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Beerkens, M.; Panova, A.; Vasari, P.; Calikoglu, A.; Jones, G.; Kim, Y.

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Chapter 5

International Staff and Diversity in Missions



Maarja Beerkens , Anna Panova , and Pekka Vasari

Abstract Contemporary universities have many different tasks. Next to the traditional research and teaching mission, universities are also expected to engage in other activities that create social value. A balance between these different tasks varies across higher education systems, institutions, and individuals. This chapter examines the position of international staff on this landscape of different missions. International mobility is usually associated with research excellence. In this chapter we empirically examine the difference between local and international staff to test this image about international staff. The analysis shows that international staff is indeed significantly more oriented towards research and less on teaching, both in their intrinsic interest and time investment. Difference with respect to ‘third mission’ activities is small. International staff is equally or even more active in activities like patenting or creating spin-off companies. On the other hand, they are underrepresented in activities that are embedded in a local context, such as serving on expert committees or undertaking consultancy work. This triggers a question about an optimal engagement of international staff in the diversity of missions.

Keywords Internationalization · Academic staff · University missions · Diversity · Mobility

M. Beerkens (✉)
Leiden University, Leiden, The Netherlands
e-mail: m.beerkens@fgga.leidenuniv.nl

A. Panova
Higher School of Economics (HSE), Moscow, Russia

P. Vasari
University of Lapland, Lapland, Finland
e-mail: pekka.vasari@ulapland.fi

Introduction

Globalization is one of the key institutional characteristics of modern higher education and research systems. It has considerably intensified the mobility of people and ideas. There were over 5.5 million international students in 2018, compared to two million in 2000 (UNESCO, 2020). Already in 2003, a substantial number of doctoral degree holders in Europe, North America, and Australia were foreign-born (Auriol, 2007); the share of foreign-born researchers exceeds 25% in several leading economies (Schiller & Cordes, 2016), and international research collaboration is growing rapidly (Graf & Kalthaus, 2018).

It is widely recognized that international staff contribute to research excellence and reputation of universities (Anderson, 2020). Altbach & Yudkevich (2017) argued that international staff are expected to “bring new insights to research, teaching, and perhaps to the ethos of university”. Furthermore, the ability to attract international talent is seen as vital for economic growth (Rovito et al., 2021). On the other hand, there are also concerns about increasing internationalization. As in other sectors, there may be tension between globalization and local interests. Overreliance on foreign PhD students may make a country vulnerable in terms of sustainable research potential, especially considering political uncertainties that may hinder mobility in the future (Baker, 2019). A drive for international excellence can make universities and academics sacrifice locally and regionally relevant knowledge creation (Leung, 2007). There may be a lack of integration of international staff, and tension between local and international staff. Furthermore, increasing numbers of international students have questioned whether the benefits of internationalization exceed the costs of providing state-subsidized education to international students (Bolhaar et al., 2019).

Universities operate in a complex institutional environment. International mobility is often presented as an inherent feature of universities. It is an expression of a universal, borderless academic culture. However, modern universities have institutional roots not only in a medieval tradition of universal knowledge, but also in the nineteenth century reforms to build nation states, strengthen national culture, and contribute to the development of vital professions and elites (Amaral & Magalhães, 2002). International and local interests are strongly interwoven, sometimes diverging, and sometimes strengthening each other. In times of economic transformation, for example, a university is often seen as an engine of new growth in otherwise declining regions. Local, regional interests and an international orientation of a competitive higher education institution can easily strengthen each other.

Internationalization, on the other hand, can also alienate a university from its local context. International staff mobility is usually discussed in the context of global competition and research excellence, and much more infrequently in the context of local benefits and the diversity of missions that universities are expected to fulfill. As Teichler (2008) argued, the most recent generation of debates about institutional diversity are strongly shaped by the desire to have world-class universities. Research excellence is a key factor in the ‘world-class’ narrative. It has been argued

that global competition is homogenizing higher education institutions. The ideal of a world class university is spreading the norm of what a good university is, and how quality should be defined (Marginson, 2006; Marginson & van der Wende, 2007). The narrative of global competition for talent and ‘world-class universities’ also guides government policies, including those that address international staff mobility. Yet the view does not do justice to the full diversity of higher education institutions and of tasks that academics are expected to carry out.

The diversity of missions leads us to the following research question: Do local and international staff serve different missions within higher education institutions? We will analyze whether international staff represents primarily the international research-centered academic space, as often projected in the ‘international talent’ narrative of knowledge economies and policy actions. Is international staff significantly different from their local colleagues in terms of their societal engagement, partnerships, and teaching responsibilities, i.e., in tasks that may be more locally oriented?

Researchers and practitioners have long been interested in the topic of academic mobility as well as mission diversity, yet very few studies bring the two themes together and discuss the topic comparatively. Furthermore, there is a lack of comparable statistics on international faculty by country. Often there is no reliable data about a share of international academic staff, or the definition what constitutes international staff varies substantially. Furthermore, different migration and naturalization policies may show the level of internationalization very differently, depending on the chosen definition. The international APIKS survey offers a unique opportunity to compare international faculty in their tasks and preferences.

We start the chapter by clarifying the notion of mission diversity and how it expresses itself in different higher education systems. Secondly, we will examine policies that encourage or facilitate international mobility and discuss their link to mission diversity. Finally, focusing on eight countries that differ in their size, level of internationalization, and system characteristics we analyze empirically whether international staff and local staff differ significantly in their interests, time-investment, and nature of activities.

Mission Diversity: Systems, Institutions, and Individuals

Universities are complex systems of multiple missions. The Humboldtian university reform established the notion of research and teaching as core missions of a university, with the conviction that the tasks of creating knowledge and transmitting knowledge could be best combined within one institution. More recently, the ‘third mission’ or ‘knowledge valorization’ has become of equal value. It represents all other activities that contribute to economy and society. The third pillar combines activities such as knowledge commercialization, offering expertise for policy making, contribution to cultural and social life, popularizing scientific knowledge, and many other tasks of social and economic value (Laredo, 2007). Relative importance

of the three missions — research, teaching, and knowledge valorization — can vary considerably across higher education systems, institutions, and individuals.

Higher education systems have approached the division of these various tasks differently (Schimank & Winnes, 2000). In the Humboldtian tradition, universities are a locus of both teaching and research activities, and the interaction between the two is seen as a strength of the system. Napoleonic tradition, on the other hand, divides the two functions between organizational types: universities focus on teaching, and research institutions focus on research. While the separation has become less pronounced over time, non-university research institutes as a strong locus of research excellence are still found in Germany and France, for example.

A relative role of research and teaching missions can vary also across higher education institutions. Binary higher education systems make a formal distinction between types of higher education institutions. A growing need for highly educated professionals gave rise to polytechnics and other types of professionally and vocationally oriented institutions, where education was the primary purpose. The status of research in these professionally oriented institutions differs considerably across countries, from virtually no research activity to a culture of high-quality applied research (de Weert & Beerkens, 2009). Several binary systems were unified during the 1990s, which has not necessarily changed their relative share of teaching and research activities.

Diversity in mission also characterizes unitary systems. We distinguish between vertical and horizontal diversity (Teichler, 2007; van Vught, 2008). Vertical diversity, or stratification, refers to differences between institutions in terms of reputation and prestige, while horizontal diversity refers to differences in mission and profile that should be seen as equal in value. It is much debated whether growth in higher education leads to more horizontal diversity across institutions or, on the contrary, contributes to homogenization of profiles and vertical diversity. Research intensity is a critical factor. It appears that research/non-research distinction always has positional implications (Teichler, 2008), even in the context of horizontal diversity.

Division of tasks can vary not only at a sectoral and institutional level but also at an individual level. Increasing proportions of competitive, project-based grants has led to a situation in which research and teaching tasks are differently divided across staff. A ‘Matthew effect’ has been shown to solidify the task division: academics who receive research funding are more likely to receive further funding in the future, due to the ‘halo effect’ of grants and increased research productivity due to additional research time. In some countries, the problem expresses itself in teaching-focused adjunct staff who substitute research-focused core staff in their teaching obligations, thereby creating a divide between teaching and research staff.

Whether different missions are complimentary or competing is not a simple question. The relationship between teaching and research quality has been extensively studied with inconclusive results (Marsh & Hattie, 2002). Research productivity appears to be a major factor in academics’ satisfaction with their work (Albert et al., 2018), and teaching load has a noticeable negative effect on research productivity (Hesli & Lee, 2011). Research productivity, however, is not only an individual phenomenon but it also depends on research climate and research productivity of

surrounding colleagues (Dundar & Lewis, 1998); the research-intensive environment has a spill-over effect. Furthermore, the relationship between teaching and research is not only quantitative but also qualitative: the nature of research activities can affect the nature of teaching activities (Mägi & Beerkens, 2016).

The relationship between research excellence and third mission activities is also complicated. Schneijderberg et al. (2021) found no relationship between so called 'excellence institutions' and their research commercialization activities. D'Este et al. (2013) concluded that the extent of university-industry collaboration is much more influenced by an institutional and departmental context than on academic excellence.

Mission Diversity and International Staff

The complexity of the relationships between different missions raises important discussions about an ideal model, how to integrate or segregate the missions at an individual, institutional, and system level. International mobility and its role in mission diversity adds another interesting dimension to this discussion.

A contribution of international staff has been studied primarily from the point of view of research excellence. It has been shown that international mobility increases research productivity and contributes to high-impact, co-authored publications (Horta, 2013; Jonkers & Cruz-Castro, 2013). Furthermore, international mobility is particularly influential at the beginning of the career when it contributes to international visibility and networking, as well as international research collaboration and productivity. International mobility in the early career is a long-term career strategy towards an academic, research-oriented career (Khattab & Fenton, 2016). Furthermore, international staff in non-English-speaking regions is often the trigger for developing English-language programs, which contributes to further internalization and visibility of these universities (Altbach & Yudkevich, 2017).

There is less evidence about the effect of international mobility on third mission activities. Bauder (2020) showed a negative relationship as the third mission activities are often based on personal ties that take time to develop, and thereby put international staff in a disadvantaged position. While there is ample evidence on the effect of international mobility on research quality and productivity (Netz et al., 2020), its effect on teaching is scarce. In Europe, the Erasmus program facilitates short-term mobility of teachers, and evaluations of the program show a positive effect of international mobility on teachers' awareness about different teaching methods, on developing intercultural skills, and on establishing research contacts (Enders & Teichler, 2005). However, there can also be other reasons than research-related motives for international mobility. Lee and Kuzhabekova (2018) studied international staff in Kazakhstan and concluded that next to research motivation, the opportunity to build new study programs attracted international staff.

In sum, the link between international staff and mission diversity has multiple facets. Research activities are the most visible part of the task portfolio of

international staff. This might be explained by a self-selection element, as research opportunities seem to be the primary reason for staff to move abroad which may encourage a stronger research-interest of the group compared to non-mobile staff. On the other hand, international mobility of academic staff is the result of various push and pull factors. The visible layer of ‘top researchers’ may create a biased view of the profile and interests of international staff in general. It is also possible that international staff is in a disadvantaged position for many third mission activities, or even for teaching activities that can be more locally embedded and require good local knowledge and contacts. Furthermore, governmental, and institutional policies may facilitate greater mobility around research excellence, thereby attracting mobile staff who are unproportionally more research-focused relative to other missions of universities. In the next section we will explore further cross-country differences in the level of international mobility and the focus of policies.

Data and Methods

The empirical analysis in this paper is based on the data from the academic staff survey ‘Academic Profession in a Knowledge Society’ (APIKS) (see *Appendix in the volume for details about the survey*). The survey explores academic staff in 34 countries and in most countries, was conducted between the years 2018 and 2020. The survey asks about work conditions, tasks, preferences, and many other aspects of their work. In this study we make use of the following survey questions:

- *How many hours do you spend in a typical week on each of the following activities? [Teaching, Research, Externally oriented activities, Administration and services within academia, Other]*
- *Regarding your own preferences, do your interests lie primarily in teaching or research? [Primarily in teaching, Both but leaning towards teaching, Both but leaning towards research, Primarily in research]*
- *In the past three years, have you been involved in any of the following activities with ‘external’ partners? [Patenting and licensing, Public lectures and speeches, etc.]*

While 34 countries participate in the survey, we include only eight countries in this study. In other countries, the number of international staff in the dataset was too low (under 50) or not made available due to concerns about sufficient protection of anonymity. The eight countries include: Canada, Estonia, Finland, Mexico, Malaysia, Portugal, Sweden, and Switzerland. As can be seen in Table 5.1, the number of international respondents is significantly lower than the number of local respondents. This is explained by the fact that international staff is a minority in most institutions, but also likely due to a lower response rate among international staff.

Identifying ‘international staff’ is not a simple task. Having followed prior education and PhD training abroad, being born in another country, or holding a citizenship from another country are all a form of being international. Each of these

Table 5.1 Sample size

Country	Canada	Estonia	Finland	Malaysia	Mexico	Portugal	Sweden	Switzerland
Local staff	2630	774	1210	4227	4534	2058	2009	868
International staff	275	59	153	141	134	52	332	158
TOTAL	2966	861	1377	4368	4668	3199	2341	1411

Note: The total includes respondents that reported neither local nor international citizenship

definitions might label some people ‘international’ who are not perceived so by their colleagues or exclude people who are clearly perceived as international. Due to data limitations, we use *citizenship* as an identifier for international staff. Academic staff holding a citizenship of the country where an institution is placed is thus seen as ‘local’ and a staff member with another citizenship is seen as ‘international’. The measure is not without weaknesses. Most importantly, countries differ significantly in their rates of naturalization. An international staff member in Canada may be more likely to take Canadian citizenship after staying for a number of years in the country than, for example, an international staff member in Estonia or Switzerland where both naturalization conditions but also cultural context are different. Therefore, a measure like ‘not born’ in Canada might give a better picture about the share of international faculty than citizenship (Barbaric & Jones, 2016).

The Level of Internationalization in the Selected Countries

In this section we will provide some background information on the eight countries that we have used in our empirical analysis. The sample includes both large and small countries, prominent and less prominent countries in terms of international research visibility, and countries with high and low share of international staff. The data provides a picture of the level of internationalization in each of the country in the sample. However, it should be noted that reliable and comparable statistics on international staff are difficult to find. The data is often not collected, but also countries and studies use different definitions for ‘international staff’ that makes reliable comparisons difficult.

In terms of academic mobility, Canada and Switzerland are clearly the most internationalized countries in our sample (Table 5.2). In Switzerland, the share of international staff exceeds 40% (ETER, 2019), and Sautier (2021) labeled it as having one of the most internationalized academic markets in the world. An OECD (2017) analysis of scientific publications showed that Switzerland had the highest percentage of publications authored by people who were previously affiliated with an institution abroad. Furthermore, Swiss universities have a goal of hiring half of their faculty through international recruitment (Altbach & Yudkevich, 2017). The high level of internationalization can also be seen in the student body. More than 17% of students in Switzerland are international students (Table 5.2). Canada shows

Table 5.2 Cross-country differences in the level of internationalization

	International staff estimate	International students (%)	Students studying abroad (%)
Switzerland	40–50% (2016)	17.8	5.3
Canada	40% (2014)	16.2	2.9
Estonia	8% (2014)	11.1	8.0
Portugal	5% (2016)	9.7	5.6
Finland	~10–20% (2016)	8.1	3.9
Sweden	~10–20% (2016)	7.2	3.3
Malaysia	<15% (2019)	6.7	4.8
Mexico	5% (2007)	0.7	0.7

Source: International student mobility data is based on Unesco ([n.d.](#)) data

a similar picture. More than 40% of academics in Canada are born in another country, based on data from 2014 (Barbaric & Jones, [2016](#)). Also, Canada has one of the most international student bodies, with more than 16% of students being international students.

Other countries have a significantly lower rate of international staff. In Finland and Sweden, the ratio of international academic staff was between 10–20% in 2016. Malaysia's goal is to have at least 15% international faculty in public research universities by 2020 (Da Wan & Abdullah, [2021](#)); however, in 2019 the share was about 7% (Ghasemy et al., [2021](#)). In Estonia, international staff has been a strategic goal for the government and universities, and the percentage of foreign academics reached 8% in 2014 (Rose & Leišyte, [2016](#)). In Mexico, about 5% of academic staff were foreign, based on data from 2007 (Gacel-Avila, [2018](#)), and in Portugal the percentage was also about 5% based on data from 2016.

Internationalization of academic staff and internationalization of the student body seem to mirror each other. Internationalized higher education systems seem to be an attractive destination for mobile students. Canada and Switzerland are thus attracting the largest share of mobile students, Mexico the least, and other countries somewhere in between. On the other hand, an internationalized staff and student body does not seem to affect the willingness of local students to go abroad. Canada is among the lowest in terms of mobility rate for outgoing students, but so is Mexico, for example.

Many countries have adopted policies to promote internationalization (De Wit et al., [2019](#)). Malaysia, for example, has taken great efforts to transform itself from a dependent country into a partner country on the global academic market, particularly in terms of students but also staff (Da Wan & Abdullah, [2021](#)). Studies on internationalisation in the sample countries tend to focus more on teaching and students than on mobile staff (Åkerlund, [2020](#); Rose & Leišyte, [2016](#); Didou Aupetit, [2016](#); Wan & Abdullah, [2021](#); Sautier, [2021](#); Välimaa & Weimer, [2014](#); Stephenson, [2018](#); Veiga et al., [2007](#); Gacel-Avila, [2018](#)). There seem to be two main policy instruments to attract and accommodate international staff. Special visa regulations and work permits are instruments that countries use, as is the case in

Estonia, for example (Rose & Leišyte, 2016). International staff may also require more flexible contracts and exceptions to a restrictive civil servant model still in place in some countries (Siekkinen et al., 2016). Another powerful instrument is international research grant schemes that either directly or indirectly attract highly competitive international staff (Beerkens, 2019). The ability to attract international staff is thus dependent on various factors, both general working conditions in the country as well special arrangements for international staff.

Are International Staff Different?

In our empirical analysis, we will examine a difference between local and international staff on three aspects: difference in their interests in different missions, time division between different tasks, and engagement in various valorization activities.

Interest in Research Vs Teaching

The data confirms the view that international staff is intrinsically more research-focused (Table 5.3). Among local staff, 61% reported that their interest lies primarily in research, or both in teaching and research but leaning towards research. Only a minority — 43% of local staff — is interested primarily in teaching or leaning towards teaching. Among international staff, the research interest is even more pronounced: 79% of international staff is more interested in research than teaching, which is a 18-percentage point difference between local and international staff.

The difference is clear in all countries, but the magnitude of the difference varies. Countries with the biggest difference between the preferences of local and international staff are Estonia and Finland, where the difference approaches 30 percentage points. The smallest difference is in Canada and Portugal at just 12.6% difference. Interestingly, the two countries are opposites in many other ways. In Portugal, the smallest share of local staff report more interest in research (43%), while Canada — with 64% — has the second largest share in local staff, after Sweden. Furthermore, Portugal and Canada are at opposite ends of the spectrum in terms of the overall share of international staff of total staff. It is thus not easy to suggest what might

Table 5.3 Interest in research or leaning towards research, local and international staff compared (% of staff)

	Can	Est	Fin	Mal	Mex	Por	Swe	Swit	Average
Local staff	64	54.7	53	81.6	62.3	48.2	65.8	55.5	61.0
International staff	76.6	84.4	82.3	84.6	89.6	60.8	84.3	71.4	78.9
Difference	12.6	29.7	29.3	3.0	27.3	12.6	18.5	15.9	17.9

explain differences between preferences of local and international staff across different countries.

Time Division Between Different Tasks

How staff members divide their time between different tasks offers further insights about differences between local and international staff (Table 5.4). It is very clear that international staff invests more time into research, on average more than 4 h per week. Only in Canada and Malaysia is the difference marginal, and even negative. To some extent, cross-country variance reflects the difference in interests reported above. Both in Canada and Portugal, local and international staff do not diverge much, while in Finland, international staff spends on average over 1.5 days (13.9 h) each week more on research. Estonia is an exceptional case where differences in interest and in time investment do not coincide.

Most of the additional time-budget of international staff comes indeed from reduced time teaching (~3.2 h per week), but not entirely. International staff tends to spend slightly less time on various valorization activities (~0.6 h per week) and administrative tasks (~0.4 h per week). Differences in administrative tasks are very small and not consistently negative. Sweden and Malaysia are examples of countries where international staff has noticeably lower administrative burden, 2.2 or 2.3 h fewer per week, respectively. These are also countries where time spent on administration seems to be the highest. In other countries, differences between local and international staff are small and sometimes positive, sometimes negative.

Differences in time spent on valorization are more consistent across countries and show that internal staff spends between 0.5 and 1.2 h per week less on various valorization activities than local staff. Exceptions are Switzerland, where there is virtually no difference between international and local staff, and Malaysia, where international staff spend 0.4 h more on valorization activities. As valorization activities can vary in nature, the next section will have a closer look into different types of valorization activities.

Different Types of Valorization Activities

Table 5.5 lists different types of valorization activities based on their relative prominence among international staff. International staff is, on average, more active than local staff in two activities: joint research and publications with the industry, and patenting and licensing. On average, 6.2% more international staff are engaged in joint research and publications, but the average is influenced by two countries in particular: Finland and Estonia. In other countries, the difference is marginal or even slightly positive towards local staff. In terms of patenting and licensing, the average difference is low, only 0.7%. Since participation in such activities is in

Table 5.4 Time spent on teaching, research, and third mission activities, difference between local and international staff (mean values in hours)

		Canada	Estonia	Finland	Malaysia	Mexico	Portugal	Sweden	Switzerland	Ave Diff
Teaching	Local	20	17.5	18.6	18.2	18.1	16.5	21.3	14.9	
	Foreign	20.3	12.7	8.2	19.7	14.9	14.2	15.9	13.6	
	Δ	0.3	-4.8	-10.4	1.5	-3.2	-2.3	-5.4	-1.3	-3.2
Research	Local	13.5	14.4	11.9	11.5	13.2	10.9	12.5	16.8	
	Foreign	12.9	15.4	25.8	15.9	19.9	12	18.6	18.3	
	Δ	-0.6	1	13.9	4.4	6.7	1.1	6.1	1.5	4.3
Valorisation	Local	3.3	4.4	2.4	4.6	3.7	3.5	3.7	7.3	
	Foreign	2.8	3.7	1.5	5	2.5	2.5	2.7	7.4	
	Δ	-0.5	-0.7	-0.9	0.4	-1.2	-1	-1	0.1	-0.6
Administration	Local	8.4	7.4	4	8.8	5.2	6.2	9.2	6.3	
	Foreign	8.6	8	3.1	6.5	5.9	6.7	7	6.5	
	Δ	0.2	0.6	-0.9	-2.3	0.7	0.5	-2.2	0.2	-0.4

Table 5.5 Contribution of international staff to various valorisation activities, compared to local staff in parentheses (% of staff involved in each activity)

	Canada	Estonia	Finland	Malaysia	Portugal	Sweden	Switzerland	Average difference
Joint research and publications	45.8% (42.2%)	62.7% (35.5%)	53.6% (37.9%)	71.3% (75.1%)	64.4% (65.9%)	49.1% (49.8%)	35.7% (33.1%)	6.2%
Patenting and licensing	4.7% (4.4%)	11.8% (4.2%)	6.0% (5.9%)	11.0% (12.8%)	4.4% (4.9%)	6.9% (4.9%)	2.5% (5.6%)	0.7%
Creation of a spin-off/ start-up company	3.6% (3.8%)	17.6% (4.5%)	6.6% (10.0%)	3.7% (3.1%)	2.2% (4.5%)	3.9% (6.5%)	1.9% (6.7%)	0.1%
Evaluation (of policies, etc.)	15.3% (19.8%)	15.7% (14.0%)	9.9% (17.2%)	14.0% (15.5%)	22.2% (16.2%)	12.9% (21.7%)	20.4% (17.5%)	-1.6
Public lectures and speeches	52.7% (53.9%)	60.8% (63.2%)	34.4% (40.9%)	34.6% (38.9%)	75.6% (66.4%)	32.9% (42.5%)	43.3% (41.6%)	-1.8
Supervision of student internship/ placements	22.5% (26.7%)	39.2% (29.2%)	37.1% (39.9%)	62.5% (65.9%)	40.0% (52.5%)	28.1% (27.2%)	23.6% (30.0%)	-2.6%
Publications for broader audience	29.8% (31.4%)	49.0% (47.8%)	43.0% (52.0%)	44.9% (44.3%)	22.2% (28.7%)	29.0% (41.1%)	31.2% (32.3%)	-4.1
Consultancy	23.3% (28.6%)	35.3% (42.9%)	14.6% (30.6%)	47.1% (49.9%)	37.8% (36.8%)	15.6% (27.0%)	26.1% (28.7%)	-6.4
Participation in external boards and committees	31.6% (35.4%)	21.6% (42.2%)	18.8% (33.8%)	41.2% (41.6%)	20.0% (24.3%)	23.1% (24.4%)	13.4% (19.9%)	-7.5
Volunteer-based professional work	26.9% (33.4%)	21.6% (41.4%)	12.6% (20.1%)	46.3% (53.6%)	20.0% (23.8%)	8.4% (19.9%)	15.9% (28.0%)	-9.8
Average difference across all activities (absolute)	-2.3%	1.0%	-5.2%	-2.4%	-1.5%	-5.5%	-2.9%	

general very low (less than 10%), the 0.7-percentage point difference could be substantial. Nevertheless, the difference in favor of international staff in this example is not shared by all countries. In creating spin-off and start-up companies, the ratio of international to local staff is more or less similar, with Estonia as an outlier with very active international staff.

Towards the end of the list (Table 5.5) we can find activities such as participation in external boards and committees, volunteer-based professional work, and consultancy where international staff is clearly underrepresented. This is the case in all countries, and the difference for both activities reach above 6 percentage points. In

the middle of the continuum, we find activities like public lectures and speeches, policy evaluations, publications for broader audience, and supervising student internships and placement. In all these activities, international staff is somewhat underrepresented (between 4.1 and 1.6 percentage points), but consistently over all countries with only incidental exceptions.

We can see that countries differ quite a lot in terms of how similar or different international and local staff are in terms of valorization activities (see last row in Table 5.5), the biggest differences seen in Estonia and Finland, at 11.1% and 6.8%, respectively. Also, in terms of interest in research and time investment in research, these countries show a sharp difference between local and international staff. On the other hand, there are countries where differences are quite small in all respects. Canada is one such example. On average, the difference between various staff members is small, but particularly in terms of more societally oriented activities (volunteering, membership in board) there is still a noticeable underrepresentation of international staff. On the other hand, difference in research preference is smaller than in other countries, and time investment in teaching and research tasks shows no difference. Also, in Switzerland, there is no difference between time investment, and difference in valorization is moderate but in an expected pattern similar to Canada. A third type of country is that in which differences between valorization activities is moderate, but in which there is a significant orientation of international staff towards research. Sweden is an example of one such country, and Malaysia also shows signs of such a pattern.

This study is not equipped to explain these cross-country differences. Four contributing factors can be mentioned. First, disciplinary mix of international staff can vary across countries. It may be the case that international staff in Estonia and Finland, for example, are relatively more concentrated in hard sciences. As a result, they may demonstrate higher commitment to research as well as to certain types of valorization activities (e.g., joint research, valorization) that is typical to these disciplines. Secondly, dominant language in a country is likely to contribute to how easy or difficult it is for the international staff to be integrated in various tasks. International staff in Canada is probably more easily integrated in teaching tasks due to English language, compared with Estonia or Finland where most study programs are in a local language, though the number of English-based programs is growing rapidly. Nevertheless, even in countries like Canada there is a clear difference in terms of the tasks that require societal engagement, such as board memberships and volunteer-based professional work. Thirdly, programs to attract international staff are likely to vary substantially across countries. Countries that are trying to build up their international research visibility offer research positions and funding to attract international staff, including PhD positions, which leads to research prioritization among the group. Lastly, naturalization policies matter. Citizenship, as measurement for international staff, can hide some essential differences. Relatively small differences between international and local staff in Canada may be explained by the fact that a large proportion of international staff takes Canadian citizenship after a relatively short stay in the country, which makes a

distinction between international and local staff somewhat blurry. Additional research on this topic might help to clarify further the role of each of these factors.

Conclusion

This chapter focused on mission diversity in higher education. While research excellence is often the most visible and prominent part of universities' activities, the quality of teaching and other contribution of universities to society are increasingly recognized. Yet the combination of different types of activities at an institutional but also individual level is often a challenge. Interrelationships between different missions are complex, both competing and complementary at the same time. Furthermore, the relative importance of different missions changes over time. Several countries have seen a recent over-focus on research excellence as harmful for the system as a whole and try to balance a whole palette of different tasks.

In the context of over-focus on research excellence and rising sensitivity towards downplaying other tasks, it is interesting to examine the position of international staff on the landscape of different missions. The emerging picture is quite nuanced. International staff mobility in policy agenda and literature is primarily approached through the logic of research excellence. The empirical analysis in this chapter confirms that international staff is on average more research oriented both in their interests and their time investment. There is a substantial cross-country variation in how similar or different international staff can be compared to local staff. Based on data in this study, it is impossible to say what explains the difference. It seems that the share of international staff matters. In countries like Canada or Switzerland where the share of international staff is reaching 50%, the difference in research-teaching task division is smaller. This is likely to indicate that a larger share of international staff means that they must be fulfilling a more diverse set of tasks. It may also refer to a fact that teaching programs are more open to international staff, for example, not inhibited by the local language requirement that might be an obstacle for engaging international staff.

Various valorization activities also show a great diversity. Some activities are equally or even more common among international staff. These seem to be activities that relate directly to research and are more common in hard sciences, such as patenting/licensing and joint industry research. For some activities, international staff is underrepresented. These seem to be activities where either local knowledge or local networks are important, such as serving on boards and expert committees, professional volunteer work, and evaluation projects.

While there seem to be systematic differences between local and international staff, it is clear that international staff is actively involved in all three missions. They are not only heavily engaged in research activities but also their teaching contribution is substantial, and they are actively involved in various valorization activities. In this chapter we have not looked deeply into differences among international staff that countries attract. There is probably a large difference in the profile of

international staff in different countries. The relative share of early-career researchers (e.g., postdocs) vs senior scholars is likely to influence the task portfolio. Furthermore, we have not looked at a disciplinary mix of international staff in different countries, which again is likely to influence the nature of activities.

The contribution of international staff to various missions of universities is an important topic. It triggers questions about using the full potential of international staff for all the missions. Their underrepresentation in certain activities may also inspire universities to think how to engage them better in activities that require local knowledge or local networks. It also illustrates the complexity of the mission diversity and raises the question of how to divide the tasks most effectively, both at an individual and institutional level. This makes the position of international staff in mission diversity a relevant issue. Understanding preferences and obstacles that international staff face in their attempt to engage in a variety of tasks might be valuable for designing effective organizational policies and creating supporting facilities.

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Maarja Beerkens is Associate professor in International Governance at Leiden University, the Netherlands. Her research covers a wide range of issues in higher education and science policy, from quality assurance, research management and internationalisation to student experiences and teaching practices.

Anna Panova is a research fellow of the Centre for Institutional Studies at National Research University Higher School of Economics in Moscow, Russia (HSE) and a senior lecturer at the Economics Department of HSE. She has a PhD in Economics.

Pekka Vasari is visiting researcher at the University of Lapland in Finland.