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STUDENT MIGRATION AS A DRIVER OF HUMAN CAPITAL DEVELOPMENT*

Jana Španková ¹, Monika Gullerová ²

^{1,2} Alexander Dubček University of Trenčín, Študentská 3, 911 50 Trenčín, Slovakia

E-mails:^{1*} jana.spankova@tnuni.sk (Corresponding author); ² monika.gullerova@tnuni.sk

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Abstract. This study investigates the determinants of international student migration and their implications for human capital development in Slovakia within the broader context of increasing global mobility. As international competition for talent intensifies, understanding the factors shaping students' destination choices and post-graduation intentions becomes increasingly important for sustainable socio-economic development. The research is based on primary quantitative data collected through a questionnaire survey administered to 150 international students enrolled in Slovak higher education institutions. The data were analysed using descriptive statistics and selected non-parametric techniques to identify significant relationships between key variables. The findings reveal that linguistic and cultural proximity, together with financial considerations, represent the dominant pull factors influencing students' decisions to study in Slovakia. In contrast, the perceived quality of education plays a comparatively limited role, suggesting that Slovakia is primarily viewed as an accessible and culturally compatible destination rather than a highly competitive academic environment. The results further indicate that a substantial proportion of students consider remaining in Slovakia after graduation; however, their intentions are strongly conditioned by economic opportunities and personal factors. The study contributes to the literature on international student mobility by providing empirical evidence from an emerging destination country. It also offers policy-relevant insights to strengthen Slovakia's attractiveness and improve the long-term retention of international graduates, thereby supporting sustainable human capital development.

Keywords: student migration; international student mobility; human capital development; push and pull factors; Slovakia

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1. Introduction

Migration is a key socio-economic phenomenon influencing contemporary societies and labour markets. In recent years, youth migration has surged, with young individuals increasingly choosing to pursue educational or professional opportunities outside their region of origin. Slovakia is currently experiencing a significant outflow of young, educated individuals emigrating abroad. This “brain drain” raises concerns about the future development of the domestic labour market. Furthermore, migration profoundly influences social structures, economies, cultures, and political landscapes, affecting both countries of origin and destination. From a motivational perspective, migration is traditionally categorised into economic migration, forced displacement (refugee migration), and family reunification (Tsegay, 2023). In the contemporary era, investigating the determinants of human capital development alongside migration trends has become increasingly critical. Migration is progressively recognised as a fundamental catalyst for sustainable socio-economic progress. In this

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context, the migratory behaviour of students warrants rigorous scholarly attention, as this demographic represents a vital reservoir of intellectual and human capital. Elucidating these dynamics is essential for expanding the conceptual understanding of the phenomenon and for optimising practical management frameworks. It is imperative to address several key challenges in this field, specifically: the identification of the primary drivers underpinning students' migratory decisions; the evaluation of the temporal consequences (both short- and long-term) of such movements; the formulation and implementation of domestic policies designed to curtail population outflows. The multifaceted dimensions of migration—including motivation, magnitude, directionality, and impact—are a focal point of applied research on modern trends in human capital formation. Historically, since the nineteenth century, economic determinants have been viewed as paramount in explaining migratory trajectories (Ravenstein, 1885). These economic variables profoundly influence the processes of globalisation and the broader dynamics of population mobility. For decades, the theoretical and methodological complexities of migration as a global phenomenon have been scrutinised by an extensive range of scholars. In various national contexts, migration is predominantly conceptualised through the lens of labour mobility (Adugna, 2019; Wang et al., 2023), with particular emphasis placed on its subsequent impact on the macroeconomic landscape (Rokita-Poskart et al., 2024; Langović et al., 2024).

The objective of this research is to bridge a significant scholarly gap by investigating the push and pull dynamics that international students consider when selecting Slovakia as an educational destination, as well as their subsequent intentions regarding post-graduation residency. In essence, the study seeks to delineate the multifaceted determinants governing the relocation trajectories of international students. To achieve this, the following research questions have been formulated. Understanding the factors that influence students' migration decisions is therefore essential. In particular, it is important to identify the motivations behind their choice of study destination and their intentions after completing their studies.

RQ1: Which key push and pull factors (economic, cultural, linguistic and educational) influence international students' decision to study in Slovakia?

RQ2: Which factors significantly influence international students' intention to remain in Slovakia after graduation?

2. Theoretical background

The International Organisation for Migration (IOM) defines migration as the movement of individuals across national borders for the purpose of attaining better economic conditions. Migrants typically seek better employment opportunities or improved living conditions in the destination country. Economic migration is characterised by settling abroad for more than one year. Working and living conditions in other countries motivate Slovak citizens to establish temporary or permanent residency abroad (IOM UN Migration, Slovakia, 2023). In recent years, there has been a global increase in the number of students leaving their home countries to pursue studies at foreign universities (Vineetha et al., 2025). Simultaneously, this trend highlights the brain drain phenomenon, which refers to the migration of skilled professionals from low- and middle-income countries to higher-income nations, subsequently impacting the labour market (Mathew & Mathew, 2020; Gözüml et al., 2024). Several studies have explored the motivations behind students' decisions to study abroad and their destination selection processes, drawing on frameworks such as push-pull factor theory (Lisana, 2022; Shahrokh et al., 2025). The decision to study abroad is influenced by pull factors, such as the quality of education, and push factors, such as limited employment opportunities in home countries.

Furthermore, key reasons for studying abroad include the quality of education, career prospects, and cultural understanding (Yılmaz & Temizkan, 2022). Mazzarol and Soutar (2002) identified financial considerations, the host country's environment, geographic proximity, personal contacts, and recommendations from others as the primary factors influencing students' decisions to study abroad. Several authors highlight economic factors as a significant driver of migration (Maringe & Carter, 2007). Other scholars emphasise linguistic and cultural proximity as an important factor (Chen, 2007; Weber & Van Mol, 2023). This suggests that host-country-related, institutional, economic, and environmental factors, along with recommendations from family and friends, are the primary determinants of students' decision-making when selecting their study-abroad

destination. As this research focuses on the Slovak context, it examines the factors that influenced international students' decision to study in Slovakia.

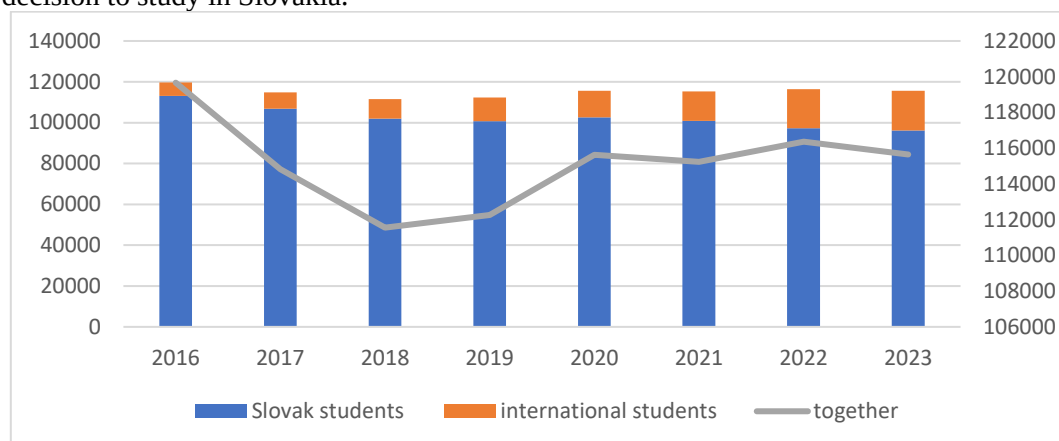


Figure 1. The Number of Slovak and International Students in Higher Education Institutions (2016–2023)

Source: Ministry of Education, Research, Development and Youth of the Slovak Republic <https://vaia.gov.sk/wp-content/uploads/2023/11/Summary-Report-of-the-EDP-to-the-Strategy.pdf>

As shown in Figure 1, total enrollment in higher education declined marginally, from 119,667 in 2016 to 115,642 by 2023. Crucially, the domestic student cohort experienced a pronounced reduction – from 113,092 to 96,146 over the same period – indicating a sustained long-term decline in the homegrown student population. Conversely, the international student demographic exhibited steady growth: initially recorded at 6,575 in 2016, the figure surged to 19,496 by 2023. This trend underscores a burgeoning predilection for Slovak academic institutions among foreign nationals. Consequently, a discernible demographic shift is occurring within the higher education sector, where a growing influx of international scholars is mitigating the attrition of domestic students. Student mobility exerts a profound influence on the macroeconomic stability of the country of origin. The systematic emigration of students, particularly toward prestigious global institutions, precipitates a "brain drain" phenomenon (Nghia, 2019; Prifti, 2025). This trajectory ultimately destabilises the domestic labour market, as highly skilled graduates frequently elect to remain within their destination countries. The ramifications of brain drain are systemic and multifaceted, affecting domains ranging from the fiscal sustainability of higher education to aggregate economic growth. In this context, the country of origin suffers a depletion of human capital, a factor indispensable to its global competitiveness (Bedianashvili et al., 2024). Conversely, the host nation benefits from an influx of talent, cultural diversity, and prospective professionals who serve as catalysts for socio-economic advancement. The decision to repatriate after graduation is contingent on a complex interplay of factors, including professional opportunities, remuneration structures, quality of life, and avenues for personal growth. Should graduates remain abroad, this would represent a substantial loss of state investment in human capital (Rydell et al., 2023). Extant research emphasises that pecuniary considerations – specifically labour market accessibility and the cost of living – predominantly dictate these post-scholastic migratory trajectories (Lee & Shutler, 2025). Furthermore, career development prospects within the host country are cited as a primary driver of the initial decision to study abroad (Zhai et al., 2019; Netierman et al., 2022) and serve as a significant determinant in the pursuit of post-graduation employment within that same jurisdiction (Cameron et al., 2019; Hooijen et al., 2017). Scholars also posit that familial cohesion serves as a potent influence; students often harbour a desire to maintain proximity to family members, exhibiting a marked propensity for return migration driven by these affective ties (Holloway et al., 2012; Martin, 2017; Van Schalkwyk et al., 2021). Furthermore, higher education institutions function as pivotal intermediaries in the labour market transition. Many universities integrate mandatory internships to provide requisite professional exposure, alongside comprehensive job-search training and vocational counselling (Cameron et al., 2019; Nghia, 2019; Dandi et al., 2024). Ziguras and McBurnie (2014) contend that wage differentials between the host and home nations function as a primary determinant of post-graduation residency. Elevated standards of living and competitive remuneration packages in the host country frequently incentivise long-term stay, thereby reducing the probability of immediate repatriation. This dynamic carries significant implications for human capital transfer. While the country of origin may face a shortage of qualified professionals, the host country

capitalises on their specialised competencies and linguistic versatility. Such complexities must be meticulously accounted for in the formulation of migration and educational policy. Empirical evidence suggests that linguistic barriers can pose a substantial barrier to cultivating professional networks, even when a global lingua franca, such as English, is utilised in the host country (Zhai et al., 2019). Linguistic proficiency dictates not only the efficacy of communication but also the capacity to engage in sophisticated professional discourse and navigate complex labour market landscapes. Thus, language serves as a critical vector for integration; a lack of proficiency can severely impede both professional maturation and social acculturation. Eisenchteter (2022) maintains that the repatriation of internationally educated individuals yields significant dividends for the home country. These returnees introduce a wealth of modern competencies, global exposure, and transnational networks. By implementing innovative paradigms and operational methodologies assimilated abroad, these graduates can catalyse the modernisation of domestic enterprises. The integration of foreign technologies and pioneering practices possesses the potential to invigorate the local economy and bolster its international standing. Moreover, returnees often facilitate scientific and commercial collaborations, creating unprecedented development opportunities. Eisenchteter (ibid.) further highlights the socio-cultural shifts these individuals undergo, noting that they often return with a more cosmopolitan perspective and progressive values, which may drive positive societal evolution. Analysing these trends is therefore vital to understanding human capital development as a cornerstone of sustainable progress. Recent research conducted in Slovak organisations further emphasises that systematic human resource development practices play an important role in strengthening human capital and supporting long-term organisational sustainability. Ultimately, the propensity for migration shapes individual life paths and employability; for instance, Slovak students' mobility to the Czech Republic is instrumental in fostering autonomy and environmental adaptability (Shutaleva et al., 2022).

The push-pull framework represents one of the most frequently applied theoretical approaches in the analysis of international student mobility (Mazzarol & Soutar, 2002; Chen, 2017). According to this perspective, students evaluate a combination of economic, educational, cultural and linguistic factors when selecting a destination country. Previous studies suggest that cultural and linguistic proximity reduces adaptation costs and facilitates social integration in the host country (Weber & Van Mol, 2023). The push-pull theory represents one of the most widely used theoretical frameworks for explaining international student mobility. According to this approach, students evaluate a combination of economic, educational, cultural and linguistic factors when selecting a destination country (Mazzarol & Soutar, 2002; Chen, 2017). Previous research suggests that linguistic and cultural proximity reduce barriers to adaptation and facilitate integration into the host country (Weber & Van Mol, 2023). Furthermore, studies indicate that students who experience stronger social and cultural integration are more likely to remain in the host country after graduation (Hooijen et al., 2017; Cameron et al., 2019). Consequently, linguistic and cultural factors may influence not only destination choice but also long-term migration intentions.

Although previous studies have extensively examined international student mobility and destination choice using the push-pull framework, most empirical evidence originates from traditional host countries such as Australia, Canada, the United Kingdom, and other Western European destinations. Limited attention has been paid to emerging destination countries in Central and Eastern Europe, particularly Slovakia. Furthermore, existing research has focused primarily on students' destination choice. At the same time, less attention has been devoted to the relationship between destination-related factors and students' post-graduation intentions to remain in the host country. Therefore, a research gap exists regarding the determinants of international student migration and retention in the Slovak context. This study addresses this gap by examining the key pull factors influencing international students' decision to study in Slovakia and by analysing the factors associated with their intention to remain in the country after graduation.

To answer the first research question (RQ1), the following hypotheses were formulated:

H1: Linguistic proximity represents a significant pull factor influencing international students' decision to study in Slovakia.

H2: Cultural proximity is perceived as a stronger pull factor among Master's degree students than among Bachelor's degree students.

To answer the second research question (RQ2), the following hypothesis was formulated:

H3: Master's degree students demonstrate a significantly higher intention to remain in Slovakia after graduation than Bachelor's degree students.

3. Research objective and methodology

The main objective of this study is to identify the key factors influencing international students' decision to study in Slovakia and to examine the determinants affecting their intention to remain in the country after graduation. The analysis focuses on economic, cultural, linguistic, and individual factors shaping students' migration behaviour.

Based on this objective, two research questions and three hypotheses (H1–H3) were formulated. These hypotheses were subsequently tested using chi-square tests of independence.

The research is based on a quantitative approach using primary data collected through a questionnaire survey. The respondents consisted of international students from various countries studying at Slovak higher education institutions. A total of 150 respondents participated in the survey. The sample was obtained using non-probability convenience sampling, as respondents were recruited through university communication channels and social media platforms. Data collection was conducted anonymously through an online questionnaire.

The questionnaire was designed to identify key pull factors influencing students' decision to study in Slovakia, as well as their post-graduation intentions. For selected questions, respondents were allowed to choose multiple answers to capture the complexity of their decision-making better.

The collected data were processed using SPSS. Descriptive statistics were applied to summarise the data, while inferential statistical methods were used to examine relationships between variables.

To test the hypotheses, chi-square tests of independence were applied to analyse relationships between categorical variables such as level of study, gender, and selected motivational factors. The Mann–Whitney U test was used to identify differences between independent groups, and measures of association (Phi coefficient and Cramer's V) were used to assess the strength of relationships. The level of significance was set at 0.05.

The basic structure of the research sample is presented in Table 1.

Table 1. Number of respondents by gender and level of study

Number of respondents	1st level (Bachelor's degree study)	2nd level (Master's degree study)	Total
Females	52	66	118
Males	10	22	32
Total	62	88	150

Source: own calculation

The data presented in Table 1 show that the research sample consisted of 150 respondents, of which 118 were female (78.7%) and 32 were male (21.3%). In terms of level of study, 62 respondents were enrolled in Bachelor's degree programmes and 88 in Master's degree programmes. The distribution indicates a higher representation of female students as well as students at the second level of study.

The research was conducted in accordance with ethical standards, including voluntary participation, anonymity of respondents, and confidentiality of the collected data.

The study has several limitations. The sample is not representative, as it is based on non-probability sampling. The data are self-reported and reflect respondents' subjective perceptions. In addition, the cross-sectional design does not allow conclusions about causal relationships or changes over time.

4. Results and discussion

The objective was to determine the rationale behind the respondents' decision to pursue their studies in Slovakia. The findings indicate that the most prevalent pull factor is linguistic proximity, cited by 93 respondents (35% of the responses). The decision to study in Slovakia was driven by financial factors for 76 respondents (29%), while cultural proximity was identified as a key determinant by 62 respondents (23%). On the other hand, the perceived quality of education proved to be the least prevalent determinant, influencing the decision of just 33 respondents (22% of the responses).

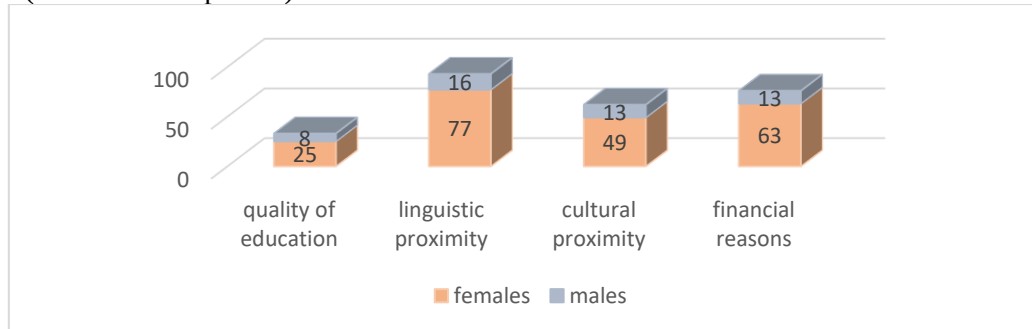


Figure 2. Respondents' pull factors
Source: own calculation

Table 2. Relationship between Level of Study and Respondents' Answers

Crosstab					
			Yes	No	Total
Level of study	1st level (Bachelor degree study)	Count	19	43	62
		Expected Count	25.6	36.4	62.0
	2nd level (Master's degree study)	Count	43	45	88
		Expected Count	36.4	51.6	88.0
Total		Count	62	88	150
		Expected Count	62.0	88.0	150.0

Source: own calculation (SPSS)

The analysis examined the Financial Reasons variable in relation to the Level of Study control variable. Pearson's Chi-square analysis resulted in a value of 0.736 (df = 1). With an asymptotic significance of 0.391, the analysis demonstrates no statistically significant association between the variables. The non-significant nature of the results was additionally validated by the continuity correction statistic of 0.479 with one degree of freedom ($p = 0.489$). The absence of a significant association was further supported by the Likelihood Ratio test, which produced a value of 0.737 with one degree of freedom ($p = 0.391$). The results of Fisher's Exact test (two-sided $p = 0.412$, one-sided $p = 0.245$) further confirm that the examined variables are not significantly related. Accordingly, the null hypothesis is retained, signifying an absence of statistically significant dependence between financial factors and the respondents' level of study. Table 2 presents the asymptotic significance values for symmetric measures, specifically the Phi coefficient and Cramer's V, which are utilised to quantify the strength of the association between two nominal variables. These coefficients operate on a scale from 0 to 1, representing no association and perfect association, respectively. The Phi coefficient and Cramer's V both indicated a very weak association (0.070); however, with an approximate significance of 0.391, this relationship did not reach statistical significance.

Table 3. Quality of Education as a Motivational Factor for Study

Crosstab					
			Yes	No	Total
Level of Study	1st level (Bachelor's degree study)	Count	16	46	62
		Expected Count	13.6	48.4	62.0
	2nd level (Master's degree study)	Count	17	71	88
		Expected Count	19.4	68.6	88.0
Total		Count	33	117	150
		Expected Count	33.0	117.0	150.0

Source: own calculation (SPSS)

Table 3 demonstrates the relationship between the students' degree level and their selection of educational quality as a primary motivator. Only 22% of the total sample (33 students) considered the quality of education a motivating factor, standing in contrast to the 78% (117 students) who did not. Thus, the data suggest that educational quality is a secondary consideration rather than a primary driver for international students coming to Slovakia. By level of study, the quality of education, as the key pull factor, was selected by 16 first-degree respondents, just above the expected frequency of 13.6. In contrast, 17 second-degree students indicated this factor, falling slightly below the expected count of 19.4. Overall, however, the discrepancies between the observed and expected values are negligible. It follows that students in both degrees of study perceive the quality of education in Slovakia similarly – as a secondary or less significant factor in their choice of study destination.

Table 4. Motivation to Study in Slovakia – Linguistic Proximity

Crosstab					
			Reason for studying in Slovakia: Linguistic proximity		
			Yes	No	Total
Level of Study	1st level (Bachelor's degree study)	Count	39	23	62
		Expected Count	38.4	23.6	62.0
	2nd level (Master's degree study)	Count	54	34	88
		Expected Count	54.6	33.4	88.0
Total		Count	93	57	150
		Expected Count	93.0	57.0	150.0

Source: own calculation (SPSS)

The findings indicate that linguistic proximity was a decisive factor for the majority of respondents, accounting for 93 students (62%) in total. Within the Bachelor's level cohort, 39 respondents (62.9%) cited linguistic proximity as a reason for studying in Slovakia, compared to 23 (38.6%) who did not; expected values were 38.4 and 23.6, respectively. Regarding Master's level, 54 respondents (61.4%) cited this factor, while 34 (38.6%) did not, against expected values of 54.6 and 33.4. These figures indicate negligible deviations from statistical expectations. In total, 62% (93) of the sample cited linguistic proximity as a reason for their choice of study destination, while 38% (57) did not, suggesting the observed distribution closely follows the expected statistical distribution. The discrepancies between observed and expected values are negligible, indicating that the level of study does not significantly influence the role of linguistic proximity in the decision-making process. These findings suggest that linguistic proximity constitutes a primary motivational factor for both expatriate Slovaks and international students when selecting Slovakia as their study destination, irrespective of whether they are enrolled in Bachelor's or Master's programs. Furthermore, linguistic proximity may serve as a stabilising element in destination selection and could significantly enhance the overall attractiveness of the Slovak tertiary environment.

Table 5. Motivation to Study in Slovakia – Cultural Proximity

Crosstab					
			Reason for studying in Slovakia: Cultural		
			Yes	No	Total
Level of Study	1st level (Bachelor's degree study)	Count	19	43	62
		Expected Count	25.6	36.4	62.0
	2nd level (Master's degree study)	Count	43	45	88
		Expected Count	36.4	51.6	88.0
Total		Count	62	88	150
		Expected Count	62.0	88.0	150.0

Source: own calculation (SPSS)

Table 5 illustrates the relationship between cultural proximity as a motivational factor and the respondents' level of study. Within the Bachelor's degree cohort, 19 respondents cited cultural proximity as a reason for selecting Slovakia, compared to 43 who indicated it was not a factor. In contrast, at the Master's degree level, 43 respondents identified cultural proximity as a decisive factor, while 45 reported it negatively. A comparison with the expected frequencies – calculated under the assumption of a uniform distribution – reveals a noteworthy shift. At the Bachelor's degree level, 25.6 affirmative responses were expected, yet only 19 were observed, indicating that cultural proximity is a less decisive factor for this cohort. Conversely, at the Master's degree level, the observed frequency (43) exceeded the expected value (36.4), suggesting that cultural proximity plays

a more prominent role in the decision-making process for Master's degree students. Pearson's chi-square test confirmed a statistically significant relationship between the level of study and the perception of cultural proximity as a motivational driver ($\chi^2(1) = 5,78$; $p = 0,016$). Master's degree students cited cultural proximity as a reason for selecting Slovakia more frequently than Bachelor's degree students. However, the strength of the association is weak ($\Phi = 0.196$), indicating a modest effect size. This finding may be attributed to the greater maturity of Master's degree students, their prior international experiences, or a heightened emphasis on socio-cultural factors when selecting an environment for further education.

The study also sought to identify international students' post-graduation retention intentions. The data reveal that 62% (93) contemplate staying in Slovakia, with 28% expressing definite intent and 34% indicating probable intent. Meanwhile, 21.3% of the cohort is undecided. A minority of 16.7% expressed no desire to remain in the country, subdivided into those who responded 'somewhat unlikely' (11.4%) and 'unlikely' (5.3%).

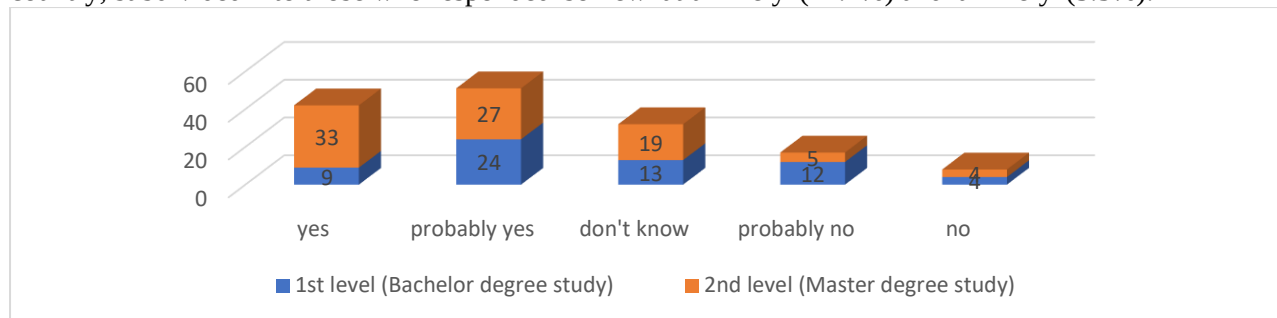


Figure 3. Post-graduation intentions

Source: own calculation

Based on the results of the Chi-square test of independence, it can be concluded that a statistically significant relationship exists between the level of study and international students' intentions to remain in Slovakia post-graduation ($\chi^2 = 13,81$; $df = 4$; $p = 0,008$). Since the p-value is below the significance threshold of 0.05, the null hypothesis of independence between the variables is rejected. This indicates that the degree level significantly influences students' decision-making regarding their stay in the country. A detailed examination of observed and expected frequencies reveals that Master's degree students expressed a definite intent to remain in Slovakia ("yes") more frequently than would be expected under the assumption of independence (observed = 33; expected = 24.6). Conversely, Bachelor's degree students provided negative responses more often than expected, particularly the "somewhat unlikely" option (observed = 12; expected = 7.0). These findings suggest that Master's degree students are more likely to remain in Slovakia after completing their studies than students in Bachelor's degree programmes. These findings suggest that higher-level students are more likely to remain in Slovakia after graduation. Consequently, these results highlight the importance of targeting retention policies specifically toward international students enrolled in advanced academic programs.

Table 6. Intention to Stay by Gender

Intention to Stay	Gender	Females	Males	Total
Yes	Count	34	8	42
	Expected Count	33.6	8.4	42
Probably Yes	Count	42	9	51
	Expected Count	40.8	10.2	51
Do Not Know	Count	26	6	32
	Expected Count	25.6	6.4	32
Probably No	Count	12	5	17
	Expected Count	13.6	3.4	17
No	Count	4	4	8
	Expected Count	6.4	1.6	8
Total	Count	118	32	150
	Expected Count	118	32	150

Source: own calculation (SPSS)

To verify the association between gender and the intent to remain in Slovakia post-graduation, a Chi-square test of independence was conducted. The analysis revealed no statistically significant relationship ($\chi^2 = 4,42$; $df =$

4; $p = 0,352$). Since the p -value is greater than the 0.05 significance threshold, the null hypothesis is maintained. These findings suggest that gender is not a significant determinant of students' decision-making regarding their future residence in the host country. A comparison of observed and expected frequencies indicates that differences between male and female respondents are relatively minor. The majority of both genders expressed a positive intention to remain in Slovakia ("yes" or "somewhat likely"), which aligns closely with statistical expectations. Although slight deviations were observed in the "no" category – where the observed frequency for men (4) was higher than the expected frequency (1.6) – this discrepancy was insufficient to establish a statistically significant association. Consequently, these results suggest that international students' decision to remain in Slovakia post-graduation is not significantly influenced by gender. Instead, the most prominent driver for student retention is personal life, cited by 113 respondents (75.3%). This factor represented the highest frequency among all variables examined. This finding implies that social bonds, romantic relationships, family considerations, or overall life satisfaction play a pivotal role in the decision-making process regarding long-term residence in the host country.

Occupational prospects emerged as the second most frequently cited motive, identified by 51 respondents (34%). This finding underscores the importance of economic drivers and labour market integration as key incentives for retaining international students in Slovakia. Furthermore, linguistic and cultural affinity was cited by 31 respondents (20.6%), highlighting the role of cultural compatibility and linguistic similarity in facilitating social integration. These factors effectively lower the barriers to living abroad and increase students' propensity to remain in the country post-graduation. Conversely, the pursuit of further education was the least cited reason, reported by only 25 respondents (16.6%). This suggests that while academic progression motivates a specific subset of students, it plays a secondary role relative to personal and professional considerations. It is important to note that since respondents were permitted to select multiple answers, their decision-making process is characterised by a complex interplay of variables. The results indicate that socio-emotional and personal factors exert a more substantial influence than purely economic or academic motives. This insight highlights the necessity of prioritising integration support, fostering social ties, and cultivating a welcoming environment to encourage long-term international student retention in Slovakia.

The primary drivers behind international students' decisions to depart Slovakia post-graduation are economic factors, specifically wage differentials and superior occupational prospects abroad. Competitive remuneration in foreign markets emerged as the most prevalent motive, cited by 50% of respondents (75). This result underscores the significance of financial remuneration as a critical determinant influencing students' migratory trajectories. Similarly, superior professional opportunities abroad were identified as a significant factor by 46.6% of respondents (70). These findings suggest that international students perceive foreign labour markets as more advantageous in terms of career trajectory, vacancy availability, and professional development. This perception is a substantial push factor behind the decision to leave Slovakia upon completing their studies. Conversely, familial considerations were cited less frequently, by only 10.6% of respondents (16). While this factor influences the decision-making of a subset of students, its impact is significantly lower than that of economic variables. This indicates that the decision to emigrate is primarily motivated by pecuniary and professional incentives rather than personal or family-related circumstances.

Given that respondents were permitted to select multiple answers, it is evident that their decision-making process is the result of a synergistic combination of factors. Overall, the results indicate that the exodus of international students from Slovakia is driven primarily by economic motives. This trend emphasises the need to enhance labour conditions, career pathways, and financial incentives to bolster the retention of international graduates in the Slovak labour market.

Testing of Hypotheses

H1: Linguistic proximity is a significant pull factor influencing international students' decision to study in Slovakia.

The results demonstrate that linguistic proximity was identified by 93 respondents (62%), representing the most frequently selected motivational factor among all examined pull factors. Therefore, H1 is supported. The findings confirm previous studies suggesting that linguistic similarity significantly reduces adaptation barriers and positively influences destination choice.

H2: Cultural proximity significantly differs according to the level of study and is perceived as a stronger pull factor among Master's degree students than among Bachelor's degree students.

Pearson's Chi-square test revealed a statistically significant relationship between cultural proximity and level of study ($\chi^2 = 5.78$; $p = 0.016$). Master's students selected cultural proximity more frequently than expected, whereas Bachelor's students reported this factor less frequently than expected. Therefore, H2 is supported.

H3: International students enrolled in Master's degree programmes demonstrate a significantly higher intention to remain in Slovakia after graduation compared with Bachelor's degree students.

The analysis revealed a statistically significant association between study level and post-graduation intentions ($\chi^2 = 13.81$; $p = 0.008$). Master's students expressed a positive intention to remain in Slovakia significantly more often than Bachelor's students. Therefore, H3 is supported.

5. Discussion

The findings of this study contribute to the existing literature on international student migration by confirming the importance of non-academic factors in the selection of study destinations. In particular, linguistic and cultural proximity were identified as key determinants of students' decision to study in Slovakia. These results are consistent with the push-pull framework, which emphasises the role of socio-cultural factors in shaping migration decisions (Mazzarol & Soutar, 2002; Weber & Van Mol, 2023). Similar findings have been reported in previous studies, where students tend to prefer destinations that offer cultural familiarity and linguistic accessibility, as these reduce the perceived risks associated with studying abroad (Chen, 2007). In addition, financial considerations were found to play an important role in students' decision-making process. This is in line with the findings Maringe & Carter (2007), who highlight that cost-related factors, including living expenses and tuition fees, are among the most influential determinants in the choice of study destination. However, the relatively low importance attributed to the quality of education in this study contrasts with some previous research (Yılmaz & Temizkan, 2022), which identifies academic quality as a primary pull factor. This discrepancy may suggest that Slovakia is currently perceived more as an accessible and affordable destination rather than a highly competitive academic hub.

The results further indicate that the level of study significantly influences students' intention to remain in the host country after graduation, with Master's degree students showing a greater propensity to do so. This finding aligns with the conclusions of Cameron et al. (2019) and Hooijen et al. (2017), who argue that advanced students are more likely to establish stronger social and professional ties during their studies, thereby increasing their chances of remaining in the host country.

At the same time, no statistically significant relationship was found between gender and students' intention to remain in Slovakia. This finding is consistent with previous research suggesting that migration decisions are more strongly influenced by structural and economic factors than by gender (Constant & Massey, 2003).

The study also highlights the importance of personal life factors in shaping post-graduation intentions. Although these factors were not analysed in depth using inferential statistics, their high frequency suggests that social ties and overall life satisfaction play a crucial role in students' decision-making. This observation is in line with the findings of Holloway et al. (2012) and Martin (2017), who emphasise the growing importance of emotional and social dimensions in international mobility. Recent research also highlights the importance of student well-being and supportive educational environments in shaping students' satisfaction and future development within higher education systems (Samašonok et al., 2026).

Overall, the results indicate that international student migration to Slovakia is driven by a combination of economic and socio-cultural factors rather than purely academic considerations. These findings provide important implications for policymakers and higher education institutions, suggesting that efforts to attract and retain international students should focus not only on improving academic quality but also on enhancing social integration, cultural accessibility, and labour market opportunities.

However, these findings should be interpreted with caution due to the study's limitations, including a non-representative sample and reliance on self-reported data. Further research is needed to explore these relationships in more diverse contexts and using longitudinal data.

6. Suggestions and recommendations

Based on empirical findings and a multifaceted analysis of student migration behaviour in Slovakia, the following strategic suggestions and recommendations are proposed to optimise human capital development and enhance the retention of international talent. Given that educational quality was the least prevalent pull factor (22%), Slovak universities must prioritise international accreditation and research visibility. Shifting the perception from a "culturally accessible" destination to a "centre of academic excellence" is essential for long-term competitiveness. Higher education institutions should function as active intermediaries. Implementing mandatory professional internships, vocational counselling, and job-search training – specifically tailored to the Slovak legal and corporate environment – can bridge the gap between graduation and professional integration. Since Master's degree students exhibit a significantly higher intention to remain in Slovakia, universities should focus retention efforts on this cohort through graduate-specific professional networking events and research fellowships.

The primary "push" factor driving students away post-graduation is the wage differential and superior occupational prospects abroad (50%). Policymakers must incentivise local enterprises to offer competitive entry-level remuneration packages and clear career trajectories for international graduates to mitigate the "brain drain." In addition, to convert international students into a permanent skilled workforce, the government should simplify administrative procedures for transitioning from student visas to work permits, particularly in sectors facing labour shortages. As personal life was the most prominent driver for staying (75.3%), integration policies should move beyond academic support. Community-building programs, social integration initiatives, and linguistic support – even for those in English-taught programs – are vital for establishing the emotional and social ties that preclude emigration. The state should continue to capitalise on linguistic affinity (cited by 62%) as a unique pull factor. Strengthening ties with regions that share these affinities can serve as a sustainable recruitment strategy.

7. Conclusions

This study analysed the key factors influencing international students' decision to study in Slovakia and their subsequent intentions to remain in the country after graduation. Based on responses from 150 international students, the findings highlight a shift in the determinants of student migration, with socio-cultural and economic factors playing a more significant role than purely academic considerations.

The results indicate that linguistic proximity and financial factors represent the primary drivers of students' decision to choose Slovakia as a study destination. Cultural proximity was found to be particularly important for Master's level students, suggesting that the importance of socio-cultural factors increases with the level of study. In contrast, the perceived quality of education plays a less decisive role in students' decision-making. These findings suggest that Slovakia is currently perceived more as an accessible and culturally compatible destination than as a highly competitive academic hub.

The analysis further confirmed that the level of study significantly influences students' intention to remain in Slovakia after graduation, with Master's students showing a stronger tendency to do so. This may reflect deeper engagement with the host country's academic and social environment during advanced studies. At the same time, no statistically significant relationship was identified between gender and students' intention to remain, indicating that migration decisions are primarily shaped by structural and contextual factors rather than demographic characteristics.

From a human capital development perspective, these findings point to an important challenge. While Slovakia has been relatively successful in attracting international students, the long-term retention of this potential

workforce remains uncertain. Economic factors, particularly wage differentials and career opportunities abroad, continue to play a decisive role in shaping students' post-graduation decisions.

In this context, it is essential to strengthen the link between higher education and the labour market. Policymakers and universities should focus on improving employment opportunities, supporting career development, and creating conditions that facilitate the integration of international graduates into the domestic economy. At the same time, attention should be given to social and cultural aspects, as personal life factors and overall quality of life appear to significantly influence students' decisions to remain in the host country.

The novelty of this study lies in providing empirical evidence on international student migration from the perspective of Slovakia as an emerging study destination. This context has received only limited attention in the existing literature. Unlike most previous studies that focus on traditional destination countries, this research simultaneously examines the factors influencing students' choice of Slovakia and their post-graduation retention intentions. The findings reveal that linguistic and cultural proximity are more influential than educational quality in shaping migration decisions. At the same time, the level of study significantly affects students' willingness to remain in the host country. These results contribute to a deeper understanding of the links between student mobility and human capital development in smaller Central and Eastern European countries.

Overall, the study contributes to a better understanding of international student migration in the Slovak context and highlights the need for a more comprehensive approach that integrates educational, economic, and social policies. Such an approach is crucial for enhancing the country's attractiveness and ensuring the sustainable development of human capital.

However, the findings should be interpreted with caution due to the study's limitations, particularly its non-representative sample and reliance on self-reported data. Future research could expand the scope of analysis by including a more diverse sample and applying longitudinal methods to capture changes in students' migration behaviour over time.

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Jana ŠPANKOVÁ is associate professor at Faculty of Social and Economic Relations, Alexander Dubček University of Trenčín, Slovakia.

ORCID: <https://orcid.org/0000-0002-9951-4890>

Monika GULLEROVÁ is assistant professor at Faculty of Social and Economic Relations, Alexander Dubček University of Trenčín, Slovakia.

ORCID: <https://orcid.org/0000-0001-6808-1167>

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