

Tertiary Scholarship Schemes as Institutionalised Migration of Highly Skilled Labour: The Mixed Evidence of Development Effectiveness from the Czech Republic

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Abstract: Providing scholarships has become an integral part of the global higher education and so has research on its impacts. This article examines the tertiary scholarship scheme of the Czech government for providing scholarships to students from the global South as a part of its development cooperation programme with a double goal. Firstly, it examines the programme's development effectiveness from the perspective of migration studies, and secondly, it investigates the underlying motivation factors which influence the students' decisions on where they will stay after their studies. A survey among students and graduates of the scheme was triangulated with quantitative data obtained from official sources. The results show a mean values of 45 percent for brain gain, meaning that almost half of the graduates do return back home after their studies, yet this situation is aggravated by a significant share of brain waste. The major factors that influence students' migration decisions were established to be economic factors, the utility of the studies and the ease or difficulty with which they can find jobs in their home countries.

Key words: brain drain, brain gain, scholarship schemes, migration, high-skilled labour, development effectiveness, development cooperation

DOI: <<https://doi.org/10.32422/mv.1584>>.

Regardless of the political and institutional changes, the tertiary scholarship schemes for students from the global South¹ have been an integral part of the Central and Eastern European development policies for more than seven decades, and their *raison d'être* has never been practically challenged. This observation is even more relevant in the aftermath of the so-called migration crisis, in which Central and Eastern European citizens and politicians display strong xenophobic attitudes against migrants from the global South, and particularly those from the Middle East and Africa. Providing scholarships as a part of the development cooperation was led by various motives in the past. As some argue,

after the end of the Cold War, “*Scholarships to students from the South stopped [serving] as a key battlefield for attaining political and economic goals*” (Altbach 2005: 66). Yet government scholarships are far from being outdated in a world of growing re-politicisation of aid where “new” donors such as China and India take advantage of tools gradually abandoned by the “old” donors (de Haan – Warmerdam 2011). Besides that, in times of rising competitiveness on the global labour market, one can also consider such schemes as an instrument of migration of highly skilled labour, which is currently experiencing a new wave as skilled migration is seen as one of the key elements for economic growth and innovation (Bailey – Mulder 2017: 2689).

Notwithstanding these transformations, there seems to be a long-term research gap on the overall development effectiveness of such programmes. It was only in the post-Cold War context that the effectiveness of the scholarship schemes, now fully considered as a part of the host countries’ development cooperation programmes, was recognised as a relevant research and policy issue for donors (see, for example, Commission of the European Communities 2008). Consequently, an increasing number of scholarship providers have recently invested time and resources into evaluations of the scholarship schemes, tracing the scholarship programmes’ alumni and examining how their post-scholarship experiences reflect the real or expected progress toward the policy objectives of the scholarship programmes (for a review of this, see Commonwealth Scholarship Commission in the UK 2014).

The Czech case analysed here is rather an example of the long-lasting lack of evidence of the development effectiveness of the Czech(oslovak) scholarship scheme that started already in the 1950s. The decades of Czechoslovakia (before 1992) and the Czech Republic (since 1993) providing scholarships have left thousands of Czech and Slovak-speaking graduates of Czech, Slovak and Czechoslovak universities in virtually all the countries of the global South. Nevertheless, in the mid-2000s the study of the scheme’s effectiveness commissioned by the Czech Ministry of Foreign Affairs (MFA), which was in charge of the scheme, was the very first study to question its development effectiveness and emphasised the difficulty of making an assessment of the development effectiveness of the scheme without any collection of data on the students’ migration decisions after their graduation (Jelínek – Dessieová – Náprstek 2004: 22). The assumed brain drain effects were later criticised in an international policy document regarding the special review of the Czech development cooperation, which was carried out by the Development Assistance Committee of the Organisation for Economic Cooperation and Development (OECD DAC 2007).² The following external evaluation (Horký et al. 2011), also commissioned by the Czech MFA, attempted to collect the missing data through a survey, but in general it was more directed towards assessing the then current scholarship scheme procedures than evaluating the scheme’s development effectiveness.

This article eventually contributes to research on the development effectiveness of government scholarship schemes for tertiary students from the global South by exploring the Czech case. When measuring development effectiveness, we track the progress towards the set development goals. As many other donors, the Czech Government justifies the existence of the scheme by its contribution to increasing human development, eliminating poverty and enhancing the socio-economic development of developing countries (MFA 2012: 1). While there is no doubt that university education is a valuable asset for the personal development of scholarship holders at the individual level, this article builds on the assumption that a scholarship scheme is efficient from the development perspective at the national level only if the individuals use their newly acquired skills and competences primarily in their countries of origin. Such an assessment requires an exploration of the graduates’ migration paths and hence this interdisciplinary paper is situated between development and migration studies. The primary goal is to assess the extent to which successful graduates return to their countries of origin, i.e. the countries of the global

South. The second, interrelated goal is to identify the factors that drive their decisions upon the completion of their studies in the Czech Republic.

To meet these goals, the article is organised as follows. The first part discusses the four brain-related migration concepts which are used as a theoretical basis for the examination of the development effectiveness of the government scholarship scheme: the concepts of brain drain, brain gain, brain circulation and brain waste. It also presents the theoretical background for the scrutiny of factors that determine students' migration strategies after they complete their studies (push and pull factors). The second part analyses the path dependence of the Czech government scholarship scheme and links the problem of the low development effectiveness of the scheme with the inherent lack of gathered data for its possible assessment. The third part presents the methodology, operationalisation and data of our research and its limitations in a situation of reduced access to official data which cover the period of 2002–2011. The fourth part presents the results of the effectiveness analysis based on a triangulation of quantitative with qualitative data based chiefly on surveys and focus groups. The fifth part investigates and categorises the most relevant factors that influence students' decisions to leave or remain in the Czech Republic after their studies. The conclusions then summarise the findings, present the current trends, discuss their political implications and question the link between the unavailability of data inherent to scholarships schemes and their development effectiveness within the current context of international development cooperation.

SCHOLARSHIP SCHEMES AS INSTITUTIONALISED MIGRATION OF HIGHLY SKILLED LABOUR: THE MAIN CONCEPTS AND FACTORS

Even though the aim to assess the development effectiveness of a tertiary education scholarship programme situates this paper in development studies, the assessment itself requires the use of concepts native to migration studies. In this perspective, this article considers scholarship schemes as a form of institutionalised migration of highly skilled labour, and as its theoretical background it borrows the four brain-related concepts of brain gain, brain drain, brain circulation and brain waste from migration studies.

Highly skilled individuals are primarily beneficial to a society where their knowledge and competences are being used. As it deals with government scholarships for students from the South, this article builds on the assumption that in the absence of externalities, scholarships yield higher development effectiveness only when the students successfully complete their studies, return home and actively use their knowledge in their country of origin – which is also the official goal of the scheme.

As applied to the tertiary education scholarship scheme, the term *brain drain* is then reserved for situations in which its graduates decide to stay in the host country or a third country with no intention of returning to their country of origin. Contrariwise, the term *brain gain* (officially declared as the main goal of most government scholarship schemes) is reserved for situations in which successful graduates return home immediately or shortly after their studies.

Brain drain is, in general, understood as the “*international transfer of human resources [that] mainly applies to the migration of relatively highly educated individuals from developing to developed countries*” (Docquier – Rapoport 2009), as the basic physiology-inspired concept of highly skilled labour originally considered international migration as a zero-sum game. As Bhagwati and Hamada (1974) argued, brain drain is a negative externality imposed on the population residing in the country of origin, and it can be analysed as a zero-sum game where rich countries get richer and poor countries poorer. However, such a pessimistic view has been rather challenged lately. It has been acknowledged that positive externalities may alter the final development effectiveness of the given brain drain. The latest research stresses that brain drain can in principle be accompanied by positive feedback even for the countries of origin, such as remittances

from migrant workers, their return to their country of origin after they have accumulated savings or new qualifications in the host country or third country, and even the participation of these migrants in scientific and business networks promoting the circulation of technological and industrial knowledge (Nechad 2018: 63).

We acknowledge the existence of the phenomenon of “*beneficial brain drain*” (Beine – Docquier – Rapoport 2001), or “*reverse brain drain*” (Maimunah – Mageswari – Roziah 2014) but we also agree with Docquier and Rapoport (2008) that there is a “*strong negative total effect of brain drain for most developing countries*”, though there is also a suggestion of moderate gains for some large middle-income developing countries – which, however, is generally not the case of the beneficiaries of the Czech scholarship scheme.

The concept of *brain circulation*, which was defined by Dawson (2007) as “*deferred brain gain*”, is applied in this article to situations in which graduates gain their first practical experiences after their graduation in the host country but still return home after a limited period.

Finally, the fourth term – *brain waste* – stands isolated from all three of the concepts mentioned so far. When applied to scholarships for foreign students, it is reserved for situations in which the students do not successfully complete their studies in the host country for a variety of reasons, regardless of where they go afterwards. In this regard, such a situation presents both sunk costs for the government providing the scholarships and opportunity costs for the students applying for them. However, from another perspective the term can also be reserved for situations in which graduates do not use their acquired education in their country of origin (Özden 2006).

To sum it up, for both epistemological and empirical reasons, we overlook the potential positive externalities of brain drain and stick to the basic acknowledgment that the scholarship schemes are efficient in terms of development only when the foreign students successfully finish their studies, return to their homelands and use their new knowledge, skills and experience back home. The combined share of brain gain and brain circulation hence serves as a proxy for development effectiveness.

The understanding of development effectiveness would not be policy-relevant without understanding the underlying reasons of the migration strategies of the scheme beneficiaries. In addition to the prevalence of the four above-mentioned concepts, this article further investigates the prevalence of a wider set of social, cultural and economic factors, at the individual, university or national level and beyond, that determine the propensity of students to remain in the host country, return home, or move to a third country after their studies.

It builds on five categories of factors adapted by Baruch, Budhwar and Khatri (2007) for North-South scholarship programmes: (1) *the student's adjustment process in the host country*, (2) *the student's satisfaction with the university* (or with his or her studies in general), (3) *cultural differences*, (4) *the student's ties with his or her home country* and, finally, (5) *the situation on the labour market* (in both the host and the home country). We narrowed down these five categories into four in the end, combining the first two into one called the “*adjustment process in the host country*”.

Each category contains a number of factors. The first category, that of the adjustment process, focusses on social factors such as the language barrier in day-to-day life (which is essential in countries such as the Czech Republic, where the majority of the population still rather does not understand English, and international students sometimes come to the country to study in English only without having any knowledge of the local language), problems encountered by foreign students at the national level such as the obstacles posed by various administrative processes (such as those related to visas or health care), and problems encountered at the university level (the language barrier, a different teaching environment, etc.). The second category deals with cultural factors. In our research we

focus on general cultural differences observed by the students and graduates, and also on their experiences with racism and xenophobia in particular. The third category focusses on individual factors which could be summed up as factors tying students to their home countries, such as the need of financial support from (or going to) the student's family, experiences of family separations and notions of studying abroad as a future benefit to the development of home country. The last, fourth category deals with various economic factors (in particular with employment opportunities in the home countries).

There is a vast literature on research of various migration factors. Nechad (2018: 60) adds several to those mentioned already: wage differences, propitious policies for the immigration of the better-educated, differences in the quality of life, education for children, interaction with other professionals, political stability, and job security, among others. Some other authors, such as Koubi et al. (2016) or Beine and Parson (2014), focus on long-run climate change factors, which increasingly influence migrants' decisions these days. Nafari et al. (2017) identified, in total, 15 migration factors from the 21 factors they initially selected by reviewing the literature.

In general all these factors can be further divided into "push and pull factors". First introduced by Lewin (1951), these factors encompass the motivation factors of students both before they decide to study abroad (Mazzarol – Soutar 2002; Parkins 2010) and after graduation. Applied to our research, push factors motivate graduates to leave the host country and possibly return home; meanwhile pull factors motivate them to stay in the host country (Baruch – Budhwar – Khatri 2007). Such a distinction helps to identify whether a student's trajectory is more influenced by the home or the host country beyond the mere area of possible intervention in the adjustment of the scheme, and hence it can contribute to drawing the political recommendations, depending on the ability of the government to influence the most relevant identified push and pull factors.

THE PATH-DEPENDENCE OF THE CZECH GOVERNMENT SCHOLARSHIP SCHEME FOR STUDENTS FROM THE SOUTH

The Czech government scholarship scheme dates back to the 1950s. Yet in spite of the major political changes over the last 70 years, including the end of the Cold War and the split of Czechoslovakia in 1993, it has a surprisingly strong path-dependency that persists beyond the variations in its geographical focus and the scale of the programme. As a part of the "socialist bloc" Czechoslovakia developed different forms of cooperation with selected countries of the Third World, and the provision of tertiary scholarships became one of its essential modalities (for details see Holečková 2010: 26). The motivation was not only to enhance the human capacities in emerging developing countries but also to intensify their inclination to the socialist model of economic and political development (Jelínek – Dessieová – Náprstek 2004: 11). The government scholarship holders originated mostly from "non-European socialist countries" (Northern Vietnam, Mongolia, and, later, Laos and Cambodia) and also "countries of special interest" (Algeria, Guinea and Mali). Scholarships were also awarded to members of various national liberation movements of that time (Jelínek – Dessieová – Náprstek 2004: 12).

The development of the programme led to the establishment of a special university for students from the Third World in 1961, which came to be called the University of 17th November; it was only the third such university in the Soviet bloc after the Peoples' Friendship University of Russia in Moscow and the Herder Institute in Leipzig (Holečková 2010: 26). However, the resentful climate in Czechoslovakia after the Prague Spring of 1968 was expressed by increasing racist attacks on foreign students and gave evidence of the intolerance of the Czechoslovak society toward the otherness of the students from the Third World. Also, the rising costs and low home return rate led to a gradual transformation of several departments of the school into departments of Charles University, and in 1974 the University was officially closed (Holečková 2010: 27). Despite this, the interest

in scholarships for foreign students rose again in the 1980s with the new “countries of special interest” such as Afghanistan, Angola, Mozambique, Ethiopia, South Yemen and Nicaragua. By the end of the 1980s the number of students accepted for studies in Czechoslovakia each year reached the unprecedented number of 850, and from the 1960s to 1992, in total, about 20,000 foreign students benefited from the scholarship programme (Jelínek – Dessieová – Náprstek 2004: 12–14). Also by the end of the 1980s, the development aid of Czechoslovakia reached possibly as high as one percent of its Gross Domestic Product (GDP) (Halaxa – Lebeda 1998). However, the expectations of the massive scholarship programme were considered unfulfilled even before the fall of the Iron Curtain (Holečková 2017) and the “*experiment*” was labelled as “*not too successful*” by former insiders who emigrated to the West (Pick 1979: 10). Unfortunately, we lack data about the extent of the brain gain from the pre-1990 period. Yet many of the scholarship recipients stayed in Czechoslovakia and some of them even became a part of the Czech political elites.

By the end of 1992, Czechoslovakia disappeared from the political map, and the newly established Czech development assistance programme re-emerged in a new political and institutional framework induced by the accession of the Czech Republic to the OECD in 1995. Yet in spite of the vast socio-economic changes in Czechoslovakia in the early 1990s, the scholarship scheme was only reduced in scale and never interrupted, unlike all the other bilateral aid modalities. Following the official restart of the Czech bilateral development assistance programme in 1995, the main motivation for the scholarship provision became the official government commitment to contribute to poverty alleviation and the sound socio-economic development of developing countries (MFA 2010: 6). Nevertheless, the scholarships continued to be used as tools of promoting foreign policy interests, especially with countries where the Czech Republic had no permanent diplomatic missions. While there was a strong path dependency in the list of priority countries before and after 1990 (Opršal – Harmáček – Srovátka 2016), in the latter period the geographical focus was spread beyond the former socialist-leaning developing countries. However, it is important to note that since the 1990s, the number of annually accepted students per year has never reached the level from the socialist era.³

In 2012, the government approved a new strategy of the programme, which was valid for the period of 2013–2018 (MFA 2012) and which pursued the scale of the programme trends in terms of availability of new scholarships at 130 per year. However, it aimed at more efficiency, mainly in the selection process of candidates and the care for students during their studies. It also introduced study programmes taught solely in English (previously students had to first learn the Czech language to be accepted to Czech/Czechoslovak universities), which was expected to increase the completion rate. As of 2017, there were 597 government scholarship holders enrolled in this programme from 52 different developing countries. Meanwhile the programme consumed 110 million CZK, the equivalent of 4.7 million USD (MFA 2018: 13). However, the new strategy did not follow the recommendations of the earlier evaluation report commissioned by the MFA (Jelínek – Dessieová – Náprstek 2004) to monitor the departures and prolonged stays as well as the successful graduations and premature terminations of studies of the students after they stop receiving scholarships. In spite of the long-term doubts about the effectiveness of the programme since the Cold War, this continuing feature unfortunately does not improve the prospects for a more accurate evaluation of the development impacts of the scholarship scheme than that which is presented in the following parts.

METHODOLOGY, OPERATIONALISATION AND DATA

As for the first research goal, and as explained above, the development effectiveness of the scheme is measured as a combined share of brain gain and brain circulation. We acknowledge that both phenomena are not easily assessed without continuously tracking

all or at least a representative sample of the scheme's graduates in order to get evidence of whether they returned to their country of origin, or circulated between their country of origin and another country of the North. Unfortunately, as noted already, this is not the case of the Czech Republic. Under such circumstances we can possibly get such results if we know the extent of brain waste, that is, the number of students who do not complete their studies, and brain drain, that is, the number of those who complete them and stay in the Czech Republic. Then we can easily calculate the development effectiveness by subtraction.

Unfortunately, the official data we received from Czech authorities were not sufficient even for the second possible approach to our research. The Czech Ministry of Interior (MoI), which is in charge of migration statistics, released for the purpose of our research some quantitative data on the graduates' migration status for the year 2005 only (as no other such research has been done by them for other years). The Czech Ministry of Education, Youth and Sports (MoE), which is in charge of the scholarship holders' data, provided us with data on scholarship holders for the period of 2002–2011. Since the scholarship scheme does not regularly monitor the migration status of its graduates, in fact the official data we received from the Czech authorities only provided us with data on brain waste. Such a situation led us to triangulate these data with estimates about the prevalence of the migration patterns from three surveys carried out among scholarship beneficiaries, the scheme's alumni and the Czech diplomatic missions in the South dealing with scholarship students at least at the initial level. We also compared our results with the estimates of the previous research done by Jelínek et al. (2004).

The surveys of scholarship beneficiaries (students and graduates) have been carried out using online tools. Since the personal data of both the students and graduates are protected by the Act on the Access to Data, the Czech MoE and universities could not release the necessary contact details for them. Hence, we had to contact the respondents by using personal links and social media. We also used the snowball method to enlarge the response pool.⁴ We acknowledge that our sample is not perfectly representative. Moreover the snowball method may induce an overrepresentation of certain categories like nationality, university or study programme. Therefore, we do not present any analysis carried out within the sample. Yet the overall return rate was relatively successful. Out of 508 students registered in the programme as of March 2011, 172 completed the questionnaire (34 percent of the students). Out of the 137 alumni for whom we managed to obtain contact information, 32 completed the questionnaire. Thus, in total, 204 questionnaires filled out by past and current students were analysed. The uncompleted surveys were excluded from our analysis.

As for Czech diplomatic missions abroad, we directly contacted them with a specific questionnaire. Out of 52 addressed embassies that administer or used to administer the selection process of the scholarship candidates, 27 completed our questionnaire (a 52 percent response rate). This way, we used no less than five different official and non-official sources that provided us with intervals of the prevalence of migration strategies based on "real" numbers and estimates by the respondents. Those figures were triangulated, as shown in Table 1.

As for the second research goal, the social, economic and cultural push/pull factors identified in the literature review were complemented by additional factors that were identified in preliminary interviews with selected students and graduates living in Prague, which led to the synthesis of the factors presented in Table 2. These factors were then submitted to the respondents (students and graduates) for an evaluation of their perception of them, and the mean value of the responses was calculated.⁵ To refine the findings from our quantitative surveys, we also organised two focus groups held in March and May of the same year with the current scholarship holders to provide us with complementary qualitative data that are used in the following analysis when indicated. One focus group

with 32 participants was organised in the centre of Prague; however, students of universities outside of Prague participated in it as well. The second group discussion was organised at the Czech University of Life Sciences Prague, which hosts a large number of scholarship holders every year. 12 students of the Faculty of Tropical AgriSciences out of 16 studying government scholarship holders participated in this group.

As for assessing the development effectiveness as such, we are aware of the limitations of the data, yet on the other hand, there is a concurrence of estimates from some of the sources of data, and we present the findings in intervals that are relatively narrow, as compared to the lack of any previous estimates of the effectiveness of this multi-million government expenditure. In the same vein, the prevalence of migration factors may be partly skewed by the insufficient representativeness of the sample, yet it is largely sufficient to point out the most important factors and draw some policy conclusions.

The assessment of the development effectiveness of the Czech government scholarship scheme

The triangulated estimates of the prevalence of the four migration patterns are presented in Table 1. Among the students who had to estimate the pathways of their schoolmates, a clear majority (67 percent) expected that the combined brain gain and brain circulation would be in between 50 and 70 percent. The Czech diplomatic missions that keep contacts with the graduates estimated that the combined brain gain and brain circulation would be in between 30 and 100 percent (with a mean value of 65 percent). These estimations are in line not only with the preliminary research carried out by Jelínek et al. (2004: 22), who estimated the range of brain drain to be only in between 20 and 50 percent, but also with, e.g., some estimates made in Canada, which ranged between 30 and 47 percent for the brain gain only (CIDA 2005: 47). All these estimates roughly correspond with the data provided by the MoI for 2005. In this year, 60 percent of all 103 of the

*Table 1
Triangulation of the data*

Category / Source	Brain gain	Brain circulation	Brain drain	Brain Waste
Survey among students and graduates	50–70		30–50	
Survey of Czech missions	30–100 (mean 65)		0–70 (mean 35)	
Survey among graduates (Jelínek et al. 2004)	50–70		20–50	
Ministry of Interior (2005)	0–75	0–33	7–40	
Ministry of Education, Youth and Sports (2002–2009)				18–71
Combined estimated interval	50–70		20–40	18–71
Estimated mean value	45	15	30	N/A

Note: All the values are in percent. A grey background indicates original data, and a white background derived values.

Sources: Own surveys and calculations, Jelínek et al. (2004).

programme's alumni (regardless of whether they were successful or not) left the country (their destinations being unknown); the rest stayed in the Czech Republic. Half of those who stayed started officially working in Czech Republic, 40 percent continued in their studies because they had not finished their study programme within the time span of the scholarship programme (and thus they lost their scholarship), and the remaining 10 percent had already acquired their permanent residence permit. Based on this sample, the combined brain gain and brain circulation estimates do not exceed 75 percent, and the brain gain varies between 7 and 40 percent.

The calculations show that the combined brain gain and brain circulation could vary between 50 and 70 percent, and the brain drain between 20 and 40 percent, which is more than expected. The finding of the relatively vast extent of brain circulation based on the 2005 data with an estimated 33 percent maximum could be considered as a new finding that deserves additional research. This indication was supported during the group discussions when a student put it this way: *"I think that most of us want to get home after [our] studies; however, for some of us it is either necessary or favourable to gain the first practical experience either here or in another country"* (Focus Group 1). Unfortunately, based on the available data, no conclusion could be derived as to where the graduates gain their first practical experiences – whether they return to their country of origin immediately, stay in the North or go to another country in the South. The sample of respondents who already graduated at the time of the survey was too small for any reliable conclusions to be derived from it. We only have some indices that can be used to draw conclusions from the survey among the current students. Slightly more than half of them (55 percent) responded that they want to look for their first practical experiences elsewhere than in their home country (24 percent in the Czech Republic, 31 percent in another country), and the rest (45 percent) wanted to return home immediately. These estimates indicate that unlike in the case of the estimated migration patterns of their schoolmates, the current students are more eager to return to their homelands immediately after their studies, implying a rising brain gain effect at the expense of the brain circulation as well as the brain drain. This indication was partially confirmed during the group discussions, where some students made the following observation: *"Currently, there are no good employment opportunities for us in Europe, but there are good opportunities in our home countries, which, unlike Europe, are experiencing economic growth"* (Focus Group 2). We have to keep in mind, though, that as Spilimbergo (2009) found out when looking at the German case, the number of students who return home after completing their studies is greater than the number of students who initially intended to do so. On the other hand, the situation on the European labour market is changing and as of 2018, especially in the Czech Republic, employment offers have multiplied and wages have risen significantly.

The findings on the extent of brain waste (understood here as the number of students who fail to complete their studies) are more disturbing. According to official data provided by the MoE, only 29 percent of the scholarship holders complete their studies successfully before their scholarships expire, meaning that less than one third of the students finish their studies without any additional semester. As for the rest, 18 percent leave the university before the end of the scholarship and 53 percent drop out of the scholarship system, mainly due to exceeding the expected length of the studies – as many Czech students do. Unfortunately, due to inconsistent data it was not possible to calculate the ratio of those students who drop out of the system but manage to successfully complete their studies on their own expenses.⁶ However, the data provided by the MoI show that in 2005 as much as 14 percent of those who did not qualify for further scholarship support continued in their studies at their own expenses. The lack of more recent data not only hampers any research efforts but also indicates a substantial flaw in the monitoring system of the Czech state authorities. Nevertheless, to sum it up, the brain waste could be, based on our estimations, only as high as 18 percent, but most probably

it is higher, and it could reach as high as the alarming figure of 71 percent. Such a high percentage naturally decreases the overall development effectiveness of the scheme, regardless of whether the students eventually return home or not, simply because they do not acquire the desired knowledge.

The results of our research indicate that despite obvious problems in the design and administrative implementation of the scheme, the development effectiveness of the programme could be considered as relatively high since the brain gain and brain circulation combined range between 50 and 70 percent. However, due to the high dropout rate (brain waste), the outcome in terms of development effectiveness could be considerably decreased in the end. This leads us to the diagnosis that there is only “mixed evidence” of the development effectiveness of the Czech tertiary education scholarship scheme for students from the South.

THE IDENTIFICATION OF FACTORS INFLUENCING THE MIGRATION STRATEGY OF SCHOLARSHIP HOLDERS

The last part of the article identifies the most relevant factors that influence students' migration decisions after they complete their studies by analysing data from the surveys carried out among current students and graduates. These factors are synthesised in Table 2.

While Baruch, Budhwar, and Khatri (2007) identified the difficulties of the process of adjusting to the local environment in the host country as the most important group of factors that push the students and graduates from the host country back to their country of origin, our survey has not confirmed this finding. The respondents have primarily focussed on the issues related to the language barrier and administration procedures in the Czech Republic as these often present the biggest challenge to deal with. These factors were highlighted as significant by only 23 and 22 percent of them, respectively.

The language issues play a different role in countries where English is not an official language, as is the case of the Czech Republic. Most of the scholarship holders study in the Czech language after they complete one year of an intensive language course, so the local language knowledge could be considered as a strong integration element, i.e. a pull factor that encourages them to stay in the host country. On the other side, there are students who study in English only and are not required to complete the one-year intensive course in the Czech language and since most of the Czech population still lacks an efficient knowledge of this language, it could be regarded as a strong push factor that pushes them to return to their home country.

As for the administrative procedures, special attention has been paid in our surveys to the issue of visas, as 30 percent of the respondents reported serious difficulties with obtaining, or prolonging them. In general, during the focus groups, administrative problems with the Foreign Police, which issues temporary residence permits, were highlighted frequently. As a participant put it, *“We have a valid resolution on the scholarship provision; however, we need to go regularly to the Foreign Police to ask for the prolongation of the residence permit. Sometimes, also, our visa expires before we complete the academic year. We do not understand why both the visa and residence permits are not linked to the validity of the resolution on the scholarship provision”* (Focus Group 2). Or as another one added, *“You queue [for] hours at the Foreign Police to get to an official who does not speak any other language than Czech and makes you feel humbled for not understanding all the requirements”* (Focus Group 2). This barrier is regarded as much more difficult and stressful than the administration procedures and the environment at the universities, which were identified as a serious problem by only 17 percent of the respondents.

The second group of factors, dealing with cultural differences, is also characterised by a very low significance for the respondents. Only three percent of the respondents consider the racism and xenophobia in the Czech Republic as a significant factor for their decision as to whether they will stay in or leave the country, and no more than nine percent see

Table 2
The main factors of migration by scholarship recipients

Category	Factor	Direction	Prevalence
Adjustment process	Language barrier in day-to-day life	Push/Pull	23%
	Humiliation during administration procedures (for visas, etc.)	Push	22%
	Serious problems encountered at the university (language barrier, bad teaching environment, missing prerequisites)	Push	17%
Cultural differences	Everyday racism and xenophobia	Push	3%
	General cultural differences	Push	9%
Ties with the home country	Financial support from/to the student's family	Push/Pull	57%
	Negative experience of family separation	Push	17%
	Studying abroad as a benefit for the development of the home country	Push	61%
Labour market	Unemployment in the home country	Pull	32%
	Ease of finding a job in the home country	Push	78%
	Use of knowledge acquired abroad	Push	82%
	A higher salary in the home country due to studies abroad	Push	51%
	A temporary stay in the Czech Republic as a beneficial experience	Push/Pull	13%

Source: Own survey and calculations. Factors with a prevalence > 50 percent are highlighted.

general cultural differences as relevant for their decision. This result is in line with Baruch, Budhwar, and Khatri (2007) but in contradiction to the findings produced by Soon (2009), who considered differences in lifestyle as the largest positive factor in a student's intention to return home. In the case of the Czech Republic, this could be accounted to the relatively large presence of scholarship holders from culturally and geographically close areas, such as South-East Europe, who do not perceive negative cultural differences in the Czech environment, quoting "*the myth of the Prague student*" in the Balkans (Tesař 2013). In any case, factors identified as "cultural" are not a strong predictor for the post-study departure (or lack thereof) of the majority of the students.

The third group of factors, which is related to the students' ties with their home countries, ranked as the second-best explanation in the study by Baruch, Budhwar, and

Khatri (2007), and it has also been assessed as the second most important group of factors in our survey. Unlike the experience of separation from one's family, which was highlighted by only 17 percent of the respondents, one's dependence on the financial support from his or her family ranked very high, with 57 percent of the responses stating that it is a major factor. The explanation for this finding could be found in the fact that the scholarship support in the Czech Republic is rather low (compared to living expenses, especially in the capital) and work opportunities for foreign students are rather rare since work opportunities are limited for non-EU citizens. Most of the respondents (61 percent) also highlighted the students' moral obligation to use the knowledge gained abroad as a benefit for their home countries, a factor that contributes to brain gain.

Finally, the perceived situation on the labour market in the country of origin has been identified in our survey as the most important group of factors. The factors regarded as the most significant were the following: the (high or low) chances to use the acquired knowledge and skills in the country of origin (82 percent), the general easiness or difficulty of finding a job in the home country (78 percent) and the level of salaries for high-skill labour in the home country compared to the level in the Czech Republic (51 percent). Having some temporary experience in the host country was regarded as beneficial for one's future career by only 13 percent of the respondents. We have already tackled the issue of the changing balance in the world economy and its potential influence on the migration patterns of scholarship holders. Even though comparable studies are not available for both the pre- and post-crisis periods, there seems to be a significant shift in the migration factors caused by the fluctuating situation on the labour markets in many countries in the global North, which stand in contrast with the high and continuous economic growth in many countries in the South. The changing economic balance appears as even more important since in contradiction with past research, we have identified the labour markets and the financial links with the home country as more important than cultural and lifestyle factors.

CONCLUSIONS

This article contributes to filling the research gap on the development effectiveness of government scholarship schemes of countries of the North that provide scholarships to students from the global South from the perspective of the migration patterns of their graduates. On the case of a minor scholarship scheme in a country without substantial diasporas, we have shown the relative irrelevance of brain circulation when it is understood as repeated migration. Instead, our article brought attention to the underestimated phenomenon of brain circulation in the sense in which it is understood as a form of deferred brain gain.

Despite the triangulation of the best available data, we could establish only intervals for estimations of the extent of the brain-related phenomena with mean values of 45 percent for brain gain, 15 percent for brain circulation and 30 percent for brain drain, figures that look more positive than expected. In addition to that, brain waste, which can partly overlap with the preceding categories, would be at least 18 percent high, which leads us to the final diagnostic of mixed evidence of the development effectiveness of the Czech tertiary education scholarship schemes for students from the South, which is similar to the corresponding diagnostics for many other countries of the North.⁷

However, our analysis of the factors that influence the students' migration decisions upon completion of their studies gives a slightly different picture from that of the existing literature (Baruch – Budhwar – Khatri 2007; Soon 2009). The "soft" factors like cultural differences and adjustment procedures in the host country were identified as relevant only by a minority of the scholarship holders in our surveys while the economic factors were identified as the most prominent for them regarding their immigration decisions. The respondents from the South have also strongly highlighted the utility of their studies

and the ease of finding a job at home after their studies. However, one has to bear in mind that the economic situations on both the home and host markets change very dynamically. Therefore, what is considered as the most relevant push factor among students and graduates at a particular period of time (i.e. the employment possibilities in the home country) could be potentially assessed differently a couple of years later. Consequently, the slowly narrowing economic gap between the countries in the South and the countries in the North could be then expected to contribute to even higher brain gain and hence to the development effectiveness of the scholarship scheme. However, the prominence of these external factors related to geopolitical shifts leaves little space for the Czech government to improve the development effectiveness of the scholarships scheme beyond the improvement of the legal design of the programme.⁸

Despite this positive trend, it is not possible to give a yes/no answer to the question of the overall development effectiveness of the Czech scholarship scheme because it is a political question to decide what threshold a scholarship scheme must reach to be labelled as efficient. Nevertheless, with brain gain and brain circulation possibly as low as 50 percent, and this situation being aggravated by a brain waste of at least 18 percent, it is highly questionable whether all the expenses should be counted as Official Development Assistance rather than discarded as a part of the “inflated aid” that was criticised by the European development NGOs (see CONCORD 2017).

The exploration of the Czech case also shows that the absence of reliable data on the status of the former scholarship holders as an inbuilt feature of the scholarship scheme is a fundamental obstacle for assessing its effectiveness. Since many students finish their studies after they leave the scholarship scheme (i.e. they continue studying on their own expenses or terminate their studies and change to another university), the Czech MFA should adjust the system so that it would have access to the most reliable data on the former students’ study success and migration status. While these data may not confirm the development effectiveness of the scholarship scheme, at least they would also help the MFA to build a database and keep track of the former scholarship holders as possible “ambassadors” of the Czech interests abroad. This all is to emphasise that a strong focus on monitoring is a necessary precondition for the effectiveness of the tertiary education scholarship schemes not only in terms of their contribution to global development, but also in terms of their contribution to foreign policy interests.

¹ We use the term “global South” or simply “South” as a contemporary proxy for the countries of origin of the students eligible for the tertiary education scholarships. This term is not equivalent with the term “Third World”, which was mainly used before the end of the Cold War, since some formerly socialist countries in Eastern and South Eastern Europe have become entitled to development aid and scholarships as a part of the Official Development Assistance (ODA).

² In spite of a lack of policy change, the problem of scholarships was entirely left out from the first regular peer review by the OECD DAC (2016).

³ The number of annually accepted students dropped to only 150 in 1994–1996 (Jelínek et al. 2004: 14) to gradually increase again up to 250 within the period of 2003–2007 (Government of the Czech Republic 2003: 1). The scheme of the programme which was valid for the period of 2007–2013 decreased this number to only 130 (Government of the Czech Republic 2007: 1).

⁴ The snowball method did not include only students and graduates, but also intermediaries such as the study administrators at some universities and faculties.

⁵ To ensure the comparability of the data, only 102 out of the 204 sufficiently completed questionnaires were included in the factor analysis.

⁶ Public higher education in the Czech Republic is free and there are no tuition fees for curricula in the Czech language and some curricula in English. The fees for an extended length of study are relatively low, so the main costs for the students that do not complete their studies as expected consist of living expenses. These are generally covered by their work or contributions from their families abroad.

⁷ These findings are in line with the latest evaluation of the Czech scholarship scheme by Feřtová et al. (2018).

⁸ Among the factors with a prevalence of more than 50 percent, the government can only indirectly tackle the dependence of the students on financial support from their families, which complements the low scholarships by increasing the students’ financial resources. Yet the effect of tackling this push/pull factor would be ambiguous:

it would decrease the perceived debt of the graduates to their families, but that would reduce the students' incentives to stay in the North to send remittances to their families but also their incentives to return to the South to "pay back" their families for their education in their home country.

Literature

- Altbach, Philip G. (2005): Globalization and the University: Myths and Realities in an Unequal World. In: *The National Education Association 2005 Almanac of Higher Education*. Washington, D.C.: National Education Association, pp. 63–74, <<http://doi.org/10.1023/B:TEAM.0000012239.55136.4b>>.
- Bailey, Ajay – Mulder, Clara (2017): Highly Skilled Migration between the Global North and South: Gender, Life courses and Institutions. *Journal of Ethnic and Migration Studies*, Vol. 43, No. 16, pp. 2689–2703, <<http://doi.org/10.1080/1369183X.2017.1314594>>.
- Baruch, Yehuda – Budhwar, Pawan S. – Khatri, Naresh (2007): Brain Drain: Inclination to Stay Abroad after Studies. *Journal of World Business*, Vol. 42, pp. 99–112, <<http://doi.org/10.1016/j.jwb.2006.11.004>>.
- Beine, Michel – Docquier, Frédéric – Rapoport, Hillel (2001): Brain Drain and Economic Growth: Theory and Evidence. *Journal of Development Economics*, Vol. 64, No. 1, pp. 275–289, <[http://doi.org/10.1016/S0304-3878\(00\)00133-4](http://doi.org/10.1016/S0304-3878(00)00133-4)>.
- Beine, Michel – Parson, Christopher (2014): Climatic Factors as Determinants of International Migration. *The Scandinavian Journal of Economics*, Vol. 117, No. 2, pp. 723–767, <<http://doi.org/10.1111/sjoe.12098>>.
- Bhagwati, Jagdish Natwarlal – Hamada, Koichi (1974): The Brain Drain, International Integration of Markets and Unemployment: A Theoretical Analysis. *Journal of Development Economics*, Vol. 1, No. 1, pp. 18–42, <[http://doi.org/10.1016/0304-3878\(74\)90020-0](http://doi.org/10.1016/0304-3878(74)90020-0)>.
- De Haan, Arjan – Warmerdam, Ward (2011): New Donors and Old Practices: Does the Rise of China Challenge Aid Effectiveness? In: *EADI General Conference 2011: Rethinking Development in an Age of Scarcity and Uncertainty*. York, England: European Association of Development Research and Training Institutes.
- Docquier, Frédéric – Rapoport, Hillel (2009): Documenting the Brain Drain of «la Crème de la Crème»: Three Case-Studies on International Migration at the Upper Tail of the Education Distribution. *Journal of Economics and Statistics*, Vol. 229, No. 6, pp. 679–705.
- Halaxa, Petr – Lebeda, Petr (1998): Mnohostranná rozvojová pomoc České republiky [Multilateral Development Assistance of the Czech Republic]. *Mezinárodní politika*, Vol. 22, No. 4, pp. 7–9.
- Holečková, Marta E. (2010): Univerzita 17. listopadu a její místo v československém vzdělávacím systému a společnosti [The University of 17th November and Its Position in the Czechoslovak Educational System and Society]. In: Sklenářová, Sylva (ed.): *Možnosti a meze výzkumu dějin vysokého školství po roce 1945: sborník z konference*. Hradec Králové: Gaudeamus, pp. 25–27.
- Holečková, Marta E. (2017): Konfliktní lekce z internacionalismu: Studenti z "třetího světa" a jejich konfrontace s českým prostředím (1961–1974) [Conflictual Lessons of Internationalism: Students from the "Third World" and Their Confrontation with the Czech Environment (1961–1974)]. *Soudobé dějiny*, Vol. 20, No. 1–2, pp. 158–175.
- Horký, Ondřej – Němečková, Tereza – Krylová, Petra – Hejkrlik, Jiří – Jílková, Klementina (2011): *Vyhodnocení programu vládních stipendií pro studující z rozvojových zemí: Zvýšení efektivity a nové nástroje podpory terciárního vzdělávání [Evaluation of the Programme of the Government Scholarships for Students from Developing Countries: An Increase in Effectiveness and New Instruments for Supporting Tertiary Education]*. Prague: Institute of International Relations.
- Jelínek, Petr – Dessieová, Květa – Náprstek, Martin (2004): *Analyza poskytování vládních stipendií ke studiu na veřejných vysokých školách občanům z rozvojových a jiných potřebných zemí [An Analysis of the Provision of Government Scholarships for Studying at Public Colleges and Universities for Students from Developing Countries and Other Countries in Need]*. Prague: Institute of International Relations.
- King, Kenneth – McGrath, Simon A (2004): *Knowledge for Development?: Comparing British, Japanese, Swedish and World Bank Aid*. London: Zed Books.
- Koubi, Vally – Spilker, Gabriel – Schaffer, Lena – Bohmelt, Tobias (2016): The Role of Environmental Perceptions in Migration Decision-Making: Evidence from Both Migrants and Non-migrants in Five Developing Countries. *Population and Environment*, No. 38, Vol. 2, pp. 134–163, <<http://doi.org/10.1007/s11111-016-0258-7>>.
- Lewin, Kurt (1951): *Field Theory in Social Science*. New York: Harper & Row.
- Maimunah, Ismail – Mageswari, Kunasegaran – Roziah, Mohd Rasdi (2014): Evidence of Reverse Brain Drain in Selected Asian Countries: Human Resource Management Lessons for Malaysia. *Organisations and Markets in Emerging Economies*, Vol. 5, No. 1 (9), pp. 31–48, <http://www.om.evaf.vu.lt/cms/cache/RePEc_files/article_55.pdf>.
- Mazzarol, Tim – Soutar, Geoffrey (2002): Push-Pull Factors Influencing Foreign Student Destination Choice. *The International Journal of Educational Management*, Vol. 16, pp. 82–91, <<http://doi.org/10.1108/095135402101418403>>.
- Nafari, Javid – Arab, Alireza – Ghaffari, Sina (2017): Through the Looking Glass: Analysis of Factors Influencing Iranian Student's Study Abroad Motivations and Destination Choice. *SAGE Open*, Vol. 7, No. 2, pp. 1–19, <<http://doi.org/10.1177/2158244017716711>>.

- Nechad, Abdelhamid (2018): A Geo-Economic Approach to Brain Drain in Morocco. *Journal of Economic and Social Development*, Vol. 5, No.1, pp. 58–68, <http://www.jesd-online.com/dokumenty/upload/separated/Vol_5_No_1_Paper7.pdf>.
- Opršal, Zdeněk – Harmáček, Jaroslav – Syrovátka, Miroslav (2016): The Allocation of Czech Foreign Aid in Sub-Saharan Africa: The Influence of Historical Relationships. *International Journal of Economic Policy in Emerging Economies*, Vol. 9, No. 4, pp. 325–143, <<http://doi.org/10.1504/IJEPEE.2016.081401>>.
- Özden, Çağlar (2006): Educated Migrants: Is There Brain Waste? In: Özden, Çağlar – Schiff, Maurice (eds.): *International Migration, Remittances, and the Brain Drain*. World Bank, Washington, DC, pp. 227–244.
- Parkins, Natasha C. (2010): Push and Pull Factors of Migration. *American Review of Political Economy*, Vol. 8, pp. 6–24.
- Soon, Jan-Jan (2009): When Do Students Intend to Return? Determinants of Students' Return Intentions Using a Multinomial Logit Model. *University of Otago Economics Discussion Papers*, No. 906.
- Spilimbergo, Antonio (2009): Democracy and Foreign Education. *American Economic Review*, Vol. 99, No. 1, pp. 528–543.
- Tesař, Filip (2013): *Můžeme, chceme, dokážeme? Česká ekonomická, veřejná a kulturní diplomacie a Balkán [Can We, Do We Want to, Are We Able to Do It?: Czech Economic, Public and Cultural Diplomacy and the Balkans]*. Prague: Institute of International Relations.

Documents

- CIDA (2005): *Evaluation of the Canadian Francophonie Scholarship Programme (CFSP), 1987–2005*. Quebec, Canada: Canadian International Development Agency, <<http://www.oecd.org/derec/canada/37778524.pdf>>.
- Commission of the European Communities (2008): *Strengthening the Global Approach to Migration: Increasing Coordination, Coherence and Synergies. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions (2008/611(COM))*. Brussels, Belgium: Commission of the European Communities, <http://ec.europa.eu/europeaid/sites/devco/files/communication-global-approach-migration-20081008_en_2.pdf>.
- Commonwealth Scholarship Commission in the UK (2014): *A Study of Research Methodology Used in Evaluations of International Scholarship sSchemes for Higher Education*. London, UK, <<http://cscuk.dfid.gov.uk/wp-content/uploads/2014/06/evaluation-research-methodology-study.pdf>>.
- CONCORD (2017): *AidWatch 2017: EU Aid Uncovered: How to Reach the Target on Time*. Brussels: CONCORD Europe.
- Dawson, Laura (2007): Brain Drain, Brain Circulation, Remittances and Development: Prospects for the Caribbean. Caribbean Working Paper No. 2. Ontario, Canada: The Centre for International Governance Innovation.
- Feřtřová, Marie et al. (2018): *Zpráva z vyhodnocení programu poskytování vládních stipendií pro studenty z rozvojových zemí v období 2013–2017 [Evaluation Report of the Programme of the Government Scholarships for Students from Developing Countries in the Period 2013–2017]*. Prague: Edreo.
- Government of the Czech Republic (2003): *Czech Government Resolution No. 773/2003*.
- Government of the Czech Republic (2007): *Czech Government Resolution No. 712/2007*.
- MFA (2010): *Koncepce zahraniční rozvojové spolupráce České republiky na období 2010–2017 [The Conception of the Development Assistance of the Czech Republic for the Period of 2010–2017]*. Prague: Ministry of Foreign Affairs of the Czech Republic.
- MFA (2012): *Strategie pro poskytování vládních stipendií studentům z rozvojových zemí pro období 2013–2018 [The Strategy for the Provision of the Government Scholarships for Students from Developing Countries for the Period of 2013–2018]*. Prague: Ministry of Foreign Affairs of the Czech Republic.
- MFA (2018): *Informace o zahraniční rozvojové spolupráci ČR v roce 2017 [Information about the Czech Foreign Development Cooperation in 2017]*. Prague: Ministry of Foreign Affairs of the Czech Republic.
- Organisation for Economic Cooperation and Development Assistance Committee (2007): *Development Cooperation of the Czech Republic: DAC Special Review*. Paris: Organisation for Economic Cooperation and Development, <<http://www.oecd.org/development/peer-reviews/45367897.pdf>>.
- Organisation for Economic Co-operation and Development Assistance Committee (2016): *OECD Development Cooperation Peer Reviews: Czech Republic*. Paris: Organisation for Economic Co-operation and Development.
- Pick, Otto (1979): Czechoslovakia's Presence in Black Africa. *Radio Free Europe Background Report*, No. 66.

Note

We are grateful to all those who contributed to this article, notably to Petra Krylová and Klementina Jilková, who helped us to collect the data used in it, to both of the anonymous referees for their constructive inputs, to the journal editor Tomáš Dopita for his valuable recommendations and, finally, to all the respondents and interviewees. This article would also not be possible without the Ministry of Foreign Affairs of the Czech Republic, which commissioned the programme evaluation by Horký et al. (2011). This report has informed our article with data and some preliminary analysis.