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# Migration and Labor Market Dynamics in the Visegrad Countries: A Pilot Study

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**Abstract.** This paper focuses on the impact of migration on macroeconomic indicators in the Visegrad Four (V4) countries. The selection of the V4 countries is based on regionalism: these Central European countries are linked by cultural proximity, similar historical experiences, and characteristic features of their labor markets. Despite their strategic position in the European Union, the economic impacts of migration in this region remain insufficiently researched. Based on data from Eurostat and national statistical offices, two hypotheses were examined and tested using Pearson's correlation coefficient. The results highlighted significant differences between the individual V4 countries. In the Czech Republic, Slovakia, and Poland, migration supported labor markets and positively impacted unemployment, while in Hungary, similar effects were not observed, which is related to restrictive policies and a weaker integration framework. The study confirms that the economic impacts of migration are complex, context-dependent, and strongly shaped by integration policies.

**Keywords:** *Migration; Labor market; Visegrad Four; Unemployment; GDP.*

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## 1. Introduction

Few topics have the power to appear in the headlines of news websites and on the front pages of scientific journals. As the last decade has shown, migration and demography have managed to gain this prominent position, as they have fundamentally changed the conditions on the labor market. While demographic changes in Western civilization have triggered concerns about the sufficient labor supply, the influx of immigrants partially compensates for this unfavorable demographic development. It is characteristic of the American and European continents that demographic development is causing an increasingly noticeable imbalance in the labor market, mainly due to the declining birth rate and aging of the population<sup>1</sup>. Population aging is the subject of intensive research, as the primary demographic trend of the 21st century<sup>2</sup>. There is a consensus that the ageing workforce will increase labor market rigidity, as older workers have less job mobility than younger workers. At the same time, there are warnings that population ageing also significantly impacts individual countries' economic development<sup>3</sup>.

Unfortunately, there are desperately few recipes for solving this situation. One is the use of migration, or the arrival of foreign labor.

Especially in the European context, migration has appeared on the horizon as a positive externality that can blunt the widening gap between the economically active and inactive population<sup>4</sup>.

However, its occurrence is not geographically uniform. Benček and Schneiderheinze<sup>5</sup> state that in recent decades, migration has increasingly

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<sup>1</sup> E. Grmanová, *Demographic changes and their impact on the labour market*, Centre of Sociological Research, 2021.

<sup>2</sup> M.-G. Oprea, M.-I. Vlădescu, *Review of labor force and active aging studies: Trends, collaborations and perspectives*, in *Economic Insights – Trends and Challenges*, 2024, vol. 13, n. 1, 37–50; A. Grenčíková, J. Habánik, J. Španková, M. Hůževka, M. Šrámka, *Current labour market challenges in the light of future economic and demographic developments*, in *European Journal of Interdisciplinary Studies*, 2022, vol. 14, n. 1, 100–112; M. Cristea, G. G. Noja, P. Stefea, A. L. Sala, *The impact of population aging and public health support on EU labor markets*, in *International Journal of Environmental Research and Public Health*, 2020, vol. 17, n. 4, 1439.

<sup>3</sup> J. Barakovic Husic, F. J. Melero, S. Barakovic, P. Lameski, E. Zdravevski, P. Maresova, O. Krejcar, I. Chorbev, N. M. Garcia, V. Trajkovic, *Aging at work: A review of recent trends and future directions*, in *International Journal of Environmental Research and Public Health*, 2020, vol. 17, n. 20, 7659.

<sup>4</sup> A. Přivara, E. Rievajová, B. Gavurová, M. Tupá, *Labour market and immigration nexus in V4 countries: Using panel data analysis for the period of 2000–2020*, in *Migration Letters*, 2023, vol. 20, n. 3, 465–476; K. Sargent, *Unpacking migration costs: Heterogeneous effects in EU labor markets*, in *Economic Modelling*, 2024, vol. 139, 106816.

focused on a small number of destination countries. This is confirmed by UN data<sup>6</sup>, according to which about half of the 272 million international migrants live in only 10 countries today. In this context, and taking into account the main migration routes, this topic has begun to be emphasized, especially by authors from Central and Eastern Europe<sup>7</sup> and Asia<sup>8</sup>. On the other hand, such studies are less frequent in the West<sup>9</sup>.

Since the vast majority of the above studies are based on data collected before the start of the Russian-Ukrainian conflict in 2022, the study of the impact of international migration on the labor market can still be considered incomplete. The Russian aggression in Ukraine caused the emergence of another migration wave, which changed the original cards in this area. Another motivation for the creation of this article was the existence of local factors that may be particularly noticeable on the European continent. Given the different historical experiences of individual European nations (socialist system vs. capitalism, proximity vs. distance from migration routes, etc.), attitudes towards immigrants and the resulting consequences for the labor market may be completely different even among close neighbors. Therefore, the challenge is to find a way to generalize the results for at least part of the European continent. However, this research should not end with summarizing the consequences of migration for the labor market. The development of the

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<sup>5</sup> D. Benček, C. Schneiderheinze, *Higher economic growth in poor countries, lower migration flows to the OECD – Revisiting the migration hump with panel data*, in *World Development*, 2024, vol. 182, 106655.

<sup>6</sup> United Nations, *International migrant stock 2019*, Department of Economic and Social Affairs, Population Division, 2019, [https://www.un.org/en/development/desa/population/migration/data/estimates2/docs/MigrationStockDocumentation\\_2019.pdf](https://www.un.org/en/development/desa/population/migration/data/estimates2/docs/MigrationStockDocumentation_2019.pdf) (accessed March 27, 2026).

<sup>7</sup> A. Přívara, E. Rievajová, B. Gavurová, M. Tupá, *Labour market and immigration nexus...*, *op. cit.*; S. Migali, M. Scipioni, *Who's about to leave? A global survey of aspirations and intentions to migrate*, in *International Migration*, 2019, vol. 57, n. 5, 181–200; L. Kilimova, O. Nishnianidze, *Socio-demographic characteristics as indicators of the unemployment rate*, in *Economic Annals-XXI*, 2018, vol. 168, n. 11–12, 82–85; J. Tepperová, J. Zouhar, F. Wilksch, D. Špalková, L. Matějová, *Migration and unemployment: Case of Germany*, in *Proceedings of the 18th International Conference on Current Trends in Public Sector Research*, Masaryk University, Brno, 2014, 16–17.

<sup>8</sup> K. Kondoh, S. Yabuuchi, *Unemployment, environmental policy, and international migration*, in *Journal of International Trade & Economic Development*, 2012, vol. 21, n. 5, 677–690; A. Tomohara, *Does an increase in the number of immigrant workers reduce unemployment rates? An industry sector unit level analysis in Japan*, in *Economic Analysis and Policy*, 2022, vol. 74, 464–476.

<sup>9</sup> R. Baumann, J. Svec, F. Sanzari, *The relationship between net migration and unemployment: The role of expectations*, in *Eastern Economic Journal*, 2016, vol. 41, n. 3, 443–458.

labor force significantly determines the performance potential of the entire economy and is directly or indirectly reflected in a wider group of macroeconomic indicators. In a broader context, this article is therefore focused on the impact of migration on selected macroeconomic indicators of the countries under study. From this perspective, its results should be helpful to the academic community and political representation. Recent developments have shown that political decisions focused on migration are often guided by emotions, without support in data. It is a consistent analysis of the factors that affect different groups of countries that can be helpful to material that will move this entire discussion in a constructive direction.

## 2. Literature Review

### 2.1 Migration

Recently, we have witnessed two serious phenomena, namely the COVID-19 pandemic and the war in Ukraine. This caused previously unanticipated consequences – extreme inflation, energy shortages, and social tensions. National economies had to face increased economic and political uncertainty. Serious consequences were not imminent<sup>10</sup>. Slovakia and two other V4 countries (Poland and the Czech Republic) sided with the warring Ukraine and provided all possible assistance. Both military assistance and assistance in receiving immigrants. The Visegrad countries became frontline countries affected by the refugee crisis. The migration and asylum agenda is thus becoming an extremely complex issue within the Visegrad Group region due to the initially intense politicization of the topic by government elites in individual states<sup>11</sup>. In the last decade, there has been a growing interest in migration intentions, their determinants and potential consequences among political and academic communities<sup>12</sup>.

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<sup>10</sup> E. Selenko, H. Berkers, A. Carter, S. A. Woods, K. Otto, T. Urbach, H. De Witte, *On the dynamics of work identity in atypical employment: Setting out a research agenda*, in *European Journal of Work and Organizational Psychology*, 2018, vol. 27, n. 3, 324–334.

<sup>11</sup> T. Kajánek, *The migration strategies and positions on the EU migration and asylum agenda: Evidence from the Visegrad Group countries*, in *Journal of Liberty and International Affairs*, 2022, vol. 8, n. 3, 202–219.

<sup>12</sup> OECD, *International migration outlook 2024*, OECD Publishing, 2024, <https://doi.org/10.1787/50b0353e-en> (accessed March 27, 2026); S. Migali, F. Natale, S. McMahon, G. Tintori, M. Perez Fernandez, A. Alessandrini, A. Goujon, D. Ghio, T. Petroliaqkis, A. Conte, U. Minora, S. Kalantaryan, *Population exposure and migrations linked to climate change in Africa*, Publications Office of the European Union, 2021.

Migration is the movement of people in a geographical environment. For international migration, nation-states and the subsequent migrant settlement in a country other than the country of origin are necessary conditions. Labor migration is associated with the emergence and development of the world economy from the last third of the 19th century to the present. The motivation for population movement has expanded significantly, especially in the second half of the 20th century<sup>13</sup>. The mutual ratio of emigration and immigration indicates the migration balance of economies, subregions, and regions. A positive value of the migration balance (i.e. net immigration) means that immigration to the country is numerically higher than emigration from the country. A negative value of the migration balance (i.e. net emigration) means that emigration exceeds immigration<sup>14</sup>. Rubinskaya<sup>15</sup> states that migration is caused and influenced by world economic trends, which include transnationalization, integration, and globalization. Migration is therefore a multi-level and multidimensional social phenomenon, where migration can also include the movement of refugees, displaced persons, economic migrants and people moving for other purposes, including family reunification<sup>16</sup>. With increasing geopolitical tensions and worsening climate disasters, it is likely that developed European countries are experiencing and will experience increasingly large migration waves from African and Middle Eastern countries<sup>17</sup>.

In 2023, migration to OECD countries reached a record high. Not only did 6.5 million permanent migrants arrive last year, but the number of temporary migrants and asylum seekers also skyrocketed. These high flows raise concerns about the impact of migrants on the economies and societies of receiving countries, but they also point to great opportunities<sup>18</sup>.

The article aims to assess the impact of immigration on selected macroeconomic indicators (see the Methodology chapter for more details). Economic growth factors such as gross domestic product (GDP), gross domestic income (GNI), unemployment rate, and inflation positively impact indicators of stability and security of the Visegrad Group

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<sup>13</sup> V. Kubišta, *Mezinárodní obchod a migrace*, Aleš Čeněk, Plzeň, 2016.

<sup>14</sup> V. Kubišta, *Mezinárodní obchod a migrace*, *op. cit.*

<sup>15</sup> E. Rubinskaya, *Migration and urbanization: Local solutions for global economic challenges*, IGI Global, 2020.

<sup>16</sup> E. Rubinskaya, *Migration and urbanization: Local solutions for global economic challenges*, *op. cit.*

<sup>17</sup> S. Migali et al., *Population exposure and migrations linked to climate change...*, *op. cit.*

<sup>18</sup> OECD, *International migration outlook 2024*, *op. cit.*

countries. Through these factors, countries can develop and improve the standard and quality of life<sup>19</sup>. GDP is considered a key economic indicator because it depicts the economy's performance based on the results of production factors located in the state's territory. The indicator characterizes economic processes and overall performance (what was produced and purchased)<sup>20</sup>. Another indicator assessed is unemployment. Forecasting unemployment is important for economists, forecasters, and policymakers concerning the economic downturn and other factors that influence it<sup>21</sup>. Immigration is one of these factors.

## 2.2 Migration and the labor market

Emigration and immigration affect not only the size of the population, but also various areas of economic life. What attracts migrants to host countries are “pull factors”, such as political stability, high income levels, better economic opportunities, and a higher standard of living. On the contrary, what forces people to emigrate from a country are “push factors”, such as political pressures, low levels of welfare, higher unemployment, low incomes, and high levels of corruption<sup>22</sup>. Migration, therefore, has a significant impact on the labor market. They are therefore of particular interest to government politicians and the professional community<sup>23</sup>. According to the theory developed by Lewis<sup>24</sup>, “high wages and a shortage of labor in richer countries motivate labor from poor countries with lower wages and limited job opportunities to migrate to rich countries, which brings balance to the international labor market.” If there were not such significant wage differences between countries, people would not be willing to migrate so much<sup>25</sup>. However, Piore<sup>26</sup>

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<sup>19</sup> A. Buriachenko, K. Zakhohay, A. Liezina, V. Lysak, *Sustainability and security of public budget of the Visegrad Group countries*, in *Acta Innovations*, 2022, vol. 42, 71–88.

<sup>20</sup> E. Ivanová, J. Masárová, *Performance evaluation of the Visegrad Group countries*, in *Economic Research-Ekonomska Istraživanja*, 2019, vol. 31, n. 1, 270–289.

<sup>21</sup> C. Jo, D. H. Kim, J. W. Lee, *Forecasting unemployment and employment: A system dynamics approach*, in *Technological Forecasting and Social Change*, 2023, vol. 194, 122715.

<sup>22</sup> D. Ushakov, *Migration determinants in the EU Member States*, in *Pressburg Economic Review*, 2022, vol. 2, n. 1, 31–36

<sup>23</sup> E. Grmanová, *Demographic changes and their impact on the labour market*, *op. cit.*

<sup>24</sup> W. A. Lewis, *Economic development with unlimited supplies of labour*, in *The Manchester School*, 1954, vol. 22, n. 2, 139–191.

<sup>25</sup> W. A. Lewis, *Economic development with unlimited supplies of labour*, *op. cit.*

<sup>26</sup> M. J. Piore, *The shifting grounds for immigration*, in *The Annals of the American Academy of Political and Social Science*, 1986, vol. 485, n. 1, 23–33.

argues that “wages are not a necessary condition for labor migration, the key role is actually played by the structure of the labor market”. The labor market has been divided into labor-intensive, lower-skilled, and highly skilled. As long as there is a demand for unskilled labor in the labor market, people will be more willing to migrate for work<sup>27</sup>.

The so-called cumulative causation theory explains the relationship between the labor market and migration. This theory emphasizes how migration flows can affect the social framework and structure of the labor market. If a concentration of migrants occurs in specific sectors of the host countries, this work is labeled as immigrant work. This leads to the fact that domestic workers do not prefer this work. This creates a need for a constant influx of migrants, and the relationship between migration and the labor market becomes a permanent phenomenon<sup>28</sup>. Ushakov<sup>29</sup> examined the relationship between unemployment rates and income levels, with migration flows in EU member states. While there is a strong positive relationship between income levels and immigration, the relationship between income levels and emigration is unclear and has a low negative association<sup>30</sup>. Cultural differences and diverse labor market institutions (such as minimum wages, collective bargaining, or unemployment and social benefits) are associated with local labor market mobility and, consequently, with spatially different unemployment rates and labor force participation<sup>31</sup>.

According to research by Přívara et al.<sup>32</sup>, it can be stated that “the relationship between immigration and unemployment is statistically significant and negatively correlated”. It also shows that in the Visegrád Four (V4) countries, immigration is not a significant source of unemployment. Unemployment is strongly related to economic growth and inflation. Therefore, these factors should be a priority for the V4 countries and they should include immigrants as a driver of growth for the

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<sup>27</sup> M. J. Piore, *The shifting grounds for immigration*, *op. cit.*

<sup>28</sup> D. Ushakov, *Migration determinants in the EU Member States*, *op. cit.*; D. S. Massey, J. Durand, K. A. Pren, *Explaining undocumented migration to the U.S.*, in *International Migration Review*, 2014, vol. 48, n. 4, 1028–1061.

<sup>29</sup> D. Ushakov, *Migration determinants in the EU Member States*, *op. cit.*

<sup>30</sup> D. Ushakov, *Migration determinants in the EU Member States*, *op. cit.*

<sup>31</sup> M. Alvarez, V. Royuela, *The effect of labor-market differentials on interregional migration in Spain: A meta-regression analysis*, in *Journal of Regional Science*, 2022, vol. 62, 913–937.

<sup>32</sup> A. Přívara, E. Rievajová, B. Gavurová, M. Tupá, *Labour market and immigration nexus...*, *op. cit.*

industry that needs this workforce<sup>33</sup>. In the Czech Republic, migration has a predominantly positive effect despite its negatives (increased crime). Migrants are predominantly of working age or even before working age, which is a good sign for successful adaptation to the given functioning and behavior of the state<sup>34</sup>.

The extent to which immigration affects the labor market and the broader economy in the short, medium, and long term is the subject of ongoing debate. The key to objectively assessing the impact of immigration on the labor market is the choice of relevant indicators. According to a report by the OECD and ILO<sup>35</sup>, this group may include, for example, changes in the employment rate, unemployment, vacancies, or wages. As the literature review has shown, authors often prefer the general unemployment rate as an indicator of the condition of the labor market. Moreover, some research also goes in the opposite direction – they examine whether employment affects migration, which, in the case of Baumann et al.<sup>36</sup>, did not prove a relationship between these variables. In their study, Jestl & Tverdostup<sup>37</sup> analyse the entry of refugees and immigrants into the labor market in Austria. They detail the factors influencing the duration and stability of employment in Austria. They point to the need for immigrants to have immediate access to training and re-education, which would help improve the quality of their entry jobs and long-term prospects. Espinosa and Díaz-Emparanza<sup>38</sup> state that the greater the immigration, the greater the unemployment. Kondoh and Yabuuchi<sup>39</sup> found, in the specific conditions of the Japanese market, that international immigration can increase the employment rate and the

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<sup>33</sup> A. Přívara, E. Rievajová, B. Gavurová, M. Tupá, *Labour market and immigration nexus...*, *op. cit.*

<sup>34</sup> P. Adámek, J. Dobrylovský, *Immigration to the Czech Republic, benefits and impacts from the view of labour market functioning*, in *International Days of Statistics and Economics 2019*, 2019, <https://doi.org/10.18267/pr.2019.los.186.2> (accessed March 27, 2026).

<sup>35</sup> OECD/ILO, *How Immigrants Contribute to Developing Countries' Economies*, OECD Publishing, 2018, <https://doi.org/10.1787/9789264288737-en> (accessed March 27, 2026)

<sup>36</sup> R. Baumann, J. Svec, F. Sanzari, *The relationship between net migration and unemployment...*, *op. cit.*

<sup>37</sup> S. Jestl, M. Tverdostup, *The labour market entry and integration of refugees and other migrants in Austria*, in *niiv Working Paper*, 2023, n. 231, <https://www.econstor.eu/handle/10419/283274> (accessed March 28, 2026).

<sup>38</sup> A. M. Espinosa, I. Díaz-Emparanza, *The long-term relationship between international labour migration and unemployment in Spain*, in *Journal of International Migration and Integration*, 2021, vol. 22, n. 1, 145–166.

<sup>39</sup> K. Kondoh, S. Yabuuchi, *Unemployment, environmental policy...*, *op. cit.*

economic well-being of the standard worker. Tomohara<sup>40</sup> further elaborates on these findings and states that the unemployment rate decreases with the increase in the number of immigrants in industries characterized by labor shortages. Some other studies, on the contrary, have yielded rather neutral results. Tepperová et al.<sup>41</sup> concluded in their study of this issue in the German labor market that most of the differences between the unemployment rate of immigrants compared to natives can be explained by different characteristics (e.g. age, gender, education) of immigrants compared to natives. The probability that an immigrant will be unemployed is only a fraction higher than for a comparable domestic resident. The relationship between the share of incoming workers (immigrants) and the employment of native workers is analyzed, among others, by the OECD report<sup>42</sup>, and is assessed as negligible for most of the countries studied. However, this analysis reflects many local specificities, such as a higher rate of urbanization and, consequently, a large outflow of workers from selected provinces. In the short term, immigration can increase the demand for goods and services, which results in an increase in production and subsequently the demand for labor, which can lead to an increase in investment over time<sup>43</sup>. When the economy is growing, new immigration creates enough jobs to keep domestic employment unharmed, even in the relatively short term. During a downturn, however, new immigrants have been found to have little negative impact on domestic employment in the short term (but not in the long term)<sup>44</sup>. Edo<sup>45</sup> examines the impact of immigration on the average wage and employment of domestic workers. This study also analyses this issue over time. The influx of immigrants will reduce the wages of competing domestic workers (with skills similar to those of migrants) and increase the wages of complementary workers (with skills that complement those of immigrants). By affecting the skill composition of the workforce, immigration can create winners and losers among

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<sup>40</sup> A. Tomohara, *Does an increase in the number of immigrant workers reduce...*, *op. cit.*

<sup>41</sup> J. Tepperová et al., *Migration and unemployment...*, *op. cit.*

<sup>42</sup> OECD/ILO, *How immigrants contribute...*, *op. cit.*

<sup>43</sup> G. Peri, *The Impact of Immigrants in Recession and Economic Expansion*, Migration Policy Institute, University of California, Davis, 2010, <https://www.migrationpolicy.org/sites/default/files/publications/Peri-June2010.pdf> (accessed March 28, 2026).

<sup>44</sup> G. Peri, *The Impact of Immigrants in Recession and Economic Expansion*, *op. cit.*

<sup>45</sup> A. Edo, *The impact of immigration on the labor market*, in *Journal of Economic Surveys*, 2019, vol. 33, n. 3, 922–948.

domestic workers through changes in the wage structure. Sargent<sup>46</sup> examines the long-term effects of costly labor migration on European Union (EU) unemployment. Understanding the labor market's impact on sending and receiving countries can inform the discussion of the long-term effects of free labor mobility. His study shows that reducing barriers to movement increases migration rates in the long term while reducing unemployment rates for all workers in both countries. He shows that workers benefit from the ability to move, even if it is very costly, through reduced unemployment rates and increased welfare associated with these moves. Unemployment rates among workers in sending and receiving countries are lower when workers are allowed to migrate than when they are restricted to their country's labor market<sup>47</sup>. A study by Poledna et al.<sup>48</sup> examines the potential economic and labor market impacts. The results suggest a positive impact on GDP due to increased aggregate consumption and investment. The unemployment rate of natives and previous migrants is increasing in the labor market<sup>49</sup>. According to OECD<sup>50</sup>, the extent to which Ukrainian refugees have been able to integrate into local labor markets has varied considerably across countries. Ukrainian refugees in some Central and Eastern European countries, such as Poland, Lithuania and Estonia, are doing particularly well in the labor market, with employment rates above 50% at the end of 2023, while fewer than one in four are employed in countries such as Germany, Austria and Belgium. This is also confirmed by the Eurofound report<sup>51</sup>, which also identifies the main barriers – language, lack of qualifications, childcare or limited networks – and describes the support policies in place (language courses, rapid recognition of diplomas, etc.).

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<sup>46</sup> K. Sargent, *Unpacking migration costs: Heterogeneous effects in EU labor markets...*, *op. cit.*

<sup>47</sup> K. Sargent, *Unpacking migration costs: Heterogeneous effects in EU labor markets...*, *op. cit.*

<sup>48</sup> S. Poledna, N. Strelkovskii, A. Conte, A. Goujon, J. Linnerooth-Bayer, *Economic and labour market impacts of migration in Austria: An agent-based modelling approach*, in *Comparative Migration Studies*, 2024, vol. 12, n. 18.

<sup>49</sup> S. Poledna, N. Strelkovskii, A. Conte, A. Goujon, J. Linnerooth-Bayer, *Economic and labour market impacts of migration in Austria...*, *op. cit.*

<sup>50</sup> OECD, *International migration outlook 2024*, *op. cit.*

<sup>51</sup> Eurofound, *Social impact of migration: Addressing the challenges of receiving and integrating Ukrainian refugees*, Publications Office of the European Union, 2024, <https://www.eurofound.europa.eu/en/publications/all/social-impact-migration-addressing-challenges-receiving-and-integrating-ukrainian> (accessed March 28, 2026).

### 3. Methodology

As mentioned in the introduction, the authors focused on two internationally frequent topics – demography and migration. Migration is perceived as a phenomenon that can partially compensate for the unfavorable demographic development of the Western population and avert economic stagnation, while having an immediate impact on the condition of the labor market. In the context of these assumptions, this paper aims to assess the impact of migration on a selected group of macroeconomic indicators in selected countries, emphasizing the labor market. An objective assessment of this phenomenon requires statistical analysis, for which Pearson's coefficient was chosen.

### 4. Research Sample

As literary research shows, the arrival of foreign labor can have very different consequences across continents and countries. The selection of a group of countries for which the results can be generalized was therefore crucial for the potential of this study. The fundamental prerequisite was to find a group of countries with unquestionable global significance and with a hitherto insufficiently explained impact of migration on their macroeconomic situation.

One possible solution for obtaining findings that could be at least partially generalizable is to apply the principles of regionalism. This approach can be loosely explained as the division of a larger entity (e.g., the European Union) into several smaller groups of related countries with similar historical experiences and compatible mentalities. With some caution, we can view this set of countries as a homogeneous whole, united by a typical "regional problem" according to De Castro<sup>52</sup>.

A typical example of such a regional grouping is the Visegrad Four, which was established in the Hungarian town of Visegrad in 1991 as a joint project of Poland, Hungary, and Czechoslovakia (which split into Czechia and Slovakia two years later). This group aimed to coordinate their efforts in the EU<sup>53</sup> and to cooperate. These countries are close in terms of

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<sup>52</sup> I. E. De Castro, *Revisiting regionalism as the foundation of the regional issue*, in *Confins-Revue Franco-Bresilienne de Geographie-Revista Franco-Brasileira de Geografia*, 2021, n. 49.

<sup>53</sup> E. Ugurlu, I. Jindřichovská, *Effect of COVID-19 on international trade among the Visegrad countries*, in *Journal of Risk and Financial Management*, 2022, vol. 15, n. 2.

cultural, intellectual, and socioeconomic values<sup>54</sup> and overcoming their communist past. A characteristic feature of the Visegrad Group countries is their common interest in European integration, strengthening stability in Central Europe, and mutual support in the economic and cultural spheres. This region has a strategic location in the European Union because it is in the center of Europe<sup>55</sup>.

The Visegrad Group countries are united not only by their proximity and location in the heart of Europe, but also by a similar historical trajectory. After World War II, they became part of an economic bloc of Eastern Bloc countries called the Council for Mutual Economic Assistance, where they transformed into some of Europe's most industrialized economies. After the fall of the Iron Curtain at the end of the last century, they began to seek a path to the free market, culminating in their accession to the European Union in 2004. To this day, they are united by several local characteristics, the most significant of which is the similar nature of their labor markets. An analysis by the Czech Statistical Office<sup>56</sup> points, for example, to the unemployment rate, which in the V4 countries, except Slovakia, remains below the European Union average. Based on data from 2022, the same trend can be seen in the long-term unemployment rate. When we also consider the above-average share of the workforce employed in the industrial sector in the Visegrad countries (with a lower share of knowledge-intensive services), we have gathered the first group of relevant reasons why these countries are so attractive to migrants who can work<sup>57</sup>. This idea is further supported by thousands of long-term job vacancies in all the countries mentioned, which creates significant opportunities for foreign workers<sup>58</sup>. The relevance of studies focused on

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<sup>54</sup> E. Matoušková, *Comparison of economic cycles of the Slovak economy and other Visegrad Four countries*, in *Pénzügyi Szemle = Public Finance Quarterly*, 2022, vol. 67, n. 3, 463–481.

<sup>55</sup> A. Sacio-Szymańska, A. Kononiuk, S. Tommei, O. Valenta, É. Hideg, J. Gáspár, P. Markovič, K. Gubová, B. Boorová, *The future of business in Visegrad region*, in *European Journal of Futures Research*, 2016, vol. 4, n. 26.

<sup>56</sup> Czech Statistical Office, *Pohyb obyvatelstva - 1.–3. čtvrtletí 2024*, 2023, <https://csu.gov.cz/rychle-informace/pohyb-obyvatelstva-3-ctvrtleti-2024> (accessed March 28, 2026).

<sup>57</sup> Czech Statistical Office, *Pohyb obyvatelstva - 1.–3. čtvrtletí 2024*, *op. cit.*

<sup>58</sup> Czech Statistical Office, *Statistika volných pracovních míst*, 2024, <https://csu.gov.cz/produkty/statistika-volnych-pracovnich-mist>; Hungarian Central Statistical Office, *Number of job vacancies and the job vacancies rate by economic branches*, 2024, [https://www.ksh.hu/stadat\\_files/mun/en/mun0159.html](https://www.ksh.hu/stadat_files/mun/en/mun0159.html); GlobalData, *Slovakia: Technology related job trends in the technology and communications sector (October 2023 – January 2024)*, 2024, <https://www.globaldata.com/data-insights/technology--media-and-telecom/slovakia-technology-related-job-trends-in-the-technology-and-communications->

the specific environment of Central and Eastern Europe is sometimes dismissed by Western researchers due to the low global significance of these countries. However, this somewhat discriminatory attitude towards post-socialist economies is gradually being questioned by both academics<sup>59</sup> and statisticians. According to an analysis by the Czech Statistical Office<sup>60</sup>, the labor force of the Visegrad Four countries comprises 29.4 million workers, representing 14% of the European Union's employment (210 million people).

Another argument for studying this sample is the need to expand theoretical knowledge about labor market developments in previously neglected countries of the former Eastern Bloc. Research focused specifically on the Visegrad Four countries has been on the rise recently<sup>61</sup>, but not all the specifics of their development have been mapped out yet. There is also potential in identifying local differences between the Czech Republic, Slovakia, Poland, and Hungary, and analyzing them in greater depth.

## 5. Hypotheses Development

### ***H1: The gross migration rate is a statistically significant factor influencing unemployment.***

In line with the above-presented objective of the study, the authors decided to test the relationship between migration and a selected indicator recognized as an indicator of the condition of the labor market. The unemployment rate is a traditional metric in this regard, whose relevance is demonstrated by its use in several similar studies<sup>62</sup>. It is understood as

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sector-2092508; Statistics Poland, *The demand for labour in the fourth quarter of 2023*, 2024, <https://stat.gov.pl/en/topics/labour-market/demand-for-labor/the-demand-for-labour-in-the-fourth-quarter-of-2023,2,52.html> (accessed March 28, 2026).

<sup>59</sup> S. Uddin, B. Popesko, Š. Papadaki, J. Wagner, *Performance measurement in a transitional economy: Unfolding a case of KPIs*, in *Accounting, Auditing & Accountability Journal*, 2021, vol. 34, n. 2, 370–396.

<sup>60</sup> Czech Statistical Office, *Statistika volných pracovních míst*, *op. cit.*

<sup>61</sup> J. Belás, R. Machová, J. Oláh, Z. Metzker, *The impact of selected HRM factors on company's survival of SMEs: Empirical research in V4 countries*, in *Journal of International Studies*, 2024, vol. 17, n. 1, 108–123; B. Gavurová, J. Schonfeld, Y. Bilan, T. Dudáš, *Study of the differences in the perception of the use of the principles of corporate social responsibility in micro, small and medium-sized enterprises in the V4 countries*, in *Journal of Competitiveness*, 2022, vol. 14, n. 2, 23–40.

<sup>62</sup> Jo et al., *op. cit.*; A. Přívara, E. Rievajová, B. Gavurová, M. Tupá, *Labour market and immigration nexus...*, *op. cit.*; D. Dorn, J. Zweimüller, *Migration and labor market integration in Europe*, in *Journal of Economic Perspectives*, 2021, vol. 35, n. 2, 49–76; F. Fasani, J. Llull, C.

the proportion of unemployed people registered with the labor office divided by the number of all people aged 15-64 living in a given territory (i.e., including foreigners). Demographic and economic factors such as age and level of education influence migration and subsequent unemployment<sup>63</sup>. The motivation for examining this indicator also includes an assessment of the partial differences between the characteristics of the individual labor markets of the V4 countries. As Kureková & Zilinciková<sup>64</sup> point out, migration within the EU, especially after the eastern enlargement, significantly impacted the labor market in the V4 countries. As local statistics show, there are significant differences within the V4 group, for example, in the number of job vacancies. The authors therefore believe that while Czechia, as the country with the highest surplus between low unemployment and a high number of job vacancies, will benefit from the arrival of foreign labor, this positive correlation is unlikely to work in Slovakia.

***H2: The gross migration rate is a statistically significant factor influencing the gross domestic product.***

When examining the potential economic benefits immigrants can bring to a country, relying on a single metric is impossible. While the indicator of the impact of migration on the unemployment rate deals purely with the consequences for the labor market, the second indicator examined is gross domestic product (GDP), which, according to the literature review, is a typical indicator for assessing economic performance. As evidenced by the study by Strzelecki et al.<sup>65</sup>, the influx of workers from Ukraine to Poland has contributed significantly to economic growth by increasing the adequate labor supply. Research suggests that this influx of labor has contributed to GDP growth. In Poland and the Baltic states, migration from post-Soviet countries has contributed to economic development and

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Tealdi, *The economics of migration: Labour market impacts and migration policies*, in *Labour Economics*, 2020, vol. 67, 101929.

<sup>63</sup> D. Hubelová, P. Ptáček, T. Šlechtová, *Demographic and socio-economic factors influencing health inequalities in the Czech Republic*, in *Geoscape*, 2021, vol. 15, n. 1, 53–65.

<sup>64</sup> L. M. Kureková, Z. Zilinciková, *Examining labour market hierarchies in Slovakia from the perspective of intra-EU migration and return*, in *Journal of Ethnic and Migration Studies*, 2023, vol. 49, n. 16, 4140–4168.

<sup>65</sup> P. Strzelecki, J. Growiec, R. Wyszynski, *The contribution of immigration from Ukraine to economic growth in Poland*, in *Review of World Economics*, 2022, vol. 158, n. 2, 365–399.

GDP growth. High labor demand in these countries and the influx of labor from Ukraine were key factors in economic growth<sup>66</sup>.

## 6. Data collection and Processing

Macroeconomic data obtained from Eurostat and national statistical offices served as the main input for the hypotheses testing. The input variables are described in more detail below.

The formulation of hypothesis H1 required the collection of data on labor market development. The source of this information was the Labor Force Survey, which took into account annual unemployment rates (in %). Conversely, migration trends (also necessary for H1) are monitored using a coefficient that relates net migration to a given number of inhabitants, most commonly per 1,000 people. While a positive coefficient indicates a population increase per 1,000 inhabitants, a negative coefficient reflects a population decrease per 1,000 inhabitants. For hypothesis H2, the authors chose to examine the impact of migration on economic performance. Eurostat monitors a country's productive activity through household consumption, which, as the most significant component of gross domestic product, is expressed in monetary units.

To verify the hypotheses, the Pearson correlation coefficient was used to express the strength and direction of the relationship between the tested variables. Its values range from  $-1$  to  $1$ , where the extreme values of  $-1$  and  $1$  indicate a perfect linear relationship. A positive correlation means that as one variable increases, the other tends to increase as well. A correlation close to zero indicates that changes in one variable are not systematically associated with changes in the other. Finally, a negative correlation means that as one variable increases, the other tends to decrease.

Given the shocks that have affected the development of the studied variables over the past decade, it was essential for the objectivity of the results to carefully define the period under investigation. In the first phase, the authors eliminated extreme years, starting with the Covid year 2020, during which all observed countries experienced a decline in economic activity and a temporary restriction of free movement. The reactivation of both economic activity and migration began in the following year, 2021, which was chosen as the starting point of the

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<sup>66</sup> P. Strzelecki et al., *The contribution of immigration from Ukraine...*, *op. cit.*; V. V. Vorotnikov, A. Habarta, *Migration from post-Soviet countries to Poland and the Baltic states: Trends and features*, in *Baltic Region*, 2021, vol. 13, n. 4, 79–94.

research. The first time sample further includes the years 2022 and 2023, which were affected by a migration wave resulting from Russia's aggression in Ukraine. Given the geographical proximity of the Visegrad countries to the conflict, these states became significant hosts for Ukrainian refugees. The year 2022 may not have fully demonstrated the impact of their arrival on individual macroeconomic indicators, as adaptation periods are typically required when entering an unfamiliar environment. However, the year 2023 is expected to reflect the real development in this regard.

In an effort to capture the broader context of the research, the authors decided to extend the analyzed period to also include the years 2016 to 2019. Including these years allows for a comparison of how the relationship between the observed variables has changed compared to the period of economic growth at the end of the previous decade, when the Visegrad countries experienced expansion without significant external geopolitical disruptions.

## 7. Results

Although the Visegrad Group countries are considered closely connected states shaped by local specificities, the data collection revealed that they exhibit significant differences in the development of the monitored indicators. This is clearly illustrated, for example, by migration balance. The initial conditions were similar across the V4 countries, as all four received refugees in 2022 and 2023 according to local statistics<sup>67</sup>. However, the increase in migrants - except in the case of the Czech Republic - did not compensate for population loss caused by emigration and natural decline. As a result, the V4 countries entered a period of moderate depopulation in the post-Covid era.

These findings are fully in line with a recent analysis by the Czech Statistical Office<sup>68</sup>, which shows that Czechia has long recorded the highest population gains, while Hungary and Poland are on the opposite end of the spectrum. Initially, Hungary experienced the greatest population decline, but it was overtaken by Poland in 2019 and again in 2021.

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<sup>67</sup> United Nations High Commissioner for Refugees (UNHCR), *Operational data portal: Ukraine refugee situation*, [n.d.], <https://data.unhcr.org/en/situations/ukraine> (accessed March 28, 2026)

<sup>68</sup> Czech Statistical Office, *Statistika čí my*, 2023, vol. 13, n. 10, 27–44.

Table No. 1 Migration balance<sup>69</sup>

Year	Czechia	Slovakia	Hungary	Poland
2016	2,4	1,7	-4,1	0,2
2017	2,9	1,4	-2,7	0,1
2018	3,7	1,3	-1,4	-0,1
2019	4,1	1,4	-1,1	-0,4
2021	4,8	-4,6	-4,3	-5
2022	29,1	-1,1	-1,1	-3,7
2023	6,7	-1,6	-1,6	-3,6

From the perspective of macroeconomic indicators, the Czech Republic has long been considered the wealthiest member of the V4 group, as reflected in its low unemployment rate and consistently high level of household consumption<sup>70</sup> (as the main component of gross domestic product). The collected data also show that while unemployment rates in the V4 countries converged between 2016 and 2023, differences in per capita consumption have slightly widened.

Table No. 2 Macroeconomic indicators<sup>71</sup>

Yr	Unemployment rate (%)				Consumption/person (EUR)			
	Czechia	Slovakia	Hungary	Poland	Czechia	Slovakia	Hungary	Poland
2016	4	9,6	5	6,3	11 460	11 050	8 300	8 490
2017	2,9	8,1	4	5	12 580	11 650	9 120	9 350
2018	2,2	6,5	3,6	3,9	13 840	12 340	9 600	9 940
2019	2	5,7	3,3	3,3	14 730	13 150	10 390	10 520
2021	2,8	6,8	4,1	4,1	15 970	14 360	10 970	11 320
2022	2,2	6,1	3,6	3,6	18 180	16 460	12 260	13 210
2023	2,6	5,8	4,1	4,1	19 550	17 560	14 240	15 110

After collecting and systematizing the data, both hypotheses were tested. In the case of hypothesis H1, the relationship between migration and the

<sup>69</sup> Eurostat, *Population on 1 January by age and sex*, 2025, <https://ec.europa.eu/eurostat/databrowser/view/TPS00019/default/table?lang=en> (accessed March 28, 2026)

<sup>70</sup> Household consumption represents the total spending of households on goods and services and serves as a key indicator of overall economic activity and living standards.

<sup>71</sup> Eurostat, *Comparative price levels of final consumption expenditure*, 2024, [https://ec.europa.eu/eurostat/databrowser/view/nama\\_10\\_pc/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/nama_10_pc/default/table?lang=en) (accessed March 28, 2026); Eurostat, *Unemployment rate – annual data (%)*, 2025, <https://ec.europa.eu/eurostat/databrowser/view/tipsun20/default/table?lang=en> (accessed March 28, 2026)

unemployment rate was examined, where the authors expected an inverse relationship. In other words, a higher migration index was expected to contribute to a lower unemployment rate. The results of the testing are shown below.

Table No. 3 Hypothesis H1 testing<sup>72</sup>

Country	Pearson test	
	2016-2019	2021-2023
Czechia	-0,963	-0,966
Slovakia	0,816	-0,975
Poland	0,931	-0,996
Hungary	-0,984	-0,62

In assessing Hypothesis H1, the years 2021 to 2023 play a key role, as they represent a period largely influenced by the migration wave. As the test result for linear dependence gets closer to -1, the inverse link between the variables becomes increasingly evident<sup>73</sup>. This finding applies to the trio of Czechia, Slovakia, and Poland, where an increase in the migration balance likely has an indirect effect of lowering the unemployment rate. Only in the case of Hungary, a significant relationship between the tested variables was not confirmed<sup>74</sup>.

For a more comprehensive assessment of migration's impact on labor market conditions, it is useful to compare how the effect of foreign labor has changed relative to the 2016–2019 period. The Czech Republic shows consistent results, with scores differing from the 2021–2023 period by only a few hundredths of a percent. Hungary also achieved comparable results in both periods; however, the initially strong inverse relationship between the two variables appears to be gradually weakening. In the two remaining Visegrad countries, the recent developments have undergone a dramatic shift. Poland's results contrast starkly with the past - what was

<sup>72</sup> Processed by the researchers.

<sup>73</sup> This relationship is particularly visible in labor-intensive sectors such as construction, manufacturing, and services, where migrant workers often fill positions that are less attractive to the domestic workforce.

<sup>74</sup> The absence of a significant relationship in Hungary may reflect differences in migration policies, labor market regulation, or the structure of the economy.

once a strong direct relationship during 2016–2019 has now turned into an inverse one. Slovakia follows a trajectory similar to that of Poland<sup>75</sup>. The results of hypothesis H1 testing laid clear groundwork for hypothesis H2. If the rise in the migration index led to a reduction in unemployment in Czechia, Slovakia, and Poland, a positive effect on the main component of these countries' gross domestic product could be expected. However, this phenomenon was observed only in Slovakia and Poland between 2021 and 2023, where a direct relationship was identified between the increase in the migration index and growth in consumption per capita. In contrast, the Czech Republic, whose indicators had previously reported an exclusively positive impact of accepting migrants, shows an insignificant relationship between these two variables. A stronger relationship was, unexpectedly, identified even in Hungary.

**Table No. 4 Hypothesis H2 testing<sup>76</sup>**

Country	Pearson test	
	2016-2019	2021-2023
Czechia	0,997	0,204
Slovakia	-0,699	0,963
Poland	-0,951	0,896
Hungary	0,959	0,703

The result of H2 testing is surprising for the Czech Republic, even in the context of earlier data, as a direct relationship between the migration index and consumption per capita was observed during the period 2016 to 2019. However, the development in Czechia is not the only unexpected finding. A look at the shift in results suggests that either the overall approach to migration has changed fundamentally across all the examined countries (with the possible exception of relatively stable Hungary), or a new economic factor has come into play<sup>77</sup>. While Poland and Slovakia showed a relatively strong inverse relationship between the observed variables in the 2016–2019 period, this relationship has now become direct. These dramatic shifts in the relationship between the migration

<sup>75</sup> The shift from a direct to an inverse relationship in Poland and Slovakia indicates a structural change in how migrant labor is integrated into the labor market, possibly accelerated by the post-Covid recovery and the inflow of refugees from Ukraine.

<sup>76</sup> Processed by the researchers.

<sup>77</sup> This may indicate that the Czech labor market has reached a saturation point, where additional migration no longer translates into increased consumption, possibly due to capacity limits or structural characteristics of the economy.

index and per capita consumption are so significant to warrant further attention in the following chapter Discussion.

If we consider a relationship significant when the coefficient of linear dependence reaches a value higher than 0.75 (or lower than -0.75 in the case of an inverse relationship), the results of hypothesis testing in the primary period of interest (2021 to 2023) can be evaluated as follows.

Table No. 5 Summarizing the results of hypothesis testing<sup>78</sup>

Country	Period 2021-2023	
	Hypothesis H1	Hypothesis H2
Czechia	Confirmed	Not confirmed
Slovakia	Confirmed	Confirmed
Poland	Confirmed	Confirmed
Hungary	Not confirmed	Not confirmed

## 8. Discussion

Migration has become a widely discussed topic in Central and Eastern Europe over the past decade, as evidenced by the emergence of numerous studies<sup>79</sup>. In this context, the research gap for further investigation might appear to be exhausted. However, the findings of this study and the documented differences in the development of the examined indicators confirm that the impact of migration on macroeconomic variables in the period 2021–2023 differed significantly from that in 2016–2019. This supports the authors' initial assumption that the migration waves that began in 2015 and 2022 share very little in common.

The authors perceive a significant difference primarily in the cultural proximity of Ukrainian refugees, who began arriving in the Visegrad Four countries in 2022 as a result of the Russia–Ukraine conflict. For the labor market, this meant the arrival of a much more flexible workforce compared to the mid-2010s. Consequently, the previously held theory that

<sup>78</sup> Processed by the researchers.

<sup>79</sup> P. Csanyi, R. Kucharčík, *Central European leaders' attitudes towards the migration and the migration crisis*, in *Journal of Comparative Politics*, 2023, vol. 16, n. 2, 20–37; A. Bąk-Pitucha, *Grupa Wyszehradzka (V4) wobec kryzysu migracyjnego w Europie*, in *Studia Politologiczne*, 2023, vol. 68, n. 2, 94–104; L. Kilimova, O. Nishnianidze, *Socio-demographic characteristics as indicators...*, *op. cit.*; J. Tepperová et al., *Migration and unemployment...* *op. cit.*

rising immigration leads to higher unemployment<sup>80</sup> appears to lose validity in the context of the V4 countries. If unemployment is measured as the ratio of individuals registered with employment offices to the total population living in a given territory, a more flexible foreign workforce should result in an inverse relationship between these two variables. This hypothesis was first formulated by Přívara<sup>81</sup> in his study of the V4 countries; however, his research covered data only up to the year 2020. Therefore, the first task of our research team was to confirm or refute his findings using data that reflect the current migration wave. An open question also remained whether the Visegrad countries would be able to translate the positive impact on the labor market into a positive effect on consumption—considered the most significant component of gross domestic product.

Another point of contention concerned the generalization of findings across all V4 countries. On the one hand, Bąk-Pitucha<sup>82</sup> notes that since 2015, EU migration policy has become a unifying and mobilizing element for the V4 region. However, during the same period, Sener and Uzun<sup>83</sup> suggested that in some countries, migration is increasingly perceived as a threat to socio-economic security. This underscores the need for a more thorough examination of local differences, the insufficient reflection of which was already highlighted in the Methodology chapter. Recent developments have shown that migration-related political decisions are often driven by emotion rather than grounded in data. A rigorous analysis of the causes of intra-V4 differences could thus serve as a valuable contribution to depoliticizing the debate and steering it in a more constructive direction.

A key finding of the presented empirical research is the confirmation of an inverse relationship between immigration and the unemployment rate in Czechia, Poland, and Slovakia. This result supports the view of Přívara et al.<sup>84</sup>, who argue that incoming foreigners can contribute positively to the labor market while also becoming one of the drivers of industrial

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<sup>80</sup> A. M. Espinosa, I. Díaz-Emparanza, *The long-term relationship between international labour...*, *op. cit.*

<sup>81</sup> A. Přívara, E. Rievajová, B. Gavurová, M. Tupá, *Labour market and immigration nexus...*, *op. cit.*

<sup>82</sup> A. Bąk-Pitucha, *Grupa Wyszehradzka (V4) wobec kryzysu migracyjnego w Europie*, *op. cit.*

<sup>83</sup> B. Sener, S. Uzun, *Securitization of international migration in the context of economic and societal security: An example of the Hungarian Fidesz and Jobbik parties*, in *Kbazar Journal of Humanities and Social Sciences*, 2023, vol. 26, n. 4, 34–61.

<sup>84</sup> A. Přívara, E. Rievajová, B. Gavurová, M. Tupá, *Labour market and immigration nexus...*, *op. cit.*

growth. Hungary, due to its strongly negative stance on immigration, risks being unable to benefit from these advantages. Moreover, this position may result in the country forgoing one of the core characteristics that enabled it - and other V4 countries - to accelerate the process of economic convergence. As shown by findings from the European Commission<sup>85</sup>, lower labor costs compared to Western Europe have often led to a significant relocation of industrial production to the V4 region, a trend further supported by the region's logistically strategic location in the heart of the continent<sup>86</sup>. This development has influenced employment structures, the intensity of foreign investment, and pressure for labor migration, from which the Visegrad countries have benefited<sup>87</sup>. Other authors have likewise confirmed that the gross rate of economic migration has had a significant impact on labor markets and economic resilience in the V4 countries<sup>88</sup>.

However, it would be overly simplistic to interpret Hungary's negative stance on immigration in general context. The results of testing hypothesis H1 clearly indicate that the relationship between immigration and the unemployment rate in Hungary differs from that observed in the other V4 countries. This opens up a range of questions, for which adequate data are largely lacking - thus presenting a stimulus for further research. First and foremost, it is necessary to examine whether Hungary's position has been shaped by a particularly negative public attitude toward foreign labor entering the country. However, the reluctance of immigrants to enter the Hungarian labor market may also stem from the country's desultory approach to managing incoming workers and from inadequate conditions for their integration.

The results of the second hypothesis may offer a tentative indication that the first explanation - Hungarians' negative experiences with incoming labor - has some merit. The data did not confirm the expected positive

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<sup>85</sup> European Commission, *Labour market and wage developments in Europe: Annual review 2020*, 2020, <https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8319> (accessed March 28, 2026).

<sup>86</sup> A. Přívara, E. Rievajová, B. Gavurová, M. Tupá, *Labour market and immigration nexus...*, *op. cit.*

<sup>87</sup> B. Galgóczi, *Why Central and Eastern Europe needs a pay rise*, European Trade Union Institute, 2017, <https://www.etui.org/Publications2/Working-Papers/Why-central-and-eastern-Europe-needs-a-pay-rise> (accessed March 28, 2026).

<sup>88</sup> J. Poór, *The managerial implications of the labor market and workplace shortage in Central Eastern Europe*, in *Strategic Management*, 2021, vol. 26, n. 2, 31–48; L. M. Kureková, Z. Zilinciková, *Examining labour market hierarchies...*, *op. cit.*; P. Strzelecki et al., *The contribution of immigration from Ukraine...*, *op. cit.*

relationship between immigration and per capita consumption, which suggests insufficient economic contributions from foreign nationals. A similar finding in the case of the Czech Republic is particularly surprising, as it raises the question of whether the benefits associated with the presence of refugees are substantial enough to offset the related costs. Marois et al.<sup>89</sup> emphasized that relying on immigration as a tool to address economic challenges must necessarily be accompanied by strong and effective measures aimed at ensuring full economic integration of immigrants. And it is precisely here that problems may lie - particularly in the Czech context. This is especially relevant given that previous discussions at forums and conferences<sup>90</sup> have indicated that the integration process in the Czech Republic has not been fully or effectively managed at the procedural level.

Both hypotheses are grounded in logical economic principles and supported by the results of correlation analysis. Migration reduces structural tensions in the labor market (H1), thereby promoting GDP growth through consumption and investment (H2). The differing results across the V4 countries confirm that the economic impact of migration is not automatic, but rather contingent on the structure of migration, state policies, and the current phase of the economic cycle.

## 6. Conclusions

The research findings confirmed that the impact of migration on selected macroeconomic indicators in the V4 countries during the period 2021–2023 differed significantly from previous years, and that these differences cannot be explained solely by the volume of incoming individuals. Key factors appear to be cultural proximity, the approach of host states, and the quality of integration policies. In countries such as the Czech Republic, Slovakia, and Poland, migration demonstrably reduced unemployment rates and supported the labor market. In contrast, Hungary did not experience the same positive effects, which may be related to its distinct political stance on migration and an insufficiently developed integration framework. The findings further suggest that the

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<sup>89</sup> G. Marois, P. Sabourin, A. Bélanger, *Implementing dynamics of immigration integration in labor force participation projection in EU28*, in *Population Research and Policy Review*, 2020, vol. 39, n. 2, 339–363.

<sup>90</sup> e.g., J. Dokulil, J. Čížek, *Financing aid to the citizens of Ukraine in the Czech Republic: A pilot survey of the economic burden of regional self-governments*, in *Proceedings of the CrisCon Conference on Crisis Management and Crisis Situation Solutions*, Tomas Bata University in Zlin, 2023, 28–30.

contribution of refugees to consumption is not automatic and requires a well-designed integration strategy.

The results of both hypotheses confirm that the economic impact of migration is complex and highly context-dependent—both over time and across individual countries. These findings open space for further research, particularly in the area of integration quality and its economic evaluation.

However, it is important to acknowledge the limitations of this study. Unemployment trends are influenced by numerous additional factors (e.g., the economic cycle, legislative changes, technological developments) that were not included in this analysis. Similarly, migration itself is shaped by a wide range of internal and external drivers, which were also beyond the scope of this research. Moreover, other indicators - such as the number of job vacancies or the economic activity rate of specific age or occupational groups - could be used to better capture the impact of migration on the labor market.

The results of this pilot study also highlight the limitations of quantitative research based solely on publicly available macro-level data sources. It is therefore recommended that future research combine quantitative approaches with qualitative methods that would enable a deeper understanding of the motivations, experiences, and barriers to labor market integration—both from the perspective of migrants themselves and of employers.



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