

## STUDENT MIGRATION POTENTIAL: THE CASE OF BULGARIA

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### **Abstract**

Transnational student mobility is a major factor, which plays an ambiguous role in the dynamic process of international highly skilled migration. In this paper we try to attempt an approximate profile of the potential migrant student in Bulgaria, according to the migration incentives, intentions and expectations of highly educated young people from six reputable universities in the country. For this purpose a sample study is applied based on binary logistic regression analysis. Some of the conclusions contribute to a critical view and confutation of prevalent theoretical concepts in international migration. In addition, the model evaluates the impact of economic and other crucial determinants which have an effect on migration intentions.

**JEL Classification:** F22, J24, O15

**Keywords:** Highly Skilled Migration, Migration Potential, Student Mobility, Bulgaria

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## Introduction

The important role of the adequate availability of highly skilled people in any country and the effects that cross-border mobility can have on the national economy represent a challenge for the study of its migration potential. On completion of their degree, students, as carriers of intellectual resources, are each country's core potential, contributing to its economic growth, development and the building of a knowledge economy. The possibility of applying one's acquired knowledge and skills is the best scenario after obtaining a university degree. In line with human capital theory, individuals prefer the country with the highest net utility. In the context of globalisation and encouraged student mobility within the EU, of global shortage and demand for specialists and highly skilled workers, young people are increasingly finding more alternatives for professional development on the international labour market.

Therefore, the choice of their own country as the optimal option for personal fulfillment and development depends on many internal and external factors that, according to the "push-pull" migration model, should retain the local highly skilled labour force or stimulate it to prefer a career at home or abroad.

Similarly, the decision of students to opt for long-term migration or have a preference for their own country, influenced by both structural and micro-level factors, has an effect on potential brain drain or brain retention.

The aim of this paper is to study the migration potential of Bulgarian students and to build an approximate profile of the potential migrant student. On this basis, some of the statements of the major classical and alternative theories on international migration are accepted or confuted empirically. This analysis follows the migration intentions of Bulgarian students by examining their incentives, expectations and migration experiences. Simultaneously, some structural features in the country such as: GDP, labour market and higher education trends are taken into account. A binary logistic regression is built to assess the impact of both economic and other determinants on migration intentions, by obtaining the net effect of the selected factor variables.

The decision to study migration intentions of Bulgarian students is dictated by the fact that over the last two decades this highly skilled group has been affected by significant dynamics. The percentage of student mobility in Bulgaria is one of the highest in the EU and the country is among the few with a decreasing gross rate of student enrollments (Makni, 2010). The analysis of migration potential allows us to identify some important aspects of the migration process of young and highly skilled people in Bulgaria. It sets the direction for outlining trends and effects of silent intellectual migration, for identifying possible policies that would reduce it and for seeking positive effects.

## 2. Methodology

The study of student migration potential in Bulgaria is linked to the study of students' intentions with respect to migration. It has been conducted in the form of an anonymous questionnaire distributed to full-time students in their third, fourth and fifth year/Master's level from six reputable universities in Bulgaria. Within this population of 16,478 students in five state-funded and one private university, the sample study is ensured through random selection of groups and study paths by year of study during students' classes and course exams. The survey was conducted between April and July of 2008 with the assistance of lecturers in different subjects from the chosen universities. The questionnaires were self-completed by 851 students, representing the sample size of 5 % of the survey population.

The choice of final-year students is justified by their closeness to graduation and more realistic attitudes with regard to migration. The six universities (five state-funded and one private) are selected for their fields of study – economics, and technical, social and medical sciences. These are courses with a strong relationship with the migration process. Thus the surveyed population is taken from three economic universities (in Sofia, Varna, Svishtov), one technical (in Sofia), one medical (in Varna) and one private with social fields of study (in Sofia). The sample includes 20 major subjects in the selected fields of study. It provides the opportunity to explore the opinions of many students of key disciplines - economists, engineers, doctors and social scientists.

The results are based on the analysis of categorical data for which dichotomous, nominal, ordinal and ranking scales are used. The questionnaire sheet is divided into two sections. The first section addresses all surveyed students. To assess the net effect of the factor variables mentioned above in shaping attitudes towards migration a binary logistic regression model is built. It describes the statistically significant relationships and quantitative impact of selected factors on migration intentions. In particular, when all other conditions are equal, the model indicates how these intentions change when the variable factor changes by an absolute unit, i.e. what is the chance of formation of emigration intentions.

The second section of the questionnaire sheet is designed to determine only the category of the potential migrant students. Initially, the distribution indicator for respondent eligibility is based on the probability of staying abroad for more than a month. The choice of criteria for the selection of the group of potential migrants from the resulting set is based on the stated purpose of the stay. The total number of potential migrants includes those who have indicated as the purpose of their trip - work, study/ training and settling permanently.

The third step in determining the characteristics of potential migrants (PM) involves splitting them into two categories according to the declared length of the stay abroad: long-term (intending to reside for more than a year) and short-term migrants

(less than a year). They are categorized in three major subgroups: potential labour migrants; potential migrants whose goal is education (study/training) and potential migrants whose purpose is to live abroad.<sup>1</sup>

### 3. Analysis of the results

#### General migration intentions of surveyed students

Overall, 57 % of respondents prefer to live and work in Bulgaria. Less than half of the students (43 %) indicate some general propensity to migrate. Some 34 % of the latter would like to work/study abroad for some time, but would return to live permanently in Bulgaria, which represents the percentage of those with intentions for temporary migration. One in ten manifested an intention to live and work abroad, which places them into the group of those willing to be absent from the country for a long period of time.

The results highlight a very high overall student mobility. Only 20 % have no intention to leave the country, and for 80 % there is some possibility of staying abroad for more than a month.

According to the neoclassical macro theory of international migration, economic determinants set the basis for trans-border mobility (Lewis, 1954). Income differentiations between countries and different unemployment levels are indicated as the major factors in migration.

The socio-economic state of Bulgaria in the first decade of the transition towards a market economy has a powerful impact on migration processes in the country. The unstable economic situation, the privatization, massive shutdowns and contraction of entire sectors of the economy lead to tremendous job cuts in the 90's. As a result, strong pressure on labour supply arises and significant discrepancy between supply and demand due to the transformation of many sectors.

In practice, income differences are often compared with the GDP indexes per capita. From 1990 to the present day, per capita GDP in Bulgaria has been way below the average EU-15 level. Thus, in 2008 it was the lowest in the EU - 38 % of those in EU-15 and 41 % of those in EU-27 (measured in PPS).<sup>2</sup> According to the neoclassical theory of international migration these circumstances ought to be a strong push factor for the Bulgarian population to leave the country.

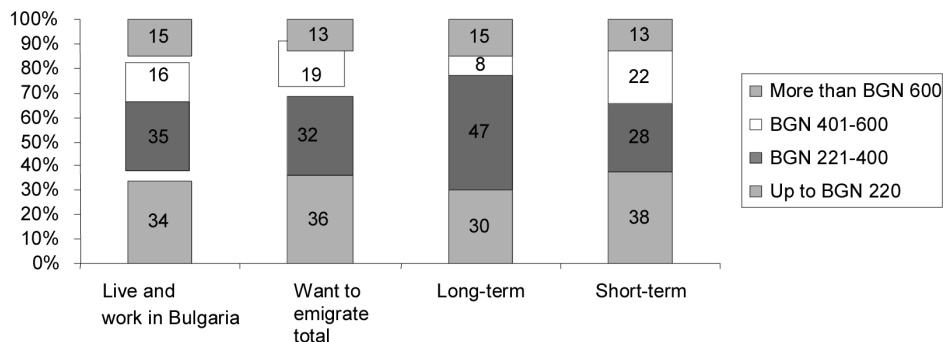
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1. We do not exclude from the group of short-term potential emigrants the so called "commuters" whose stay abroad is limited to several weeks to three months, since we believe that a certain portion of this particular type of external mobility has a role in the formation of Bulgarian transnational social relations in the international area.

2. Eurostat <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsieb00>

Indeed, the majority of the students wishing to emigrate have lower incomes. Those with the lowest incomes indicate the strongest intentions to emigrate (36 %). With the increase in income the overall propensity to emigrate drops. (Fig. 1)

**Figure 1.** Respondent structure by general migration attitudes, distributed according to the size of the disposable personal income



Source: Field Survey, 2008

The Bulgarian labour market in the last two decades has passed through different periods – from an extremely high unemployment rate in 2001 (19.9 %) to a relatively low (for the EU) rate in the last few years. In 2008 it was 5.6 % in comparison to 7% in the EU-27.<sup>3</sup>

The problems of the Bulgarian labour market today are not too different from those of the EU labour markets – ageing labour force, quantitative and particularly qualitative imbalances between supply and demand; difficulties in integration of graduates into the labour market (Beleva, 2008). It is significant that in Bulgaria the youth unemployment ratio in 2008 was only 4 %, compared to the average 6.9% in the EU-27.<sup>4</sup>

3. Employment in Europe 2009

[www.ec.europa.eu/social/BlobServlet?docId=4196&langId=en](http://www.ec.europa.eu/social/BlobServlet?docId=4196&langId=en)

4. The youth unemployment ratio is the unemployment of persons aged 15-24 relative to the total population of the same age; (Employment in Europe 2009 Report)

According to their employment status, 46 % of all employed students, wish for some type of migration. A much higher percentage (61%) of the unemployed prefer to stay in the country (Table 1). In practice, contrary to the neoclassical approach and in confirmation of previous empirical studies,<sup>5</sup> most of the students with intentions to go abroad are employed and most of those with intentions to stay, are not working.

**Table 1.** Attitude intensity according to respondent employment status

Attributes	Without intentions to leave the country	With intentions to leave the country	Total
Employed	54	46	100
Not employed	61	39	100

*Source:* Field Survey, 2008

Presumably the incentive for outward mobility is not so much the lack of jobs as the low level of work compensation, i.e. low income. Experience shows that both employed and unemployed people have migration intentions, and also those with high and low incomes. In this sense, a number of other non-economic determinants should be sought, which have an effect on the shaping of migration attitudes.

The most famous amongst the alternative theories on international migration is the network theory. According to its main essentials the probability for cross-border mobility grows higher when nationals have relatives and friends abroad, since these social networks reduce the migration expenses and risks, and increase the expected net gain resulting from the migration (Stark, 1991).

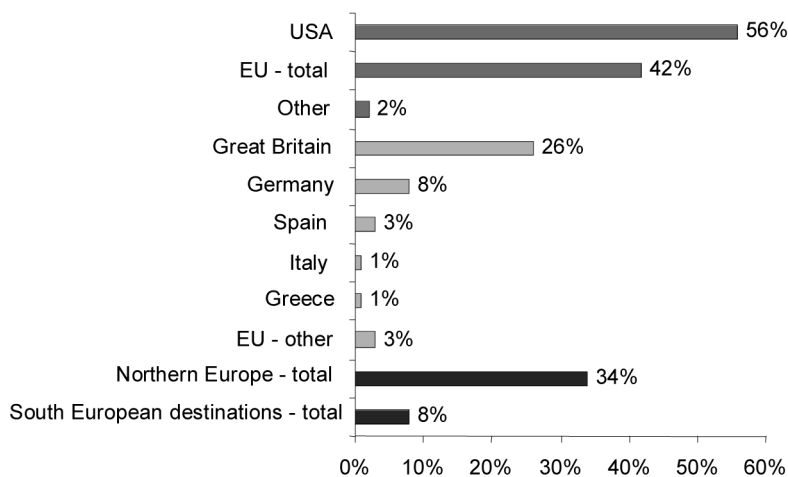
There are two types of migrant networks. The first arises locally in the sending country when the emigrants have relatives abroad. Indeed, the proportion of the students who wish to emigrate is higher among those who have relatives abroad.. This implies that a family member abroad has some impact on shaping emigration intentions.

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5. The share of persons employed in Bulgaria who intend to migrate always exceeds that of the unemployed (Kalchev, 2001).

Another way to build social networks and subsequently migrant ones is a personal knowledge of the international environment, i.e., a previous stay abroad. Of all students surveyed, 32 % have previously pursued employment abroad. More than half (56 %) obtained their emigration experience by working in the USA and 42 % in an EU country (the majority of them in Great Britain, Germany and Spain). Of all ex-migrants almost one in two plan another migration (Fig. 2).

**Figure 2.** Migration experience – worked abroad (Base: 266)



Source: Field Survey, 2008.

For students, however, the choice definitely falls on the traditional immigrant countries – the USA and the northern European destinations, mainly Great Britain and Germany. Therefore, large distances are not at all a deterrent to high mobility. The theoretical claim of the gravity model of international migration, that larger distance between countries reduces the migration flow between them, is questionable, given that 82 % of ex-migrants have worked in the USA and Great Britain.<sup>6</sup>

6. The development and tests of the Gravity model, See Lewer, J and Hendrik Van den Berg (2008)

Traditionally, men are more mobile than women and that has been confirmed in the Bulgarian reality in the first decade since transition. With the intensive globalization processes in the 90s and the subsequent structural changes in the world economy, the ratio between men/women global migration flows has balanced gradually. In 2010 almost half of international migrants were women (49%) and even more significant is that they represent a more-qualified flow than men (IOM, 2010). This gender trend is also reflected in the general Bulgarian migrant population. Since 2007 the majority of all Bulgarian migrants have been women. In 2008 for instance, they accounted for 64% of the general migration flow.<sup>7</sup>

The student survey confirms this trend. Only 27% of all male students have worked abroad, compared with 42 % of all female students; i.e., women today are more likely to be mobile than men. Moreover, the results indicate the prevailing tendency of long-term migration for women and short-term for men (Table 2).

**Table 2.** Former migrant structure according to gender indicator

	Long-term migration experience	Short-term migration experience	Without experience
Men	43	57	70
Women	57	43	30
	100	100	100

*Source:* Field Survey, 2008

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7. In Bulgaria official migration statistics started in 2007 and its methodology is unified with that of the European institutions, National Statistical Institute <http://www.nsi.bg/otrasal.php?otr=19>



### Logit analysis – a model of binary logistic regression

In our model, the dependent variable whose variations are observed is the students' intention to migrate. For this purpose, it is studied as a dichotomous (alternative) variable. All value frequencies corresponding to the preference for living and working in Bulgaria, i.e., to the absence of migration intentions are identified with code "0", and they form the base respondent group. All other meanings which include any type of migration intentions, both short- and long-term, take code "1", and form the target group of the dependent variable – respondents with general migration intentions.

The formal logit model adopts the following form:<sup>8</sup>

$$\text{Log} [P(x) / 1 - P(x)] = \beta_0 + \sum_{i=1}^N \sum_{j=1}^{K_i-1} \beta_{ij} * X_{ij} \quad (1)$$

In order to construct the model, seven (independent) factor variables are included whose quantitative effect on the change in the defined dependent variable are examined - gender, permanent residence, personal income, employment, emigration experience, the presence of a household member abroad, and expectations of finding adequate occupation in Bulgaria after graduation.<sup>9</sup>

Those meanings of the individual factor variables which presumably correspond to the characteristics which are possibly inhibitory to migration are chosen as the reference group (Table 3). The persons in the base group are those who correspond to all of the following values of the categories surveyed: female students, with permanent jobs, with average and higher income (above BGN 600), living in a town, without emigration experience, in whose household there isn't a member abroad, and with clear expectations of finding an adequate qualified job after graduation.

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8. Where  $P(x)$  is the probability that the respondent will develop intentions to migrate;  $N$  – number of the factor variables included in the model ( $N=7$ ); For each independent variable ( $i$ ) a set of ( $K_i - 1$ ) number of dichotomous indicator variables  $X_{ij}$  is created, where  $K_i$  is the number of possible answers to the given question. The  $\beta_{ij}$  coefficients evaluate the net factor effects of the indicator variables on the formation of emigration attitudes. See: (Minchev and Boshnakov, 2007).

9. For the interpretation of the independent variables a set of fictitious (dummy) indicator variables was used, whose number is determined by the number ( $K_i$ ) of categories for each variable reduced by a unit, i.e. equals ( $K_i-1$ ) dummy variables. For the purpose, it was necessary to determine the base (reference) group resulting from the independent variables which would be the basis for the interpretation. Respondents from the base group were given the characteristics corresponding to null values of the dummy variables. The remaining respondents take the value "1" only in the case of a corresponding value of the specific independent variable and "0" in the case of all its other values. Kotseva (2001) makes a good explanation of binary logistic models.

**Table 3.** Description of the independent variables and the reference (base) group

Independent variable	Categories
1. Gender	(1) Men <b>(2) Women (reference group)</b>
2. Permanent residence	(1) Capital city (2) Regional center <b>(3) Other city (reference group)</b> (4) Village
3. Personal income	(1) Up to BGN 220 (2) BGN 221-400 (3) BGN 401-600 <b>(4) Above BGN 601 (reference group)</b>
4. Employment status	<b>(1) Permanent (reference group)</b> (2) Part-time (3) Seasonal (4) Not employed
5. Migration experience	(1) Long-term (>1 yr.) (2) Short-term (<1 yr.) <b>(3) Without migration experience (reference group)</b>
6. Presence of a household member abroad	<b>(1) None (reference group)</b> (2) At least one
7. With clear expectations of finding adequate employment after graduation	<b>(1) Definitely yes (reference group)</b> (2) Unsure of expectations

Source: Field Survey, 2008

Significant net effects are established with respect to four of the seven factors examined in the model, when all other conditions are equal, i.e., while keeping all other variables at a constant level. Indeed, migration determinant factors are employment, migration experience, household member abroad and expectations of finding an adequate qualified job.

No significant net effects are found for gender, residence and income. The explanation by gender may be found in the fact that the majority of female students are not tied to family life and children yet, making them as mobile as men. Moreover, according to human capital theory high qualifications and youth in general promise higher returns on investments in education (Sjaastad, 1962). As mentioned above, latest world statistics also prove an even lower impact of the gender factor on the quantitative aspect and its increasing role in the qualitative aspect.

The permanent residence factor is also blurred, the reason being the fact that most of the students have high internal mobility, and often the latter precedes external mobility. Our hypothesis is that high mobility, which the universities abroad offer under the student exchange programmes, presents large consecutive possibilities for youth drain. This gives rise to the so called “two-step migration” (OECD, 2010).

Contrary to expectations, income is not a sufficient reason for the formation of migration incentives. The main reason for this is the students’ income being less a function of employment and therefore, not the main motive for migration.

By calculating the probability of the base group forming migration intentions we can determine the marginal effects for all other variables in the model by means of the formulae:<sup>10</sup>

$$P_o = \exp(\beta_o) / 1 + \exp(\beta_o) \quad (2)$$

$$\Delta P_j = \beta_j * P_o * (1 - P_o) \quad (3)$$

After applying formula (2) the likelihood of the reference group of students developing migration intentions is only 19 %. ( $P_o = 0.189$ ). After applying ( $P_o$ ) to formula (3) it is determined for each indicator variable that the strongest net effect is reported for students who have some migration experience, the most pronounced result being for the case of long-term stay abroad (Table 4).

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10.  $P_o$  gives the probability to develop emigration intentions of a respondent from the reference (base) group, evaluated using the model’s constant;  $\Delta P_j$  measures the net change in the probability that the respondent will develop migration intentions under the influence of the change in the corresponding  $X_{ij}$  characteristic with respect to the reference respondent category, all other conditions being equal.

**Table 4.** Results of binary logistic regression for general emigration intentions\*

Independent variables	B	Sig.	Exp(B)	dP
<i>Constant</i>	- 1.460	0.000	0.232	-0.223
Man	0.111	0.491	1.117	0.017
Income up to BGN 220	0.039	0.868	1.039	0.006
BGN 221-400 income	- 0.068	0.766	0.935	-0.010
BGN 401-600 income	0.259	0.319	1.296	0.040
Part-time employment	0.371	0.168	1.450	0.057
Seasonal employment ***	0.612	0.008	1.844	0.093
Not employed	0.160	0.464	1.174	0.024
Long-term migration experience **	0.895	0.012	2.447	0.137
Short term migration experience ***	0.549	0.001	1.731	0.084
Presence of a household member abroad *	0.341	0.089	1.406	0.052
Without clear expectations of finding an adequate job ***	0.592	0.002	1.807	0.090
Capital city	0.399	0.166	1.490	0.061
Regional center	0.117	0.522	1.124	0.018
Village	0.389	0.515	1.475	0.059

\* B – regression coefficient; Sig – level of significance; dP – net change of the probability

Source: Field Survey, 2008

Obviously, migrant networks have a crucial role in the formation of the definitive decision to migrate, especially when linked to a long-term stay abroad. This factor is a priority, anticipating all other factors. This confirms one of the hypotheses of the migrant networks theory, that at some point they can prevail over the economic determinants of cross-border mobility and exert a strong attracting pull-effect, from the perspective of the host country.

Significant results are obtained for the employment factor, where seasonal employment increases the likelihood of the formation of emigration intentions by 9 percentage points at a level of significance 0.01. A large part of migration intentions develop due to prospective seasonal employment of students abroad. The result for those not employed does not report a significant effect. The regression coefficient for this category is the lowest in comparison with those who are employed.

A strong marginal effect is reported also with students who do not have clear expectations for finding suitable employment after obtaining a university diploma. The uncertainty regarding adequate professional fulfillment on the Bulgarian labour market is a strong "push" factor in the decision to migrate.

The presence of a household member abroad also increases the probability of the formation of migration intentions by 5 percentage points and confirms the important role of social networks in cross-border mobility.

Based on the results of the model, no indicator variable reports an inhibitory effect on the migration intentions, except for the low income levels where the regression coefficient is a low negative (Table 4). The latter can be explained by the theoretical hypothesis that, in fact, international migration is not carried out by individuals at the lowest income levels because they are unable to bear the costs of migration (Parnreiter, 2000).

The evaluated logit model confirms that migration experience begins to exert an increasingly greater, even leading role in the formation of migration intentions among people in the country. It is also a decisive factor in the mobility of the highly skilled, even more when their integration in the receiving countries is relatively high.

### **Evaluation of potential student migration**

We should underline the very short-term nature of the student migration potential, which is largely due to the students' intention to engage in summer work abroad. Potential migrants (PM) account generally for about 45% of all respondents and 59% of them are short-term. The main purpose of the stay abroad is to perform work activities (64%) and one in four aims to study or get training. Only 8% intend to live abroad. Therefore, the two main types of student mobility are economic and educational migration.

To identify the profile of PM more precisely two indicators are used - the scope of recruitment and the intensity of the intentions.<sup>11</sup> The scope of recruitment evaluates the structure of the corresponding category of the students according to the selected variables. The intensity measures the relative share of the PM-category in the overall number of respondents for the respective indication.

The structure of PM by gender is in favour of men, bearing in mind that their share is two times larger than the share of women surveyed. However, the intensity of the intention of women is much higher, both for short- and long-term migrants (Table 5). The higher mobility of female students must be emphasized, and its longer-term orientation.

The scope and intensity of potential migrants by income shows an obvious downward trend with the increase in income of short-term migrants. The results are not so clear with long-term PM, where even those with the highest income occupy a significant share. Therefore, low income is a leading motive primarily for short-term labour migration, but income in general is not a major determinant for long-term migration.

Based on our analysis it becomes clear that international migration is present in people of all incomes. It becomes obvious that low incomes are not always an incentive for external mobility, or high incomes for refraining from it. This is yet another argument which refutes the neoclassical theory of migration. Its arguments in favour of income differential have proved to be insufficiently substantiated and this is especially true for long-term cross-border mobility.

PM by employment status has the highest share among seasonal workers for all migrants' categories. The results give an indication that temporary migration is motivated primarily by the need to ensure a higher income from foreign employment. The presence of a permanent job somewhat reduces the intensity of the short-term intentions of students, but does not affect long-term attitudes.

It is noteworthy that for income and employment, there are little variations in the intensity of long-term intentions. This is meaningful in drawing the conclusion that these socio-economic factors do not have a significant impact on long-term migration intentions. They constitute more powerful determinants of short-term mobility.

An important factor is the duration of the previous stay abroad. A longer stay abroad leads to an increase in the volume of potential long-term migration. Similarly, the intensity of the intentions is highest in long-term PM who have resided abroad longer. In the case of the short-term ones it is highest among those who have been away from the country temporarily. PM-students without migration experience have the lowest intensity of intentions. Therefore, migrant networks form a spiraling migration process which becomes more intensive with the increase of the length of the stay abroad.

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11. The two indicators are used by Bulgarian NSI to identify the socio-demographic profile of potential emigrants in Population, Housing and Farm Census of 2001 (Kalchev, 2005).

**Table 5.** Profile of potential long-term and short-term migrants by scope and intensity of migration intentions (%)

<i>Student categories</i>	<b>Structure</b>			<b>Intensity</b>	
	PM total	Long-term	Short-term	Long-term	Short-term
<b><i>Gender</i></b>					
Men	59	54	61	8	24
Women	41	46	39	13	30
<b><i>Income</i></b>					
Up to BGN 220	37	31	40	9	29
BGN 221-400	32	36	31	11	23
BGN 401-600	17	15	17	9	25
Above BGN 600	14	18	13	13	23
<b><i>Employment status</i></b>					
Permanent	21	28	19	11	21
Part-time	10	12	9	9	20
Seasonal	36	33	37	13	38
Not employed	33	28	35	7	25
<b><i>Migration experience</i></b>					
Long-term	9	14	5	27	36
Short-term	46	41	47	15	47
None	45	45	46	6	18
<b><i>Expectations of adequate professional fulfillment on the Bulgarian job market</i></b>					
Positive	64	60	67	8	26
Negative	28	34	27	16	33
Not sure	8	11	6	11	16
<b><i>Rating of the quality of higher education in Bulgaria</i></b>					
More than good	21	24	20	10	22
Good	35	29	37	8	27
Less than good	44	47	44	12	29

Source: Field Survey, 2008

The expectations for adequate placement on the Bulgarian labour market after graduation give results that speak for themselves of scope and intensity. The intensity of the sentiments is overwhelmingly the highest in both categories of PM, suggesting that the uncertainty about adequate placement on the local labor market and the frequent discrepancies between demand and supply of human capital continue to be a strong push factor for potential migrants from the country.

The low ratings of the quality of higher education in Bulgaria also stimulate the intentions of students for transnational mobility. While lower ratings increased the number of potential long-term migrants, a good rating increased the share of short-term migrants. With the lowering of the rating, the intensity of the intentions grows, both for short -and long- term PM.

Apart from the average rating given by the students for the quality of Bulgarian higher education, there are other indicators for migration: the increasingly lower education costs since 1990 (Rangelova, 2007); the existing gap between education and practice; the lack of feedback between education and business; the centralization and lack of flexibility of the education process (Makni, 2010).

Increased student mobility inside the EU, simplified access to foreign universities and other stimulating techniques on the side of the industrial countries for attracting the highly skilled, will become major determinants in a massive decrease in the number of student enrollments in Bulgarian universities in the coming years.

Combining all factors of migration gives rise to two unwanted phenomena - brain drain and brain waste. In fact, brain drain and brain waste<sup>12</sup> deserve attention when it comes to migration of longer-term character. Based on our results, it can be concluded that, in terms of potential long-term migration, the "brain drain" phenomenon predominates, since 69 % of long-term migrants intend to work in the high-qualified area and/ or their field of study. "Brain waste" covers about 31% of potential long-term emigrants. It is related to professional fulfillment which is different from the qualification being acquired, namely in the services, construction and tourism areas. In both cases we witness waste of human capital for Bulgaria.

Students with technical expertise have the highest emigration potential – and medical students the lowest (Table 6). Narrow technical specialisation certainly provides greater opportunities to work abroad. It is not by accident that the largest shortage of specialists in industrial countries is generated precisely in the field of technology. And since the technical and technological market in Bulgaria has not highly developed yet, it represents an additional "push" factor with respect to specialists.

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12. Brain waste is a term, which explains the horizontal migration of individuals from a highly-qualified to a low-qualified area of employment. The process in the national economy is known as internal brain waste and in a foreign economy as external brain waste. (Breinbauer, 2007).



The low intensity of migrants from the medical sciences can be explained with the relatively low demand for high-qualified medical professionals in developed countries despite the increased labour shortages in health care. In addition, medical professionals in Bulgaria are still able to have good careers locally.

According to the year of study, the highest intensity of intentions is observed among third-year students. A logical explanation here is the fact that they still have not completed their education and most of them are temporary (seasonal) labour migrants (60 %). By contrast, 69 % of long-term migrants in the last year of their study plan to work abroad while 19 % intend to obtain a foreign degree or to complete specialised training (Table 6).

**Table 6.** Intensity of the educational profile of PM\*

Indicators		PM total	Long-term PM	Short-term PM	Undecided	Total
University	UNWE - Sofia	43	29	53	18	100
	AE – Svishtov	46	20	67	13	100
	UE – Varna	45	19	63	18	100
	TU – Varna	64	28	47	25	100
	MU – Varna	32	25	40	35	100
	NBU - Sofia	42	15	38	47	100
	Year	Third	51	17	64	19
	Fourth	41	28	55	17	100
	Fifth	45	20	57	23	100

\* The inconsistent % of students by university and year renders adequate only the analysis of PM intensity without an evaluation of their structure.

Source: Field Survey, 2008

The predominantly temporary character of student potential migration is due to the still unfinished educational process. For this reason, the intensity of the intentions increases with the approach of the graduation date, which, for a large portion of students in bachelor's programs, in fact, is expected to take place outside of Bulgaria. This, in turn, increases the chance for the effect of "brain drain" to be observed because it provides an ideal opportunity for further professional development abroad.

#### **4. Concluding remarks on the profile of the potential student migrant from Bulgaria**

Students appear to be a particularly mobile group: on the one hand, thanks to the opportunities offered by higher education in the cross-border system of connections for the exchange of experience, cooperation and taking advantage of the summer months, and on the other, as a result of the increasingly attractive international conditions for young high-qualified specialists due to the global competition for human capital of the highest level. Therefore, the modern student is rather flexible and highly mobile, responding to the new intensive processes in cross-border relations.

High student mobility creates two contradictory challenges for potential migrants – first, it predetermines the predominantly short-term nature of student migration, in view of the incomplete higher education process during which potential migrants have the options to choose their professional path and gather international experience; and second – it allows future graduate specialists to make their choice of the optimal country for obtaining the highest return on their investment. Therefore, the modern student-potential migrant is mostly a temporary migrant. He has already gained international experience, which gives him the confidence and ambition to prefer an environment which would meet his/her high requirements.

The graduating contemporary student – potential migrant is a long-term migrant to a higher degree. He challenges the international labor market with good qualifications or with the acquisition of a foreign university degree that ensures adequate professional development in a global competitive environment.

“Brain drain” prevails against “brain waste”, the first one being the leading one. The modern student - potential long-term migrant develops relatively high expectations for professional development abroad. The prospects of turning "brain drain" into "brain gain" depend on the degree of success and adaptation to the competitive conditions of the international environment and on the opportunities which the Bulgarian labour market would offer to him when rewarding the international experience acquired.

The modern student - potential long-term migrant is increasingly often a young highly skilled woman, with specific aspirations and expectations. The prospects of such a type of mobility are unfavorable to the demographic structure of Bulgaria - aggravated enough without this extra load. In this respect, clear, targeted and flexible measures are needed for closer, even priority integration of high-qualified young women into the professional labour market.

The modern student - potential migrant, has migration experience and low expectations of professional development in Bulgaria. The size of income and the prospects for employment are additional, but not necessarily decisive, factors when taking a decision about migration.

The successful future of one efficient migration policy in Bulgaria is not in the retention of human capital, but in promoting its development and taking advantage of it in the country. With the increasing student mobility the best strategy would be the optimal replication of the international experience in economic, social and political culture. The potential for such a bold formulation resides in the young and qualified human capital of Bulgaria, enriched by and perceived through transnational realities.

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