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Explaining the Role of International Scholars in Semi-Peripheries. Evidence from Slovakia

Abstract

The paper aims to examine the socio-demographic profiles of international scholars in Slovakia and the motivations which local higher education institutions have in hiring them. Slovakia is understood as a model semi-peripheral country in the global system of knowledge production. We rely on data from the Slovak Register of Higher Education Institutions Employees and an onomastic method which enabled us to identify particular international scholars. A multivariate analysis of public data allowed us to create an image of this heterogeneous group and reveal relationships between the share of foreigners employed by Slovak higher education institutions and the characteristics of these institutions. This supports the assumption that foreign-born faculty members serve primarily as a solution to the problem of qualified workforce shortages and should not be viewed as a sign of academic excellence.

Introduction

The paper aims to determine the number and demographic background of international academics in the system of higher education in Slovakia as well as factors which encourage local higher education institutions (HEIs) to hire them. In our study, Slovakia is understood as a model semi-peripheral country in the global system of knowledge production.

Data used in this paper originate from our analysis of the Slovak Register of Higher Education Institutions Employees (Register zamestnancov vysokých škôl) and a web search that helped us gather additional information concerning these academics (e.g. gender, academic discipline, title). We employed an onomastic method to identify particular international scholars, who are also referred to as “highly skilled migrants” (Yeoh and Lam 2016), “mobile academics” (Dervin and Dirba 2008), “self-initiated expatriates” (Loacker and Śliwa 2016), or a sub-section of the “creative class” (Florida 2002). In this study, we treat notions of “academics” and “scholars” interchangeably. According to our working definition, a foreign-born academic is a person involved in a teaching and/or research activity affiliated with a Slovak university. The term “scholar” may be conceptually narrower, suggesting that one is involved in research, but international scholarship shows that the two are used interchangeably in similar contexts (see e.g. Nedelcu 2008; Siegert 2011).

Academic circulation is a global phenomenon, and peripheries are an important part of it for various reasons. One perspective is that without peripheries, the centers would no longer be centers. More importantly, however, peripheries not only consist of countries which send academics to other countries, as is often assumed. They also attract academics from abroad. Some of them are academic migrants and some are mobile scholars (most notably transnational academics supported by various scholarships and grants but also commuters working in several countries at the same time), who decided to work here but not to settle permanently in Slovakia. Existing literature on the internalization of academia focuses on the global academic centers, mainly the US and other Western countries (see e.g. Stephan and Levin 2001; Alberts 2008; Kreber and Hounsel 2014; Webber and Yang 2014). Another branch of research focuses on big countries in the rest of the world. However, it rarely embraces smaller post-communist countries (Santos and Guimarães-Iosif 2013; Coates et al. 2014; Kukarenko and Zashikhina 2017; Kriulya 2017; Xie 2018).

These studies suggest that foreign-born scholars contribute extensively to the development of local HE systems (Stephan and Levin 2001; Bokek-Cohen and Davidovich 2010; Libaers and Wang 2012; Lu and Zhang 2015; Berzins 2017) but –

paradoxically – very often encounter various forms of discrimination (Maximova-Mentzoni et al. 2016) or a sense of alienation (Kreber and Hounsel 2014; Loacker and Śliwa 2016). Teaching is also difficult because of cultural and linguistic differences (Neves and Sanyal 1991; Alberts 2008). The overrepresentation of men among internationally mobile academic faculty is also widely discussed (see e.g. Bokek-Cohen and Davidovich 2010; Webber and Yang 2014). Investigating these matters in the academic semi-periphery may shed new light on academic systems that are understudied, not especially prestigious, and located in a small country. These three factors underlie our hypothesis that academics come to Slovakia out of personal necessity (e.g. to get extra income, or build a professional network) or are attracted by local higher education institutions' (HEIs) lack of qualified teachers. Unlike in Western academic systems, a high share of international scholars would not necessarily be a sign of excellence in countries like Slovakia.

The paper begins with the discussion of the concept of academic peripheries, followed by a brief overview of the scale of academic migration in Europe. Next, we discuss research on highly-skilled migrants to and from Slovakia, and, with a brief interlude devoted to methodology, we present our findings regarding the number of international academics in Slovakia, their experience, country of origin, gender, as well as their academic field. A multivariate analysis of the relationships between institutional characteristics and the share of foreign-born academics follows.

Academic Centers and Peripheries

The perspective of world-systems theory (Wallerstein 2007) helps capture not only purely economic inequalities but cultural disparities, and power relations between different elements of global systems of production as well. According to Wallerstein, the world-system works for the benefit of the center. Peripheral processes cannot change those in place at the centers. Thus, innovations are distributed from center to periphery¹, and surplus value travels in the opposite direction. The system of knowledge production

¹It is important to keep in mind that for Wallerstein, “central” or “peripheral” are characteristics of the economic processes within these countries, not the countries themselves. The phrase “semi-peripheral countries” is a convenient mental shortcut.

is not different in this respect. Core immigration countries for scientists are identical to immigration countries in general, i.e. the United States, Switzerland, and other developed western democracies (see e.g. Kaczmarczyk and Okólski 2005: 51). Under these circumstances, it is rather unusual for a mobile academic to settle in a peripheral, or semi-peripheral, country. Indeed, these movements do not get much academic attention. Foreign-born scholars in a peripheral country are vastly understudied.

Central and Eastern European (CEE) countries (with the exception of Austria) are particularly good examples of semi-peripheries² in the world of knowledge production, as has already been acknowledged by some scholars (see e.g. Abriszewski 2016). Our study of Slovakia – in many regards, the exemplary Central European country – supplements the work of authors who use centers and peripheries as heuristic devices that help understand knowledge production in non-European and non-North American contexts (see e.g. Rodriguez Medina 2014; Connell et al. 2017). The peripheral status of CEE academic systems is an effect of their complicated past, which translates into moderate economic development and low internationalization of their academic job market. From a global perspective, there are, however, more obvious peripheries. In some countries harsh economic conditions, an unstable political situation, or ideological claims (e.g. orthodox Islamic countries excluding female professors) prevent entire categories of potential academics from developing their carriers. In general, the wealthier the country, the bigger the scientific potential, but there are culturally-driven exceptions to this rule, with Japan being the most prominent one (Alatas 2003: 605). As Connell et al. (2017: 1) have argued, in the case of some Southern-Tier countries (Brazil, South Africa, Australia), their economic development does not preclude their peripheral status, even though those countries are neither powerless nor passive. Having this in mind, CEE cannot be regarded as an example of a region which is “almost” a global center, because “academic imperialism” is still strong (Alatas 2003), reinforcing dependency on central countries such as the US, the UK, Switzerland, France, or Germany. That is why we refer to CEE academic systems as semi-peripheral.

²According to Alatas (2003: 606), in social sciences there are just three core countries: the US, the UK and France, and countries such as Australia, Japan, the Netherlands and Germany should be considered semi-peripheral insofar as they are dependent on ideas originating in the social science centers, but also exert some influence on peripheral social science communities. This conceptualization is, in our opinion, too narrow.

In the above-mentioned study, Connell et al. (2017) highlighted phenomena typical for countries out of the metropole but subject to metropolitan hegemony. First of all, referring to Hountondji's (1997, see: Connell 2009: 46) concept of "extraversion" (i.e. a tendency of intellectuals in the periphery to look outward to the metropole as the source of their concepts, methods, recognition, etc.), they point out that even if the research is conducted in the periphery, the reference point is always a metropole. In a similar vein, in the CEE context, philosopher Krzysztof Abriszewski (2016), proposed the term "suitcase research". This refers to the practice of bringing home copies of papers or books in their suitcases and making use of them in the periphery, where their value is much higher, thereby boosting the prestige of scholars who managed to "smuggle" them from a center.

Well-established "central" standards and frameworks are set in metropolises, which result in the most prestigious "international" (i.e. published in metropolises) journals being unlikely to publish research that does not fit current trends (Connell et al 2017: 9). In this sense, metropolitan institutions have a double authority: their power is not only direct, deciding whether or not to grant research funds, but also indirect, insofar as they set the research framework. This is why some peripheral scholars adopt a two-track publication strategy: they publish more generic findings locally, saving the cutting-edge for an international audience.³

Moreover, even if peripheral institutions cooperate with their metropolitan counterparts, the nature of this partnership is asymmetrical. International scholars are often contractors with limited impact on methodological or theoretical approaches. As Connell et al. note (2017: 8), "the researcher in the periphery may have a role in study design, but the prospects for this are not necessarily improving". This can create the feeling of being undervalued, especially when a peripheral institution (or scholar) is working too much and is getting little in return.

³Usually, local topics are unlikely to resonate with these audiences but some ideas do. Connell cites a brilliant example of an Australian gender studies scholar, who ironically learned about postcolonial theory via the metropole, since it appeared in the journals she follows (2007: 13).

Reference points established in the global centers, the tendency to fit in into global research trends, and the asymmetrical cooperation diagnosed by Connell et al. (2017) in Southern-tier countries, shape every scientific periphery. Before we proceed to our own findings regarding Central European (semi)peripheries, let us briefly present some basic background information regarding the extent of academic mobility in Europe.

Volume of Academic Migration in Europe

According to Eurostat (2016)⁴, in most European countries, the share of international researchers was below 6 percent. The only exceptions are Estonia, Malta, Portugal, and Cyprus, and this difference can be easily explained on historical grounds. All those countries have previously been either colonized by foreign empires⁵ or were colonizers themselves, which enhances their ethnic composition and international exchange. With its 3.03 percent of international researchers in the higher education system, Slovakia was more internationalized than many countries from the region, including the two neighboring countries: Hungary (2.17) and Poland (1.64). Compared with other countries, this percentage of foreign researchers is rather low, as predicted by the world-systems theory.

Table 1. Foreign researchers in higher education systems (2014)

These numbers for Slovakia and other CEE countries correspond to the rather moderate amount of international students in the region, understood as another indicator of internationalization.⁶ In 2017, the number of foreign students in Slovakia was 10,876 (OECD 2017). This means that international students constituted 5.9 percent of all university students enrolled in tertiary education. The percentage of international students in Slovakia does not differ much from the corresponding number for other countries from

⁴Unfortunately, after 2010, data on foreign researchers is missing for many countries (including Germany, France and the United Kingdom). Eurostat presents information on 17 European countries (see: Table 1).

⁵In our understanding, Estonia was “colonized” as a part of the USSR and – what’s crucial here – still have a large number of ethnically non-Estonians with connections mainly in Russia.

⁶The Czech Republic is an outlier in the region mostly due to the high numbers of Slovak students enrolled at local universities, who profit from the lack of a language barrier.

the region but in some, the absolute numbers are much higher due to the country's size. For instance, in 2017 there were 43,988 foreign students enrolled in all tertiary programs in Poland (2.6 percent of all students) and 21,707 (or 7.1 percent) in Hungary (OECD 2017). In case of both academic migration and student migration, Slovakia does not attract many foreigners. In this context, it seems even more interesting to find out who the academics are who decided to work in Slovakia.

Research on highly-skilled migrants to and from Slovakia

There is a limited body of knowledge concerning highly-skilled migrants (HSM) to Slovakia. At the same time, outward migration from Slovakia has been analyzed from different perspectives (see e.g. Láštiová 2014; Bahna 2011; Bahna 2018). Studies on populations immigrating to Slovakia are scarce and concern mainly individuals who did so for economic reasons (Hlinčíková 2010; Sekulová 2010), just like Slovaks migrating to Western countries (see e.g. Blazek 2015). Economic migrants to Slovakia typically comprise low-skilled, blue collar workers, i.e. a group outside of the focus of this paper. The scarcity of research on immigration to Slovakia is understandable when one takes into account that Slovakia has traditionally been a country of emigration rather than a country of economically-motivated immigration (Kolláriková 2016), just like other countries in the region (Mucha and Luczaj 2013).

Investigating highly-skilled migrants seems indispensable when we take into account the notion of brain gain, encompassing different types of potential benefits for the country of destination. Thus, studies in social policy regarding HSM seem to be an increasingly important area of research all over the world (see, e.g., Skeldon 2009; Boucher and Cerna 2014; Cerna 2014). There is also a growing understanding in Slovakia of the social policy aspects of immigration (see, e.g., Filadelfiová et al. 2011). Nonetheless, just as in other Central European countries, in Slovakia, knowledge about HSM is virtually non-existent, with the exception of student migration (see e.g. Baláž and Williams 2004). In Slovakia, academics were researched by Williams and Baláž (2005) in a broader context, but their sample included only eleven persons from this category. The same authors (Williams and Baláž 2008) were later also interested in returning Slovak medical doctors but those constitute only one small category of HSM. According to Mahroum's (2000: 25-9)

functional typology, there are five main types of skilled labor migrants: managers and executives (dubbed “accidental tourists”), engineers and technicians (“economy-class passengers”), academics and scientists (“pilgrims”), entrepreneurs (“explorers”), and students (“passengers”). There are knowledge gaps regarding each of these groups in different countries, but the reasons for the “pilgrimages” of academics and scientists remain the most under-researched. This paper aims to fill this gap by asking two sets of questions: a) Who are these mobile academics coming to Slovakia? b) Who are the employers of these mobile academics? These questions help us address the central issue of this paper – to verify if employing foreign faculty members is a sign of academic excellence, as in the core academic systems (see e.g. Stephan and Levin 2001; Bokek-Cohen and Davidovich 2010; Libaers and Wang 2012; Lu and Zhang 2015; Berzins 2017). If academic migrants were hired by the most prestigious institutions, then the answer would be positive. If not, we need a discussion of factors making migration to peripheral countries different from migration to core countries. At least one of those is rather straightforward. Salaries in Slovakia are low compared to Western Europe. In the first half of 2017, the average gross wage of teachers at public universities in Slovakia was 1,438 EUR, which was approximately 1.6 times the national wage average (921 EUR) (OZPSV 2017). Even though there is no comprehensive dataset charting salaries in Slovak HEIs and comparing them with Western countries, a juxtaposition of the amount listed above with the German salary (3,405⁷ EUR for junior professor) shows the difference. The MORE2 project, comparing salaries in other CEE countries (e.g. Poland, Hungary and the Czech Republic), also reveals obvious disparities. For all the new EU countries (EU12), gross annual salaries and PhD stipends of university researchers are less than 40 percent of the best paying country within career stages (MORE2: 110). Moreover, Slovakia lacks programs aimed at attracting international academics. Some scholars are attracted by the Marie Curie scheme of the Slovak Academy of Sciences (SASPRO) and – to a lesser extent – the National Scholarship Programme (SAIA) – but these stays are temporary and cannot help Slovak HEIs to secure a sustainable inflow of well-established scholars. Despite the lack of an organized policy targeting foreign

⁷Source: <https://www.academics.com/guide/professor-salary-germany>, Academics.com by *Die Zeit*. Salaries in Slovak academia vary widely according to different criteria, so it is difficult to find an analogic position for them in the local pay scale.

scholars, a substantial number of foreign-born employees work at Slovak HEIs. This makes the question of why Slovak HEIs are willing to attract international scholars – despite unfavorable circumstances – even more interesting.

Methodology

While pursuing our above outlined research goals, we rely on two sets of data. Our first dataset is based on the publicly accessible Register of Employees of Higher Education Institutions, administered by The Ministry of Education, Science, Research and Sport of the Slovak Republic.⁸ This database contains information on the number of foreign faculty members in 43 HE institutions in Slovakia by gender and nationality. The data from the register refer to the situation at the end of 2017.

Since the information provided by the register on foreign faculty members is limited, we created a second data set containing individual foreign faculty members employed by Slovak HE institutions. To create the dataset, we utilized the onomastic method (name-based sampling) that allowed us to identify ethnicity based on names (see: Groenewold and Lessard-Phillips 2012; Salentin 2014; Schnell, Trappmann and Gramlich 2014; Recchi 2015). The analysis was conducted in the second half of 2017.

Previous studies indicate that the error margin of this sampling method is approximately 10 percent (see e.g. Groenewold and Lessard-Phillips 2012: 47). A methodological paper by Schnell, Trappmann and Gramlich (2014: 246) stated that “name-based sampling results in biased estimates, but the effect sizes are mostly small”. In some multiethnic countries, like the US, there are two institutionalized possibilities for verifying the initial, tentative, onomastic classification. The first is based on the use of existing databases that include common ethnic-name databases (e.g. Most Common U.S. Ethnic Surnames; Kerr 2008). In addition, in these countries, one can find representatives of different diasporas, so it is possible to employ students (or other competent persons) who would verify whether the holders of foreign names are actually immigrants (Tynyildiz 2013). In Slovakia, as in most countries of the world, there are no lists of typical names of immigrants, and the technique of employing students from different ethnic groups cannot

⁸“Register zamestnancov vysokých škôl” available at: <https://www.portalvs.sk/regzam/>

be utilized since there are no large groups of migrants of one nationality (such as the Chinese, Koreans or Mexicans in the United States, or the Turks in Germany). To this end, the reliability of coding should be verified by publicly available information, mainly web-based registers and a web search.⁹

To assign the status of foreigner to a subject from the register:

1. The coder was looking for a foreign first or last name (preliminary qualification) and analyzed the first three pages of Google search results to verify this qualification.
2. The coder tried to find a curriculum vitae or other document that unequivocally confirmed the nationality (e.g. biographical note, newspaper article about this person) in order to verify the preliminary qualification.
3. If such a document was lacking, the coder searched the web (including social media) to find any clue that might have indicated foreign nationality, e.g. mother tongue, secondary school, undergraduate studies¹⁰, field “from” on Facebook, or information in the subject’s PhD. thesis description.
4. In rare unclear situations, the coder used various minor clues such as the foreign spelling of a name (e.g. Petr instead of Peter, or a national emblem as a Facebook picture), or the list of publications.¹¹
5. If no relevant data could be found, the subject was treated as a local scholar and excluded from the sample of international scholars.

This procedure ran smoothly with one major problem to be reported. As Hungarian, German/Austrian and Czech names are widespread across Slovakia, public data was often insufficient to distinguish Slovak from non-Slovak holders of those names (see: Table 2). In the case of these nationalities, only persons with both ethnic first name and last name were analyzed. If one possessed a Slovak first name and a foreign last name (or the other

⁹One such tool is names registers such as: <https://www.behindthename.com>. In this way, we can find out, first of all, what country the given name comes from and often also the subject’s gender. This method worked well for most of the subjects, but failed in the case of Asian names, which are often gender neutral.

¹⁰If undergraduate studies were completed in Slovakia and there were no other data, the subject was treated as Slovak.

¹¹If in doubt, we looked at the list of publications: if all were written in Slovak or English, the subject was treated as Slovak.

way round) or the subject's name included Slovak diacritical marks, s/he was treated as a Slovak. The same procedure was applied if a woman had a Slovak first name and her last name took the feminine suffix (-ova). The implication of this problem is that Austrians, Czechs, Germans, and Hungarians may be underestimated in our dataset based on the onomastic method.¹² Despite this, the onomastic method was the only possibility to go beyond the limited official statistics.

In our onomastic search, we focused on 32 Slovak universities and omitted 11 due to the following reasons.¹³ First of all, we skipped a couple of branches of foreign universities operating in Slovakia, one private university lacking any employee records, as well as all military institutions and the Selye János University in Komárno with Hungarian as the language of instruction. The institutions which mainly target an ethnic minority and military universities were considered special because the nationality of an instructor in their faculty lists might have been influenced by factors absent in the case of regular HEIs.

To answer the first set of our research questions, we will now present descriptive results based on our two datasets. Later, we will employ multivariate analysis to answer the second set of our research questions.

Results

Number of Foreign-Born Academics in Slovakia

The total number of foreigners in the academic system was 861, which translates into 5.9 percent of all 14,619 employees included in the database. It is highly likely that this number is an overestimation, because of several problems related to the ministerial database. First of all, it contains information about both academics and non-academics (employees not attached to any faculty). If we subtract the latter, the total number of foreign-born academics drops to 830. Another problem is more serious, as individuals with dual affiliation are counted as multiple scholars and there is no way to correct for

¹²Problems with differentiating Czech from Slovak names seems to be less important as certain migration scholars exclude the Czech Republic from the list of foreign countries, since Slovakia and the Czech Republic were one country until 1993 (see e.g. Williams and Baláz 2008: 1927).

¹³It should be noted that this register includes neither employees of the Slovak Academy of Sciences (SAV), nor short-term employees.

this.¹⁴ Furthermore, a large number of individuals have an “unspecified nationality”. This problem is related to another limitation of this database. In case of two institutions, we observed a disproportionately high percentage of international faculty, which does not seem to be realistic. For instance, some faculties reported that over 40 percent of their staff were foreigners, which is unlikely given the list of staff displayed on their websites. This was the case, for instance, with Fakulta environmentálnej a výrobnj techniky of the Technical University in Zvolen. Moreover, those “foreigners” are usually within the “unspecified nationality category”. When we contacted the ministry for clarification on this matter, we were informed that these data were provided by the faculties. If we decide to exclude universities with those unusual faculties,¹⁵ the total number of foreign-born academics drops to 545. This is the number of foreign academics in our dataset used for further analysis.

It is not possible to compare this figure directly to the results of our onomastic search, as our search did not cover all universities. If we select only the 32 HE institutions covered by the search, the official number drops further to 477 foreign-born scholars. Another difference is that in the onomastic search, we identify foreign-born scholars, while in the register data, we identify foreign citizens employed in Slovak HEIs. Based on the onomastic method, we identified 289 international foreign-born scholars or 2 percent of 14,135 scholars at 32 Slovak universities whose data were available in the system at the time of analysis.¹⁶ All in all, it’s safe to say that the number of foreign scholars employed in Slovak higher education institutions (excluding the Slovak Academy of Sciences and special-purpose schools) in early 2018 was between 300 and 500 (i.e. a share between 2.1 to 3.5% at the 32 universities analyzed). The onomastic search also allowed us to notice a high fluctuation of foreign-born academics in the Slovak system. From mid-2017 to early 2018 as much as 9.7 percent of foreign-born academics (28 people) ceased to work in Slovakia.¹⁷ This is possibly related to the temporary contracts of language instructors or

¹⁴However, as our onomastic search suggests, having a double affiliation with Slovak HEIs is a rare situation for foreign-born academics in Slovakia.

¹⁵All faculties from the Matej Bel University and Technical University in Zvolen are excluded from our dataset.

¹⁶Data from 30 June 2017. In rare cases of dual affiliation, we counted a subject as an employee of the bigger institution or of an institution which was the obvious primary employer according to the contract type (full-time versus part-time).

¹⁷This observation is based on the reexamination of the Slovak Register of Higher Education Institutions Employees after six months.

to unfavorable economic conditions – but a detailed investigation of this fluctuation requires qualitative methodology. Preliminary findings from a study of Slovak academics based on individual in-depth interviews – which cannot be discussed here due to limited space – suggest that this fluctuation is related to low salaries, in the sense that language instructors often decide to quit their position when a better paying job is available either in Slovakia or abroad. Long-term instructors, on the other hand, usually have sound family reasons to stay in Slovakia. They are usually not, however, satisfied with their salary and therefore have various additional jobs (e.g. language schools, private lessons, translations). An overview of the basic characteristics of international foreign faculty members at Slovak HE institutions in 2017 is provided in Table 2.

Table 2. Foreign faculty members at Slovak HE institutions in 2017

Gender

According to official data, 34 percent (or 184 people out of 545) of foreign-born scholars in the ministerial database were female (see Table 2). The sample identified by the onomastic method was comprised of 72 percent men and 28 percent women.¹⁸ To assess how this disproportion reflects general trends in Slovak academia, we used data from the UNESCO Institute for Statistics. According to this source, in 2015 (the latest data point available) women constituted 45.4 percent of Slovak academics (Index Mundi 2016) and this number does not differ much from neighboring countries in this respect (Austria – 42.7 percent, the Czech Republic¹⁹ – 37, Hungary – 42.1, Poland – 44.4). The gender bias can be a result of different factors (e.g. the gender composition of academia in sending countries). It is worth noticing that fewer women than men are also found among foreign-born academics employed in the USA (Webber and Yang 2014), Israel (Bokek-Cohen and Davidovich 2010), or Poland (Mucha and Luczaj 2016).

¹⁸There is a possibility that the overrepresentation of men can, to some extent, be a side effect of the onomastic method, as women are harder to identify based on their name considering that some of them change their last name over their life course.

¹⁹Data for 2012.

Nationality

As can be seen in Table 2 in the register data, the most common nationalities were: Czech (n=191, or 35 percent), Hungarian (n=64, or 12 percent), Polish (n=51, or 9 percent), and Ukrainian (n=32, or 6 percent). It is worth noticing that frequent cooperation – in terms of publications and conference attendance, as well as reviewing PhDs and habilitation dissertations – between those countries was visible in the analyzed resumes and other kinds of publicly available materials. The remaining countries were represented by less than 20 people each. Among them, there were relatively high numbers of Russians, Serbians, Americans, and Germans. These numbers correspond with the results of our analysis based on the onomastic method.²⁰ Those numbers are consistent with research from Poland, where the six most common nationalities of international academics were Ukrainians, Slovaks, Germans, Belarussians, Russians and Czechs, i.e. the neighboring countries (Mucha and Luczaj 2014: 119).

The list of absentees is also telling. The lack of non-European countries among the top sending countries, other than the US, can be interpreted as a consequence of geographical barriers and the limited appeal of the Slovakian academic environment. Slovakia may offer some benefits or opportunities to European scholars, but it is not competitive enough to attract people from more distant countries. The only exceptions are single cases of people from developing countries (e.g. Bangladesh, Jordan, Kenya, Ethiopia), many of whom have studied here. This contrasts sharply with the ethnic composition of foreign-born academics in the US, a global hegemon, where academics from China, India, South Korea, and Germany are the most common foreign-born faculty members (Herget 2016). Another great absentee among top sending countries is Austria (n=10, or 2 percent of all foreigners).²¹ It seems that – despite geographical proximity – Slovakia is unable to attract scholars from the richer neighboring country. This shows the difference between academic mobility to global centers and peripheries. In the global production of

²⁰We identified the nationality of 246 foreigners (85 percent of the final sample). In case of the remaining 43 people (15 percent), there was a strong indication that the person is a foreigner, but it was impossible to identify the particular country of origin. For instance, the fact of being a French native-speaker is not sufficient to uncover one's nationality, as French is widely spoken not only in France but also in Belgium, Luxemburg, Switzerland, various African countries, or Canada.

²¹The onomastic search identified 14 Austrians employed in Slovakia, or 5.7 percent of the entire sample.

knowledge, Slovakia can source talent to academic centers but is unable to attract scholars from more developed countries.

Academic title

The academic title of the international faculty as identified by the onomastic method is also reported in Table 2. This information is not available in the register data. Almost half of the entire sample consisted of PhD holders (48 percent), and the rest was about equally divided between non-PhDs (27 percent) and Professors (25 percent). Professors (both Full Professors and Associate Professors, sk. Docents) were people who possessed a PhD and a habilitation, a kind of second PhD for mature researchers common in German-speaking countries and CEE which can be compared to American tenure. PhD holders were academics without habilitation. Similar proportions were discovered in the case of international academics in Poland, 47 percent of whom were academics with habilitation while 23 percent were PhDs without habilitation and 30 percent were non-PhDs (Mucha and Luczaj 2014: 128). This share of Professors, PhDs, and other employees tells us that Slovak HEIs, as well as their Polish counterparts, employ mainly experienced researchers while the need for entry-level academics (assistants without a PhD) is smaller, yet non-negligible. Here again we can point to hegemonic center – periphery relations.

Academic discipline

Our onomastic approach revealed that the share of the representatives of science technology, engineering and mathematics (STEM) and humanities and social sciences (HSS) were comparable, with a small bias towards the first group (32% versus 27%). However, if we sum up humanities/social sciences, language studies, and artistic fields, it turns out that they outnumber the STEM field (66 versus 32 percent) by far. A similar insight is offered by the register data where academic discipline is derived not individually, but by the faculty employing a foreign scholar. In this perspective, up to 58% of foreign faculty members are employed by HSS faculties while only 24% work at STEM faculties (Table 2). This is interesting, as STEM accounts for 75 percent of the international scholars employed in the US (Herget 2016) but not in Poland, where the proportions of academics involved in STEM and HSS are similar to those observed in

Slovakia (Mucha and Luczaj 2014: 123-4). To assess how Slovak data on the HSS-STEM division is related to the division between disciplines in the national scale, we aggregated academic disciplines chosen most often by students in Slovakia. This is an indirect measurement of the disproportion between HSS and STEM. STEM students accounted for 43 percent and HSS for 57 percent of all students enrolled in full-time study in 2015 (ŠÚ SR 2016: 160). As we know the overrepresentation of international faculty is stronger in HSS, it seems fair to state that Slovakia attracts humanities scholars and social scientists rather than academics from the STEM fields.

Academic discipline accounted for a non-obvious division within the sample. Whereas HSS scholars and language instructors provided detailed information on their background (in the form of CVs, personalized university websites), those involved in STEM did that slightly less often. The group most open about their foreign origins was composed of the academics in the field of arts (we were able to confirm the nationality of all 16 subjects). Information was the least available among medical doctors and other employees from the STEM group (18 percent of subjects with unknown nationalities).²²

Explaining the share of foreigners in HE in Slovakia

To answer the second set of our research questions, we now focus on the share of foreigners employed by the faculties of Slovak universities. We employ ordinary least squares (OLS) regression to analyze the connection between the share of foreigners employed by a faculty and the locality of the faculty, the share of personnel with dual affiliation (i.e. teachers employed at more than one university in Slovakia, indicating qualified staff shortages), the share of staff with temporary contracts (indicating economization when employing staff), the academic field of the faculty, the legal status of the university (private or state) and whether it is included in the top 1000 ranking of world universities (dichotomous variable). Dual affiliation (DA) is treated as a gauge of staff shortage. DA is a widespread phenomenon in CEE where academics decide to take more than one job to secure a satisfactory income. Usually, it is primarily an economically motivated decision. In Slovakia, as well as Poland and other countries in

²²The corresponding numbers for people employed within HSS and language fields were 13.8 and 14.7 percent respectively.

the region, it is legal to have more than one academic post. Less prestigious public HEIs, usually located in smaller regional cities, as well as private institutions, are eager to hire scholars also employed elsewhere because they need academics who would publish as their faculty members.²³ It is often the case that such employees commute to work from other cities. If they were to choose one affiliation, they would choose the more prestigious one (see: Bérubé 2003). In the official statistics, however, both affiliations are visible, and HEIs with an overrepresentation of employees holding dual affiliation are most likely the sign of a struggle with staff shortages. At the end of 2017, approximately 2.8% of teachers at HEIs in Slovakia were affiliated with more than one university. Teachers with an additional affiliation at a foreign university are not recognized as having double affiliation in the Slovak system.

In most cases, we were able to assign the independent variables we use in explaining the share of international scholars to faculties, rather than universities, which provided us with 120 university faculties across Slovakia representing individual cases in the multivariate analysis. Only two of our explanatory variables – legal status of the university (private or state) and inclusion in the ranking of world universities – are university-level variables.

We decided to run separate regression models explaining the share of faculty members from the neighboring Visegrad Group (V4) countries (the Czech Republic, Hungary and Poland) and the share of faculty members from poorer European countries.²⁴ The motivation to analyze the share of faculty members from V4 separately is twofold. First, many of these faculty members are commuters, and therefore cannot in a strict sense be considered as highly skilled migrants. Another reason is based on our finding from the onomastic search – a large share of faculty members from the V4 countries serves as a guarantor of a particular field of study at the university (31 percent or 16 persons out of

²³However, in the Slovak case, publication of HEI employees are registered centrally, and one publication cannot be dedicated to two universities in Slovakia simultaneously.

²⁴ We included faculty members from Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Moldavia, Montenegro, Romania, Russia, Serbia, and Ukraine (register data) as well as Georgia, Kazakhstan, Lithuania, Macedonia, Romania and Slovenia (onomastic study).

51 guarantors).²⁵ It is highly likely that the motivation to employ someone as a guarantor is different than employing a “standard” employee.

Contrary to the analysis of faculty members from the V4 countries, the analysis of the share of faculty members from poorer European countries is not “polluted” by the high share of academic commuters. In this case, we are able to focus on a question inspired by the Wallersteinian framing of our approach: What explains a semi-peripheral academy’s employment of faculty members from peripheral countries? Is the hiring of international staff connected to scientific excellence in this case? If so, it would mean that Slovakia as a semi-peripheral country participates at least partially in a global production of knowledge, and international staff is a visible sign of participation in a global knowledge production system.

Table 3. Share of foreign faculty at HE institutions in Slovakia, OLS regression

Table 3 presents the results of three ordinary least squares regression models. Standardized Beta coefficients are presented to indicate the strength and direction of the relationships between the dependent and each of the independent variables. The R² reported provides information on the amount of variability of the dependent variable explained by the independent variables. For example, Model 1 explains 26% of the variability of the share of foreign faculty at Slovak HEIs. Since we analyze the whole population, the p-values (Sig. in Table 3) are provided for informative purposes only, since in this case, every coefficient indicates a relevant relationship.

As already mentioned, we analyzed two independent variables at the university level. According to the results in Table 3, private universities employ more foreigners than state universities. This connection is strong in the first model but is present in the other two models as well. Being a top university²⁶, on the other hand, slightly decreases the number

²⁵7 guarantors came from Poland, 5 from Hungary and 4 from the Czech Republic.

²⁶I.e. being listed in the Times Higher Education list for 2017.

of international staff. The expected connection between academic performance and share of international faculty is not confirmed in any of the models, not even in Model 3 in Table 3. The internationally ranked universities in Slovakia employ fewer foreigners than the national average. This result also supports the expectation that hiring foreign faculty members is a strategy to tackle staff shortages. It can be expected that these are experienced more often by new and low-prestige universities. This finding is in line with the onomastic search revealing that as much as 17.6 percent of subjects (or 51 people) served as “guarantors” – senior academics legally required for each higher education program in Slovakia.

At the faculty level, the results further support the hypothesis that employment of foreign faculty members is best explained by shortages in qualified staff. The share of staff with a DA – a clear indication that the faculty attracts academics employed elsewhere to overcome the problem of qualified staff shortages – is the strongest predictor of the share of foreigners in Models 1 and 3 in Table 3. The effect is stronger for academics from poorer countries, who seem to serve as an easily accessible labor force. Another related factor is Bratislava’s location. Faculties based in the capital city, contrary to what some theorists of the urban spaces would hypothesize (see: Florida, 2002, Beaverstock 2012), employ less foreigners than other faculties (Models 1 and 2 in Table 3). This may indicate that the relative lack of qualified researchers and instructors is less severe in Bratislava. This independent variable, however, has a different connection to the share of faculty members from poorer countries (Model 3 in Table 3). Faculties based in Bratislava have a higher share of employees from these countries than other faculties in the country. This can perhaps be explained by the fact that foreigners living in Slovakia are concentrated in the affluent region around the capital city.

The connection between the share of foreigners and the share of staff with temporary contracts is weakly positive in Model 2 and negative in Models 1 and 3 in Table 3. This suggests that the employment of foreign faculty members, particularly faculty members from poorer European countries, is not an effort to economize.

The models in Table 3 further confirm what we already know from the onomastic search: compared to their STEM counterparts, foreigners are more often employed by faculties in the HSS fields. This is a consequence of the urgent need for foreign language instructors as suggested by the fact that this effect is notably weaker for academics from the Czech Republic, Hungary, and Poland as well as academics from poorer European countries (none of which are native speakers of a world language commonly taught in Slovakia).

Discussion and Conclusion

Our study focused on international academics in an academic semi-periphery. By using data from an exhaustive register of all university employees in Slovakia, we asked who these academics are and which factors explain their employment at Slovak universities.

The onomastic method was utilized in our study to provide more detailed insights into the population of foreign academics in Slovakia. The database created on the basis of foreign first and last names in the register allows further analyses of key characteristics of this category of migrants. This is an important empirical contribution of this paper, as the onomastic study of international scholars in Slovak academia sheds new light on academic work in a global periphery. Wallerstein's world-systems analysis as well as various analyses of academic imperialism cited in this paper help convey an understanding of the differences between peripheral and central countries regarding the numbers of incoming international scholars. As predicted by the theory, Slovakia cannot fully participate in an international exchange of people and ideas as it is largely able to attract only scholars from neighboring countries (i.e. other semi-peripheries) or peripheral countries of the former Eastern Bloc. Moreover, academic excellence does not seem to be the main driver of these moves. Indirectly, we can infer that the products of peripheral academics employed in a peripheral country are not likely to create "leading products" (Wallerstein 2012: 3) in the realm of ideas, theories, or more tangible patents.

What is more, scholars from neighboring countries often do not have to live in Slovakia permanently but rather commute to work from nearby academic centers. It is worth noting that Bratislava is only 66 kilometers from Vienna (Austria), 130 from Brno (the Czech Republic), or 200 from Budapest (Hungary). Žilina, an academic center in the

north of the country, is 115 km away from Ostrava (the Czech Republic) or 170 km from Katowice (Poland). 160 kilometers separates Ružomberok, a regional university center, and Kraków, one of Poland's major academic centers, not to mention smaller cities with HEI institutions on both sides of the Slovak-Polish, Slovak-Czech, Slovak-Austrian or Slovak-Hungarian borders. The geographical distance from the Ukraine is comparable, but the EU border waiting time is hard to predict, making these journeys more complicated, yet still relatively easy.

We also observed a bias towards HSS scholars as opposed to those involved in STEM (67 versus 33 percent), despite the fact that the disparity between students in HSS and the STEM programs is significantly smaller (57 versus 43 percent). This supports our hypothesis that foreign-born faculty are, to a large extent, language instructors and academics focusing on the culture of their homeland. Based on publicly available data we could also identify the academic title and gender of the migrating scholars.

Our multivariate analysis supports the hypothesis that foreign-born academics in the Slovak system are – to a large extent – a remedy for shortages of qualified staff. Contrary to the Western context, they are more likely to be employed in smaller academic centers by less prestigious universities. These often newly established universities are more likely to struggle with shortages in qualified staff. A high share of international academics at a university is therefore not a sign of scientific excellence, but rather the opposite. If this is the case in all countries of the academic semi-periphery, then this question is worth further exploration. Further studies should use qualitative methodologies to get insights into these central problems. In this respect, we may refer to a study conducted in Poland (Mucha and Luczaj 2017a; Mucha and Luczaj 2017b). The description of working conditions in Poland (e.g. low salaries, insufficient infrastructure) and problems related to academic outcome (e.g. the scarcity of international publications, the lack of cutting-edge research, many publications in the local language, and low expectations regarding one's own work) make Slovak and Polish cultural contexts comparable (see: Mucha and Luczaj 2017b: 155). The Polish study disclosed four major types of international scholars in Poland (Mucha and Luczaj 2017a: 141) – “economic migrants and status seekers”,

“enthusiasts” (i.e. people intrinsically in Poland), “cosmopolitans”, and “commuters”. Our analysis of the Slovak academic system indicates that the first and last category is also present in Slovakia, whereas we cannot be sure about cosmopolitans and “enthusiasts” (sometimes referred to as “individualists” or “global scientists”, see: Siegert 2011: 980). The contrast with Western studies on highly-skilled migrants allows us to believe, in turn, that some types are just missing or negligible in the case of academic migrations to CEE. Those are for instance “children of immigrant families” and “former employees of subsidiaries of local companies” and – to the lesser extent – “former foreign students” and “high-tech braceros” (Alarcon 1999).

The potential policy implication of this research is that Slovakia would benefit from a system fostering true internationalization. The inflow of foreign-born scholars that we observed is mainly the effect of a struggle for teachers required to fulfil legal obligations and willing to take teaching loads. It is not, however, a struggle for academic excellence that might make Slovakia and other CEE countries real players in a global system of knowledge production. The second implication is that programs targeted at young scholars are in especially high demand. This could help bring the younger generation’s attention to Slovakia as an academic destination during their PhD studies or shortly thereafter. Without this step, foreign-born staff will be largely limited to commuting professors and academic instructors teaching their own language and culture.

Several countries have implemented efficient programs in order to support academic migrants. We can single out the Canada Research Chair Program (CRCP), American Presidential Young Investigator Award (CAREER) and Presidential Early Career Awards for Scientists and Engineers (PECASE), or Australian Federation Fellowship Program as good examples (see e.g. Zha 2013). The incentives vary from economic benefits to certain legal solutions such as granting citizenship to foreign-born academics (Bokek-Cohen and Davidovich 2010: 53). Those systematic actions can help attract academics and contribute to a sustainable research system in a peripheral country – not only as guest researchers or instructors. Without such policies, it is highly unlikely that top researchers

will be attracted to Slovakia and other CEE countries, beyond temporary visits or guest lectures.

This study has limitations that have to be discussed. The first one is the focus of the study. While we answered the question of why Slovak HEIs might be interested in attracting international scholars, another one – regarding motivations of individuals to work in semi-peripheral countries – remains unanswered. The answer would require an in-depth qualitative study. Another limitation is the credibility of the public data we relied upon. Although there is no better source of data, we must be aware that some inaccuracies are likely due to the circumstances described above. The third limitation is related to the scarce literature on foreign-born academics in CEE. While we demonstrated what analogies can be drawn between Slovakia and Poland, quantitative studies of foreign-born academics employed in other CEE countries are lacking. Due to enormous differences, comparisons with the US are not always possible and would require detailed explanations that go beyond the scope of this paper. These three limitations set the stage for the next step in the process of examining international faculty in the region, by showing the necessity of qualitative study regarding their life trajectories, expectations, motivations, and the perceptions of local HEIs and academic systems.

Acknowledgements

The work of Kamil Luczaj was supported by Polish Ministry of Science and Higher Education Grant 0142/DLG/2017/10. The work of Miloslav Bahna was supported by Slovak Research and Development Agency (SRDA) Grant APVV-14-0527. The feedback and comments provided by the two anonymous referees are greatly appreciated.

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Table 1. Foreign researchers in the higher education systems (2014)

Country	Researchers in HE	Foreign Researchers in HE	Percentage
Cyprus	1527	397	26.00%
Portugal	51924	5293	10.19%
Malta	849	81	9.54%
Estonia	4811	395	8.21%
Czechia (2011)	20732	1136	5.48%
Spain	119290	6243	5.23%
Italy	79220	4119	5.20%
Serbia	10769	428	3.97%
Slovakia	17668	535	3.03%
Slovenia (2013)	4310	124	2.88%
Lithuania (2012)	13939	350	2.51%
Hungary	15925	346	2.17%
Greece (2013)	38724	837	2.16%
Poland	70771	1158	1.64%
Bulgaria	8505	39	0.46%
Croatia	6966	12	0.17%
Romania (2011)	15086	22	0.15%

Source: Own compilation based on Eurostat – R&D statistics; rd_p_perscitz data (last update: 12.12.2016).
Exceptions to the reference year: CZ, GR, LT, SI, RO.

Table 2. Foreign faculty members at Slovak HE institutions in 2017

	Register data		Onomastic study	
	N	%	N	%
Females	184	33.8 %	81	28.0%
<i>Nationality</i>				
Czech	191	35.0 %	15	5.2%
Hungarian	64	11.7 %	13	4.5%
Polish	51	9.4 %	37	12.8%
<i>Visegrad countries total</i>	306	56.1 %	65	22.5%
Ukraine	32	5.9 %	16	5.5%
Russia	14	2.6 %	11	3.8%
Serbia	14	2.6 %	3	1.0%
<i>Poorer European countries total</i>	78	14.3 %	87	30.1%
Western countries ²⁷	89	16.3 %	84	29.1%
Unknown			43	14.9%
<i>Academic title</i>				
Professors			73	25.3 %
PhD holders			137	47.4 %
Non-PhDs			79	27.3 %
<i>Academic discipline</i>				
HSS	317	58.2 %	79	27.3 %
STEM	130	23.9 %	93	32.2 %
Language studies	4	0.7 %	95	32.9 %
Artistic fields	37	6.8 %	16	5.5 %
Unidentified / mixed faculties	57	10.5 %	6	2.1 %
Total	545		289	

Source: Slovak Register of Higher Education Institutions Employees.

²⁷All western Europe and USA, Israel, Canada New Zealand, Korea.

Table 3. Share of foreign-born faculty at HE institutions in Slovakia, OLS regression

	Model 1 All foreigners		Model 2 CZ HU PL		Model 3 From poorer countries	
	Beta	Sig.	Beta	Sig.	Beta	Sig.
<i>Faculty level</i>						
Bratislava	-0.172	0.079	-0.185	0.080	0.059	0.579
Share of staff with double affiliation	0.191	0.080	0.133	0.257	0.214	0.075
Share of staff with temporary contracts	-0.039	0.658	0.022	0.817	-0.155	0.113
STEM	-0.116	0.378	-0.097	0.492	-0.078	0.588
HSS	0.118	0.333	0.078	0.552	0.042	0.752
Number of staff	-0.024	0.801	-0.039	0.707	0.072	0.499
<i>University level</i>						
Private	0.175	0.094	0.023	0.837	0.068	0.552
TOP_1000	-0.077	0.439	-0.081	0.454	-0.065	0.556
N	120		120		120	
R ²	0.258		0.138		0.104	

Note: For the sake of simplicity, the presented results ignore the two level (university and faculty) hierarchical character of the data. Regression models using a hierarchical approach were calculated and provided similar results. These models are available upon request from the authors. There is no consensus in the literature if p values should be reported when analyzing the whole population rather than a sample. We decided to include p values (Sig.) in our results.

Source: Slovak Register of Higher Education Institutions Employees.