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DEVELOPMENT AND CAUSES OF MIGRATION IN LAGGING REGIONS IN THE YEARS 2017–2021: A CASE STUDY OF THE SLOVAK REPUBLIC

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Abstract. Migration represents a process where people leave their homes for various reasons. The aim of the article is to evaluate the level and development of migration in Slovakia and to identify its causes in the Gemer region, which is among the least economically productive regions of Slovakia. We quantified the development and level of migration based on secondary data through selected analytical indicators of migration. We determined the motivations of the residents of the Gemer region to migrate using a questionnaire survey. Until 2004, Slovakia was an emigration country, but in recent years it has turned into a destination country. However, the situation is not the same for all regions of the country. A negative migration balance persists in the Gemer region, although restrictions related to the coronavirus pandemic have slowed this trend. We found that up to 21 % of respondents from the region migrate for work. Up to 45 % of respondents want to move out of the region, while in 64 % of cases the migration is motivated by economic reasons. The opinion on migration is influenced by the gender of the respondent but is not related to the level of education achieved.

Keywords: Regional differences, migration, lagging regions.

1. Introduction

Migration is a historical social phenomenon that has political, economic and social implications, but it also affects national security by changing the social composition of countries. Migration can be a catalyst for conflict but also for national development [1]. Migration is most often classified according to whether or not an individual or group moves inside or outside the borders of a country, whether or not a national border is crossed. Based on these criteria, a distinction is made between international and internal migration. Internal migration takes place at the level of the state, regions, districts and municipalities. On the other hand, international migration includes intercontinental and intracontinental [2]. Internal migration can generally be seen as the movement of people from one geographical area to another for the purpose of permanent or temporary residence. The study of this form of migration is therefore important for understanding population distribution, growth and urbanization of territories [3].

Most studies suggest that migration is primarily motivated by economic factors. In developing countries, low agricultural incomes and unemployment are considered as the primary factors that lead migrants to move to developed areas with higher employment opportunities. Thus, almost all studies agree that most migrants move in search of better economic opportunities [4]. Economic migration is triggered by the search for a better livelihood, seeking better conditions, compared to financial opportunities in the country of origin. In all cases, economic migration is voluntary. Political migration can be based on armed conflict or a political decision that leads to the deportation, relocation or resettlement of a country's population - this is the case of forced migration. In addition, political migration can also occur when a person, although not in an immediate situation of forced displacement, comes from a territory where human and political rights are violated [5]. Migrants are not a homogeneous group. Rather, migrant categories are often defined by migrants' reasons for leaving home. Categories of migrants include refugees, economic migrants, migrants fleeing war, environmental migrants, climate migrants, and migrants seeking to reunite with family. Further, a migrant may have multiple overlapping reasons for their movement. International refugee law protects some individuals whose flight is perceived as forced and completely excludes others whose flight is perceived as voluntary [6]. The most common reason for migrating from country to country is job opportunities. This is confirmed by several studies. For example, Western European countries, which felt the economic devastation caused by the Second World War profoundly, were forced to import labour from other countries [7]. From 1955 onwards,

labour migration began from developing countries, especially to the Federal Republic of Germany; and in the 1960s, workers began to be brought mainly from Spain, Portugal, Italy and Greece, and then from Mediterranean countries such as Turkey, Morocco, Algeria and Tunisia [8]. Immigrants are still one of the biggest problems of separation in the EU. Member states have seen their first tough test in the crisis triggered by immigrants appearing at the EU's borders in 2015-2016, causing the Dublin system to lose its functionality [9]. Bell et al. [10] state that an important event in migration policy in the Republic of Poland, was represented by the introduction of a simplified procedure for the employment of foreigners in the Polish labour market in 2006-2007. Initially, it was limited to selected types of agricultural and fruit-growing activities and to citizens of countries neighbouring Poland, but later it was abandoned to specify the types of economic activity and to cover citizens of Armenia, Belarus, Georgia, Moldova, the Russian Federation and Ukraine. Changes in Poland's migration situation are intertwined with changes caused by demographic processes: depopulation, rapid increase in the number of people of post-working age, ageing workforce and low birth rate. In practice, of course, the relationship between population density and the net migration rate is not straightforward. In most countries, the residuals from regression analysis suggest that more complex patterns of movement are also taking place. Migration is by no means uniformly directed towards the most densely populated regions, as the outlying regions show [11].

Migration processes cause a variety of economic and social effects, and the more intense the migration, the more dynamic the processes become. The effects can be both positive (strengthening of the economy, its development, cultural enrichment, development of social integration processes, etc.) and negative (segmentation of the population and increase in ethnic and cultural tensions, overburdening of the social security system, administrative overload, etc.) [12]. In today's highly mobile world, migration, and in particular internal migration, is becoming an increasingly complex area of governance that is highly interlinked with other key policy areas, including economic and social development, national security, human rights, public health, regional stability, etc. Managing migration at national or regional level is a complex and multifaceted task. Internal migration includes regular, irregular and forced migration. It has been shown that the increasing scale of migration is in many cases not matched by the availability of infrastructure in urban centres to accommodate migrants [13]. Perhaps the most significant aspect of internal migration is that it changes the spatial distribution of the population. Internal migration, together with births, deaths and international migration, shapes population changes in a territory. Analysing the drivers and dynamics of internal migration is crucial to understanding the progressive shifts in human settlement patterns around the world [14]. However, apart from individuals and households that are mobile both internally and internationally, the "boundary" between internal and international migration can easily become blurred. Distance is certainly not the determining criterion. Moreover, the nature of international borders may be changing: the European Union and its borderless "Schengenland" have created a borderless zone for mobility that is, with its regime of passports, visas and borders, more akin to internal migration than to "traditional" international migration. Moreover, borders themselves can be mobile; they can appear or disappear (e.g. the dismemberment of the former Soviet Union or Yugoslavia) [15]. On the other hand, according to [16], migration is an inevitable feature of development. Migration can improve the distribution of income at origin by providing rural households with opportunities to diversify their income portfolio. Also [17] confirms that although filling labour market gaps with migrants may only be a temporary solution, it is nevertheless of positive importance, especially for the further functioning of the market in a particular country. And at the same time, this can often prevent the decline of certain sectors in which the indigenous population refuses to work. According to [17], uncovering the link between internal migration and economic development is difficult. Researchers analysing internal migration face two challenges: on the one hand, the inconsistent and difficult conceptualisation and subsequent measurement of internal migration and, on the other hand, its limited popularity within economic research. Problems related to defining, measuring and collecting data on domestic flows have hampered research on internal migration. However, there is also an empirical correlation between internal migration and the residential distribution of immigrants, which is the basis of spatial assimilation theory (SAT). According to this theory, the early settlement of immigrants from abroad was generally in large urban cities or areas where their national or ethnic groups were more concentrated (ethnic concentration). Immigrants then tended to be distributed in a similar way to natives. They leave areas of first arrival and relocate within the host country through internal migration [18, 19]. Geographical migration is thus the result of the socio-economic upward mobility of immigrants who, through the process of assimilation, acquire knowledge and become more attached to the host country and the native population. This, in turn, leads to a reduction in ties with the native community, less segregation and a convergence of settlement patterns between immigrants and natives [20]. This is primarily related to the existence of a set of displacement and integration costs, and therefore immigrants tend to first observe the process or racial or ethnic concentration in certain areas. Only subsequently does the dispersal of the original community and its integration into the host society occur.

However, the relationship between spatial mobility and assimilation is not always direct. Socio-economic improvement and the formation of ties to the host country do not necessarily lead to spatial assimilation. For example, it has been shown that the impact of certain individual characteristics may differ between immigrant groups. Similarly, it appears that some individuals, regardless of their socioeconomic status, prefer to reside in ethnic enclaves. The persistence of high moving costs or the existence of discriminatory practices (for example, in the housing market) may also hinder the assimilation process. Thus, there is no consensus on the characteristics of immigrants who move within the host society, nor on their possible dispersion from the original concentrations of foreigners [21]. Thus, human capital migration theory is not conclusive on whether immigrants should generally be expected to be more mobile than natives. This ambiguity is due to the conflicting forces that affect the internal migration of immigrants. On the one hand, there is a lack of locally specific human capital due to more recent relocation, potentially increasing the propensity to migrate. On the other hand, there is the empirically observed effect of ethnic enclaves where immigrants tend to cluster. These enclaves allow immigrants to benefit from their origin-specific human capital, which would otherwise be worthless in the new host country. Migration rates are therefore potentially reduced for immigrants residing in an enclave [22]. The new economics of migration argues that migration is a rational decision made by an individual or family based on a cost-benefit analysis. However, research has increasingly focused on quantitative regression analysis to examine the "causes" and "impacts" of migration largely along the (implicit or explicit) lines of the push-pull model. Push factors are factors that, for a variety of reasons, force someone to leave their place of birth and seek new opportunities elsewhere. Pull factors, on the other hand, are those factors that attract migrants to a particular place and offer various advantages, benefits and more eastern living conditions [23]. Push-pull models dominated much of migration thinking in the mid-twentieth century, until the 1960s, and reflect a paradigm of neoclassical economics based on the principles of utility maximization, rational choice, price differentials between regions and countries, and labour mobility [24]. According to this model, migrants are actors seeking to maximise income or "utility". Neither qualitative nor quantitative approaches have adequately captured the vital role of hard-to-quantify structural factors such as inequality, power and the state in shaping migration processes. They have also not been able to develop a meaningful idea of human agency beyond the voluntaristic assumptions of neoclassical models or the portrayal of migrants as more or less passive victims, as is common in historical-structural theories [25].

Internal migration, which involves population movements within a country's borders for economic, political or social reasons, is considered both a cause and a result of regional imbalances. In this framework, the impact of increasing internal migration on developed and underdeveloped regions may differ due to the influence of different socio-cultural and economic conditions between regions. The imbalance aspect is directly related to the extent to which migration affects parameters such as wages, output, consumption, human capital levels, business migration, unemployment and household income in regions with different levels of development [26]. The benefits of internal migration include the costs associated with job opportunities or other financial benefits. Examples of such benefits include higher wages or better employment, better job prospects and cheaper housing. Associated costs include the costs of moving a household, the time costs associated with finding new housing and employment, and the loss of local networks or locally specific human capital. In addition to economic considerations, other important costs and benefits relate to local amenities or family issues [27]. Karhula et al. [28] add however, that cheap housing in poorer urban areas can be an attractive option for those migrating to study. At least initially, students also have greater opportunities to move to wealthier areas after graduation. Over time, however, both processes (the migration of the less well-off as well as the emigration of the better-off) can potentially lead to a concentration of low-paid and low-skilled internal migrants in more deprived neighbourhoods. However, there is also other research on the factors that influence internal migration.

Research [12] has shown that the fragmentation of rural agricultural land is triggering a process of rural-to-urban migration in India. The higher the extent of subdivision and fragmentation of agricultural land the lower will be the agricultural productivity and the higher will be the extent of rural-to-urban migration. Rural industrialization has been found to play a significant role in determining the extent of rural-urban migration in India. The higher the degree of rural industrialization, the higher will be the employment opportunities and hence lower will be the extent of rural-to-urban migration. On the other hand, rural unemployment acts as a driving factor in the process of rural-to-urban migration. In many cases, it has been found that due to unavailability of jobs in the rural sector, people are forced to migrate from the rural to the urban sector. The most important factor which significantly explains the rural-to-urban migration pattern is the urban amenity index. Opportunities to lead a better quality of life in urban centres act as a pull factor in this rural-to-urban migration process as well as an impulse factor in determining the extent of rural-to-urban migration. According to [29], rural-to-urban migration has been one of the key drivers of demographic development over the last three decades worldwide.

Global forces can also affect internal migration in

other ways. As manufacturing in many industrial economies becomes more labour-intensive or less competitive compared to emerging economies, smaller or more peripheral cities may experience population decline [13]. Research [30], which examined migration flows from Wrocław, shows that there are also permanent migration flows to other rural communities in the voivodeship and other major cities in the country. The migration to rural areas that are not close to the city is significant. Against the background of a general decline in the urbanisation index for Poland and Dolnośląskie Voivodeship, this may indicate that anti-urbanisation processes are taking place in the country and the region. Moreover, this phenomenon involves not only a redistribution of population between the city and its suburbs, but also an outflow of population from the city to peripheral areas. This is confirmed by [31], who states that permanent migration from urban to rural areas occurs in most cases in peri-urban zones. These migrations are largely a consequence of, but probably also the reason for, the increased amount of housing development in the vicinity of cities. Given that the subjects of permanent migration to peri-urban zones are young people just before or just after entering into (in)formal relationships, this value appears to be a good variable, useful in identifying urban functional areas at different levels of the urban hierarchy. Permanent internal migration in rural areas is less significant among all directions of migration. They share a common characteristic, that is, they usually take place between places that are not distant, between neighbouring units. However, according to [32], internal migration not only increases the region's population, but young people's enthusiasm, self-fulfilment, risk-taking and entrepreneurship will drive innovation and development. At the same time, such migration will bring racial and cultural diversity to cities, fostering integration, while also providing the right conditions for innovation. This is confirmed by [24], who states that population redistribution contributes to the flow of innovation between regions. At the same time, however, Chen and Rosenthal [33] pointed out that economic benefits seem to be an important driver for young people and those with a university education, but amenities such as climate seem to be more important for older people.

One of the other factors influencing internal migration was the amount of information they had about where they wanted to settle and the amount of assistance they could expect to receive there. Studies on internal migration provide ample evidence of the existence of various social networks that link urban and rural communities and provide migrants with extensive information and practical assistance. Social networks vary in nature: some are based on blood relations, others on professional ties, personal friendships or common geographical origins [34]. Networks enable immigrants to accumulate social capital, facilitate the acquisition and distribution of information and the availability of ethnic goods and services, and reduce the costs of migration and the risk of discrimination in labour markets [35]. Interestingly, internal migration is largely ignored as a consequence of global, regional and national policymaking, but the topic of urbanization, which is a direct consequence of international and internal movements, is hotly debated [36].

2. Materials and methods

The aim of the article is to evaluate the level and development of migration in Slovakia and to identify its causes in the Gemer region, which is among the least economically productive regions of Slovakia.

We tried to find answers to the following research questions:

(1.) How important are the push and pull factors that motivate people to migrate?

(2.) Are there significant differences between individual factors?

(3.) Are there significant differences in opinions in terms of gender, residence and level of education?

To evaluate the status and development of migration, we used analytical indicators of migration. For example, gross and net migration, immigration and emigration, the migration balance index, which shows the efficiency of migration, and the gross migration balance. The main source for the calculation of analytical indicators was the Statistical Office of the Slovak Republic, specifically the Statistical Yearbooks of the Slovak Republic, as well as the Regional statistical yearbooks of the Slovak Republic.

We investigated the motivation for migration and its causes based on the push-pull model. We used data from a questionnaire survey in which residents of the Gemer region participated. Respondents filled out questionnaires in the Google Forms application. From a methodological point of view, we focused on the psychological barriers of the respondents to fill out content- and technically demanding questionnaires. Based on the above, we compiled the most suitable questionnaire with an adequate number of the simplest possible questions. When designing the questionnaire items, we emphasized their mutual symbiosis. Pilot testing was carried out on a small sample of respondents in order to find out feedback on the comprehensibility of the questionnaire. After slight adjustments, the result was 6 questions focused on the socio-demographic characteristics of the respondents and 6 questions related to the solved problem. We used random sampling to construct the research sample. There were 316 correctly completed questionnaires. We conducted the research from January to March 2023.

Table 1 summarizes the personal characteristics of the respondents. The group included 179 women (56.65 %) and 137 men (43.35 %). Next, we focused on the characteristics of residence and education. We

Variable	Number of respondents	Percentage
Gender		
Female	179	56.65
Male	137	43.35
Total	316	100.00
Residence		
Town	176	55.70
Countryside	140	44.30
Total	316	100.00
Education		
Elementary	8	2.53
Secondary	152	48.10
University	156	49.37
Total	316	100.00

TABLE 1. Personal characteristics of the participants. Source: Processing by the authors based on their own questionnaire survey: The main causes of migration in the Gemer region.

	2017	2018	2019	2020	2021
Immigrants	7,188	7,253	7,016	6,775	5,733
Emigrants	3,466	3,298	3,384	2,428	3,395
Total migration	10,654	10,551	10,400	9,203	9,128
Migration balance	3,722	3,955	3,632	4,347	2,338

TABLE 2. Development of international migration in Slovakia and its analytical indicators [37–41].

present these characteristics because they were the subject of our research in our own work. Of the total number of respondents, 176 (55.70 %) lived in the city and 140 (44.30 %) lived in the countryside. The structure of the selection set was approximately the same as the structure of the base set for these two characteristics. In terms of education, the research sample consisted of 8 respondents (2.53 %) with completed primary education, 152 respondents (48.10 %) with completed secondary education and 156 respondents (49.37 %) with completed university education. The higher representation of respondents with completed university education is primarily related to their willingness to participate in questionnaire surveys.

For the purpose of evaluating the data obtained from the questionnaire survey, we used descriptive and inferential statistics. Considering the type of data obtained, we preferred to use non-parametric tests. Specifically, we used the Friedman test for comparison of multiple dependent samples. The subsequent examination of the two experimental units was carried out using the Nemenyi post-hoc test. We will also use the Chi-square test of independence to determine the dependence of two nominal variables. All tests were performed at a significance level of 0.05. Data analysis for this purpose was created using the Real Statistics Resource Pack software (release 7.6). Copyright (2013–2021) Charles Zaiontz [42].

3. Results and discussion

3.1. International and internal migration in Slovakia

We will evaluate the development and state of migration in Slovakia for the period from 2017 to 2021 (Table 2). In 2017 and 2018, the number of immigrants showed an upward trend, although the increase was minimal [37, 38]. Since 2019, there has been a decrease every year. While only 241 fewer people chose Slovakia as a destination country between 2019 and 2020, between 2020 and 2021 the number of immigrants decreased by 1 042 people. This was probably caused by the situation related to the COVID19 pandemic at the time. The numbers of emigrants did not change significantly except for one year. In the first monitored year, the number of emigrants was 3 466. Subsequently, a decrease in migration values can be observed in 2020. This change was caused by the pandemic described above and its negative consequences. The number of emigrants decreased by 956 between 2019 and 2020. By 2021, however, the situation stabilized again and the values again reached the median and average from previous years. The number of immigrants is always higher than the number of emigrants. Between 2017 and 2021, on average, 3 599 more people immigrated than emigrated. This indicates that Slovakia is a target destination from an economic, social, demographic and cultural point of view. The volume of migration is the sum

	2017	2018	2019	2020	2021
SR total	**95 132**	**98 414**	**98 677**	**87 853**	**92 768**
in the district	42 590	44 222	42 837	39 343	41 772
between districts	27 800	28 809	28 854	25 478	27 019
between regions	24 742	25 383	26 986	23 032	23 977

Table 3. Development of internal migration in Slovakia [37–41].

of the number of immigrated and emigrated persons. It can also be called gross migration. During the monitored period, this volume of migration was the highest in 2017. Subsequently, it began to gradually decrease. Net migration is the difference between the number of people who moved in and the number of people who left. In the first three years, the value of this indicator was at the level of 3 700, then it increased to 4 347 in 2020. This increase was caused by a greater decrease in the number of emigration than immigration. Finally, the migration rate reached its lowest value in 2021. This was due to the fact that in 2021, compared to the previous year, the number of immigrants decreased and the number of emigrants increased [37–41].

Internal migration (Table 3), which includes population movements within a country's borders for economic, political or social reasons, is considered both a cause and a consequence of regional imbalance [26]. If we consider the average of migration between 2017 and 2021, we can say that the majority of people – specifically 45 % of internal migration – took place within one district. Another 29 % of persons involved in internal migration moved from one district to another within the county. The remaining 26 % moved from one region to another within Slovakia. Internal migration can also be examined on a regional basis. The largest increase in migration over a long period was recorded in the Bratislava region, which is the most economically productive region of Slovakia. In 2021, the gross migration rate per 10 000 inhabitants was 56.7 [41]. This value is significantly lower compared to recent years and 2019. The second highest gross rate of migration increase (28.6 persons per 10 000 inhabitants) was in the Trnava Region, where the gross rate in 2021 increased compared to the previous year. Only these two regions in Slovakia had a positive population increase during the monitored period. Other regions have long-term migration losses, i.e. the number of emigrants exceeded the number of immigrants in all monitored years. The largest migration decreases were recorded in the Banská Bystrica and Prešov regions, in both regions in 2021 there were 16.4 gross migrants per 10 000 inhabitants [37–41].

3.2. Migration in the Gemer region

The Gemer region is located in the south-eastern part of Slovakia and had 178 680 inhabitants in 2021 [43]. It includes the districts of Rimavská Sobota, Revúca and Rožňava. These districts are not only geographically similar, but also share a common history, similar social structure and culture of life. Although they are part of the same region, Rimavská Sobota and Revúca belong to the Banská Bystrica region, while Rožňava belongs to the Košice region [23]. The Gemer region belongs to the regions of Slovakia with the lowest economic performance.

Due to the availability of data on regional migration, we focused on its evaluation for the period from 2017 to 2020 [44]. In each district of the Gemer region, we monitored how the number of immigrants and emigrants changed. We further divided immigrants and emigrants into two groups: immigrated from/to Slovakia and immigrated from/to abroad. Every year, more people leave the Gemer region than move into. This means that the number of emigrants exceeded the number of immigrants every year. Noticeably more people moved to other parts of Slovakia than abroad. In the case of immigrants to the Gemer region, in the monitored years, on average, five times more people came from other parts of Slovakia than from abroad. Eighteen times more people immigrated to other parts of Slovakia than abroad [44].

- Median number of people emigrating from Slovakia: 882.
- Median number of persons who immigrated from abroad: 173.
- Median number of persons migrating to other parts of Slovakia: 1 388.
- Median number of persons migrating abroad: 84.

Net migration shows a fluctuating development. In 2017 and 2019, net migration increased compared to the previous year. In 2018 and 2020, it was at the level of approximately −370.

In the next part, we examine the reasons for migration in the Gemer region (Table 4), based on the answers to the questionnaire we composed. In addition to socio-demographic questions, we investigated where the respondents currently work and whether they were thinking about moving out of the region. Subsequently, we investigated the respondents' motivations based on the push-pull model. Push factors are factors that, for various reasons, force someone to leave the place of their birth and look for new opportunities elsewhere. On the other hand, pull factors are factors that attract migrants to a specific place and offer various advantages, benefits and better living conditions. The combination of these two factors helps

	Immigrants			Emigrants			Net migration
	from SK	from abroad	total	to SK	to abroad	total	
2017	918	164	1 082	1 427	84	1 511	−429
2018	911	173	1 084	1 388	88	1 476	−392
2019	841	174	1 015	1 460	83	1 543	−528
2020	801	216	1 017	1 315	52	1 367	−350

TABLE 4. Development of migration trends in the Gemer region [44].

determine the reasons for emigration and immigration of people from one country to another [45]. Push and pull factors are usually opposite. For example the push factor of lack of job opportunities in the rural areas is the opposite of the pull factor of abundant vacant jobs in the urban areas [46].

The basic results show that 55 % of respondents would not want to leave the Gemer region. A total of 24 % of respondents would like to leave Slovakia and move to another country. 21 % of respondents would like to move to another region in Slovakia. Respondents who would like to leave the region also stated their reasons. In the twelfth question, respondents could choose from three predefined options or enter their own answer. Of those who wanted to move, up to 64 % said economic reasons prevailed, 15 % cited demographic reasons and 13 % socio-cultural and political reasons. The remaining 9 % gave their own answer. The respondents most often stated: better work, studies, low living standards, family ties, weak infrastructure, lack of opportunities in the field of culture and sports, or a weak offer of commercial services.

Based on the established research questions, we further investigated the relationship between the selected socio-demographic characteristics of the respondents and questions related to attitudes towards migration. Specifically, we investigated whether there is a difference in the propensity to migrate with respect to gender, level of education of the respondent and with respect to his place of residence (whether the person lives in a city or in the countryside). In all cases, these were nominal variables, and testing was performed using the Chi-square test of independence. The results of the calculated p-values are documented in Table 5. Based on it, it can be concluded that the null hypothesis can be rejected only in the case of the first alternative, as the calculated p-value is smaller than the confidence interval of 95.00 %. We can say that there is a difference in the propensity to migrate between men and women. Specifically, 52.55 % of men and 39.66 % of women thought about emigrating from the region. This is an expected result given the traditional model of family functioning, where the man takes responsibility for the material security of the family. This confirms the results of family migration research, according to which couples' decisions about migration are more often made with regard to the male career than the female career [47]. Couples are more likely to move for the male's job than for the female's job [48, 49] and social-economic and work characteristics of the man often have a greater influence on the couple's propensity to migrate than the characteristics of the woman. In other cases, the calculated p-value is higher than 0.05 and therefore we do not reject the null hypothesis. There is no difference in how men and women perceive the goal of migration (domestic or foreign migration). Furthermore, the propensity to migrate is not related to the level of education. University-educated people are interested in migrating from the region due to limited employment in the region. People with lower education, whose motivation to migrate includes both limited opportunities for employment and low wages. It is interesting to note that there is no significant difference in the propensity to migrate with respect to the place of residence. We hypothesized that in an economically weak region, the propensity to migrate will be higher among residents who live in the countryside.

Variable	p-value
Gender – propensity to migrate	0.023
Gender – destination of migration	0.160
Education – propensity to migrate	0.448
Residence – propensity to migrate	0.094

TABLE 5. Results of the investigation of the relationship between the respondents' personal characteristics and their propensity to migrate. Source: Processing and calculations by the authors based on their own questionnaire survey: The main causes of migration in the Gemer region.

Table 6 shows the respondents' answers regarding pull factors. On a scale from 1 (the least important factor) to 5 (the most important factor), the respondents expressed the subjective importance of the mentioned pull factors. The arithmetic mean of all items was 3.56, which indicates that pull factors are important for the residents of the region. Table 6 contains arithmetic means of each evaluated pull factor, standard deviations and interval estimates of the mean at a confidence interval of 95.00 %. The factors are ranked from most important to least important based on the arithmetic mean. The most important pull factor is better living conditions in the target region, which can be considered an expected result. This confirms the results of studies according to which most migrants

Pull factors	Average	St. dev.	−95.00 %	+95.00 %
A. Better living conditions	3.965	1.161	3.837	4.094
B. Higher wages	3.915	1.225	3.779	4.050
C. Better working conditions	3.851	1.234	3.715	3.988
D. Career opportunities	3.848	1.251	3.710	3.987
E. Better health care	3.475	1.298	3.331	3.618
F. Better educational opportunities	3.386	1.274	3.245	3.527
G. Family relations	3.358	1.374	3.206	3.510
H. Better climatic conditions	2.867	1.307	2.722	3.012
I. Political and religious freedom	2.440	1.407	2.284	2.596
Scale: 5 = most important, 1 = least important				

Table 6. The importance of pull factors. Source: Processing and calculations by the authors based on their own questionnaire survey: The main causes of migration in the Gemer region.

Factors	p-value	Factors	p-value	Factors	p-value	Factors	p-value
A-B	0.987	B-D	1.000	C-G	0.046	E-G	1.000
A-C	0.747	B-E	0.010	C-H	0.000	E-H	0.000
A-D	0.929	B-F	0.000	C-I	0.000	E-I	0.000
A-E	0.000	B-G	0.004	D-E	0.029	F-G	0.943
A-F	0.000	B-H	0.000	D-F	0.000	F-H	0.022
A-G	0.000	B-I	0.000	D-G	0.013	F-I	0.000
A-H	0.000	C-D	1.000	D-H	0.000	G-H	0.000
A-I	0.000	C-E	0.093	D-I	0.000	G-I	0.000
B-C	0.998	C-F	0.000	E-F	0.854	H-I	0.009

Table 7. Comparison of pairs of pull factors by Nemenyi post test. Source: Processing and calculations by the authors based on their own questionnaire survey: The main causes of migration in the Gemer region.

move in search of better economic opportunities [4]. Other factors in order of importance include higher wages in the target region, better working conditions, the possibility of realizing a career or better health care. It should also be noted that in the case of lagging regions we can talk about labour migration. It is obvious that in this case economic pull factors will reach higher levels of importance [50]. Nevertheless, we agree with the opinion [51], according to which non-economic factors also play a very important role in the decision on migration.

The least important factors are better climatic conditions or political and religious freedom in the target region. Better climatic conditions were not so important for the respondents due to relatively homogeneous climatic conditions in the country. The distribution of the population in terms of religion in Slovakia is also relatively homogeneous with majority representation. The situation is similar in the case of religion. In 2021, there were 68.80 % Christians in Slovakia, 23.80 % of people with no religion and 0.90 % of people with other religion.

The order of pull factors shown in Table 6 is valid only for a sample set of respondents. If we want to generalize these results (order of pull factors) to the level of the basic set, we need to find out whether the differences in the respondents' answers are statistically significant. For this purpose, we used the Friedman test, through which we verified the validity of the null hypothesis. The null hypothesis assumed that the average level of all pull factors is the same compared to the alternative. The calculated p-value of the Friedman test was 0.000, which means that we reject the null hypothesis. There are statistically significant differences between the level of at least two pull factors. To achieve more accurate results, we had to perform Nemenyi post test, the results of which are shown in Table 7.

Based on the results of Nemenyi post test, it can be concluded that the factors of better living conditions, higher wages, better working conditions and career opportunities are significantly more important than other pull factors (at the 90.00 % confidence level). On the other hand, the factor of political and religious freedom is significantly the least important among the other mentioned pull factors.

Table 8 captures the responses regarding push factors. Push factors are a negative motivation to migrate. These are factors that motivate people to emigrate from their place of residence. In this case as well, the respondents assigned numbers from 1 to 5 to the individual factors. The number 1 corresponded to the lowest importance and the number 5 to the highest importance. The overall average of all responses was 3.251. Compared to the value of pull factors, this is a smaller number. This may mean that pull factors

Push factor	Average	St. dev.	−95.00 %	+95.00 %
A. Lack of jobs	3.943	1.225	3.807	4.079
B. Bad economic conditions of the region	3.785	1.231	3.649	3.921
C. High unemployment	3.592	1.341	3.443	3.740
D. Few opportunities for career growth	3.560	1.297	3.417	3.704
E. Poor health care	3.437	1.307	3.292	3.581
F. Poor living conditions in the region	2.851	1.262	2.711	2.991
G. Discrimination in the region	2.794	1.321	2.648	2.941
H. Lack of political or religious freedom	2.044	1.236	1.907	2.181
Scale: 5 = most important, 1 = least important				

TABLE 8. The importance of push factors. Source: Processing and calculations by the authors based on their own questionnaire survey: The main causes of migration in the Gemer region.

Factors	p-value	Factors	p-value	Factors	p-value	Factors	p-value
A-B	0.961	B-C	0.357	C-E	0.981	D-H	0.000
A-C	0.024	B-D	0.135	C-F	0.000	E-F	0.000
A-D	0.005	B-E	0.036	C-G	0.000	E-G	0.000
A-E	0.001	B-F	0.000	C-H	0.000	E-H	0.000
A-F	0.000	B-G	0.000	D-E	1.000	F-G	1.000
A-G	0.000	B-H	0.000	D-F	0.000	F-H	0.000
A-H	0.000	C-D	1.000	D-G	0.000	G-H	0.000

TABLE 9. Comparison of pairs of push factors by Nemenyi post test. Source: Processing and calculations by the authors based on their own questionnaire survey: The main causes of migration in the Gemer region.

represent a generally more important motivation for respondents to migrate than push factors. Push factors are arranged in Table 8 based on the arithmetic mean from most important to least important. Based on the descriptive statistics, it can be concluded that the most important push factor is the lack of jobs, which can be considered an expected result. In order of importance, the poor economic conditions of the region, high unemployment, few opportunities for career growth and poor health care were ranked next. It is interesting that poor health care was a more important factor for the respondents than poor housing conditions, as the majority of the sample was represented by the younger population. The least important push factors included discrimination and lack of political and religious freedom.

In order to find out whether the results from Table 8 are generally valid for the base set (residents of the Gemer region), we will use the Friedman test. The calculated p-value was 0.000, which means that we can reject the null hypothesis. Therefore, the alternative hypothesis is valid, based on which there is a statistically significant difference in at least one pair of factors (in their arithmetic averages). To obtain more detailed results, we will perform Nemenyi post test, the results of which are in Table 9. We can say that the lack of jobs is the most important among all other factors (except for bad economic conditions in the region). It can also be concluded that the factor of lack of political and religious freedom is significantly the least important push factor for the inhabitants of the region.

4. CONCLUSION

Migration is a complex phenomenon and it has many different effects on society. It is important to understand its causes, consequences and risks in order to develop an effective policy in this area. Migration can also be defined as the spatial movement of the population and one of the most important components of population development and regional development [52]. We can conclude that Slovakia is attracting people in terms of migration in the current situation. More people immigrate to Slovakia than emigrate from it. This is mainly due to the fact that business and economic conditions have improved since 2004, which has enabled Slovakia to compete with other countries. Innovations and reforms increased labour productivity, reduced unemployment and increased the number of foreign migrants [53]. Although the current situation is positive, it should not be considered closed. The COVID-19 pandemic radically limited migration flows, but already in 2021 there was an intensive increase in migration. During the five monitored years, the average number of internal migrants was 94 569 [37–41]. The majority of these internal migrants, namely 45 %, moved within one district. In other words, they did not leave the district of their residence, but migrated within it. 29 % of internal migrants moved from one district to another within the region. The remaining 26 % moved to another region within the country. The Bratislava Region was the area within Slovakia where the largest increase in migration was recorded in the monitored years. The stated fact confirms the general

empirical research according to which the greatest migration activity takes place in the most developed regions. The level of development of these regions compared to other regions is very high, which is reflected in their attractiveness for migration [54]. The largest migration declines were recorded in the Banská Bystrica and Prešov regions. We also paid attention to the Gemer region, which is among the least economically productive regions of Slovakia. It is a marginal and disadvantaged region with a lower standard of living, an aging population, a lower number of job opportunities, a lower educational level and lower investments [55]. A negative migration balance with the threat of depopulation is typical for this region. Every year, more people leave the Gemer region than move into [44]. Net migration shows a fluctuating trend. The questionnaire survey showed that 21 % of the inhabitants of the Gemer region regularly migrate. Based on the results of the questionnaire survey, it follows that the favourite destination countries are Hungary, Germany, the Netherlands, Austria, Italy, England and the Czech Republic. Within the country, the most common destinations are Bratislava, Prešov and Košice regions. 45 % of respondents would like to move from the Gemer region, of which 24 % to abroad and 21 % to another part of Slovakia. The Gemer region is a region with a long-term negative migration balance, which loses its potential from the labour production factor and thus its chances for convergence decrease [54]. On the other hand, some authors consider migration as a necessary feature of development that can improve income distribution by providing households with the opportunity to diversify their income portfolio [16]. A total of 64 % of respondents cited economic reasons for migration. This result confirmed the empirical assumption about the importance of economic reasons for migration. This is also confirmed by the majority of studies, according to which the economic factors of migration can be considered a key and significant driving force in the decision of migrant workers, and most migrants move in search of better economic opportunities [4, 56]. Furthermore, 36 % of respondents to the questionnaire survey stated demographic, sociocultural or other reasons for migration. Based on the conducted research, we can conclude that the propensity to migrate is dependent on gender, but it is not dependent on the respondent's place of residence and his education. On the contrary, based on the results [57], it follows that residents with higher education show the greatest interest in migration. However, this survey was conducted before Slovakia joined the EU, when the conditions for migration were more difficult and the educational level of the country's population was lower. We investigated the motivation to migrate based on the well-known push-pull model [23]. The most important pull factors that motivate individuals to migrate to another place include better living conditions and higher wages. One of the most important push factors that motivates residents to migrate from their place of residence is clearly the lack of jobs. Research [56] proved that there is a stronger correlation between the number of migrant employees and the number of job vacancies. Discrimination or the level of religious and political freedom do not play an important role in deciding on population migration.

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