is to provide to every agro-food industry subject an economies of scale and encouraging the development of production that can, based on available factors of production, as well as those that will develop
in the future, achieve a level of efficiency and competitiveness, first in terms of price, and later of quality in a harsh and unequal international competition.

In the proposed organizational model, clearly can be separated only two socio-economic structures.

The first and key is tied to the creation of socio-economic environment, which should initiate and support the project of building a global competitive primary agricultural production on the model of economically self-sustainable farms. This project, due to different natural, economic and other conditions in relation to the rest of Serbia, should have a highly regional characteristic.

However, in second area (which includes from first to fourth level) there are no sharp boundaries between some levels. Also, it is not possible to ex ante determine the boundaries of power distribution between central and regional factors. Their more precise determination can give only a realistic economic life based on analysis of efficiency of some solutions in the realization of the final goal - better utilization of natural and man-made resources. At the same time, there should be no difficulties in determining the standards for results measuring, because in the targeted European environment can easily find appropriate role models - and that, in the case of Vojvodina, should be Denmark and its results.

2.3. **Determinants of model for improving the competitiveness of the agro-food industry in Vojvodina**

In determining and ranking the factors for structuring the determinants of the new development model of agro-food industry in Vojvodina, the special attention was paid to their alignment with the criteria of the European concept of endogenous, auto-propulsion and self-sustainable regional development (Adžić, 2011).

In this context, concretization of model elements to improve the competitiveness of the agro-food industry in Vojvodina is based on the results of the analysis: (1) direct and indirect participation of export and import in production and trade of particular agro-food products, (2) assessing the quality of entrepreneurship in the specific agro-industrial structure (in particular from the aspects of: (a) international marketing, (b) quality assurance according to European standards and specific requirements of specific foreign markets, (c) provision of additional financial resources for financing the process of reproduction), (3) availability of qualified and internationally competent labour required for production and trading of particular agro-food product, and (4) availability of physical infrastructure in function of linking area where the specific agro-food production in Vojvodina take place with targeted segment of the European and global market.

The emphasis in this definition of the improving competitiveness factors is on: (1) qualitative side of the human factor, and (2) availability of physical, STIEOT, financial, commercial and specialized public infrastructure. These are factors on which can consciously act in a context that depends on economic, social and political action to establish a (socio-economic) consensus in their promotion. Accordingly, in analysis a special attention was paid to determining the following relationships: (1) “Which of these factors work together and what is their individual and cumulative impact on the economy and quality of concrete production in the agro-food industry in Vojvodina?” (2) “What is the origin of the production factors (inputs) in the specific production of agro-food industry in Vojvodina, i.e., what is the compliance between
import and export flows by value and quantity with the destination of inputs import?”, (3) “What is the time period in which can provide a change of direction and activity intensity of factors of non-price and price competitiveness (in terms of: negative -> positive, and threats that can change the effect in direction: positive -> negative!)?”, and (4) “How and under what conditions may influence the internal mobility of factors of non-price and price competitiveness (especially from the financial and service to the real sector and inter-branch mobility)?”.

In the light of these findings, a review of the determinants is set that should represent the basis for creating a new development model of agro-food industry in Vojvodina in order to improve competitiveness. These are: (1) creating a economically self-sustainable farms, (2) measures for the development of production (productive) entrepreneurship, (3) institutional reforms in the function of developing internationally competent infrastructure for public regulation of agro-food industry behaviour, (4) establishing and development of specialized circuits of commercial and financial capital on the basic reproduction units (given lines of agro-food industry production – note by author’s), (5) effective business and organizational connections of primary agricultural production, manufacturing, trade and transport with the complex macro-logistic bases and border crossings by the basic reproduction units, (6) improvement of the education system in the function of human capital development, (7) promotion of scientific-research work and networks of institutions for agro-technologies transfer by the basic reproduction units, and (8) revitalization, modernization and new building of transport infrastructure with the complex of macro-logistic bases and border crossings in function of the physical connection of Vojvodina with the targeted segments of European and global market.

Hereinafter, the emphasis is on elements of the model that should encourage the development of economically self-sustainable farms, because it represents the basis on which build the elements from (2) to (8). The main problem in implementing a project of development of economically self-sustainable farms (family farms and large commercial farms) in Vojvodina is the imprecise definition of its content. Official (national and regional) agricultural development strategy is without real and professional discussion, chosen the European approach in determining the economically self-sustainable family farm as the basis for future development. However, practically nothing has been done on its implementation. On the other hand, is completely ambiguous the attitude of the state to the large commercial farms evolved from the ruins of inherited agro-industrial systems. In this context, in the analysis of model elements for constitution of economically self-sustainable family farm, we will restrict to the problems of selecting the optimal size of holdings and seeking the efficient solutions for (co)financing the development from external sources. In our opinion, two cases should be differing.

In husbandry, fruit and wine growing, but also in some other agricultural productions the requirement is to create such size of land ownership, in which the farmer and his family will find full employment, while providing the conditions for rational use of productive capital (from tractors and machinery to the industrial facilities and permanent crops). The basis of this project is enlargement of properties with an emphasis on the development of family farms with an area of 50 to 250 hectares, primarily by the implementation of appropriate land policy (Adžić, 1992). This project is spontaneously realized, developing the layer of so-called agricultural entrepreneurs in Vojvodina, who managed to combining their lands and leased land (from non-agricultural population and state) - create commercial farms of appropriate size for cost-effective
production by the given lines of production, but with yields that are on average lower by 20 to 30% of pre-transitional maximums. In any case, it is a project that will exhibit the real effects in the long run.

Differently raises the problem of creating an economically self-sustainable farms that are capitally intensive, so no need for a larger area of land – hothouses and greenhouses (in which produce vegetables, flowers, etc.), hangars (for broilers, eggs, mushrooms production, etc.) and livestock barns (feedlot for cattle and pigs, milk production farms). Creation of such production capacities, primarily, depends on the knowledge and motivation of producers and appropriate cost of capital (long-term and stable relationship between the rate of profit and interest). According to the author, the key is in forming of appropriate Regional agricultural bank with a team of experts trained in cooperation with the local (rural) authorities and all available scientific-research resources to provide a rational investment of capital with different maturities in capitally intensive agriculture by any particular project.

3. THE NEW MODEL OF PUBLIC AND CORPORATE GOVERNANCE IN AGRO-FOOD INDUSTRY

The performed analysis indicates that the new development model of agro-food industry in Vojvodina should be based on the mix of public and corporate governance in which was made a substitute of agreements of distributive-oriented coalition with a combination of hard administrative regulation mechanisms (in the field of application of quality of processes and products and measures to protect natural resources, life, health and consumer of agro-food products interests) and encouraging the establishment of development-oriented coalition (in the field of constitution and development of export-oriented reproduction unit, primarily, the macro-clusters in a function to lowering all costs).

This approach is implicitly based on the assumption of the existence of an efficient network of economic institutions in the function of development the so-called by investment drawn export economy based on the coordination of many small private interests and resources (Adžić, 2008b, and c). Without entering here in its detailed contents and modalities of its functioning, the attempt was made to find answer to the basic question: “How in environment: (1) in which the social and economic development strategies (of Serbia and Vojvodina) are unclear, (2) in which dominate interests of distributive-oriented coalition in formatting the economic conditions of agro-food industry, (3), in which the specialized foreign trade network is underdeveloped, inefficient, expensive, and no equity, (4) in which the financial system is uninterested in long-term investments in export business, (5) in which the macro, mezzo and micro-organization and management (of agro-food industry) are outdated and underdeveloped, and (6) public finance are poor and burdened by preservation of internal social stability - provide conditions for efficient realization development strategy for the agro-food industry in Vojvodina?”.

Solutions for better mix of public and corporate governance, according to the author’s, should be sought in terms of defining their role in the realization of the trial of goals: (1) Modernization and development of specialized infrastructure to ensure public goods and public administration services for the agro-food industry needs, (2) Modernization and development of appropriate STIEOT infrastructure in order to increase performances of products, processes and
human capital in selected (given) production lines, and (3) Revitalization, modernization and new construction of appropriate physical infrastructure. Let's see - “What should be their specific (scientific) recommended content and which mix of public and corporate governance should be applied?”

Improving the technology of public and corporate governance in function of effectively modernization of specialized infrastructure for ensuring the public goods and public administration services for the agro-food industry needs, should be made by explicit using the technique of total re-engineering (Adžić, 2004), by the model of solutions in small European Union countries with large food production. Its main indications are: (1) improving the efficiency of public services by applying the concept of values for price - by implementing public management techniques and creating transparent procedures for measuring the performance and on this basis revision of their work, and (2) introduction of competition in providing public services - using techniques of internal market and developing partnerships between public and private sectors.

Improvements in the model of public and corporate governance in function of realization of projects of modernization and development of appropriate STIEOT infrastructure to enhance the performance of products, processes and human capital in selected lines of production should be performed in accordance with the needs of creating an encouraging frame for the implementation of the concept of self-sustainable development, international marketing, management of total quality of processes and products, modern models of financial engineering and development of export macro-clusters. Solutions should be found in reliance on a network of formal and informal institutions, such as: (1) positively defined political factors toward rural development based on private initiative and increasing the degree of economic freedoms, (2) development orientation in the specific activities of specialized public infrastructure, (3) linking the high education institutions with the subjects of agro-food industry in order to realize various forms of scientific-research activities and personnel exchange, (4) economic and agricultural chambers and associations, and (5) partnership of public and private sectors.

Due to high fiscal burden and underdeveloped financial infrastructure, solutions for better public and corporate governance in function of more efficient implementation of projects of revitalization, modernization and new construction of specialized physical infrastructure for the needs of agro-food industry in Vojvodina should be sought in the creative application of partnerships institution between the public and private sector, and in forms that would ensure greater involvement of trade, i.e., local capital of rural areas.

The performed analysis indicates that the main role of the mix of public and corporate governance in the new model of development of the agro-food industry in Vojvodina should be - providing a relative balance between centralized interests of inputs suppliers, processing of agricultural products, commercial and financial capital, on the one hand, and disintegrated interest of producers of primary agricultural products, on the other side. In concrete conceptual frame, it is important to: (1) provide a systematic approach to study the root causes of slow improvement of non-price and price competitiveness of specific agro-food production and determine the alternatives, and (2) create a culture of behaviour of economic, administrative and political actors of agr0-food industry reproduction in which the efforts to overcome the conflict take priority. In this sense, it is necessary that public and corporate factor in its operations relies on four principles (Adžić, 2008a):
First, the illusion that with the existing mixes of public and corporate governance can be realized a new model of the agro-food industry development in Vojvodina should be abandoned.

Second, there is a need for precise critical evaluation of the role of carried out privatizations, large enterprises and foreign factor in the restructuring of the agro-food industry in Vojvodina, especially regarding the creation of micro-economic conditions for the dynamic increase of export based on increasing the non-price and price competitiveness.

Third, it is necessary to constantly work on clear, transparent and accurate comparative analysis of the organization, structure, personnel and technical performance of the system of public and corporate governance with agro-food industry in Vojvodina according to the system of standards applied in chosen country of European Union and on this basis to initiate actions to fine-tune their mix.

Fourth, necessary is the timely and effective critical evaluation of the content of goals and actions in the new model of agro-food industry development in Vojvodina based on the analysis - what are their effects on the promotion and coordination of all available individual development initiatives and resources in function of global commercialization with precisely defined objectives in the short, medium and long term.

4. CONCLUSION

The presented concept of a new development model of agro-food industry in Vojvodina is based on three explicit elements. The first is of a general nature and is valid for the entire real economy of Serbia. It is the realization of the economic institutions reform in function to create conditions for development of so-called investment drawn economy in function of radical increase of exports. The second is specific to the agro-food industry in Vojvodina and refers to the development of economically self-sustainable farms. The third is based on determining the mix of public and corporate governance so that as soon as possible reaches the improvement of price and non-price competitiveness. In this context, three operational conclusions can be made, which are also the basis for further research.

First – The base of presented conception is systematically arranged integration of paradigm learning and cooperative collaboration - based on mass and, mostly, informal communication between individuals, economic and non-commercial entities, which provides the division of labour and specialization on the basis of information flow and experience exchange necessary for timely and (economically) effective action for the operationalization of individual and group preferences in harsh, open and unequal market competition.

Second – Operationalization of actual content of development model of agro-food industry in Vojvodina should be based on the activist approach, where priorities are: (1) development of economically self-sustainable farms, (2) unaddressed encouraging the restructuring of production, technological organizational, ownership and staffing structure, and (3) overcoming the internal limitations by eliminating the influence of the distributive-oriented coalition.

Third - The operationalization of the specific content of mechanisms for the realization of goals in the initial period reduce to: (1) modernization of specialized infrastructure for the provision of public goods and services of public administration, (2) support the development of productive (production) entrepreneurs and human capital through various forms of cooperation
between the public and private sector, (3) revitalization and modernization of transport infrastructure with the complex of macro-logistic bases and border crossings in function to create conditions for economic and technical rational food export by the high European standards, and (4) rural policy in function of relief over employment agricultural production.

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DEVELOPMENT OF AN AGRICULTURAL COMPLEX OF RUSSIA IN GLOBALIZATION

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ABSTRACT

The main theme of this report is the food safety of Russia. This condition of the state economy, when food independence of the country is provided, provision, economic utility of food products is guaranteed by the state and corresponds to requirements of the legislation of the Russian Federation in safety and quality. Food safety of Russia is considered if, in case of the receipt termination in the country of foodstuffs from abroad, there is no food crisis. In Russia, it should be made: Potato—95%; Grain, milk and milk food—90%; Salt food—85%; Meat and meat products—85%; Fish and fish products, sugar, vegetable oil—80%.

Keywords: agriculture and food, food safety, food independence, regional aspect of food safety, guarantee of food safety with risk
FOOD SAFETY IN RUSSIA

The food security of Russia was formalized in January 2010 when president Medvedev signed the “Food Security Doctrine”, which aims to see the country reach 85% self-sufficiency in meat and poultry by 2020. Business Monitor International (London, Great Britain) forecast self-sufficiency in poultry to be reached in 2013. Russia is using the tools to achieve such goals include slashes in import quotas. This year, US pork quotas were cut 43% from 100,000 to 57,000 tonnes. We expect demand will suffer as prices rise and forecast a decline in pork consumption for 2010. And Putin (2010) says:

We have taken a major decision in the interests of domestic producers—in 2011 we’ll cut poultry imports to Russia practically in half. This was not an easy decision but we’ve taken it with a view to reducing imports in general and strengthening domestic agriculture.

Less favourable weather means grain harvests for 2009/2010 expected to fall across the board following bumper 2008/2009 season. Wheat to fall 4.0% year-on-year to 61.1 mn tonnes, corn to plummet 33% to 4.44 mn tonnes, barley to drop 26% to 17.1 mn tonnes.

Milk consumption forecast for 2010 revised upwards with improving Russian economy, which we now expect to grow 4.0% over the year. A slight year-on-year gain in milk consumption is expected, with the figure remaining around 12.1 mn tonnes.

Balance of trade in goods expected to rise from US $ 303.3 bn in 2009 to a forecast US $ 364.0 bn in 2010. Russia is aiming at the expansion of wheat exports to Asia. With quality perception a challenge, Business Monitor International believes that it is likely to focus initially on more price sensitive South East Asian markets such as Indonesia, Vietnam and Malaysia. Russia plans to ship 1 mn tonnes of wheat to the region in 2010. Labelling laws requiring milk made with milk powder to be called “milk drink” are causing trouble for milk processors. Market leader Wimm Bill Dann saw its profits drop to one-third of 2008 levels in 2009.

The US-Russian trade dispute over poultry exports may soon be at an end. US producers are expected to stop using the chlorine washes which caused the ban, with exports expected to resume thereafter. Yet, while US producers remain outlawed, their Russian counterparts should continue to benefit. The length of time it takes for exports to resume poses a risk to our production forecasts.

RUSSIA AGRICULTURE SWOT ANALYSIS

According to Russia Agribusiness Report (2010), Russia Agriculture SWOT analysis is as follows.

**Strengths**

- With 10% of the world’s arable land, about 35 mn hectares of which reportedly lie fallow, Russia has enormous potential for expanding agricultural production;
- Russia’s population of around 140 mn people provides a vast market for agricultural products.

**Weaknesses**

- Decades of collective and state farming with little incentive to maximize production have left Russian agriculture with poor yields by international standards;
- Creaking Soviet-era infrastructure increases costs and makes expansion into new
areas difficult;
• Many farmers lack the skills to run a profitable business without government aid.

Opportunities
• Poor yields leave much room for increasing production through better farming practices;
• Large and efficient corporate farms are beginning to emerge with much opportunity for further expansion;
• Rising disposable incomes in the long term will allow Russians to spend more on food;
• Agricultural expansion could substantially benefit from Putin’s latest land reform legislation which means that for the first time since 1917 Russia will permit the trading of national farmlands. This could go a long way towards attracting the types of investment that can help Russia fulfil its vision of being a major agricultural player;
• Foreign investment is playing an increasingly important role in the development of the agri-food industry.

Threats
• The rural population is declining rapidly with many young people heading for the cities;
• Much of the country suffered from environmental degradation in Soviet times, which, if not dealt with, could threaten agricultural production in the future;
• The government has been threatening to reassert its former role of directing agriculture and has signed into being the United Grain Company, although the full implications of this development are as yet unclear;
• The global recession has taken its toll. The economy is estimated to have shrunk by 8.1% in 2009, the outlook for household consumption is weak and unemployment spiralled to an eight-year high in March 2009. The economy will be improved in 2010 but consumer spending is likely to remain subdued for the short term; investment slow down and the government’s plans to expand the sector could also be affected.

In 2010 in agriculture, there was the strongest drought and fires. In this connection, Medvedev D. has forbidden export. Food safety became threat of food independence in Russia. And Putin (2010) says:

We know that grain prices are up both in Russia and the rest of the world. We see that the market is on pins and needles. Whoever is waiting for December 21 or 31 is wrong because whether we lift the export ban depends solely on this year’s harvest. The problem is compounded by the fact that Russia’s leading farming regions cannot sow winter cereal crops because of the weather, so a major part of the country will begin the new year without winter crops. So it appears that the export ban will not be lifted soon, even though it is, of course, a temporary measure. We are in an emergency and it is our duty to think, first of all, about our own citizens, including farmers.

Food independence is the ability of agrarian sector of the country to provide manufacturing, storage, processing and delivery to the population foodstuffs principal views, in quantity and the assortment necessary for an active healthy life. Food safety is not provided if manufacture of a foodstuff makes less than 75-80%, according to physiological norms.
RUSSIA POLITICAL SWOT
According to BMI (2010) and Russia Agribusiness Report (2011), Russia political SWOT analysis is as follows.

**Strengths**
- The Russian government maintains a strong parliamentary majority and overwhelming public support.

**Weaknesses**
- A lack of transparency in decision-making, including high levels of behind the scenes activity by various power groups, makes for a large element of unpredictability in domestic politics over the long run;
- The high degree of political authority in the executive poses a risk to further institutional development in the legislative and judicial sectors.

**Opportunities**
- President Dmitry Medvedev has expressed a more compromising tone on foreign policy matters and has suggested a new emphasis on the development of civil society;
- Tight energy markets increase Russia’s foreign policy options, especially as regards consumer states.

**Threats**
- Russia’s moves to increase its regional dominance in the energy sector risk a further deterioration in relations with the western-leaning countries of the “Near Abroad”;
- Persistent frozen conflicts with separatist regions in Georgia and Moldova threaten to undermine Russia’s foreign relations with key trading partners.

Under the forecast of the international organisations the world situation on food safety the next decade will become aggravated. In the developed states exists two basic approaches in food safety:

1. The first—a priority in support of the national agricultural manufacturer (country EC);
2. The second—equal support of agricultural manufacturers and consumers of food (USA).

It is offered to use support of manufacturers and foodstuffs consumers in Russia.

All slides, schemes, tables are taken from official sources of the Ministry of Agriculture and the foodstuffs.

The budget of agricultural manufacturers in Russia (see Figure 1) is less than in the USA—with 2.7 times, in countries EC—with 5.4 times. Natural environmental conditions in Russia for manufacture of agricultural production are much more difficult.

Problems of food safety become more important in world trade regulation. The Russian economists, name “food”, “food independence”, because of essential economic dependence of Russia in import of food and raw materials.
Growth of manufacture of agricultural production in Russia was accompanied by growth of import of the foodstuffs. The import volume has reached 35.2 bln. dollars, and the negative balance of export and import has made 25.8 bln. dollars (see Figure 2). Import growth goes much faster than export growth.

Volumes of import of meat fresh and frozen, dairy products (see Table 1) have considerably increased. The basic increase in value of import has occurred at the expense of increase of average contract prices practically on all articles of food. In 13 times contract prices of meat fresh and frozen, and also fowl have increased.

That is, high import dependence of the country by separate kinds of agricultural production and the foodstuffs remains. At the expense of import 36% of commodity resources today are formed. Sharply, there is a problem of dependence on import in the market of cattle-breeding production. The share of import in commodity resources of meat is estimated in 41%, milk in 27%. Import of pork from the beginning of 2009 has grown on 29%, and dried milk almost in 2 times.
Table 1
Import of Principal Views of Articles of Food and Agricultural Raw Materials to the Russian Federation, Thousand Ton

<table>
<thead>
<tr>
<th>Kinds of the agricultural production and the foodstuffs</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2008 year in % 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Articles of food and agricultural raw materials (except textile). bln. dollars of the USA</td>
<td>21.6</td>
<td>27.6</td>
<td>35.2</td>
<td>127.3</td>
</tr>
<tr>
<td>Meat fresh and frozen (meatless birds)</td>
<td>1,411.4</td>
<td>1,489.4</td>
<td>1,710.8</td>
<td>114.9</td>
</tr>
<tr>
<td>Fowl fresh and frozen</td>
<td>1,282.5</td>
<td>1,294.9</td>
<td>1,223.8</td>
<td>94.5</td>
</tr>
<tr>
<td>Fish fresh and frozen</td>
<td>686.1</td>
<td>870.2</td>
<td>881.1</td>
<td>101.2</td>
</tr>
<tr>
<td>Milk and cream condensed</td>
<td>145.3</td>
<td>130.6</td>
<td>160.2</td>
<td>122.6</td>
</tr>
<tr>
<td>Oil creamy and other dairy fats</td>
<td>165.0</td>
<td>123.5</td>
<td>140.0</td>
<td>113.5</td>
</tr>
<tr>
<td>Oil sunflower</td>
<td>100.0</td>
<td>131.9</td>
<td>111.9</td>
<td>84.8</td>
</tr>
<tr>
<td>Sugar6raw</td>
<td>2,629.4</td>
<td>3,410.4</td>
<td>2,417.6</td>
<td>70.9</td>
</tr>
<tr>
<td>Sugar6white</td>
<td>349.7</td>
<td>296.1</td>
<td>165.1</td>
<td>55.8</td>
</tr>
<tr>
<td>Citron fruits</td>
<td>1,187.4</td>
<td>1,260.2</td>
<td>1,288.4</td>
<td>102.2</td>
</tr>
</tbody>
</table>

Growth of internal manufacture of meat not to the full covered increase of consumer demand of the population was reflected in increase in volumes of its import (see Figure 3).

![Figure 3. Meat import of everything, including fowl (million ton)](image)

Relative density of import in formation of the general resources of meat and meat products (in recalculation on meat) has made in 2007, 33.2%, in 2008, 32% at a target indicator of 34%.

Import of meat fresh and frozen has developed at 1,711 thousand level tons that on 14.9% more than in 2007, including: beef, 871.6 thousand tons (10.2%), pork, 822.1 thousand tons (19.6%). Fowl import has decreased on 5.5% to 1,223.8 thousand tons.

In 2008, dried milk import has increased 21.3%, oils creamy 8.1%, cheeses and cottage cheese, on 5.8%. In recalculation on milk it has been delivered dairy production of 7,315.3 thousand tons. The share of import dairy production in its general resources has made 17.6% against 17.3% in 2007.

All increase dependence of the food market and seriously infringes upon interests of the Russian agriculture.

The governmental policy in sphere of a guarantee of products of food should include necessarily risks and agricultural production threats.

It includes, for example, such factors as deficiency of competent staff, price...
disproportion, modern systems of supervision on the state of the market of manufacture etc..

To come nearer to level of the developed countries, it is necessary to solve simultaneously some the interconnected and capital-intensive problems:

(1) Technological modernization of agriculture and the food-processing industry, sphere of industrial service of agrarian and industrial complex;
(2) Formations of personnel potential of the branch, capable to master an innovation;
(3) Work on manufacture restoration on the thrown agricultural grounds;
(4) Creation a modern social infrastructure of rural territories (habitation, roads, etc.).

The guarantee of safety of foodstuff is connected with overcoming of following negative factors:

(1) Substantial growth of threshold value of criteria of a saturation of home market by import production, for example, meat;
(2) Low level of payment ability of the population for a foodstuff;
(3) Not stability of system of the financial credit;
(4) Insufficient level of development of an infrastructure of home market;
(5) Moral and physical ageing of a material condition agroindustrial and a fishery complex;
(6) Insufficient level of an innovation and investment actions;
(7) Reduction of national genetic resources;
(8) Probable expansion of production of biological fuel from agricultural production and raw materials;
(9) Shortage of competent staff.

CONCLUSION

The problem of food safety dares in the world, in the country and regional aspect.

In Rome, on November, 16, 2009 in the Declaration of the World summit on food safety five principles of the Akvilsky initiative on food safety are confirmed:

- Investment in realization of national plans on food safety;
- Strategic coordination of actions at global level, country level, regional aspect;
- The universal approach to maintenance of food safety, that is a combination of urgent measures of the help to long-term efforts on agricultural production development;
- Increase of a role and efficiency of institutes;
- Maintenance of steady investment in agriculture and food safety.

The Ministry of Agriculture and the foodstuffs of Russia have developed the doctrine of food safety. In the doctrine, the conventional recommendations of FAO about a share of import and stocks of food resources are considered.

Doctrine’s main objective is self-maintenance of the country with qualitative agricultural production, raw materials and the foodstuffs at level not less than 80-90% from requirement. At the summit, the concrete contribution of Russia to strengthening of global food safety at the expense of stable growth of manufacture of grain and the accruing volume of its export has been noted. For today Russia is included into a three of the largest world suppliers of wheat.

The next 10-15 years in Russia, it is planned to finish manufacture of grain to 120-125 million tons a year that will allow providing stable export at level of 30-40 million tons.
Within the limits of the doctrine of food safety, reduction of import of meat to 18% by 2012, which is almost twice in comparison with 2008 is predicted. Internal manufacture of meat should grow on 25% or on one and a half million tons, milk, to 33 million tons, import on milk will be reduced by 2012 to 16.6%.

As a result of realization of a series of measures on agriculture development, by 2012 in separate directions the stage import replacement (fowl, pork, grain, a potato, vegetable oil) and saturation of home market by domestic production is finished.

Export of agricultural production, raw materials and the foodstuffs has made 9.39 bln. dollars of the USA and has grown in comparison with 2007 on 0.32 bln. dollars of the USA, or on 3.3% (see Figure 4).

![Figure 4. Export of agricultural production and the foodstuffs (bln. US dollars)](image)

Regional, dominating features of support in agrarian sector become one of the important forms of management of a state policy of agriculture.

Efficiency of a regional policy proves to be:
- In flexibility;
- High possibilities in management;
- In use of budgetary funds.

The leading part at the decision of a problem of food safety should be taken away to a regional government.

The project of the Rostov region should be spent in following directions:
- Safety of area in the foodstuffs, in quantitative and qualitative aspect;
- Quality check of foodstuff of the population;
- Economic suitability of the foodstuffs.

In the world, the country and in region management of agriculture with a view of advancement to food safety, should be co-ordinated necessarily with food independence.

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## Appendix: Performance of the Basic Indicators Characterizing Realization Government Program in 2008

<table>
<thead>
<tr>
<th>Basic indicators</th>
<th>Plan</th>
<th>Fact</th>
<th>Feasibility (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. An index of production of agriculture in economy of all categories (in the comparable prices) (%)</td>
<td>103.8</td>
<td>110.8</td>
<td>7.0</td>
</tr>
<tr>
<td>2. An index of production of animal industries in economy of all categories (in the comparable prices) (%)</td>
<td>104.8</td>
<td>103.4</td>
<td>-1.4</td>
</tr>
<tr>
<td>3. An index of production of plant growing in economy of all categories (in the comparable prices) (%)</td>
<td>102.9</td>
<td>117.6</td>
<td>14.7</td>
</tr>
<tr>
<td>4. An index of physical volume of investments into a fixed capital of agriculture (%)</td>
<td>115.0</td>
<td>97.5</td>
<td>-17.5</td>
</tr>
<tr>
<td>5. Had resources of house economy in a countryside (on a member of an economy in a month). rbl.</td>
<td>7,085.0</td>
<td>7,752.1</td>
<td>109.4</td>
</tr>
<tr>
<td>6. A share of the Russian manufacture in formation of resources (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meat and meat products (in recalculation on meat)</td>
<td>61.1</td>
<td>60.8</td>
<td>-0.3</td>
</tr>
<tr>
<td>Milk and milk food (in recalculation on milk)</td>
<td>78.3</td>
<td>77.8</td>
<td>-0.5</td>
</tr>
<tr>
<td>7. Factor of updating of principal views of agricultural machinery in the agricultural organizations (%)</td>
<td>5.2</td>
<td>5.4</td>
<td></td>
</tr>
<tr>
<td>Tractors</td>
<td>7.4</td>
<td>8.9</td>
<td></td>
</tr>
<tr>
<td>Combines grain-harvesting</td>
<td>11.8</td>
<td>11.9</td>
<td></td>
</tr>
<tr>
<td>Combines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Power security of the agricultural organizations on 100 hectares of an area under crops. h.p.</td>
<td>134.0</td>
<td>145.3</td>
<td>108.5</td>
</tr>
<tr>
<td>A labour productivity index in economy of all categories (%)</td>
<td>104.8</td>
<td>113.0</td>
<td>8.2</td>
</tr>
</tbody>
</table>

*Note.* According to the Ministry of Agriculture of Russia.
INFORMATION BASIS FOR THE ANALYSIS OF POTENTIAL INDUSTRIAL INNOVATION: CURRENT STATUS AND DEVELOPMENT TRENDS

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ABSTRACT

This article deals with the development of official statistical reporting for an objective assessment and effective management of industrial innovation. The analysis is based on the study of existing statistical information and indicators of scientific and innovative potential of industry trends.

Key words: Innovative potential of industry and information basis, industrial innovation, material and technical resources.

INTRODUCTION

The world financial crisis has shown the importance and size of miscalculations in economic policy, disproportions in structure of economy, Russian economic system institutional structure imperfections. The fact that possibilities created by a rise in oil prices haven't been effectively use in 2000-2008 Russia, for an intensification of processes of structural reorganization of economy, end of institutional reforms and adaptation of a national financial system to new calls of globalization became obvious. It has caused necessity of new strategic problems statement of Russian development. Thus, formation in Russia of the international level financial center that will allow to modernize a financial infrastructure of the country becomes a strategic problem of institutional development of the Russian economy in the postcrisis restoration aspect, that will transform Russian market into a universal financial platform in the region, capable to compete in the global markets in the long term, and will raise integration level with the CIS and other countries, and also transformation of rouble into regional reserve currency as institutional basis of construction of effective system of financial safety maintenance.
INVESTIGATION

Managing the process of building and enhancing the use of scientific and innovative potential of industrial enterprises, like any other control of economic nature, is determined, to a large extent by the quality and objectivity of the assessment of the status and purposeful use of resources for innovation. The latter, in turn, is directly connected with the reliability, quality and sufficient amounts available to the analysts' information. In addition, the definition of the real picture of the status and possible development potential of industrial innovation in the industry as a whole, that is higher compared to micromanagement at some industrial enterprises, requires significantly large amounts of information, as well as some of its characteristics of both qualitative and quantitative nature. This is due, primarily, to the responsibility for erroneous decision increases significantly and, therefore, thoroughness of preparation of such solutions should be higher, which creates the need for a decision support system, organized on a high scientific and methodological level, and uses latest information technology.

Thus, the prerequisite for the formation of a holistic systems management science and innovation potential of industry is to create a system for monitoring information about innovative activities of industrial enterprises, serving as a basis for assessing their capacity and to allow for decision support to improve the efficiency of its use. Decision support system, having the informational character should be based initially in compliance with all requirements for such facilities, based on the use of modern information technologies to ensure compliance with stated characteristics, and also it should have important quality of compatibility with others, already introduced mechanisms for the adoption and implementation of management solutions [1].

Since the development and application of innovation in the industry are of particular importance during the establishment and strengthening of the modernization process, inputting and developing of information data in the context of groups of industries, as well as on levels of economic systems seems to be appropriate in the system of quantitative assessments of the scientific and innovative potential of industry. Conceptual representation of such a design is shown in Figure 1.

As seen in Fig. 1, the unit of statistical observation supports enterprise, but because of objectively existing fundamental linkages with institutions that perform research and development activities for the purpose of innovation in the industry which the company is often unable to perform independently, or it is not advisable, it seems necessary to take into account their subcontractors on the formation and application of scientific and innovation potential. Since the basic unit of observation is an industrial enterprise, it will give the opportunity to avoid "double counting" for scientific and research institutions engaged in innovation for a number of enterprises (especially similar in terms of production). However, without taking into account both the existence and use of links with academic institutions, the full credibility of scientific and innovative potential of industry, as well as developing recommendations for its strengthening and effective use is not possible.

Assessed with the reliance on official statistics on indicators of scientific and innovative potential of industrial enterprises (note that a number of indicators that are integrated to higher levels of aggregation, without loss of generality refers to the level of the enterprise itself) can be developed in two directions parallelly, in the frame of two-dimensional grouping: by industry and by levels of economic system (i.e, grouped by region).
Figure 1. The principle of two-dimensional sets of quantitative assessments, scientific and innovative potential of industry

Note, that it also seems to be justified methodologically, to group innovations according to the potential areas of their application. This is especially important for industrial innovation, having non-narrow specified character, i.e. having potentially relevant applications in various industries and for production of various industrial products. This kind of grouping will provide an opportunity to assess the extent of possible innovative exchange between innovation-active economic entities in the industry.

The particular importance of these groups is gaining in the connections with the necessity of adding a system of quantitative assessments of the scientific and innovative potential of industry by the estimations of the ability to attract and divert innovative resources, i.e. "export" and "import" of technologies and innovations, both between regions and countries (as well as between the individual industries), what for it is necessary to know the potential of such exchanges. Such assessments can also be based on a number of statistical indicators.

In an economy based on knowledge, an important role is played in co-operation in research and development, transferring technologies and the best practices that became the subject of international agreements, innovation and investment projects, commercial transactions outside national boundaries. International technology transfer has become a factor of economic development at national and global levels and the degree of participation of various countries in this process is largely defined as the ability of their technological progress and position in the...
global arena. The transaction either on acquiring or transferring the technology can be performed within a single country and internationally, when the technology is transferred across borders from one country to another. In this case, different commercial and noncommercial forms of implementing such transactions are available.

Statistics takes into account the number of acquired and transferred technologies (with separation of cases when partners of Russian companies are from the CIS or CIS). There are the following forms of acquisition [2]:

- transferring patent license rights to patents;
- results of research and development (including contract or made jointly);
- know-how, agreements on technology transfer;
- purchase (sale) of equipment (if the transferred technology is completed);
- purchase (sale) of an enterprise or of its part;
- targeted recruitment of qualified professionals;
- contribution of industrial property in the authorized fund of the company;
- getting technology in the given investment;
- leasing;
- acquisition of technology through joint ventures, etc.

These indicators are supplemented by information on joint projects on the research and development implementation, as well as information sources for innovation. Among the latest internal sources of the enterprise, external commercial sources (suppliers, customers, competitors, scientific organizations, etc.) or public information (patent, scientific and technical literature, conferences, exhibitions and other promotional events) are considered.

With the entering of Russian scientific institutions and enterprises the foreign markets and attracting foreign investments into the domestic economy, the task of statistical monitoring of export and import of technology appears. According this statistics take into account the intangible transactions related to exchange (trade) knowledge, information and technological services with foreign countries. International transactions (i.e., involving partners from different countries) having a commercial nature (if any payments or proceeds of their commission) and directly related to the sale of technology or the provision of related services are subject to account. There are the following [2]:

- technology transferring (patents, patent licenses, non-patent inventions, know-how);
- transferring of trademarks, the agreement on industrial samples;
- providing of engineering services for the preparation of production, design and technical assistance;
- agreement on research and development, performed by Russian specialists abroad and financed from foreign sources (the export of technology) or carried out by foreign specialists in Russia and financed from domestic sources (imported technology).

The collection of reviewed and related official statistics makes it possible to quantify the value of scientific and innovative potential of industrial enterprises belonging to individual logic blocks in the system of estimating the industrial potential of the industry as a whole. It is important to note the following property of quantitative assessments of the potential from the standpoint of their values.

Since the potential is not simply an opportunity to aggregate resources, and it is strategically focused on solving a number of challenges facing the industrial enterprise, the
quantitative assessment of the scientific value potential, being a statistic one, i.e. received simultaneously, must be analyzed in terms of its possible future implementation in achieving the goals. In this case, there are two vectors of changing scientific and innovative potential of industrial enterprises:

- increase, i.e. increase of its value, the values of quantitative assessments;
- development, defining a qualitative improvement of potential, primarily in terms of achieving the strategic goals of the enterprise.

In assessing the degree of development a great role can be played not only and not so much by building-up value of scientific and innovative potential of industrial enterprise, but by the ratio of its individual parts, components (i.e., changes in the potential structure), as well as possible changes in the structure of each of its parts (especially in management, administration, logistical and human components), enabling a qualitatively different future realization of accumulated scientific and innovative potential. Obviously, for the development potential assessment of industrial innovations quantitative estimates are not sufficient, complements are required by the assessment of qualitative and, in the first place, the expert view.

Picture 2 shows a matrix analysis of scientific and innovative potential of industrial enterprises in the present context. As it can be seen, the values of scientific evaluations of innovative potential may fall either into one of four quadrants of the matrix, or in one of four "pure" states, characterized by a vector, in which a change in the scientific and innovative potential of industrial enterprises.

![Matrix and vector analysis of the scientific and innovative potential of industrial enterprises](image)

Figure 2. Matrix and vector analysis of the scientific and innovative potential of industrial enterprises
From "pure" states are the two positive - the rise and development of their opposites - drop and degradation, of course, negative. However, getting into the "pure" state, although theoretically possible, practically it seems unlikely - most likely, scientific and innovation potential of the industrial plant will occupy an intermediate position, characterized quadrants by the matrix, so it seems necessary to separately analyze their significance from the perspective of implementation and capacity scientific and innovative potential of industrial enterprises.

The first quadrant (I) is characterized by simultaneous state - to "enhance" and "degradation". This means that when building the values of some (not all) of the quantitative characteristics, the quality of scientific and innovative potential decreases. This can occur in cases, for example, if high allocations for the development of innovation, improvement of material and technical basis, the impact does not occur because of the weakness of scientific personnel, or significant deficiencies in the management of not being able to bring innovative ideas to the state of innovative industrial products. This state, being negative in fact, may, nevertheless, a qualitative and timely management, go to the state (II) - «improvement" and "development", the most positive of the four. It means, both quantitative and qualitative capacity of scientific and innovative potential of industrial enterprises, as well as the most complete of his engagement to achieve the strategic goals of the company bearing the innovative character.

The fourth quadrant (IV) is the most negative of the "intermediate" states, since it is located between the vectors of "reduction" and "degradation". It is obvious that, except for a small number of cases of scientific and innovative potential lowering, which manifests itself in reducing the values of quantitative estimates, this lowering is sharply negative. This is especially connected with the financial resources allocated to development and maintenance of scientific and innovative capacity, as their reduction may lead to a falloff human resources in the first place, which in many cases is irreplaceable. Nevertheless, it is the human resources that are the most important component of scientific and innovative potential of industry, as well as the most challenging in terms of formation, internal structure and relationships between elements.

CONCLUSIONS

Therefore, it is not possible to estimate human resources quantitatively as it is done in financial and logistical spheres. This means the use of special complex technique, introduced into the rating system of scientific and innovative potential of industrial enterprises.

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PROBLEMS OF INSTITUTIONALIZING OF ECONOMIC INTERESTS OF ECONOMIC ENTITIES

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ABSTRACT

The article is devoted to the issues of institutionalizing of interests of economic entities. These issues concern the functional weakness of formal institutions, such situation creates favourable conditions to make non-formal institutionalizing active. The article analyses the causes of clash of institutionalizing of interests, caused by the fact that interests do not find efficient institutional form for their realization. The article suggests the ways to settle the clash of institutionalizing of economic interests, i.e. to establish institutions for coordinating the interests.

Key words: Economic interests, institutionalizing, coordination, trade unions

INTRODUCTION

Ongoing institutional reforms do not take full account of existing in a society's economic interests, formation gravitating system of institutions does not fully support its role in the economy is unstable and ineffective. Functional weakness of formal institutions creates favorable conditions for enhancing informal institutionalization, which in the Russian economy, to some extent, undermines and limits the operating procedures of formal institutions. Many formal rules are not respected, economic interests are translated into the shadow economy. Meanwhile, institutions actively working not only affect the production process, but also on the processes of distribution and redistribution of wealth, which reflect the economic interests of the subjects of production and society.

MAIN IDEAS

Economic interactions are displayed in the economic institutions, the main purpose of which is not to be simply the rules of the game, and in the functional organization of social interactions of people, groups and communities.

Process institutionalizing economic interests is characterized by following signs:
- in a basis institutionalizing process of the coordination economic interests lays; the necessary measure of submission individual interests to group or public interests is provided;
- institutionalizing economic interests causes a set of economic norms and the rules specifying a context of existence and interoperability of economic subjects;
- institutionalizing economic interests effectively connects economic behaviour of carriers of economic interests, provides conformity to actual expectations and develops force of economic action;
- institutionalizing economic interests management and the control of its activity is accompanied creation the organizations and the establishments providing stability functioning of appropriating economic college.

Developed in Russia institutionalizing the system reflects interests, first of all, proprietors of the large capital. It leads to infringement of interests of proprietors of other factors of manufacture. Effective progress of economy requires formation institutionalizing the forms protecting economic interests of all layers of a society and providing maximization of their incomes.

Economic interests of proprietors of factors of manufacture are realized through incomes. Struggle for incomes can finish contradictions between economic interests to antagonism. Formation of economic colleges which would regulate the order of economic activities is necessary, defined frameworks of functioning of market attitudes. As a result proprietors of factors of manufacture have interests in the field of creation and functioning of colleges - institutionalizing interests.

The last can be as the general, shaping the colleges assisting maximization and optimum distribution of incomes of all proprietors of factors of manufacture, and egoistical, private, directed on creation of the colleges increasing incomes of one group of proprietors due to reduction of incomes of others.

In Russia individual qualities of the worker, its capacity, knowledge, energy do not find specific reflection in a level of its payment. Reduction of possibilities of growth earnings, restriction of a degree of satisfaction of new demands are as forms of resolution of conflicts institutionalizing economic interests, in our opinion, colleges of the coordination interests act: the unions and associations of businessmen; college of the property.

Which basis is made with freedom of redistribution of property rights between subjects of economic activities; the Labour code of the Russian Federation, which key problem the coordination of interests of workers and employers; the Law «About stock societies», solving a problem of the coordination of interests of fine shareholders and holders of a control share holding, etc. One of institutional forms of the coordination of controversial economic interests of various levels of hierarchy there is a college of social partnership.

The social partnership reflects historically caused compromise of interests of subjects of a facilities, expresses an objective indispensability of the social world as one of the basic conditions political and economic to stability, requires a high degree of a maturity of productive forces, the certain level of self-organizing and consciousness of subjects.

The major mechanism for settlement of contradictions between businessmen and workers is the labour contract. In contract the basic obligations of sides stipulate, in particular,
what and in what volume the worker should carry out work and must to pay what wages to it the head. Performance of the contract should be adjusted and provide by the legislation.

In practice the possibility of judicial protection of interests of workers as it is done in the developed states, is low. It is necessary for protection of interests of workers create effectively operating college trade unions. Trade unions are, in essence, the unique mass organization representing and economic interests of hired workers on a labour market. In the states with market economy trade unions play important a role. As a result of their active policy the actual wages constantly raise. Workers have powerful support of trade unions in case of infringement by the employer of conditions of the labour contract.

In Russia, unfortunately, effective enough colleges (as formal, and unformal), appropriating economic interests all proprietors of factors of manufacture to date are not created. As a result costs for a greater part of the population are very high, distribution incomes between proprietors of factors of manufacture is carried out is disproportionate to the contribution of factors. For normal progress of economic the countries it is necessary to create colleges, protected economic interests of all layers of a society and providing maximization of incomes owner’s all factors of manufacture.

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