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www.esu-online.org
Mundo-Madou Avenue des Arts 7/8
1210 Bruxelles

BRAIN DRAIN IN HIGHER EDUCATION- EUROPEAN CONTEXT

FINAL REPORT- ESC41

Report is prepared by:
Martin Hammerbauer (martin.hammerbauer@esu-online.org)
Pegi Pavletić (pegi.pavletic@esu-online.org)
Matteo Vespa (matteo.vespa@esu-online.org)

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Content

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1. Glossary

All definitions used in this document are taken from relevant sources and no new definitions have been introduced for the purposes of this report. Some terms have been modified to fit the scope of the report, but they do not represent substantial discrepancy from the original definition.

Brain Drain (BD)
: Permanent emigration of skilled persons from one jurisdiction to another.

Brain Circulation (BC)
: The possibility for developing countries to draw on the skills, know-how and other forms of experience gained by their migrants - whether they have returned to their country of origin or not - and members of their diaspora.

Brain Gain (BG)
: The benefit to a country as a result of the immigration of a highly-qualified person.

Brain Mobility (BM)
: Mobility of skilled individuals among jurisdictions, be they students, academics, or workers.

Brain Waste
: A state when a qualification, education or skills are not recognized.

Highly-skilled person/ highly-qualified person
: Individual who has a university degree or extensive/ equivalent experience in a given field.

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2. Brain Drain

1. DEFINING THE PROBLEMATIC OF BRAIN DRAIN

The term Brain Drain (BD) identifies several phenomena. From the first time it was used in 1963 by the Royal Society to describe the migration of British intellectuals to the United States (1) to its usage within the discourse of Third Worldism within the United Nations context (1;2), the term has been used to indicate the mobility of students, academics and skilled workers, under the common definition of 'permanent emigration of skilled persons from one jurisdiction to another. The 'sender' jurisdictions are typically the losing ones while the 'receiver' jurisdictions are typically the 'brain gainers'.' (3) What accomunates them is the loss of human resources on which the sending countries had put considerable educational investment (4). For the purposes of this note, we will use terms such as Brain Drain, Brain Mobility, along with specific types of Brain Mobility (BM):

- Student BD and BM: related to individuals studying in Higher Education Institutions;
- Labour BD and BM: related to skilled workers;
- Academic BD and BM: related to researchers and Higher Education academic staff.

Student BD can happen at the inter-regional, national, European and global level. In this part of the report, the student BD and BM refer to degree mobility, i.e. pursuing one of the three Bologna study cycles in a different country from one's own. This note will explore the issue of student BD within the European Higher Education Area (EHEA), i.e. the phenomenon of BD involving countries of the EHEA both as sender and receiver jurisdictions.

2. BRAIN DRAIN IN LITERATURE: CAUSES, EFFECTS, REMEDIES

Analysing student BD cannot put out of the picture the general context of social, economic and labour-division relations on which this phenomenon happens, as well as the links between student BD and labour BD. Wallerstein's work explored the international division of labour between centres, semi-peripheries and peripheries (5) with a concentration on capital (included 'human capital') within the centre at the expense of the peripheries: the economic structure of the peripheries encourages BD, which deplete the highly educated staff and labour force that would need to attract investment towards more knowledge-based sectors and raise the wages of that country (6). Brezis & Soueri (2012) developed a 'unified brain drain model' (7), which seeks to establish the factors of student and labour BD in a two-step model, where the decision of studying in the native country or abroad affects the following decision of working at home or abroad. Analysing the costs and the benefits (both economic and psychological) of migration, the authors propose that, in a system where tuition fees are not so different between home and abroad, labour BD is the sub-optimal option, meaning that the two main strategies would be either student BD (i.e. studying abroad and staying there to work) or study and work in the home country. Analysing the data on student migration within the European OECD countries in the period 2001-2006, the authors state that students choose to study in countries that have quality education and not so high wages (which can be explained as moderate cost of life) - they find also that high

tuition fees seem to have a positive impact on inward student migration. There are some caveats to be considered. The first is about the restricted example used to draw conclusions, both geographically and economic-cycle wise (2001-2006 was a period of relative prosperity and economic upturn). Secondly, the quality of education indicated in the study is based on university rankings, and the tuition fees as pull factor are explained as a signal of 'quality education': this posits doubts of, on the one hand, of the socio-economic affordability of student mobility (question that arise especially for non-EU EHEA students) and on the other hand, on the vicious circle of rank-positioning, rising tuition fees and conforming to the evaluation criteria of the rankings that accentuates the commodification of Higher Education and its transformation in an 'international education market'. Furthermore, the article doesn't take into account the difficulties in recognition of Higher Education degrees in the different countries, as well as the pull factors that low tuition fees and access to a generous student welfare can have on student mobility (see below). Moreover, other studies explicitly examined the intentions of mobile students to come back to work in their home country, demonstrating that many did or would be willing to (1), which is contrary to the authors' proposition that, unless there are specific pull factors towards the home country, the possibility of international education and work in the home country is 'sub-optimal'. Finally, the push factors of student BD are not identified. Mahroum (2005) identifies technical and structural issues as push (or pull) factors of (general) BD (or Brain Gain; BG). Structural issues are linked to the culture of the country, therefore they are harder to change; technical issues are normally in the hands of the States and can be more easily changed: examples are immigration rules, taxation, science and technology policies, recognition of qualifications. Interestingly, the structure of education and academic careers are considered cultural, therefore, structural issues, as well as language and openness to foreigners (3). Other pull factors are the possibility to work for non-nationals during their studies (allowance by EU rules or student visas), as well as the facility in the transition from study to work permits (8).

An International Labour Organisation paper (4) summarises the benefits and the losses for (general) BD sending countries, as shown in Figure 1.

Table 2: Brain Drain Balance Sheet: Sending Countries

Positive effects	Negative effects
➢ Provides rewarding opportunities to educated workers not available at home. ➢ Inflow of remittances and foreign exchange ➢ Induced stimulus to investment in domestic education and individual human capital investments ➢ Return of skilled persons increases local human capital, transfer of skills and links to foreign networks ➢ Technology transfer, investments and venture capital by diasporas ➢ Circulation of brains promotes integration into global markets (India, Taiwan, (China)). ➢ Short term movements of service providers (GATS Mode 4) generate benefits for both receiving and sending countries. ➢ ICT allows countries to benefit from diasporas.	➢ Net decrease in human capital stock, especially those with valuable professional experience ➢ Reduced growth and productivity because of the lower stock of human capital ➢ Fiscal loss of heavy investments in subsidized education ➢ Remittances from skilled migration may taper off after some time. ➢ Reduced quality of essential services of health and education ➢ Students educated at government expense or own resources in foreign countries imply further drain ➢ Opportunities for short-term movement of natural persons is seriously constrained by immigration policies of developed countries. ➢ Causes increasing disparities in incomes in country of origin.

Figure 1. Summary of the positive and negative effects for (general) Brain Drain sending countries. (source: International Labour Organisation)

Another ILO Paper (9) identifies seven possible policies to address (labour) BD:

1) return of migrants;
2) restriction of emigration;
3) recruitment of international migrants;
4) tax the loss of human capital (never implemented);
5) use the diaspora as a resource for the country;
6) retention through investments in education;
7) retention through economic growth.

ILO papers provide evidence that investment in education and rapid economic growth are also the best ways to attract back the diaspora and turn BD into BG (4;8) and avoid the Brain Waste, i.e the mismatch between the (higher) skills of the worker and the (lower) competences requested for the job, another important factor in deciding whether to emigrate (7). More on this topic is explained under the Chapter 5. of this report.
For student BM, the above policies need to be adapted so they could refer to mobility between cycles; policies that impede emigration if the student was financed by government grants, as it was enforced in Hungary (10); policies to increase the share of international students in the HEIs; and to the contrary version of this (i.e. a tax on sending countries), which was the proposed portability of student support within the Bologna process (see below).

3. BRAIN DRAIN IN THE CONTEXT OF EHEA AND EU

The first element to be noted is that there is no readily accessible database on student mobility flows (4), despite the commitments in several Bologna Ministerial Communiques. The most recent data that compare the intra-EHEA flows date back to 2011 (11). The Figure 2. shows that only a minority of countries has what is called Brain Circulation (BC; a

simultaneous gain-loss (12) of students), while only a handful of countries are brain gainers. The general picture is however misleading, because it is possible to identify the clearly defined sub-group of the EU countries within the EHEA that has different dynamics.

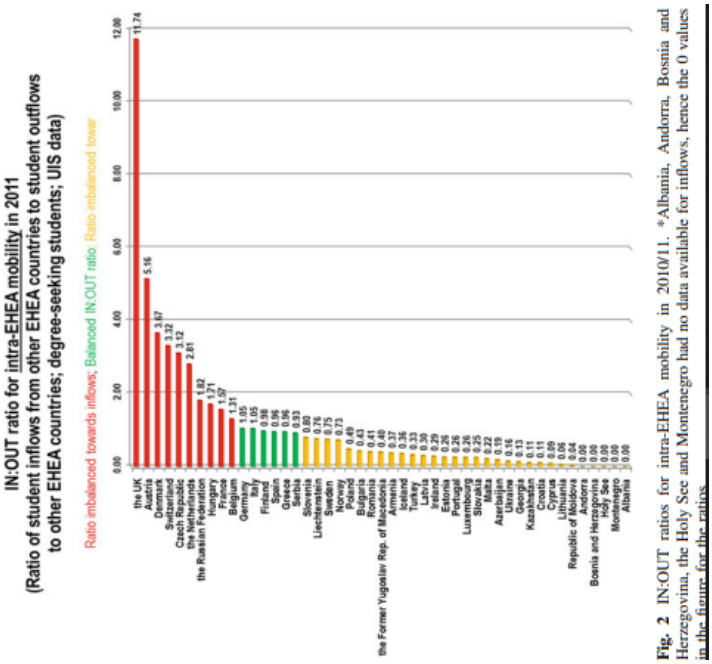

Fig. 2 IN:OUT ratios for intra-EHEA mobility in 2010/11. *Albania, Andorra, Bosnia and Herzegovina, the Holy See and Montenegro had no data available for inflows, hence the 0 values in the figure for the ratios

Figure 2. Ratios depicting intra-EHEA mobility in 2010/2011. Red bars represent countries with established Brain Gain; green bars indicate countries with Brain Circulation and yellow bars indicate countries with Brain Drain (source: Ferencz, 2015)

EHEA students are considered as third-country nationals, therefore subject to possible visa regulations, limitations of activities within the staying in the host country (13) and specific tuition fees, which are higher than home students' fees in more than two thirds of the EHEA countries (14). The exception is given by EU nationals within the EU: according to the EU Treaties, they are free to study wherever in the EU (12); furthermore, they are subject to the same conditions and benefits of the home students, including admittance, student welfare and tuition fees (15). This creates a special situation where, in principle, access to international mobility is broader, in socio-economic terms, than the usual conditions applying to international students. Additionally, when there are similarities in languages and cultures, students tend to move to study in systems with good education, lower tuition fees, less barriers at the entrance and more generous student welfare (Austria for Germans and Belgium for French, especially in medical fields) (15).

Looking at the general trends of BD within the European Union, it is possible to identify a pattern of migration from Southern and Eastern Europe toward the Western and Northern Europe, especially Germany, after the 2008 economic crisis. As Giousmpasoglou and Koniordos (2017) report, 'The number of young people coming from the EU who moved to Germany for their studies increased from 14,100 in 2007 to 16,837 in 2009 and to 21,324 in

2010. Moreover, in 2011, the third and fourth largest groups of students immigrating to Germany in order to study at universities were Bulgarian (7,500) and Polish students (7,500). Furthermore 4,500 Spanish, 4,300 Italian and about 3,100 Romanian students moved to Germany for their studies (Düll 2013). Among Eastern European Member States, Romania and Poland are the most affected by the brain drain (Ionescu, 2014).' Furthermore, the destination countries might see a shift due to Brexit, in favour of Germany, France, Ireland and the Netherlands. (23) The BD from the sending countries seems critic in the South Eastern Europe, where strategies to increase the enrolment into Higher Education have not reversed the BD - even if membership in the European Union might seem correlated to relatively smaller BD rates, as the Romanian and Bulgarian figures show, compared to the figures of other countries from the region.(6)

4. POSITION OF EU AND BFUG ON BRAIN DRAIN

There has been for long a functional division in addressing BD between the EU and the BFUG: the first tackled labour and academic BD, the second student BD - yet, with the goal of establishing an EU European Education Area the EU Council started referring to student BM. (16) However the same objective is indicated by the BFUG, i.e. 'balanced mobility'. The concept is mentioned as a goal in London (17) and in the Leuven/Louvain-la-Neuve (18) Communiques, as the ILO policy solution 3 (see above) to BD without endangering the comprehensive nature of the EHEA. However, the concern for a 'balanced mobility' was not driven by the majority of the sending countries, but rather from the minority of receiving countries that were experiencing problems related to a perceived excessive inflow of international students (11). This became clear in the following two Ministerial Communiques and working documents.

The Bucharest Communique (19), in fact, states that '[i]f mobility imbalances between EHEA countries are deemed unsustainable by at least one party, we encourage the countries involved to jointly seek a solution, in line with the EHEA Mobility Strategy'. In the Mobility Strategy 2020 approved at the same conference (20), even if there is a mentioning of possible 'return grants' to encourage return of graduates to their home countries, the two commitments are a regular and systematic analysis of mobility flows as the tool to detect mobility imbalances, whose results would be, as the second commitment, the trigger of the intergovernmental process of finding solutions to the mobility imbalance: 'If the findings show greater imbalances over longer periods of time, the governments concerned should jointly investigate the causes, consider carefully the advantages and disadvantages of the specific imbalance and seek solutions if deemed necessary. Dealing with the matter multilaterally might also be considered'. This might be an explanation on why there hasn't been the implementation of the 'regular' and 'systematic' monitoring of mobility flows. In the Yerevan Communique (21), the new concept of 'portability of grants and loans' was introduced as a way to achieve a 'fair balance of financial support between the home and host countries': the cost of supporting living expense would rest on the sending country (with possible top-ups by the receiving country, if needed), while the study costs by the receiving country (22). Even if theoretically a student-friendly measure, it was de facto a compensation

mechanism towards receiving countries, similar to others in place in the Nordic region and between Swiss cantons, which however is not designed neither to reduce the imbalances, nor to address the causes of Brain Drain (11) and results in a de facto tax on sending countries (an a contrario version of the ILO policy 4). Its difficult implementation, its political controversy and the non-bindingness of the Bologna commitments made the concept of portability of student support be dropped in the following communiques. The return of the issue of balance mobility within the EEA discourse might serve to look for real solutions to BD this time.

3. Brain Circulation

1. DEFINING AND EXPLAINING BRAIN CIRCULATION

BC is often replaced by the term BG, however, there are considerable differences between the two as BG is considered a permanent migration, whilst BC is a temporary migration. Based on the specific area of interest to ESU, which is higher education (HE) and the academic community within EHEA, in regards to the topics of BC and BG, we shall analyse and define key contributors to these phenomena. (24;25) As a consequence of the constant changes in BC within EHEA, it is hard to determine which migration percentage is, in fact, temporary, and which is permanent. Therefore, for the purpose of this report, BC signifies the migration of a highly skilled person or a HE student to a foreign country for a minimal period of 1 year, without the intent of gaining permanent residence in that country. BG signifies the same migration types but with the intent of the person/ student to gain residence after the expiration of a 1-year period of stay.

The individual development of the countries depends on research, innovation, education and international cooperation, meaning that the isolated economy will not be able to progress and stay internationally competitive. Hence, migratory intellectuals could significantly contribute to the economic progress of a country, regardless of the length of their stay. Besides the national accumulation of human capital, country's independence, productivity rate, number and quality of the institutions, research and innovation, a large role in the economic growth and the support of BC plays the politics. (26) Our goal within this chapter is to define the key contributing factors to BC, and to identify key objectives that could contribute to BC within EHEA. It is important to note that, in order to establish BC, BD and BG need to be negatively altered.

2. BRAIN CIRCULATION- FROM THEN TO NOW

'Biao (2007) states that since the topic of 'brain drain' was introduced to the United Nations' debates in the late 1960s, policy thinking on skilled migration has shifted its focus from discouraging emigration in the 1970s to encouraging returns in the 1980s, and to facilitating 'brain circulation' since the 1990s.'(25) In 2008, Tung pointed out 4 key aspects of an effective BC: globalization, careers without boundaries, absence of movement barriers and

allowing the possession of dual citizenship. The most beneficial structure of the BC includes win-win-win systems where the benefits of an intellectuals' migration are present for the receiving country due to labour market shortages, to the sending country by guaranteeing sufficient financial revenue for development, and to the migrant itself.(26)

The EU recognised the importance of attracting international students from third-countries in 1994, when it adopted the Council Resolution on the admission of third-country nationals to the territory of the Member States of the EU for study purposes. Since the launch of the Bologna Declaration in 1999, internationalisation became one of the main focuses and it contributed to the founding of the EHEA. The need for promoting the mobility of international students was highlighted once again in the 2015 European Agenda on Migration and through the Erasmus+ Programme. The Council and the European Parliament adopted the Students and Researchers Directive in 2016 (adaptation of the 2004 Directive on the conditions of admission of third-country nationals for the purposes of studies, pupil exchange, unremunerated training or voluntary service) and the 2005 Directive on researchers.
BC policies are often oriented either to their researchers in foreign countries, or to all the researchers in general. The main European Union's initiative on BC includes the development of the European Research Area (ERA) which aims to have a unified approach in the creation of the 'internal market' for research, developing effective European-level coordination of national research policies and commitments, and to assure their implementation. EURAXESS was developed (previously known as ERA-MORE) as an initiative to support researchers' mobility, international cooperation and career development, not only on the EHEA level, but worldwide. (27)

3. BRAIN CIRCULATION IN NUMBERS

The EMN has issued a EMN Synthesis Report for the EMN Study 2018, which was published in 2019, with the topic of 'Attracting and retaining international students in the EU'. Report classifies non-EU/EEA students as international students. This report shows that almost half of EMN member states consider attracting and retaining international students as a policy priority with different significance levels. The number of students coming to the EU for their studies is increasing by year, with the United Kingdom (UK), France and Germany being most attractive to the students for studying in 2017 (Figure 3.). (27)

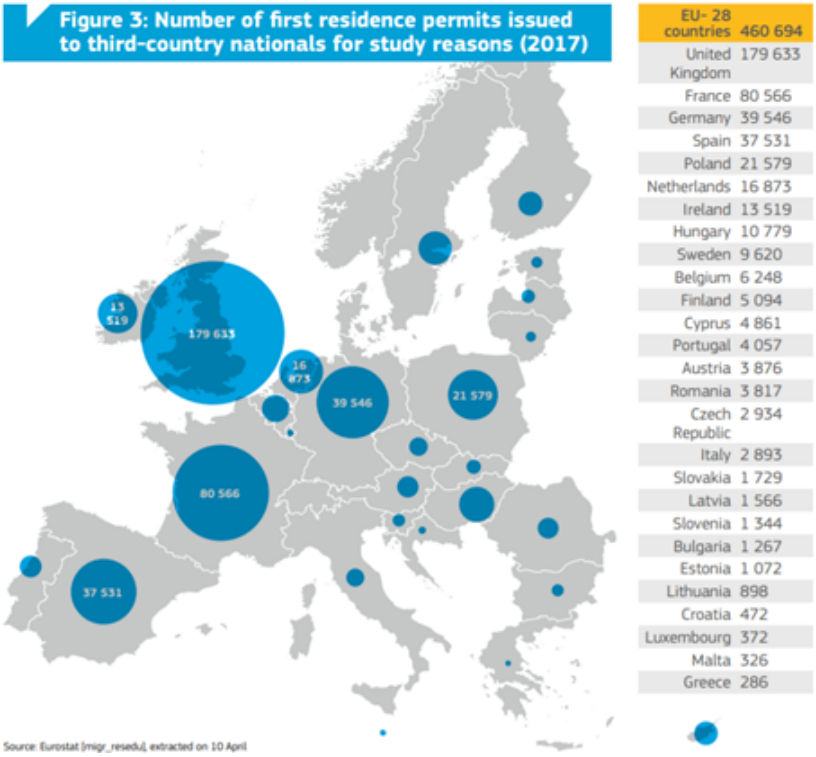

Figure 3. Number of first residence permits issued to international students from third countries for study reasons in 2017 (source: European Migration Network)

The highest share of international students per total number of students were present in Cyprus (18%), Germany (10%), Hungary (9%), Ireland (8%), and Latvia (8%), as shown in Figure 4. (27)

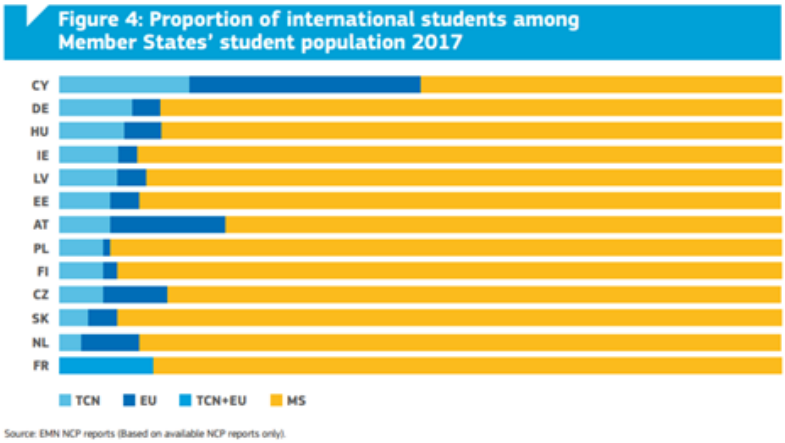

Figure 4. The proportion of international students from third countries in total national student population per country, in 2017 (source: European Migration Network)

Interestingly, the highest number of international students in the EU came from China, United States, and India (Figure 5). (27)

Table 2: Number of students enrolled in HEIs in Member States, disaggregated by EU and non-EU international students[162]

MS	2013			2014			2015			2016			2017		
	Total students	Of which EU nationals (in %)	Of which TCNs (in %)	Total students	Of which EU nationals (in %)	Of which TCNs (in %)	Total students	Of which EU nationals (in %)	Of which TCNs (in %)	Total students	Of which EU nationals (in %)	Of which TCNs (in %)	Total students	Of which EU nationals (in %)	Of which TCNs (in %)
AT	423,966	15%	6%	426,945	15%	6%	430,697	15%	7%	436,232	16%	7%	436,672	16%	7%
CY	33,674	21%	8%	37,166	25%	10%	40,347	29%	15%	44,446	31%	16%	48,172	32%	18%
CZ	367,747	7%	4%	346,893	8%	4%	326,528	8%	5%	311,168	9%	5%	299,054	9%	6%
DE	2,616,881	4%	8%	2,698,910	4%	8%	2,757,799	4%	9%	2,807,010	4%	9%	2,844,978	4%	10%
EE[163]	59,998	3%	3%	55,214	3%	4%	51,092	4%	5%	47,794	4%	6%	46,154	4%	7%
ES	1,553,137	2%	3%	1,538,241	2%	4%	1,548,369	2%	4%	15,64,943	3%	5%			
FI	308,917	1%	5%	306,059	1.5%	5.0%	302,478	2%	5%	297,163	2%	5%	295,528	2%	6%
HU	221,521	4%	4%	214,607	4.5%	5.1%	206,922	5%	6%	201,908	5%	7%	198,546	5%	9%
IE[164][165]	166,640	2.6%	5.6%	169,212	2.7%	6.1%	174,501	2.9%	6.6%	176,578	2.6%	7.3%	180,044	2.7%	8.1%
LT	137,901	0%	2%	129,689	0%	3%	123,259	0%	3%	111,383	0%	4%	107,700	0%	4%
LV	65,112			62,552	4%	4%	61,593	4%	5%	60,275	4%	6%	58,925	4%	8%
NL				700,637	7%	2%	701,350	7%	2%	712,115	8%	3%	730,218	8%	3%
PL	896,748	0%	2%	910,082	1%	3%	898,502	1%	4%	877,480	1%	5%	837,607	1%	6%
PT	360,818	3%	5%	350,513		5%	337,507		5%	343,117		6%	346,963		7%
SK	148,095	3%	1%	142,461	3%	1%	134,856	4%	2%	127,065	4%	3%	120,486	4%	4%
UK[166]	1,696,030	6%	17%	1,697,095	6%	17%	1,740,530	6%	16%	1,798,040	7%	16%			

Source: EMN NCPs

Figure 5. The ratios of EU students enrolled in HEIs in EU Member states in comparison to the ratios of international students from third countries enrolled in HEIs in EU Member states (source: European Migration Network)

On the policy level, main goals of EMN member states were internationalisation in HE acompassed by the increase in the financing of HE, contribution to the economic growth through producing highly skilled individuals, tackling the needs and shortcomings in the labour market, tackling demographic change. Cooperation between national governments and Higher Education Institutions (HEIs) was fruitful, however attracting international students has proven to be easier than students' retention, even when there were retention policies in place on a national level. Identified difficulties in the access to international HE were: insufficient offer of English- taught classes, lengthy and slow process of application to the HEI, for residence permits or visas; lack of scholarship or (affordable) housing opportunities for international students, inability to fully immerse in the culture of another country (due to all international classes being taught in English, which contributes to the low levels of students' retention).(27)

Incentives for students' retention were not thoroughly developed at the time, except in Spain which implemented exemptions from labour market examinations, work permits, lower

salary thresholds and immigration quotas together with incentives for family reunification. BG was supported by HEIs through different initiatives: graduate counselling, Alumni platforms, internships open to international students, etc. 9 countries had established anti-BD measures: Luxembourg, Germany, UK, France, Netherlands, Ireland, Hungary, Austria and Finland. They included governmental agreements with other countries, promotional activities, scholarships that support BC (return to the residence country after the education period is finished), delocalised education opportunities, education for the support of local needs. (27)

4. BRAIN CIRCULATION IN CONTEXT OF INTERNATIONALISATION

Higher tuition fees were charged to international students on public HEIs (excluding Czech Republic, Italy, Luxembourg and Slovak Republic where they are the same), while some EMN member states have capped their tuition fees, limiting the fee for international students. Some of the used retention measures offered by HEIs to support BG were providing career counselling and job- orientation services that helped students in finding employment or internships. Sometimes HEIs even actively collaborated with the representatives from the industry to assure smoother transition of international students into the labour market. Governmental measures in support of BG were removing the restrictions in the labour market for international students (i.e. labour market examinations, salary thresholds). Bilateral and multilateral agreements helped in internationalisation. (27)

Generally speaking, the responsibilities of HEIs in internationalisation were primarily during the enrolment process for the student at the HEI, and promotional activities were developed by HEIs for international programs, however, no direct support services were established to support students' groups or individuals. Those promotional activities were mostly centralized (government-coordinated) and included promotion through an online portal or website, campaigning, social media platforms, and centralized agencies. In some countries, only nationally accredited institutions were able to offer international programs, while in other countries this mechanism did not exist. Additional measures some countries have taken (examples come from Malta, Spain and Czech Republic) include active collaboration with immigration authorities. Offering scholarships to international students (not only from the government and HEIs, but from different foundations and private companies as well) has also proven to be impactful on attracting them to study abroad, and Erasmus+ funding opened a lot of mobility opportunities for them. Additional financial support for vulnerable groups, as well as family reunification and family support for international students was noticed as well in some countries (AT, BE, EE, ES, HU, NL, PL, SE, SK, UK). (27)

Non-binding Memorandums of Understanding (MoUs) signed between the EU institutions and those from third countries were usually to support the academic and student BM. (27)

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5. INTERNAL MIGRATION IN EUROPE WITHIN THE CONTEXT OF BRAIN CIRCULATION

A cohort study on 14 European countries was conducted in 2017, by Aude Bernard, in order to assess the extent of internal migrations within Europe. In Figure 6. we can see how much, on average, the subjects of the study (born between 1947 and 1957) moved within the EU until the point when the study began. The author notes that the north–south and east–west gradient is apparent, with high completed migration rates in Denmark, England, and Sweden (southward and eastward migration), and low levels in Czech Republic and Greece. Countries with the highest values of subjects` moves also have the highest number of frequent movers. This is in line with the findings on BD described in the Chapter 1. Of this report. (28)

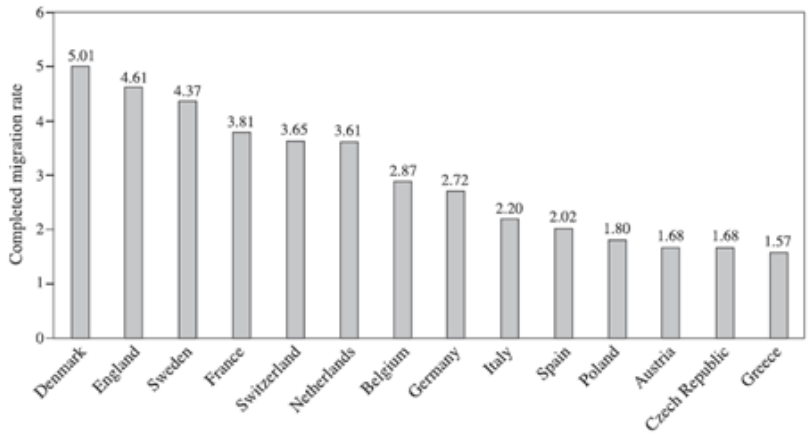

Figure 6. Completed migration rates indicating the number of moves for the subjects born between 1947 and 1957, for the cohort-participating countries (source: European Management Journal)

It is interesting to note that the number of moves per person is also connected to changes in subjects' lives, and young adults tend to move more, after which a decline in movement is apparent. In the South of Europe, young people usually leave their parental home for the reasons of marriage or parenthood, while in the North of Europe, leaving parental homes is quite common in younger ages. (28) Regional differences on a national level, between different counties or even districts, can contribute to emigration in the context of BC, due to high unemployment rates, underdeveloped economical structure, age and/or educational background of the population or the geographic position, research in Serbia shows. (29)

Although it is known that national migrations are present due to differences in the development of different geographical regions of individual countries, scarce research has been done on this topic within the context of BC. Regional upgrading as a motivation for regional migration has been discussed, and it can give a good perspective on the migration patterns within the European Union, however, it was not in the focus of this report. (30)

6. KEY OBJECTIVES IN SUPPORT OF BRAIN CIRCULATION WITHIN EHEA

Based on the EMN report and other resources available to us, ESU identifies several key points to investigate in regards to BD mitigation and BC support on HEIs within EHEA:

1) National policies in place to support BC and internationalisation financing;
2) Institutional policies to support BC and the accreditation of HEIs' international programs;
3) Admission procedures to HEIs: inclusion, scholarships, promotion of programmes, admission requirements (language and competencies), students' rights on housing, accommodation, transport and work, administration length;
4) Internationalisation during study period: student-centered learning, support services for international students, students' rights in practice, mobility opportunities, competencies of teaching staff in an international environment;
5) Transparent and independent graduate tracking and entry to the labour market (in regards to monitoring the progression in the labour market and the inclusive transition of students to the labour market): opportunities for international students, ease of transition, alumni support, governmental conditions.

4. Economic aspect of Brain Drain

1. ECONOMIC PERSPECTIVE ON BRAIN DRAIN WITHIN EHEA

There is a wide agreement that increased labour mobility is a good thing. People are able to choose from more opportunities, companies can attract more talent and everyone has a better chance to find a suitable job position. In the end, the labour market is more efficient and employees are being either less underpaid or overpaid. However, while mobility benefits the region as a whole, effects on its individual parts vary. This is also the case of mobility within the European Union and the European continent as well.

The opening of the Single Market and mobility-promoting measures had a strong influence on both the volume and directions of migration in Europe. In hope for a better life, millions of people migrated towards new opportunities, mostly from Eastern and Southern Europe to the West and North, as noted in previous chapters. Studies show that people with tertiary education were more likely to leave than others, and the highest probability for emmigration occurred between 20 and 30 years of life. (31;28; see Chapter 3.5) However, as an unfortunate side-effect, sending countries lost this promising part of population, sometimes for good. In the end, higher BM helped the overall prosperity of Europe but reinforced regional disparities and kept working against the EU's Cohesion policy. For example, if current mobility trends continue, the share of the EU population living in Western member states will increase from 54% in 2015 to 59% in 2030 while Eastern European countries will get more depleted. (32) In addition, since main receiving European countries (Germany, UK) are quite populous, the

relative impact of immigration on their population is not as substantial, whereas some smaller sending countries like Moldova lost up to a third of its total population since 1989. (33) As a result, the very same interlinking phenomenon can be perceived as a secondary topic in one country and as a crucial one in the other.

2. ECONOMIC MECHANISM OF BRAIN DRAIN

To understand the impacts of BM, it is easier to illustrate the situation in the receiving countries first. Firstly, there is an inflow of intelligence into the population - BG. BG is characterized by two distinctive features, it is a) highly skilled, and b) in a productive age. Because of that, it fills in the demand for missing skills on the labour market, be it in a private, public or academic sector. It can also improve the state of fields where local skills already exist (e.g. a better foreign scientist replaces an average successful native one, which accelerates research). Productivity and innovation potential are also fostered by knowledge spillover from the immigrants to the people around them, namely their colleagues and partners. (34) Altogether, these factors lead to increased competitiveness and economic growth. Age, the second above-mentioned feature, plays a role too. With the rate of workers to pensioners in Europe largely decreasing, public budgets get tighter as states receive less income and need to spend more. Naturally, BG helps to balance this ratio, and what's more - a part of newly collected taxes turns into new investments, attracting additional immigrants.

With this chain of effects described, it should now be easy to imagine the impact of loss of such a population group, namely BD. First, a skill gap emerges as the country keeps losing highly qualified people. Some of the more specialized job positions keep being vacant and others occupied with under-skilled employees. This lowers productivity as well as potential for innovation, because teams in workplaces miss bright minds who could spread their expertise and inspire their peers. Needless to say, the competitiveness of the country and its economic growth decrease. Population gets older, state budgets are burdened by lower contributions and it is increasingly harder to maintain the current level of public spending. Studies prove that countries in Central, Eastern and South Eastern Europe attempt to compensate for this loss of income by increasing taxes. According to the IMF, 1 percentage point increase in the emigration-to-population ratio in this region is linked to an increase in the labor tax wedge by 4.4 percent. (35) In summary, a BD-impacted country develops slower in comparison to others, and its worsening environment pushes more people to move elsewhere. As most models, this one is a simplification of real-world events too, but serves as an overview of the sequence of effects.

This mechanism is present not just in long-term relations of the West and the East, but also in sudden economic crises, whereas countries that are struck harder experience more BD. Moreover, as economic ups and downs influence mobility, it can happen that a country becomes a strong receiver in one cycle and an equally significant sender in the following one. A perfect example of such development is the story of Spain in recent decades. Throughout the local boom of 1996-2006, Spain enjoyed an influx of highly-qualified immigrants that fostered its growth. A reverse came during the Great Spanish Depression of 2008-2014, when

the situation shifted into BD that partially continues to this day. What is perhaps even more interesting, statistics show that the current BD is mostly driven by non-nationals, suggesting that the immigrants from around the year 2000 decided to emigrate once again. (36) This leads to the conclusion that a flexible societal group exists in the long-term that shifts from one booming economy to the next one.

3. THE SOCIO- ECONOMIC SIDE OF BRAIN MOBILITY

Literature on BD often works with the notion that moving workers from one country should have no problems in finding a suitable matching job in their destination country. Nevertheless, even highly qualified immigrants sometimes miscalculate or struggle with the adaptation to the new environment. Imperfect language skills, cultural barrier, recognition of competencies for entering the labour market or lack of awareness of local conditions can make getting a job a laborious process, not to mention possible discrimination from the locals. As a result, the incoming intelligence can end up unemployed or in trivial jobs where they cannot utilize their education. A state when a qualification, education or skills are not recognized is called Brain Waste. (37) Furthermore, people whose skills come in vain abroad are sometimes looked down upon even after returning back home, because they lack the experience corresponding to their qualification and are deemed a failure as a result. (38) This is a common experience e.g. for Polish immigrants in Western Europe.

Of course, push and pull factors of BM work outside of Europe too. When a crucial part of Eastern European intelligence moves elsewhere, a need arises to fill its place in the local market. In an attempt to replace the missing workforce, organizations try to attract people with similar qualifications from other regions, usually less developed ones. A drained country can then turn into a receiving one and pass the negative effect of BD on, which triggers a BD chain reaction. (39) Typically, this is the case of competition for doctors and medical personnel moving from Germany to Switzerland, then to Germany from Eastern Europe and there from other nearby regions.

To assess the effects of BD, it is necessary to keep in mind that an emigrant usually still keeps a connection with their country through family ties. After securing a life in their new destination, two additional events can happen. Having an idea what to expect, remaining family members can try to follow the first mover and reunite in the receiving country. Hence, there is a certain inertia in BD, i.e. even if all push and pull factors incentivizing BD suddenly disappeared, there would still be a delayed mobility because of family bonds. Secondly, the migrant can send a part of their income back home, where the value of such contribution is larger. The sum of these financial flows is not characterized as 'only pocket money', but sometimes a significant part of the domestic GDP. For example, in 2019 remittances accounted for 16% of GDP in Moldova, 11% in Bosnia and Herzegovina and 10.5% in Montenegro. (40) Given the amount of money flowing to these countries, it is logical that remittances affect other local indicators as well. For instance, they lower the availability of human capital. (35) People receiving remittances are less incentivized to go to work, as they are able to get by with the money sent by their family members from abroad. Because of

that, companies need to offer more money to make them accept job offers and so the reservation wage rises. And while increased wages are not necessarily a bad thing, it also means that there are less organizational funds left for investments and some talented people are voluntarily abstaining from contributing to the economy.

4. ECONOMIC MITIGATION OF BRAIN DRAIN

Fixing such a multifaceted issue as BD is obviously no easy task. A purely theoretical way could be to offset the 'value' of BG by receiving countries to the sending ones, which is practically impossible to quantify and morally questionable. But there is already an established mechanism within the EU that resembles this idea, which is the redistribution of EU funds from net contributors to net receivers that helps certain regions to catch up. However, the phenomenon of BD goes well beyond the borders of the EU and this goal would have to be stressed in the European Neighborhood Policy or a similar instrument as well.

As for the measures that do not require international coordination, countries with a high share of remittances could benefit from maintaining contact with the diaspora and introducing incentives for emigrants. (35) Those could then either invest in their home country, relocate back or start a business there instead of just sending savings for consumption. In any case, adjusting public investments is a must. For a start, increasing funds in research and development would create competitive employment opportunities to retain domestic talent. A better funding of Higher Education would also help mitigating Brain Waste in a place that is specifically designed for it, accelerate scientific breakthroughs, and other ideas for improving the local environment. Politicians also need to address concerns of young people and make their countries a place where they can imagine their future. This includes building infrastructure, services, but also increasing the transparency of the public affairs which is often inadequate in sending regions. What's more, one study found a direct cause-and-effect link between competitiveness and BD, meaning that any measure fostering competitiveness should decrease the outflow of intelligence. (41) These steps (especially R&D investments) therefore could be the remedy, but they require a strong political commitment, not just the usual adjustments for inflation and other cosmetical measures. And since the inertia of BD makes it hard for governments to reap the fruits within a single election term, this seems to be a persisting challenge.

European Students' Union (ESU)
Fighting for students' rights since 1982
www.esu-online.org
Mundo-Madou Avenue des Arts 7/8
1210 Bruxelles

5. Conclusion

Based on the contents of this report, we can clearly identify contributing factors to BD, which we define as: differences in tuition fees; barriers to enter Higher Education; varying student welfare between EHEA countries; differences in legal treatment between EU and non-EU EHEA students; real or perceived (ranking-based) differences in quality of Higher Education, due to technical and structural issues; and differences in wages and in the capacity of absorption of graduates within the economies (Brain Waste). In order to successfully convert BD to BC in context of Higher Education, we have identified key commitments as shown in Chapter 3.5. Those commitments include: establishing national policies in support of BC and increased internationalisation financing; development of institutional policies to support BC and encouraging accreditation of HEIs' international programs; changing admission procedures to HEIs and making them more accessible; encouraging internationalisation during students' study periods and the development of internationalisation practices in learning and teaching; graduate tracking and increasing accessibility of the recognition of prior learning processes. From the economic perspective, we can conclude that increased competitiveness leads to diminished BD, and improved infrastructure, transparency, and other living conditions help to retain talent. Research and development investments create jobs for the most desired group with highest innovation potential and the facilitation of productive use of remittances could turn them into investments rather than consumption. We notice that there is a potential of stressing BD in the redistribution of EU funds and European Neighborhood Policy which could additionally help in support of BC, alongside ensuring sufficient funding for return grants.

From ESU's perspective, we can identify key aspects for future improvement of BD and steady conversion to BC within Higher Education, such as: avoiding palliative, non-implementable solutions; working on the upward convergence of students' conditions and rights within EHEA (tuition fees, conditions to enter Higher Education, student welfare); policies to elevate the quality of education of the Higher Education Institutions; flexibilisation of procedures for visa applications and fostering internationalisation; removing the technical and structural barriers of the academic and research careers; and building synergies within the ERA. Furthermore, it should be ensured that the principle of territorial balance is implemented within the European Universities and that degree mobility from traditionally receiving to traditionally sending countries is balanced in support of BC.

In order to achieve BC at the institutional level of HEIs, their practices in support of BC need to be investigated, as well as the main problems institutions face in the implementation of BC methods, as they are usually imposed at the governmental level. These steps are proposed due to insufficient information on how HEIs are tackling BD in HE and the lack of documentation on specific measures to mitigate BD. Additionally, students' perspective needs to be included in all the matters regarding BD, BM and BC as they present one of the most active migratory groups.

Attracting foreign researchers and promoting mobility of scientists, at least for a short mobility period should be prioritized, as well as fostering education-related aspects of competitiveness, transparency and engagement in local communities. HEIs in BD countries could make themselves as attractive as possible for international students (to go against the trend of the BD) and be more open toward foreign students, by developing targeted attraction plans (i.e. scholarships, equal enrolment fees to country nationals etc.). We are also stressing the importance of further development of the processes for the recognition of prior learning, to be faster, more transparent, less bureaucratic, more uniformed across EHEA, and to implement the automatic recognition of DEQAR- registered professions by accredited institutions as soon as possible, to endorse BC. From the economic standpoint, collaboration with ETUC for a convergence of salaries and social conditions within the EU could level the labour market and social surroundings, helping in creation of European identity and contributing to equality, brain circulation and ERA.

Lastly, ESU recognizes that the impact of BD on Higher Education is grossly underestimated, as the lack of information shows. BD is often addressed through the economic aspect, disregarding the impact on education, social inclusion, and cultural wealth of European countries. Based on that, ESU strongly supports further research on this topic, active participation of students in addressing BD and mapping out the national and international plans on the conversion to BC.

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www.esu-online.org
Mundo-Madou Avenue des Arts 7/8
1210 Bruxelles

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