















Institutional and individual perspective

Attraction and support of international PhD students, lecturers and researchers in Hungary: state-of-the-art, challenges and areas for improvement

Institutional and individual perspective

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AUTHORS: Academic Cooperation Association

Veronika Kupriyanova Irina Ferencz

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TEMPUS PUBLIC FOUNDATION

HU-1077 Budapest, Kéthly Anna tér 1., Postal address: H-1438 Budapest 70., POB 508. Phone: +36 1 237 1300 • Infoline: +36 1 237 1320,

E-mail: info@tpf.hu www.tka.hu

www.stipendiumhungaricum.hu



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1. INTRODUCTION

This report presents the findings of the study on the attraction and support of international PhD students, lecturers and researchers in Hungary, conducted by the Academic Cooperation Association (ACA) and commissioned by the Tempus Public Foundation (TPF) in summer 2021.

The report is based on the individual and institutional data collected under the <u>EU-funded UniWeliS project</u> (Supporting internationalisation of higher education through professionalising services of mobile academic staff) and the individual data collected by TPF through its graduate tracking survey of *Stipendium Hungaricum Scholarship* holders over the same period of time.

This report consists of eight chapters. The first three chapters provide background information to the study, a short summary of the key findings and an overview of methodological issues, including data collection, analysis and sample characteristics.

The fourth chapter explores the key motivations of international academics for choosing Hungary and a Hungarian higher education institution as a destination for mobility. The analysis is complemented with an overview of key reasons for international PhD students leaving Hungary after graduation. This chapter also provides an overview of the key information sources about mobility opportunities in Hungary and funding schemes used by the mobile academics to finance their mobility experience in the country.

The fifth chapter investigates several institutional approaches to attracting and retaining international talent, focusing on the current types and numbers of international academics hosted by the selected Hungarian higher education institutions as well as the level of institutional commitment to the attraction and retention of international talent.

The sixth chapter examines the types of support services offered to international academics by the Hungarian higher education institutions at different mobility stages, from the perspective of both mobile individuals and host institutions.

The seventh chapter continues with the analysis of the degree of satisfaction with the support services obtained by international academics at various mobility stages as well as the key challenges that marked their mobility experience in Hungary and possible areas for improvement.

The eighth chapter provides conclusions and recommendations for the Hungarian higher education institutions and national support agencies, building on the analysis presented in prior chapters.

2. EXECUTIVE SUMMARY

This report presents the findings of the study on the attraction and support of international PhD students, lecturers and researchers in Hungary, conducted by the Academic Cooperation Association (ACA) and commissioned by the Tempus Public Foundation (TPF) in summer 2021.

The report is based on the individual and institutional data collected under the <u>EU-funded UniWeliS project</u> (Supporting internationalisation of higher education through professionalising services of mobile academic staff) and the individual data collected by TPF through its graduate tracking survey of Stipendium Hungaricum Scholarship holders over the same period of time.

The objective of this study was to explore the state-of-the-art of talent attraction and personalised support to international academics at higher education institutions in Hungary, and to explore any potential gap between the academics' expectations in this respect and the current institutional support realities.

It also aimed to explore key information sources about: mobility opportunities in Hungary and funding schemes used by the mobile academics, as well as the key motivation factors for selecting Hungary as a mobility (study, research or work) destination, and the degree of satisfaction with the obtained support and the overall mobility experience, including the key challenges faced and reasons for leaving the country.

This topic was investigated from a dual perspective: the individual needs and perceptions of international academics (explored through a survey) and current institutional practices in attracting and supporting international talent at various career stages (explored through a series of interviews with the responsible managerial and support staff).

Overall, the international academics' sample (n=375) was representative in terms of the respondents' gender, field of study, the country of origin and host institution in Hungary, but more homogeneous in terms of educational background, career stage, duration of mobility and family travel status, being dominated by early-stage researchers / PhD students originating from countries in Africa and Asia, who typically travelled to Hungary on their own / without their family members in order to obtain a doctoral degree.

The survey feedback was collected for mobile academics at 19 higher education institutions in Hungary, based on the survey respondents filled in at their host institutions. The biggest number of responses was submitted by international PhD students, researchers and lecturers welcomed by the University of Szeged, the University of Debrecen, the Hungarian University of Agriculture and Life Sciences as well as Eötvös Loránd University, jointly accounting for more than 60% of valid responses.

The institutional interview sample (Eötvös Loránd University, the University of Debrecen, the University of Pécs and the University of Szeged) was marked by geographic diversity and institutional size but lacked representation in terms of different types of higher education institutions, being primarily dominated by comprehensive universities.

The analysis showed that **one of the key motivations** shaping the respondents' decision over Hungary and its higher education institutions as a mobility destination, was related to **professionally oriented**

reasons, such as acquiring knowledge and specific know-how from good practice, a possibility to work with outstanding scientists or lecturers in the field and to enhance future employment and career opportunities. These reasons were found to be similar across the larger region of Central and South-East Europe, based on a larger dataset collected in the framework of the UniWeliS project.

Interested academics primarily learned about study and research opportunities in Hungary via their professional networks as well as dedicated national and European promotional platforms (e.g., Study in Hungary, EURAXESS). The majority of the respondents funded their mobility experience in the country with a Hungarian national grant or scholarship, particularly the *Stipendium Hungaricum* scholarships, with national grants and scholarships representing also an important source of funding for living expenses. Travel expenses were mostly covered through the respondents' own means.

While the availability of national-level financial support for early-stage international academics in Hungary emerged from the analysis as one of the key competitive advantages for the attraction of foreign talent, the qualitative feedback exposed some shortcomings, including financial ones related to the insufficient size of a grant.

Additional data collected from 119 international PhD students with a *Stipendium Hungaricum* Scholarship through the TPF graduate tracking survey shed light on the main reasons for leaving the country, after the completion of studies. The latter included, in nearly half of the cases, original intentions to leave the country before starting the programme. While this was established as one of the original *Stipendium Hungaricum* programme conditions, a general lack of interest in the professional and social integration seemed to continue throughout the entire mobility period until the end of the stay. This situation could be due to several reasons, varying from a lack of/insufficient dedicated information or support provided prior and during mobility on the related continuation opportunities in Hungary, coupled with structural issues related to the overall openness of local employers to hire foreigners or limited job opportunities due to the COVID-19 pandemic.

Family reasons and social circle issues were found to be the second common reason for leaving Hungary. At the same time, limited opportunities to reunite with and sustain families were found to negatively affect the overall satisfaction with the mobility experience, potentially associated with the lower intention to stay over.

From an institutional perspective, the Hungarian higher education institutions were found to be quite successful in recent years in attracting foreign talent at PhD-seeking level, taking advantage of the availability of *Stipendium Hungaricum* grants which funded ca. 70% of all international degree-seeking doctoral students. Consequently, the institutions focused on organising and offering support to this group of (early-stage) international academics who represented the critical mass.

The share of full-time international lecturers and researchers among academic staff remained at a stably low level over the same period. While the attraction of foreign staff on a longer basis was declared as the policy priority until recently, some of the interviewed institutions started to reflect on a closer and more strategic link between the value of international staff mobility and its impact on all university missions, particularly the quality of learning and teaching as well as research, only more recently. The institutions could clearly be even more strategic in such intentions and more concrete in related implementation actions, particularly in further improving the quality of support services offered to international PhD students, researchers and lecturers at various mobility stages.

Our analysis did not reveal any major gaps between the most required services by international academics in Hungary and the typical services currently offered by the Hungarian higher education institutions. Neither did the analysis expose any major satisfaction problems with the support provided by institutions on the essential matters. The latter were found to have structured processes in place to provide the core services related to immigration, accommodation, and health insurance to the vast majority of mobile academics at various levels, with special emphasis on information guidance and support at the prearrival stage and during mobility.

Of all essential matters, accommodation remained one divisive topic for international academics, because of its varied quality across the different institutions as well as the extent to which the mobile academics' special needs in housing (e.g., family situation, cultural tolerance) could be addressed or not.

Similarly, while the respondents acknowledged to have received some information, guidance and support on funding related issues from various sources, including the national agency and the host institution at different mobility stages, with average levels of satisfaction, funding emerged as a big area of concern for many of them, primarily due to the insufficient amount of current grants compared to actual living costs in Hungary.

The institutions were also found to be generally less supportive in the final stages of mobility, and in bridging professional and social reintegration of international academics.

When it comes to the less essential support, particularly on family matters and professional development at various mobility stages, there is some room for improvement still, as many mobile academics had to rely either on themselves or on external service providers, which had some impact on their degree of satisfaction both with the obtained support and the overall mobility experience. Such services are however crucial for the long-term retention of international academics, particularly PhD students, and their willingness to integrate professionally and socially into the country's life.

The following recommendations have been made to address some structural issues entailing professional, social and personal challenges for international academics in Hungary (e.g. language/communication, integration into the local labour market, family reintegration), as well as institutional issues including their capacity to offer quality information or support to international academics at various mobility stages.

Concerning actions at national level:

While structural barriers are difficult to address in a short term, the national agencies in Hungary involved in the attraction and retention of global talent could help further highlight and raise awareness that international academics can be an asset to the country. They could do so through regular data monitoring, evidence collection and analysis channelled through dedicated communication campaigns.

Such evidence could support an open dialogue with all stakeholders including other public bodies and higher education institutions on information guidance and support services needed by international academics for a successful academic stay and integration, with more coordinated approaches and by providing them in a more collaborative way.

It would be important for national agencies to share comprehensive information about existing opportunities for personal and professional growth in Hungary with the prospective applicants of the national scholarship programmes already at the promotion stage and offer regular updates to

the successful candidates throughout their mobility stay in the country. Such information, coupled with more flexible ways to obtain a residence and work permit after the end of the scholarship, could further stimulate the interest of international PhD students in their subsequent professional and social integration in Hungary.

In view of the reported financial difficulties, it would be advisable for the national funding agency to review the value proposition for different groups of international academics and to potentially recalibrate the number, size and composition of grants and institutional financial incentives, more closely adapted to the living costs and realities in Hungary (matching similar offers in neighbouring countries, and based on a comprehensive benchmarking analysis).

Comprehensive national funding schemes that span across all levels of tertiary education and bridge them to early stage (both doctoral and postdoctoral schemes) and more advanced academic careers would be essential to support new quality-oriented institutional strategies and to ensure more effective talent attraction and retention in the country. The responsible national agencies could provide some additional guidance to the higher education institutions in Hungary on how to use and combine the existing funding schemes in a more strategic and holistic way, with the aim to increase the overall quality of internationalisation.

As for the institutional level:

The Hungarian higher education institutions have been particularly successful in recent years in their efforts to attract international PhD students and to further internationalise doctoral education in the country, relying on the financial support of the *Stipendium Hungaricum* programme. Attraction for other, more senior groups of international academics remains however limited for various reasons, including the reported funding limitations.

In the next step, the Hungarian institutions will have to adopt more comprehensive, strategic and quality-driven selective approaches to international talent attraction if they wish to remain attractive and keep a solid reputation amongst potential candidates. Such full-cycle approaches, starting from Master's or PhD level, intentionally and strategically link talent attraction, support and retention and offer distinct professional and academic integration scenarios from the start, based on more systematic and need/purpose-driven approaches in line with the institutional mission and overarching goals.

The Hungarian institutions set up structured internal processes, mostly at the central or faculty level, to provide support on the matters that make mobility possible per se, including visa and immigration, accommodation, health insurance and basic administrative matters. Nevertheless, to enhance their global competitiveness and to continue attracting talent, institutions in Hungary will need to continue improving their support and assistance to international academics prior to and during their mobility, as well as upon departure.

The established institutional processes could be further customised in order to become more inclusive and better capture specific situations and needs of international academics, which seem to be important for their overall level of satisfaction with the mobility experience, as well as for the willingness to stay, impacting their ambassador potential as well. With limited impact on related workload, institutional support on the essential matters could possibly involve several predefined tracks established in view of the immigration status, family situation or any other important social or cultural differentiators.

Similarly to the essential matters, support on 'softer' issues including professional advice, career guidance, and family matters there is scope to further improve and mainstream available services. The quality support on such matters was found to strongly affect the overall degree of satisfaction with the mobility experience.

It would be important to increase support to the Hungarian higher education institutions specifically for creating opportunities for professional integration of international academics, particularly at early career stages. Professional and social integration of international academics can be enabled by institutions themselves by raising awareness of their valuable presence among local staff and students through various internal communication channels. Furthermore, institutions will need to continue developing the capacity of their staff to provide high-quality services with regard to professional and social integration, which could be further incentivised through dedicated support measures at national level.

There is a clear need, as well as scope, to further streamline and professionalise support to international academics on both the core and less essential services offered at the faculty/department level by formalising responsibilities and allocating adequate staff and other resources for the related (clearly articulated) purposes, while fostering synergies with central level activities.

This would require creating opportunities for further professional development of both administrative and academic staff responsible for service delivery and supervision of international academics as well as institutionalised opportunities to recognise and award their related efforts. Evidently, further financial support to institutional capacity-building for a more comprehensive internationalisation would be indispensable.

3. METHODOLOGY

3.1. Methodological approach

The objective of this study was to explore the **state-of-the-art of talent attraction and personalised support to international academics** at higher education institutions in Hungary and to explore any potential gaps between the academics' expectations in this respect and the current institutional realities.

This topic was investigated from a dual perspective. On the one hand, the study focused on the **needs** of international academics, including PhD students, lecturers and researchers, in terms of information guidance and personalised support at different mobility stages, as well as on their level of satisfaction with various services obtained and challenges experienced during mobility. On the other hand, the analysis covered the existing institutional practices in attracting and supporting international talent at various career stages at four higher education institutions in Hungary, which agreed to take part in the study: Eötvös Loránd University, the University of Debrecen, the University of Miskolc and the University of Pécs¹.

3.2. Data collection and analysis

The study largely relied on mixed method data collection processes set up in the framework of the UniWeliS project (Supporting internationalisation of higher education through professionalizing services of mobile academic staff):

- » A large-scale survey of incoming international PhD students and academic staff hosted or employed by higher education institutions in Central and South-Eastern Europe for at least three months within the last five years (probability sampling via snowballing) (hereinafter "survey 1")²;
- » A series of interviews with higher education managers and support staff responsible for organising and offering support to international PhD students, lecturers and researchers at higher education institutions in the target region (semi-structured interviews)³.

The UniWeliS dataset was complemented by quantitative data collected through a survey of international students who completed their studies in Hungary in the period between 2014 and 2021 in the framework of the *Stipendium Hungaricum* Scholarship Programme (graduate tracking survey). This survey was conducted by the Tempus Public Foundation (TPF) in spring 2021 (hereinafter "survey 2").

^{1.} The ACA research team approached several other higher education institutions in Hungary with an interview request, namely the Corvinus University of Budapest, the Hungarian University of Agriculture and Life Sciences, the University of Szeged, Pázmány Péter Catholic University and Obuda University, considering the substantial number of survey responses received for these institutions. However, these institutions decided to opt out of the study.

^{2.} The survey questionnaire can be consulted on the UniWeliS website: uniwelis.saia.sk/en

^{3.} The interview questionnaire can be consulted on the UniWeliS website: uniwelis.saia.sk/en

In more specific terms, the individual and institutional data for Hungary and the Hungarian higher education institutions was extracted from these three larger datasets and a country specific data subset was created based on:

- 375 responses submitted by international PhD students, lecturers and researchers with an at least three-months' long mobility experience at a Hungarian higher education institution within the last five years (survey 1);
- 6 interviews with higher education staff, including four higher education managers at central and faculty level, one member of support staff and one member of (doctoral) student representation staff, employed by four Hungarian higher education institutions (Eötvös Loránd University, the University of Debrecen, the University of Miskolc, and the University of Pécs);
- 119 responses submitted by international PhD students to the TPF 'graduate tracking' survey (survey 2), which was used to analyse one specific aspect related to the main reasons for leaving Hungary in order to complement the analysis of motivation for study and work in Hungary based on the survey 1 data.

The dataset was checked for missing data and outliers. Valid responses covered at least 60% of the questionnaire designed for the survey 1 including a series of key questions covering:

- Reasons for selecting Hungary and a Hungarian higher education institution as a destination for study or research;
- The type of services obtained by the respondents and the related level of satisfaction;
- The most important support services from the perspective of international academics;
- Challenges and areas for improvement proposed by the survey participants.

Valid responses to the question "What were the main reasons for leaving Hungary?" in the survey 2 were retained for analysis.

The data was then analysed using statistical software SPSS and Excel. In most cases, valid percent values were retained for the report unless specified otherwise.

Qualitative data submitted to open questions was coded to identify and assess key trends and the most representative statements were selected to provide contextual background.

The institutional interviews were transcribed, and a thematic analysis was further conducted. This involved coding all the data before identifying and reviewing four key themes that were considered important for the purpose of this study:

- The type and number of international academics attracted (also quantified);
- Institutional commitment to the attraction, support and retention of international talent;
- Standard processes in place to support this commitment;
- Challenges and suggestions for improvement.

Each theme was examined to gain an understanding of the interviewees' perceptions and suggestions.

3.3. Data sample

In total, 375 responses from international PhD students, lecturers and researchers who were employed or hosted by a higher education institution in Hungary for at least three months in the last five years were submitted to the survey 1.

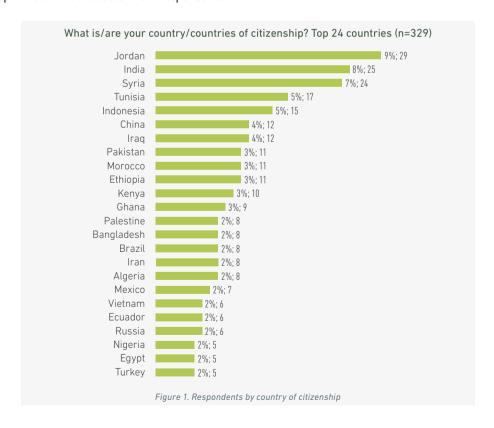
3.3.1. Respondents' profile

3.3.1.1. Gender and country of origin

The majority of the respondents (196), corresponding to 55% of those who disclosed information about their **gender** (n=356) were male, whereas 44% were female (158). Less than 1% of the respondents selected the "other" option (2).

The respondents originated from 85 countries around the world, particularly from the Middle East, South Asia, and Africa. The list of top sending countries included 24 countries of origin which had at least 5 respondents per country.

Jordan, India, and Syria completed top three countries of origin, accounting for nearly one fourth of valid responses, followed by Tunisia and Indonesia. Russia was found to be the only European country on the top 24 list with a sizeable share of respondents.



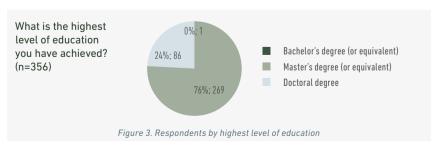
In terms of their country of origin, the respondents to the UniWeliS survey (survey 1) and the TPF graduate tracking survey (survey 2) strongly overlapped. The top 10 sending countries for international PhD students surveyed by TPF (n=119) included Vietnam (11%), India (11%), Iraq (9%), Jordan (8%), Syria (7%), Palestine (6%), Algeria (6%), Tunisia (5%), Turkey (5%) and China (5%).

Interestingly, when it comes to the country of prior educational background, more than one third of the respondents to this question already studied in Hungary in the past, likely at Master's level. This indicates that nearly one third of the respondents decided to stay over for a higher degree and to continue their professional and academic pathway in Hungary (Figure 1).

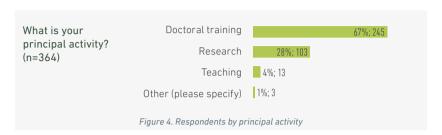


3.3.1.2. Educational background, principal activity and career stage

In terms of **educational background**, 76% of respondents to this question held a Master's degree or an equivalent diploma, while 23% held a doctoral degree (Figure 3).

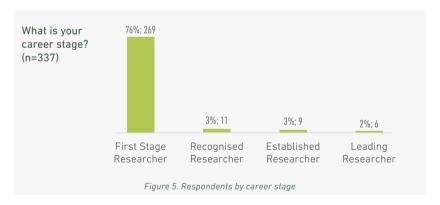


The sample therefore mostly consisted of international PhD students, which was also evidenced in the distribution of respondents by **principal activity** and **career stage**. In total, 67% of the respondents to this question selected doctoral training as their **principal activity**, while 28% and only 4% indicated research and teaching, respectively (Figure 4). Other reported types of activity included a combination of the proposed options.



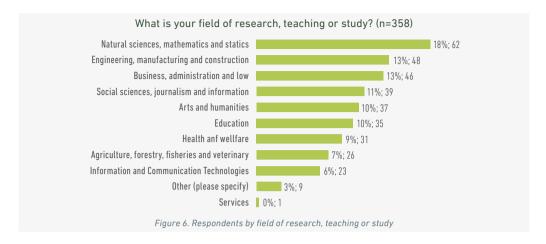
In terms of **career stage**, the sample was dominated by early-stage academics, as 92% of the respondents reported to be first stage researchers (up to the point of PhD, according to the <u>EURAXESS classification</u>).

According to the same classification, nearly 3% self-identified as recognised researchers (PhD holders or equivalent who are not yet fully independent, e.g. post-docs or assistant professors); ca. 3% as established researchers (who have developed a level of independence), and 2% as leading researchers (leading their research area or field, e.g. leading large-scale scientific projects or offering scientific advice to policy makers and funders) (Figure 5).



More than one third of the respondents to this question reported to work or study in the field of natural sciences and engineering, with business, administration and law also quite prominently represented in the sample (Figure 6). Social sciences, humanities and educational sciences also accounted jointly for more than 30% of the respondents' fields of study⁴.

^{4.} Fields of research, teaching and study formulated based on International Standard Classification of Education: Fields of education and training 2013 (ISCED-F 2013). URL: Field Descriptions (unesco.org), visited on 15 October 2021.

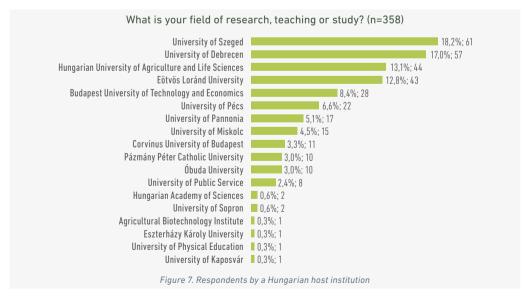


3.3.2. Mobility experience

3.3.2.1. Timing and host institution

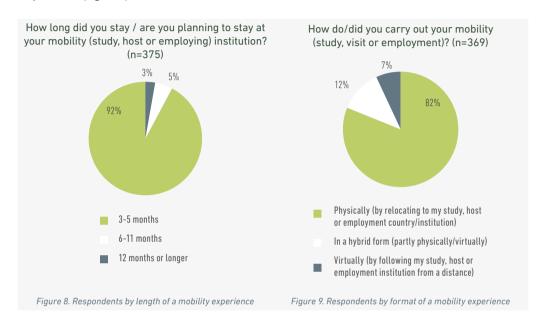
The majority of the respondents (343 of 375) reported on their **ongoing mobility** experience at a higher education institution in Hungary at the moment of their participation in the survey 1. Less than one tenth (32 respondents) reported on their **past mobility experience** which took place within the past five years.

Overall, feedback was collected for 19 higher education institutions in Hungary which hosted the respondent international academics. The biggest number of responses were submitted by international PhD students, researchers and lecturers hosted by the University of Szeged, the University of Debrecen, the Hungarian University of Agriculture and Life Sciences as well as Eötvös Loránd University, jointly accounting for more than 60% of valid responses (Figure 7).

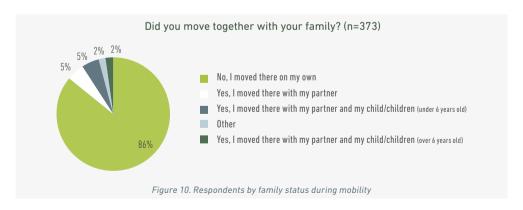


3.3.2.2. Mobility duration and format

In line with the aforementioned findings pointing to the overrepresentation of PhD students in the study sample, the vast majority of the respondents (92%) took part in **longer term mobility**, lasting at least one year, whereas only 8% spent between 3 and 11 months in the host country/institution (Figure 8). Despite the pandemic, physical mobility was the main format of engagement for more than 80% of the respondents (Figure 9).



In total, 86% of the respondents (n=373) moved to Hungary on their own, whereas the rest either relocated to the country with their family or expected to reunite with their family members in the near future, as clarified in the feedback provided to the "other" category (Figure 10).



Overall, the international academics' sample was representative in terms of the respondents' gender, field of study, the country of origin and host institution in Hungary, but more homogeneous in terms of educational background, career stage, duration of mobility and family travel status, dominated by early-stage researchers / PhD students originating from countries in Africa and Asia, who travelled to Hungary to obtain their doctoral degree.

Such sample composition was partly due to a snowballing technique applied to disseminating the survey, resulting in higher response rate among the international PhD students in Hungary who seemed to be more used to various feedback surveys required by their funding programmes.

This overrepresentation was partly mitigated through a series of institutional interviews which shed light on the needs and situations of different groups of international academics hosted by the Hungarian higher education institutions.

The institutional sample was marked by geographic diversity and institutional size but lacked representation in terms of different types of higher education institutions, being primarily dominated by comprehensive universities.

4. MOTIVATION FOR STUDY OR WORK IN HUNGARY

4.1. Top reasons for selecting Hungary and its higher education institutions

One of the aims of the study was to gain understanding of the main reasons that motivated the international academics participating in the survey 1 to move to Hungary for study or work at a Hungarian higher education institution. The related analysis was conducted from a comparative perspective using a larger dataset compiled for several countries in Central and South-East Europe, including Bulgaria, Croatia, Czech Republic, Hungary, North Macedonia, Poland, Romania, Serbia, Slovakia and Slovenia.

More specifically, the survey data showed that acquiring knowledge and specific know-how from good practice was one of the key motivation factors shaping the respondents' decision to choose Hungary and its higher education institutions as a mobility destination. Two other top reasons included the possibility to work with outstanding scientists or lecturers in the field and the enhancement of future employment and career opportunities (Figure 11). These professionally oriented reasons were especially relevant for the dominating group of PhD students who only started their academic pathway.

These reasons were found to partly overlap with the patterns established for the larger region of Central and South-East Europe (excluding Hungary) based on a larger UniWeliS dataset. In the case of this bigger region, given a more diverse sample of international academics (not only PhD students, but also researchers and lecturers in contrast to the Hungarian sample strongly dominated by international doctoral students), a somewhat stronger emphasis was given on some research related rather than learning or training related aspects, such as professional networking and the development of research methods and approaches (Figure 11).

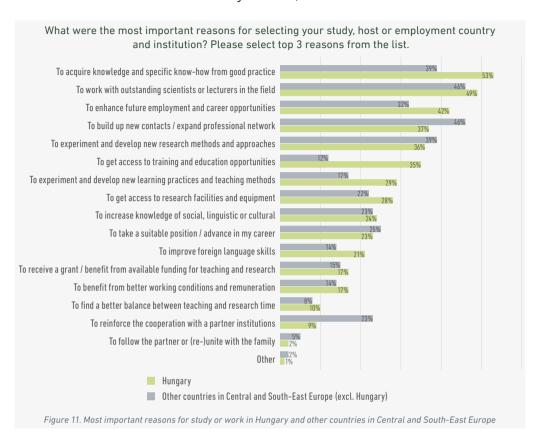
Interestingly, the respondents from the Hungarian subset ranked the access to research facilities and equipment higher than the international academics with mobility experience in other countries of the broader region. This could point to the country's somewhat higher perceived attractiveness from the infrastructural point of view.

The monetary aspects of mobility such as opportunities to receive a grant or find better working conditions or remuneration were ranked quite low in both cases, although the obtained qualitative data pointed out to a low socioeconomic / financial background of some respondents, particularly those included in the Hungarian subset.

In this respect, the qualitative information collected through the survey revealed that Hungary was perceived among the respondents as a 'more affordable' academic destination in Europe for international academics originating from countries in Africa and Asia.

Institutional benefits such as reinforcing cooperation with a partner institution appeared on the bottom of the list for the respondents reporting on the mobility experience with Hungary, possibly due to the fact that the longer-term mobility of degree-seeking PhD students who dominated this sample geared towards more **individual benefits of international experience**. This was found to be a much more

important motivation factor for the rest of the region, which was represented by a more diverse group of international academics with broader mobility intentions, as mentioned above.



4.2. Information sources

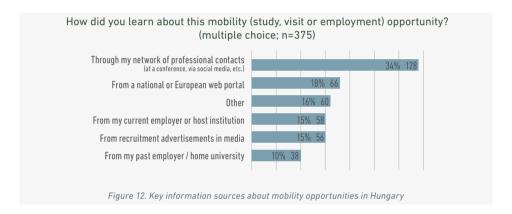
The study included a question about the major **sources of information** regarding mobility opportunities that were used by the respondents. This analysis helped gain some (indirect) insights into the visibility of the Hungarian higher education institutions and the promotion of their academic opportunities as well as the most effective channels for communication on these topics.

As revealed through the survey findings, information about mobility opportunities in Hungary was mainly retrieved through **professional networks** and, to a lesser extent, through **dedicated national and European promotional platforms** (e.g., Study in Hungary, EURAXESS) (Figure 12). Given the fact that some respondents continued their Masters' level studies in Hungary at a doctoral level, this group of the survey participants might have also obtained the related information from their current (host) or past (home) institution.

Information sharing via current/host or past/home institutions as well as through recruitment advertisements in media was found to be less common. Among "other" sources of information, the most frequently mentioned options included websites and information leaflets of **national higher education ministries** as well as personal (family, friends, alumni) networks. The information resources of the Tempus Public Foundation were also specifically mentioned by several respondents.

Interestingly, the qualitative feedback obtained from the institutions revealed that some of them relied on the network of foreign embassies in Hungary and the Hungarian embassies abroad in disseminating the information about academic opportunities. The latter institutions typically closely collaborate with national higher education ministries and agencies and, thus, contribute to their importance as information channels

Overall, the promotion of opportunities for study and research in Hungary emerged from the institutional analysis as one of the areas where further public support would be necessary. This aspect is studied in more detail in sections 6–9.



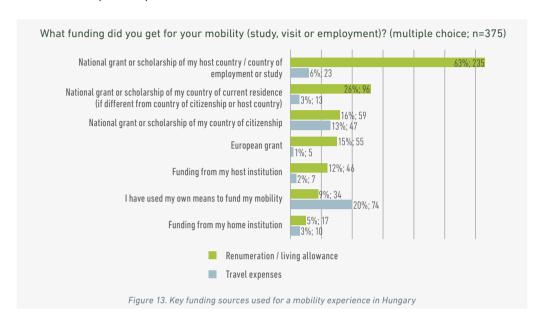
4.3. Funding sources

National grants or scholarships offered by the host country (Hungary) represented the major source of funding for covering (parts of) living expenses for almost 65% of the respondents (Figure 13), with 16 survey participants referring specifically in their qualitative feedback to a *Stipendium Hungaricum* scholarship.

More than 40% reported to cover (parts of) their living expenses through a **national grant or scholarship** issued either by their country of citizenship or country of current residence. Nearly 15% of the respondents benefitted from a European grant. A mix of financial support obtained from both the host and home institutions, as well as from own means were also referenced as a source of funding for both travel expenses and living allowance (Figure 13).

Some of the respondents indeed reported to top up funding obtained from external sources with their own means including private savings and/or employment -related income earned in the host country in order to be able to cover living expenses in Hungary as well as related travel costs, for which only limited funding was found to be available for international academics.

While the availability of national-level financial support for early-stage international academics in Hungary (esp. *Stipendium Hungaricum* grants for PhD students) emerged from the analysis as one of the competitive advantages for the attraction of foreign talent, the qualitative feedback exposed various implementation problems and financial difficulties experienced by the responding international PhD students. This aspect is explored in more detail in section 7.3.



4.4. Reasons for leaving Hungary

To complement the analysis of the key factors that motivated international academics to come to Hungary, additional data from 119 international PhD students with a *Stipendium Hungaricum* Scholarship collected through the TPF graduate tracking survey was used to shed light on the main reasons for leaving the country (Figure 14).

In total, 56 out of 119 international PhD students (47%) left Hungary after obtaining their doctoral degree. The most commonly cited reason was the respondent's original intention to leave the country before even starting the programme. This finding reflected one of the original intentions of the Stipendium Hungaricum programme for students to leave the country after graduation. While this expectation was found to be changing over time and getting recently less restrictive on the programme management side, the international graduates might still be attracted by opportunities for professional and social integration in other countries or in their country of origin rather than in Hungary (with 32% of the respondents reported to have returned to their home country), as acknowledged by 18% of the respondents (Figure 14).

This rather limited initial interest in the subsequent integration into Hungary's labour market and society might also be partly due to the lack of transparent communication on the related opportunities for

personal and professional growth, which could be shared with the prospective applicants already at the promotion stage (e.g. case studies) and regularly explored with the successful candidates starting from the preparatory / pre-arrival stage.

The lack of interest in the professional integration was found to continue through the entire mobility period until graduation. Additional evidence from the graduate tracking survey showed that less than one fifth of the respondents (19%; n=119) sought work right after their graduation in Hungary and further 19% did so in both Hungary and in another country. On the one hand, this finding again reflected the abovementioned expectation for the scholarship holders to leave the country after graduation. On the other hand, some of the graduates seemed to have limited interest in realising their legal right to stay over to find a job.

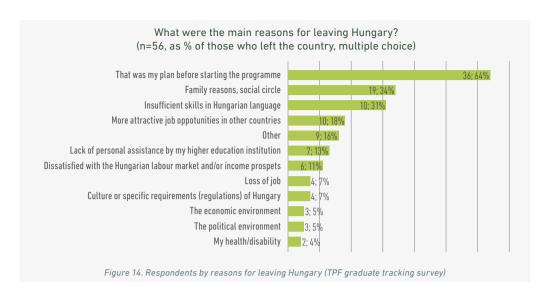
Further challenges were revealed with regard to both academic success and professional integration, particularly during the COVID-19 pandemic. In total, 57% of those who reported to live in Hungary by the moment of the survey (30; n=53) were unemployed. This number included 19 doctoral students who failed to complete their studies (63%; n=30) and 6 doctoral students (20%; n=30) who graduated between 2020 and 2021. These findings highlighted the importance of career guidance and professional development support in addition to academic supervision during mobility, which is discussed in more detail in Section 6.

Family reasons and social circle issues were found to be the second common reason for leaving Hungary. This finding echoed the feedback on the key challenges experienced by international PhD students, researchers and lecturers with family obligations in Hungary, obtained through the UniWeliS survey (for more details, see Section 7.3). The latter quoted family integration as one of the biggest problems due to immigration/visa problems and financial difficulties in bringing over and sustaining family in Hungary. At the same time, limited opportunities to reunite with families were found to have negative impact on mental wellbeing of international PhD students, especially during the COVID-19 pandemic, and as a result negatively affected their academic progress and the overall satisfaction with the mobility experience, potentially associated with the intention to stay over (Section 7.3).

Almost one half of the international PhD students surveyed through the TPF graduate tracking survey (47%; n=107) would be interested to come to Hungary with their family for an eventual postdoctoral research stay in the country, while more than one fourth (22%; n=107) were found to be undecided, probably due to the lack of information about possible financial and administrative support on family matters that could positively influence their choice.

The insufficient skills in the Hungarian language were picked up by more than one fifth of the respondents (Figure 14) and represented the third most common reason for leaving Hungary for international PhD students with a *Stipendium Hungaricum* scholarship. This finding confirmed another top challenge for international academics in the country, identified through the UniWeLiS survey, related to problems with social integration and communication (for more details, see Section 7.3).

Furthermore, the lack of personal assistance by the hosting higher education institution was cited as one of the main reasons for departure by 13% of the respondents (Figure 14), pointing to to the need for further progress by the Hungarian higher education institutions in terms of welcoming, supporting and supervising international doctoral students. This aspect is investigated in more detail in sections 6–9.



5. INSTITUTIONAL APPROACHES TO ATTRACTING AND RETAINING INTERNATIONAL TALENT

While the quantitative data provided some indirect insights into several aspects of institutional promotion and attraction of international academics in Hungary, further observations could be made based on the evidence obtained from a series of institutional interviews, including the data on current numbers of international academics hosted and the degree of institutional commitment to talent attraction and retention.

5.1. The number of international academics hosted

The number of international academics attracted / hosted yearly by the four interviewed higher education institutions was found to be quite comparable in size (Table 1.). The most robust data was sourced for (long-term) PhD students coming to earn a doctoral degree in Hungary, in most cases with the financial support of *Stipendium Hungaricum*. Data on international lecturers and researchers hosted by the selected higher education institutions was found to be more fragmented due to varied institutional approaches to both staff categorisation and data collection.

Table 1. The number of international academics hosted yearly by the four interviewed universities

Higher education institution	International PhD students	International lecturers and/or researchers
University of Debrecen	Ca. 250	Ca. 20-30 international lecturers who come on a long-term basis (between three months and one year)
University of Miskolc	Ca. 175	Ca. 20 full-time international lecturers
University of Pécs	Ca. 235	Ca. 40 international research and teaching staff
Eötvös Loránd University	Ca. 265	n/a

For all four universities in the sample, the share of international PhD students corresponded to approximately 20% of all doctoral students. The respondents acknowledged that this figure had been increasing over the last years (together with the overall figures for international student enrolment). Although it proved to be more difficult to assess the share of full-time international lecturers and researchers among academic staff, this figure could be estimated at ca. 1%, which – unlike international (PhD) student numbers – has remained relatively stable over the last years.

This data indicates that the selected Hungarian higher education institutions were more successful in recent years in their attempts to attract foreign talent at PhD-seeking level and, thus, to internationalise doctoral education. This positive trend could be attributed to the availability of *Stipendium Hungaricum* grants which funded ca. 70% of all international degree-seeking doctoral students. Consequently, the institutions concentrated their efforts in organising and offering support services to this group of (early-stage) international academics who represented the critical mass.

5.2. Institutional commitment to talent attraction and retention

While the institutional interviewees recognised the fact that the attraction of (more) international lecturers and researchers compared to the current numbers was at least a declared high-level priority for their respective institutions, this aim was either not (clearly/strongly) articulated in their current institutional development plans or internationalisation strategies⁵, or seemed to focus on shorter term staff exchanges (e.g. under the Erasmus+ programme), rather than longer-term talent attraction or retention schemes.

The emphasis of the current institutional strategic documents reviewed for the purpose of this study was found to be rather placed on increasing international student numbers and further improvement of services offered to this group. Admittedly, PhD students – the main respondent category to the survey – are typically covered in institutional strategies also within the wider target group of international students, either explicitly or implicitly.

At the same time, there were some indications that institutions had started to reflect on a closer and more strategic link between the value of international staff mobility and its impact on all university missions, particularly the quality of learning and teaching as well as research.

For example, the University of Pécs will put under its new strategic framework for 2021–2025, a major emphasis on quality-focused internationalisation, including by means of attracting international researchers and PhD students for longer stays⁶. Similarly, Eötvös Loránd University (ELTE) aims to "increase the number of professors, both employed at ELTE and guest professors – all involved in teaching activities at ELTE", thus connecting the quality of its English-taught programmes to the engagement of international staff.

The institutions could clearly be even more strategic in their talent attraction strategies, making a stronger and intentional link between their talent recruitment strategies for students at doctoral level, many of which had already been attracted or retained from the Master's level through the *Stipendium Hungaricum* funding scheme, and the retention of this group in Hungary post-graduation, supporting their continuation as foreign academics.

One of the reasons behind the currently limited numbers of international lecturers and researchers was reported to relate to the lack of funding and the overall ability of institutions to offer attractive salaries to international lecturers and researchers, particularly those coming from Western Europe and the United States, a challenge also for the wider region of Central and South-East Europe.

This situation seems to be however evolving. Several institutions in the sample were in the process of assessing where they currently stand with attracting foreign staff and discussing internally various funding approaches. For example, some institutions managed or intended to attract national or EU-level project funding to further increase their international competitiveness, including by means of foreign staff recruitment. These more recent plans were however halted by the COVID-19 pandemic.

^{5.} The consulted resources include the following: for the University of Debrecen, URL: edu.unideb.hu/p/strategy, visited on 13 October 2021; for the University of Pecs, URL: mellearn.pte.pdf, visited on 13 October 2021; for ELTE, URL: www.elte.hu/en/internationalization, visited on 13 October 2021; for the University of Miskolc, URL: www.uni-miskolc.hu/international-relations-office, visited on 13 October 2021.

 $^{6. \ \} The \ University of P\'ecs, URL: \underline{mellearn.hu/wp-content/uploads/2019/05/mellearn_pte.pdf}, visited on 13 \ October 2021.$

^{7.} Eötvös Loránd University, URL: www.elte.hu/en/internationalization, visited on 13 October 2021.

Similarly, several interviewees reported on internal discussions regarding a possible set-up or continuation or enlargement of dedicated institutional funding programmes for internationalisation that could be used to attract foreign staff.

The established trend was conflicting though and requires further validation on a bigger institutional sample. While two institutions dismissed such possibilities due to some ethical concerns (e.g., paying significantly higher salaries to foreign experts compared to local staff) or due to the preference for project-based funding, one institution was planning to set up its institutional scholarship programme to focus on international recruitment strategies, based on the experience gained with the institutional internationalisation fund maintained since 2016.

6. SUPPORT SERVICES OFFERED TO INTERNATIONAL ACADEMICS

The ACA research team explored the type and volume of assistance offered to international PhD students, lecturers and researchers from the perspective of both mobile academics themselves, as well as the host higher education institutions. The latter were represented by the support and managerial staff from the four interviewed higher education institutions. This dual perspective allowed us to investigate any potential expectations gap between the services needed by international academics, on the one hand, and those delivered by higher education institutions in practice.

6.1. International academics' perspective

6.1.1. Most important support services

The 'essential' services that make mobility possible as such including those related to **immigration** matters, accommodation, and social and healthcare insurance were considered most important by the vast majority of the survey respondents (Figure 15). Importantly, assistance with funding opportunities was also ranked quite high by nearly one half of all respondents, coming next to the afore-listed essential services.

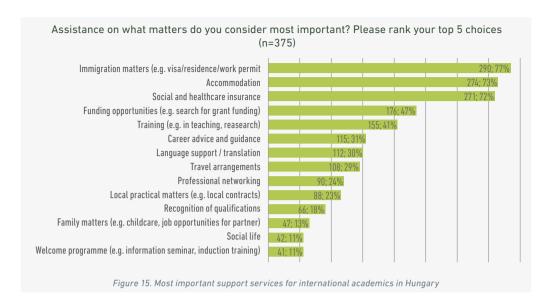
The relative importance of training in teaching and research as well as career advice and guidance in the ranking, selected by 41% and 31% of the respondents, respectively, reflected the academic and professional needs of international academics, particularly those at early stages of their career. These services echoed the key motivation factors for study and research in Hungary related to the development of new knowledge and the enhancement of future employment and career opportunities. Therefore, they are key for the degree of satisfaction with the mobility experience and outcomes.

Furthermore, support on local practicalities including language assistance and travel arrangements were found to be among the top 10 most important services for 30% and 29% of the respondents, respectively.

Family matters appeared on the bottom of the list (in absolute terms) due to a smaller share of the respondents (travelling) with a family in the sample. However, the qualitative feedback showed that the support on these issues was very important to international academics with families and contributed to their overall level of satisfaction with their stay in Hungary. As mentioned above, family issues were one of the most common reasons for international PhD students leaving the country after their graduation.

Support with **social integration** and welcome programmes was considered the least important type of assistance compared to other types of services. However, social integration was found to be one of the major challenges for the international academics in Hungary, partly contributing to the reasons for leaving the country ("social circle").

The reported challenges facing the respondents during their mobility are explored in more detail in section 7.3.



6.1.2. Obtained information guidance and personalised support

In total, 70% of all respondents reported to have obtained **information guidance** prior to their mobility and 39% reported to have received **personalised assistance** (e.g., support with a visa application, translation of documents, accommodation search) (Figure 16). These figures indicated that higher education institutions paid special attention to the preparatory pre-arrival stage, confirmed as well through the qualitative interviews with the sample institutions (for more details, see section 6.2.2).

Furthermore, 63% and 53% of the survey respondents received respectively some information guidance and support during their mobility experience. The numbers of the surveyed international academics who obtained information guidance and personalised support upon departure and after mobility were established to be rather small (23% and 17%, respectively) (Figure 16).

The above findings exposed a relatively big share of the respondents who reported to receive little or no information guidance or support prior or during their mobility and, therefore, indicate the need for higher education institutions in Hungary to further streamline and upscale their welcome and assistance activities at these mobility stages.

Such gap appeared to be particularly noticeable in case of support offered upon departure or after mobility where significantly fewer respondents reported to have obtained information guidance and personalised support compared to the other mobility stages. While it could be partly explained by the fact that some respondents had not yet finished their mobility experience by the time they participated in the survey, as evidenced through the qualitative institutional analysis, support activities at these final stages of mobility tend to be overlooked or underestimated by higher education institutions in terms of their strategic potential for contributing to talent attraction, retention and circulation, e.g. via international alumni activities and networking.



The following sections present a more detailed analysis of various support services obtained by the survey respondents at three mobility stages discussed above.

6.1.3. Type of information guidance and support obtained prior to mobility

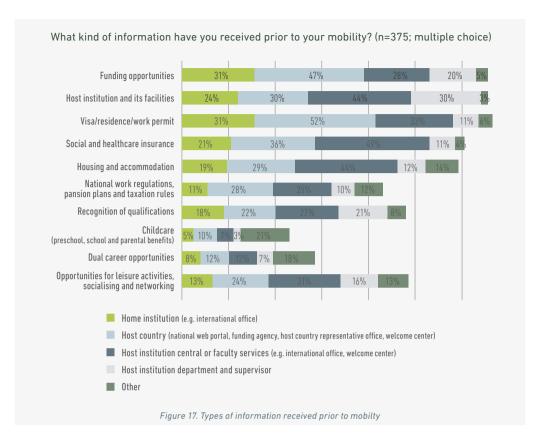
Information guidance

Information guidance was found to be most commonly obtained on visa/residence/work permit, funding opportunities, and on the host institution and its facilities, followed by social and healthcare insurance, and accommodation. Such guidance was obtained from various sources including the home institution and the host country (particularly important in case of guidance on funding opportunities and immigration matters) as well as from the host institution at central and departmental level, which played a prominent role in sharing information on insurance and accommodation matters (Figure 17).

Further topics on which a significant number of respondents reported to have benefitted from information guidance included **recognition of qualifications** and **opportunities for leisure**, socialising and networking. In both cases, the information was shared more or less equally from the different sources included in the options.

National work regulations, pension plans and taxation rules emerged as an area where few respondents reported to have been supported with related information and where institutions might need to pay greater attention to. Such information support was reported to be mostly provided at the level of the host country and host institution (central units), with a relatively high share of "other" responses, indicating that the concerned international academics might have sought information elsewhere.

Family related issues including childcare and parental benefits as well as dual careers represented the least common areas for information guidance as a share of all respondents. At the same time, these two areas were marked by the highest shares of "other" sources of information, which could indicate that the concerned respondents had to turn to other sources, possibly due to the fact that the information shared by the home and host organisations involved in the support cycle was either insufficient or misaligned with their needs.

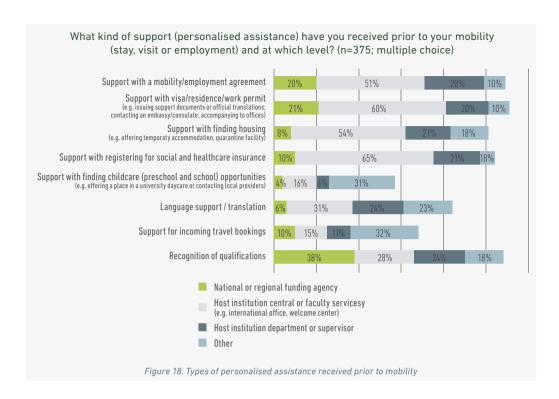


Personalised assistance

Echoing the findings on information guidance, the majority of the respondents reported to have obtained personalised assistance on similar matters that were essential for starting a mobility experience, namely **immigration** and **contractual issues** as well as **insurance** and **accommodation** (Figure 18). Support on these matters was predominantly offered by the host institution at the central or faculty level.

Recognition of qualifications emerged as another common area for personalised support, where national or regional funding agencies were found to play the most important role together with the host institution (faculty and department level).

Personalised support on language, family and travel related matters was found to have been obtained by a limited number of respondents, with the host institution's central level departments playing the most active role. Furthermore, the share of "other" sources of support was found to be significantly larger for these areas, again indicating that the respondents had to seek related assistance from other sources, different from the listed ones.



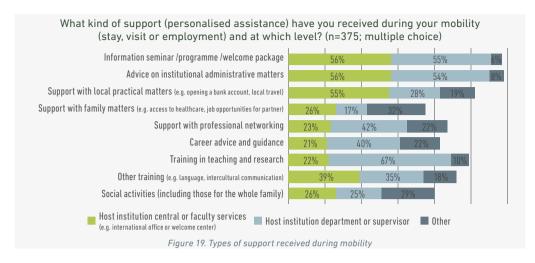
6.1.4. Type of support obtained during mobility

Most typical support services received by the respondents during their mobility included **advice on institutional administrative matters** and **welcoming activities** offered almost equally at the central/faculty and department level (Figure 19).

Furthermore, many respondents were found to be supported via training in teaching and research, mostly at the department or supervisor level, as well as on **local practical matters**, where the central or faculty level services played the leading role together with external ("other") providers.

Support on professional matters such as career advice and guidance, professional networking and other types of training was found to be received by the surveyed international academics less frequently compared to the aforementioned services. Assistance on the related matters was mostly offered at the department or supervisor level and partly at the central level. The share of "other" providers was found to be rather high, potentially indicating that institutional support on professional matters was insufficient for the respondents. Yet these areas were among the key drivers for the international academics to come to study or work in Hungary, as indicated in section 4.1.

Support on **family and social integration matters** was least frequently mentioned by the respondents given the relatively small share of those travelling with their family in the sample, with a remarkably high share of external sources of support used by the mobile academics participating in the survey.

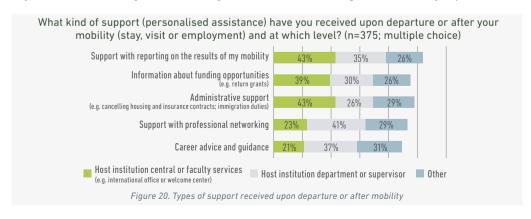


6.1.5. Type of support obtained upon departure or after mobility

Most common support services obtained by the respondents upon departure or after mobility included reporting and administrative support provided at both the central/faculty and department/supervisor level. Support on other matters, particularly related to professional development and integration, such as advice on career development and funding opportunities, as well as professional networking, was also obtained by some respondents primarily at the central level (Figure 20).

The share of the external service providers used by the survey participants was found to be the highest compared to other mobility stages. This could indicate that the respondents had to seek support from other sources than the host institution, as higher education institutions tend to pay less attention to the delivery of support services in the final stage of mobility. Such services are however crucial for the long-term retention of international academics and their professional integration of into the country's labour market, which could be particularly interesting from the perspective of international PhD students.

These findings might also indicate that towards the end of their stay mobile academics might have a better grasp of the service delivery, and might directly contact external services themselves, rather than rely on the host university, as the tendency seems to be in earlier stages of the mobility experience.



6.2. Institutional perspective

To complement the user's perspective, the analysis included a mapping of common services that were reported to be offered to international PhD students, researchers and lecturers by selected higher education institutions in Hungary through a series of interviews with the responsible managerial and support staff.

6.2.1. Typical services offered by higher education institutions

While institutions may offer a great variety of services to international academics depending on their commitment to setting up and maintaining a welcoming environment and the available resources in place, it was established from the interviews with four higher education institutions in Hungary that the most typical (most commonly mentioned) support services for international PhD students, lecturers and researchers at various mobility stages included the following:

- Providing information on academic requirements, administrative matters and social opportunities at the host institution shared at the selection stage prior to mobility;
- Visa support at the pre-arrival stage (including contacts with the embassy if needed);
- Support with university housing or temporary accommodation and help in search for private accommodation;
- Support with health insurance (including pre-filling documents for international academics);
- Support with obtaining a residence permit (e.g., via an on-campus immigration service);
- · Organising orientation weeks, days or information seminars upon arrival;
- Sharing welcome package or handbooks for international students and staff upon arrival;
- Offering access to various social activities and events (e.g., events organised or promoted by the International Student Union);
- Offering a mentoring programme to PhD students and researchers;
- Providing support in handling the national taxation system (including personal accompaniment to related offices offered to international lecturers and researchers);
- Organising language training through a university language centre.

These services corresponded to those highly ranked by the international academics, covering the most essential aspects of organising and supporting mobility.

Less common services, which could however serve as good practice examples, included mental wellbeing counselling and legal support provided to international academics (at the University of Pécs) as well as advice on local academic culture and requirements (at the University of Pécs and ELTE) provided to international PhD students.

Although some of the international PhD students / scholarship holders hosted by the interviewed institutions were reported to be mature students with family obligations, support on family matters was rather limited for this group of mobile academics. For example, the latter had to arrange independently visas and accommodation for their family members, with limited advice provided in some cases by the universities on private options for childcare, family insurance or accommodation. Support on family matters was found to be offered more frequently to international researchers and lecturers than to PhD students who were established to be significantly larger in numbers (section 5.1). Serving the latter on more complex personal situations involving family matters in a more systematic and structured way

seemed to be problematic for the interviewed institutions considering the persistent staff limitations and the limiting scholarship arrangements for family encompassing mobility.

6.2.2. Roles, responsibilities and standard processes in place

All interviewed institutions were found to have standard internal processes in place to deliver essential support services to international PhD students, particularly to those who were paying fees, either with their own means or with government support (e.g., Stipendium Hungaricum Scholarship). Assistance to international researchers and lecturers seemed to be organised in a less structured way.

The central or, in some cases, faculty-level administration (e.g., international relations offices or faculty members responsible for international relations) emerged from the analysis as the key player responsible for communicating with and supporting international PhD students prior to and upon arrival, offering general institutional information (e.g., via information days or orientation weeks) and assistance on visa, immigration, accommodation and healthcare matters (e.g., prefilling of documents in the Hungarian language for a healthcare card).

Several institutions reported to make active use of dedicated mobility management systems in order to enact these processes (e.g., DreamApply system at the University of Debrecen) or the supportive mentoring activities (e.g., remuneration-based mentor programme at the University of Miskolc).

In several instances, the institutions reported to have collaborated with external partners including private companies that helped them to ensure quality assistance on specific matters such as accommodation (e.g., the University of Debrecen) or talent recruitment (e.g., the University of Pécs). The universities reported to closely collaborate with the Tempus Public Foundation (TPF) in sharing scholarship related information as well as information about living or staying in Hungary.

Academic guidance and supervision for international PhD students were found to be offered at the department level or through a faculty doctoral school, and in some cases through doctoral school associations. As reported by the interviewed institutions, students were encouraged to meet their (potential) supervisors from the first day of their doctoral training. Such support, however, was established to depend on the commitment of supervisors to offer quality guidance to international PhD students which might differ significantly across individuals, faculties and institutions. As revealed by the interviews, some international PhD students required additional or more intensive guidance depending on their prior educational background.

Other types of services, particularly those related to professional development (e.g., career advice) and personal matters (e.g., social and family life), were in some instances offered at the department or supervisor level on an ad-hoc and case by case basis, resulting in varied quality.

As reported by one interviewee, support to international PhD students on various non-academic issues (e.g., psychological counselling and organisation of vaccination against COVID-19; cultural integration) was typically organised and offered by various faculty members (including both academic and administrative staff) on a volunteer basis. Such less formalised approach to handling the issue was qualified by the interviewee as "unsustainable in the long run" and also prone to variate in quality, depending on staff's commitment, abilities and skills.

Consequently, and in the absence of systematic staff training for this ad-hoc service delivery, the international academics could be perceived by the involved faculty members as an "extra burden",

resulting in lower quality administration and willingness to provide support. One interviewee stated quite critically in this respect that "the system cannot accommodate international PhD students and they sometimes give up".

Good practice examples, highlighted by the interviewees, however revealed the institutions' ongoing efforts in further structuring and professionalising support on such 'softer' matters (e.g., legal issues and mental wellbeing counselling offered at the University of Pécs), however it is clear that further and more systemic actions would be needed in this respect.

When it comes to international lecturers and researchers, given their significantly smaller numbers compared to PhD students, there appeared to be more room for more personalised (but less structured) support both at the central and department level, for example, involving personal mentoring on local practical matters and even personal accompanying to various public bodies. The related support arrangements were also found to be dependent on the funding body involved. For example, in case of Fulbright scholars, the universities in some cases provided additional support in searching and funding private accommodation that was more suitable to the scholars' needs in order to make their stay more attractive.

6.2.3. Suggestions for improvements

One of the core areas for improvement mentioned by the responding institutions related to the need to further streamline and formalise the responsibilities for supporting international PhD students. As stressed above, the lack of standardised protocols and procedures including more clearly articulated responsibilities for the related support staff, particularly at the faculty/department level, affected the quality of assistance and the attraction of international academics in the long run. Relatedly, it would be important to put some dedicated policies and structures in place in order to attract and retain international talent, while offering support for more effective and efficient recruitment, based on clear(er) responsibilities and roles within the host institution.

The institutions acknowledged the need to continue improving the quality of information guidance and support, paying more attention to social, cultural and academic integration of international academics. Furthermore, the interviewees commented on the importance of moving towards a bilingual university, with all documentation and processes translated/available in English as well as a wider use of English by the support staff.

According to the interviewees, attention should be paid to training faculty members on intercultural communication and offering opportunities for further professional development of support staff in order to improve their transversal skills (e.g., conflict resolution, time management) and knowledge about specific areas and topics of internationalisation (e.g. international alumni networks, promotion and use of social media, internationalisation of curriculum).

The analysis did not reveal any major gap between the most required services by international academics in Hungary and the typical services offered by the Hungarian higher education institutions. The latter were found to provide core services related to immigration, accommodation, and health insurance to the vast majority of mobile academics at various levels, with special emphasis on information guidance and support at the pre-arrival stage and during mobility. Yet, when it comes to less essential support on family matters and professional development, there is some room for improvement still, as many mobile academics had to rely on themselves or external service providers, which had some impact on their degree of satisfaction both with the obtained support and the mobility experience. This aspect is explored in more detail in section 7.

7. SATISFACTION WITH MOBILITY EXPERIENCE AND SUPPORT SERVICES

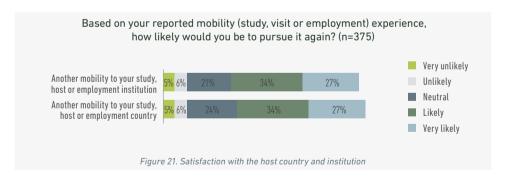
One of the key aspects investigated by the study involved the degree of satisfaction of the surveyed international academics in Hungary with their overall mobility (study, research or work) experience in the country as well as with the host country and institution. This issue was explored through the quantitative feedback to the survey and cross-checked against the qualitative comments on major challenges experienced during mobility.

7.1. Overall satisfaction with the host country and host institution

The overall level of the respondents' satisfaction was found to be quite similar for the host institution and the host country. In total, 61% and 62% of all respondents (n=375) reported to be likely or very likely to repeat their mobility experience to their host institution and host country, respectively (Figure 21).

Nonetheless, opinions seemed to be partly polarised. If close to two thirds of respondents would pursue the experience again, a significant one fifth (21%) and almost one fourth (24%) of the respondents were undecided (neutral) about their mobility experience at their host institution and host country, respectively.

Furthermore, more than one tenth of the survey participants were unlikely or very unlikely to come back to their host institution (11%) and host country (11%), respectively. This level of dissatisfaction was found to be **among the highest in the target region**⁸, and seemed to correlate with the reported variation in the quality of personalised and case-by-case support offered by host institutions.



The following sections explore in more details the level of the respondents' satisfaction with various types of support services at different mobility stages.

^{8.} The region of Central and South-East Europe covered by the UniWeliS dataset which was used for this study.

7.2. Satisfaction with services at different mobility stages

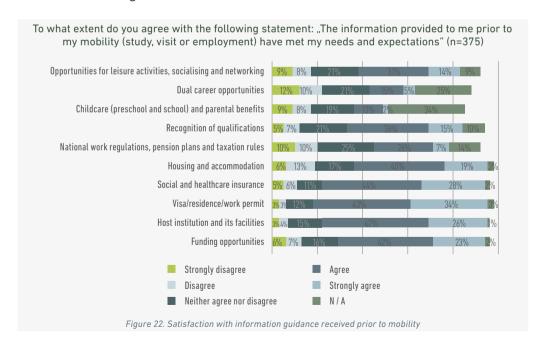
7.2.1. Satisfaction with information guidance obtained prior to mobility

When it comes to the information guidance received prior to mobility, the respondents expressed the highest level of satisfaction (and above the average of 61-62%) with information support on the essential matters for the mobility experience: visa/residence/work permit (77%), host institution and its facilities (73%), and social and healthcare insurance (72%), obtained prior to their mobility (Figure 22). As indicated in brackets above, the majority of those who required/received such information were satisfied or strongly satisfied.

Lower levels of satisfaction were found for funding opportunities (65%); housing and accommodation (59%) and recognition of qualifications (51%).

The analysis revealed the lowest levels of satisfaction when it comes to 'less essential' types of information such as opportunities for leisure activities, socialising and networking (45%), national work regulations, pension plans and taxation rules (33%), dual career opportunities (20%), and childcare and parental benefits (15%). These figures are however higher if calculated as the percentages of those who required/obtained such type of guidance (54%; 43%; 32%; 26%).

In these cases, the lower level of satisfaction could be linked to both the quality of related services, as well as to the overall framework conditions (e.g., taxation rules), that go beyond the remit of higher education institutions themselves and their service offer, but which shape the country and institutional attractiveness for foreign academics.

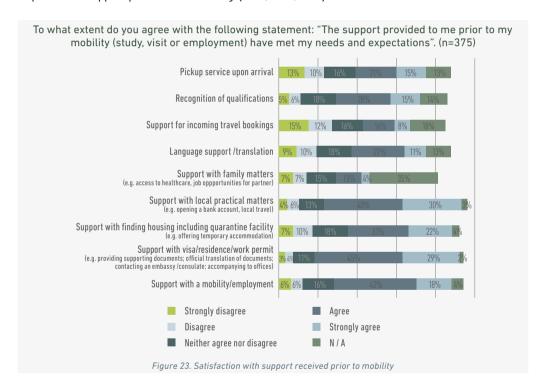


7.2.2. Satisfaction with support obtained prior to mobility

The highest levels of satisfaction (combined "agree" and "strongly agree" response options) were reported for the support obtained by the respondents prior to mobility on the following issues: visa/residence/work permit (74%), registration for social and healthcare insurance (70%) and conclusion of a mobility/employment agreement (60%) (Figure 23).

The medium levels of satisfaction were related to support with finding housing (53%), recognition of qualifications (43%) and language support (38%). These values were higher if calculated based on the number of those respondents who required such support prior to their mobility (61%; 59%; 51%).

Travel related issues including pickup service upon arrival (36%) and travel bookings (24%) as well as support with finding childcare facilities (17%) were marked with the lowest levels of satisfaction among the respondents. These values were higher if calculated based on the number of those respondents who required such support prior to their mobility (48%; 36%; 36%).



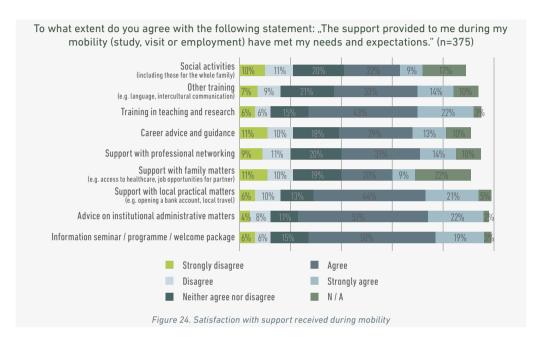
7.2.3. Satisfaction with support during mobility

When it comes to support during mobility, the respondents reported the highest levels of satisfaction on institutional administrative matters (73%), welcoming activities (69%), training in teaching and research (65%), and local support matters (65%) (Figure 24). These values were slightly higher if calculated as valid percentage based on the number of those who required/obtained such type of support (76%; 72%; 71%).

The lower/medium levels of satisfaction were established for other types of training (47%), support

with professional networking (45%) and career advice and guidance (42%). These values were higher if calculated as valid percentage based on the number of those who required/obtained such type of support (57%; 53%; 51%).

Especially problematic areas in terms of the level of satisfaction with the support obtained during mobility were family matters (29%) and social activities (31%). These values were higher if calculated based on the number of those who required/obtained such type of support (43%; 43%).

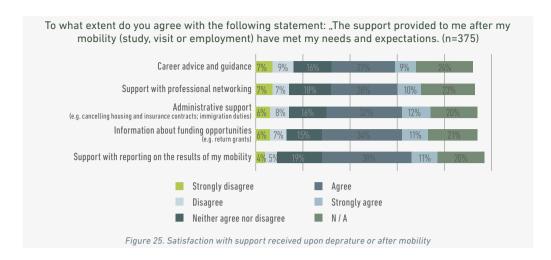


7.2.4. Satisfaction with support obtained upon departure

The degree of satisfaction with various support services obtained upon departure or after mobility was somehow lower than that observed at the pre-arrival and during mobility stages (Figure 25).

The highest level of satisfaction in this case was found at the level of 49% (valid percent – 63%), relating to the support with mobility reporting, followed by information on funding opportunities 45% (valid percent – 62%) and administrative support 44% (valid percent – 60%).

The lower levels of satisfaction were reported for professional development matters including professional networking (38%; valid percent – 54%), and career advice and guidance (36%; valid percent – 53%).

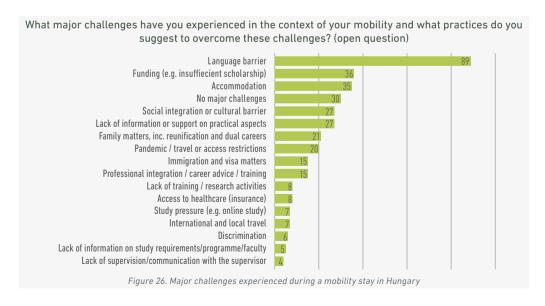


7.3. Challenges and suggestions for improvement

While reflecting on their mobility (study, research or work) experience, the survey respondents reported on a broad range of challenges they were confronted with during their stay in Hungary, as summarised in Figure 26.

Less than one tenth of all respondents highlighted the fact that they had not encountered any issues or problems in the context of their mobility, and in some cases praised their host country and institution. "It has been good and useful experience in my life. This experiment expanded my knowledge thanks to research, the laboratory work, and thinking. In addition, I learned a new language and culture".

"I am very satisfied with my PhD training in my host institution where I had great support on both professional and social aspects support since my arrival".



Language barriers, as well as social and cultural integration problems were spontaneously cited as the biggest challenges by the largest number of the survey participants (81; 22% and 35; 9%, respectively). One of the

main suggestions made by the respondents to tackle this issue was to introduce free mandatory language courses for international students. This finding echoed the key reasons for international PhD students with a *Stipendium Hungaricum* scholarship to leave the country after graduation, discussed in section 4.4.

"Mostly cultural and language barriers. Providing cultural and language programmes for free could mitigate these challenges."

Since the 2020/21 academic year, the newly enrolled *Stipendium Hungaricum* students are obliged to take part in free mandatory language and culture classes to ensure their successful social and cultural integration in Hungary, thus partially tackling this barrier. The scholarship payment is conditional to the grantees' successful participation in language courses.

However, international PhD students seem to be exempted from this requirement as long as they are enrolled in English-language taught programmes. In addition, language courses might not be free of charge for other groups of international academics (e.g., international lecturers and researchers/postdocs) who come to Hungary for a longer period and, therefore, require some basic language skills for local integration.

Relatedly, some difficulties with sourcing English-language information and lack of support on practical matters appeared among the respondents' major concerns. Several respondents reported on lack of information on academic requirements or lack of communication with the supervisor.

"English language webpages are not developed fully, thus some information is missing. However, this information is located on the Hungarian language website. Therefore, including all information on both websites would be great. That includes both the university main webpage and the faculty webpages".

"It was often difficult to find up-to-date information about current rules and regulations regarding immigration, health care, taxation, and other official matters. It would be great if universities could provide the most important data to the newcomers (or a list of reliable sources where one can find answers to their questions)".

The main suggestion proposed by the respondents in this respect, also with relevance to the language barrier, involved the following:

- Expand the offer of English-language information/guidance on institutional websites, including all administrative and settling-in information, PhD guidelines and interactive materials explaining academic/degree requirements etc.,
- Improve communication with the department (e.g., by holding regular department meetings in English or sharing meeting points by email or through a newsletter).

Funding challenges, particularly related to the reported insufficient size of a grant compared to living costs and private housing prices in Hungary, represented another big area of concern for many respondents.

"The living allowance is not comparable with other European countries. Considering the inflation rates and economic conditions, it is inevitable to increase the living allowance. For research purposes, especially for publications, additional grants are required for PhD scholars".

"Funding is the biggest challenge that I have faced and been facing. It's hard to find jobs in Hungary especially after COVID-19. Sometimes I think I shouldn't have come to Hungary without proper funding availability but I took the big step anyway". Some of the survey participants suggested to increase the size of the scholarships, and introduce family allowances and additional funds for research needs (e.g., publications, conference attendance, expenses related to field/lab work). Furthermore, as the pandemic was disruptive for some PhD researchers (e.g., in terms of limited access to research facilities, disrupted field work, overall stress), several suggestions were made to extend the financial support for those international PhD students whose research was affected by COVID-19.

The reported problems with **accommodation** were mostly due to the unmet personal or professional needs and expectations of the respondents (e.g., having a quiet place to study and to do research; opportunity to live in a culturally diverse and friendly environment; affordability; suitability for families; flexible contractual arrangements), signalling the need for more personalised and flexible accommodation options (better) suited to international academics' needs.

"Accommodation for a family especially if you have kids is not easy."

"The biggest challenge was finding private housing for married couples, because university housing is not suitable for them."

"Difficulties to find accommodation for family. One way to overcome the issue could be university dormitories for families. The other option could be asking international students to provide a contact of helpful real estate agents/landlords."

"As a PhD student I really need a good accommodation to have rest and focus on my study. But the dormitory assigned me a roommate who kept disturbing me. Nobody helped me with this and after several attempts I gave up and found a new place myself with great effort. Funding for accommodation is not sufficient for me to rent a room in the department".

"It would be better if we had a chance to cancel the contract with the dormitory after seeing it... as we have to sign it before travelling."

The respondents indicated a few possible ways to improve the issue by offering separate dormitories for international students, offering support in switching dormitories because of "different customs", and providing financial support for accommodating PhD students with families.

Another reported area of concern related to **professional development**, career advice, and difficulties with integration into the national labour market, as several respondents highlighted the lack of opportunities and institutional support in this respect. This finding points indirectly to some missed opportunities in terms of talent retention at both institutional and national levels.

"...Another challenge is the difficulty to find a job. Although I spent almost four years in Hungary, I could not find an appropriate job. As a PhD student, I'd like to deploy my knowledge and skills with others".

"No professional prospects discussed or offered".

"Opportunity for working with national students and national research centers".

"Getting practical experience during research or getting opportunities for starting the career. I suggest open-spaced business coworking practice where local businesses could find solutions among those proposed by students and in turn students will get an opportunity to implement their research in small local projects".

"The access to different organisations to conduct my studies, if there are partnerships with certain companies, it would provide a great help". Several suggestions for improvement included the following:

- Offering more guidance and assistance in employment and/or training search during and after the study period;
- More actively integrating international PhD students into local research groups and activities and creating bridges between local and international communities;
- Raising awareness of international academics as an asset to the host country and institution;
- Easing the process of extending the work and residence permit for graduates interested to stay in the host country.

Family matters including opportunities for reunification and dual careers were found to be most challenging for the respondents with families. The reported issues primarily related to difficulties in bringing families along and getting practical support on accommodation, healthcare and other family related issues. The respondents suggested to provide more information about opportunities and immigration requirements for partners and to introduce mentors who could help "manage family life matters during the mobility" in addition to providing family allowances, as mentioned above.

"Acquiring visa for close relatives, such as spouse and children. Acquiring visa for close relatives should be made flexible and automatic as for other scholarships, especially for PhD candidates."

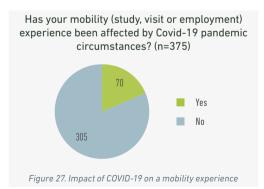
"It is challenging to manage mobility and bring family. I didn't receive clear guidelines on this issue prior to my arrival. It should be more clearly explained from the beginning to someone who will come with family." "The major challenge for me is family reunification. I've been abroad for 4 years and I still have two years to complete my studies. I suggest more support in family reunification and try to convince the immigration office to be less demanding and make it easier for students as their residence will be permanent."

A large share of all respondents (81%) was found to be affected by the COVID-19 pandemic (Figure 27), which was also mentioned in the qualitative feedback on the challenges faced during mobility. These comments revealed that the negative impact of the pandemic was mostly translated into the limited opportunities for international and local travel, challenges with online education/study/research and administration, and problematic access to research and other facilities.

"Coronavirus (university and dormitories are not ready for online classes implementation)"

"The university was closed, due to this pandemic, and therefore I stopped working in the laboratory, and that is why I was late with my research (my laboratory work)."

"The online studying during the pandemic. In order to perform my research analysis, I need access to the laboratory, so may be restrictions should be less strict for PhD students so that they can continue their studies"



8. CONCLUSIONS AND RECOMMENDATIONS

The study has shed light on the key trends and main issues when it comes to the support of international academics hosted by the Hungarian higher education institutions, particularly PhD students funded with a national grant. While some insights were also gained into the attraction and retention of international talent in Hungary, a more in-depth analysis based on a larger institutional sample and a more diverse group of international academics would be required to draw more substantive conclusions in this respect.

Our analysis showed that **Hungary is an appealing destination for study and research**, particularly for early-stage, degree-seeking international academics, originating from different countries in Africa and in Asia. The latter were particularly attracted by the existing academic and professional opportunities related to acquiring knowledge and enhancing future career perspectives. Yet, the levels of the international academics' satisfaction with the mobility experience were found to be rather low, whereas quite many *Stipendium Hungaricum* PhD scholarship holders reported limited interest in staying in Hungary after graduation.

The current situation could be due to multiple reasons, varying from structural issues related, for instance, to the country's overall preparedness to welcome and integrate foreigners, and resulting in various reported professional, social and personal challenges (e.g., language/communication, integration into the local labour market, family reintegration) to institutional issues such as lack or scarcity of dedicated quality information or support provided to international academics at various mobility stages.

- While structural barriers are difficult to address in the short term, the national agencies in Hungary involved in the attraction and retention of global talent could help further raise the awareness of the institutional communities and general public about international academics as an asset to the country, and for its economic and social development and prosperity. For further awareness raising, the agencies would need to rely on regular data monitoring, evidence collection and analysis channelled through dedicated communication campaigns.
- Such evidence would be instrumental for an open dialogue with all stakeholders including other public bodies and higher education institutions on information and services needed and expected by international academics (continuing language/cultural activities; extension of work and residence permits for those interested in staying in Hungary; family reunification for long-term scholarship or grant holders) and more coordinated approaches to provide them in a more collaborative way.
- It would be important for such national agencies to share comprehensive information about existing opportunities for personal and professional growth in Hungary with the prospective applicants of the national scholarship programmes already at the promotion stage (e.g., by using persuasive case studies) and offer regular updates with the successful candidates starting from the preparatory / pre-arrival stage. Such information, coupled with more flexible ways to obtain a residence and work permit after the end of the scholarship, could further stimulate the interest of international early-stage researchers in their subsequent professional and social integration in Hungary.

- » In view of the reported financial difficulties, it would be advisable for the national funding agency to review the value proposition for different groups of international academics by recalibrating the number, size and composition of grants and institutional financial incentives against the realities in Hungary (e.g. living costs, opportunities to invite and sustain a family) and similar offers in neighbouring countries (e.g. Austria, Czech Republic, Germany, Poland and Slovakia) based on a comprehensive benchmarking analysis.
- » National agencies can also play a crucial role in supporting higher education institutions in Hungary to further build their capacities and further professionalise service delivery, through targeted training sessions, peer learning activities, institutional service benchmarking within the country as well as with other higher education institutions in the region, and the promotion and recognition of good practices. Such a support would be instrumental in nurturing the development of a service culture, making a quality shift between strategies that are primarily driven by quantitative targets, to more mature approaches, focused on quality attraction of the top talent and their successful integration.

The Hungarian higher education institutions have been particularly successful in recent years in their efforts to attract this group of international academics and to further internationalise doctoral education in the country, relying on the financial support of the Stipendium Hungaricum programme. Attraction for other, more senior groups of international academics remains however limited for various reasons, including the reported funding limitations.

» In the next step, the Hungarian institutions will have to adopt more comprehensive, strategic and quality-driven selective approaches to international talent attraction. Such full-cycle approaches, starting from Master's or PhD level, intentionally and strategically link talent attraction, support and retention and offer distinct professional and academic integration scenarios from the start, based on more systematic and need/purpose-driven approaches in line with the institutional mission and overarching goals. Key in this respect is coordination of all related service units within the universities, bringing them together in their role of promoting integrated and customised services.

The new generation of quality-driven internationalisation strategies that are currently put forward by some higher education institutions in Hungary indicates some positive signals in this direction, which, however, will require further support in building institutional capacity for attracting, supporting and retaining talent, and embracing a service culture.

"> Comprehensive national funding schemes that span across all levels of tertiary education and bridge them to early stage (both doctoral and postdoctoral schemes) and more advanced academic careers would be essential to support such new aspirations of the Hungarian higher education institutions and to ensure more effective talent attraction and retention in the country. The responsible national agencies could provide some additional guidance to the higher education institutions in Hungary on how to use and combine the existing funding schemes in a more strategic and holistic way, with the aim to increase the overall quality of internationalisation.

The Hungarian institutions set up structured internal processes, mostly at the central or faculty level, to provide support on the matters that make mobility possible per se, including visa and immigration, accommodation, health insurance and basic administrative matters. The present analysis did not reveal any substantial gaps between the most essential services that are required/expected by international academics and those that are currently offered to them by the institutions. Neither did it expose any satisfaction problems with the support on the essential matters.

As information on study and work opportunities in Hungary seems to largely circulate by word of mouth through the professional networks of international academics, their level of satisfaction with the support obtained from the host country and institution plays an important role for the country's future attractiveness to global talent.

- To enhance their global competitiveness and to continue attracting talent, institutions in Hungary will need to continue improving their support and assistance to international academics prior to and during their mobility as well as upon departure.
- The established institutional processes could be further customised in order to be more inclusive and better capture specific situations and needs of international academics (e.g., culturally diverse/specific accommodation; special healthcare/insurance needs; family situation), which seem to be important for their overall level of satisfaction with the mobility experience as well as for the willingness to stay.
- With limited impact on related workload, institutional support on the essential matters could possibly involve several predefined tracks established in view of the immigration status, family situation or any other important social or cultural differentiators.
- >> The improvement of services also requires creating formal and less formal feedback loops to international academics to monitor and collect satisfaction data.

Furthermore, this analysis proves the importance of 'softer' issues including professional advice, career guidance, and family matters for international academics, particularly PhD students, who expect to improve their employment and career prospects in the first place, and whose overall quality of life and wellbeing depends on the possibilities to (smoothly) relocate with their families. Some of the institutions have so far underestimated the importance of support on such matters although there seems to be a growing understanding of the need for further improvements in these areas.

The lack or scarcity of more customised approaches to the support of international academics and the oversight of their professional and personal needs and aspirations could be among the reasons behind the relatively low level of satisfaction or incapacity to define one's level of satisfaction with the host country and institution, in combination with some reported financial and administrative struggles.

At present, the related support is organised in a less structured and systematic way than the essential services and is primarily delivered at the department/supervisor level. Yet, in many cases, it is based on unclear, often informal responsibilities and arrangements, which results in varied quality and lower levels of satisfaction.

- Similarly to the essential matters, support on 'softer' issues including professional advice, career guidance, and family matters have to be further improved and mainstreamed at the Hungarian higher education institutions.
- It would be important to increase support to the Hungarian higher education institutions specifically for creating opportunities for professional integration of international academics, particularly at early career stages (e.g., funding for internship schemes, networking, professional job counselling). Institutions will need to continue developing capacity of their staff to provide high-quality services with regard to such topics, which could be further incentivised through dedicated support measures at national level.

- » Professional and social integration of international academics can also be enabled by institutions themselves by raising awareness of their valuable presence among local staff and students through various internal communication channels and by also creating both formal and informal spaces for interaction and collaboration.
- There is a strong need to streamline and further professionalise support to international academics on both the core and less essential services offered at the faculty/department level by formalising responsibilities and allocating adequate staff and other resources for the related (clearly articulated) purposes, while fostering synergies with central level activities.
- Such professionalisation requires creating opportunities for further professional development of both administrative and academic staff responsible for service delivery and supervision of international academics including managerial, intercultural communication and English-language training as well as institutionalised opportunities to recognise and award their efforts.
- >> Further opportunities to finance institutional capacity-building for a comprehensive internationalisation, including by means of staff development programmes should be created through the existing or new national funding schemes.

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