

# The Role of the Brexit Referendum and the COVID-19 Pandemic in the Changing Patterns of Hungarian Migration to the United Kingdom

Anna Sára Ligeti\* 

*Although the United Kingdom was the primary destination for Hungarian emigrants in the period following EU accession, since the second half of the 2010s there has been a considerable decline, while the number of Hungarian return migrants from the UK has been higher than ever. Using longitudinal administrative data spanning from 2010 to 2022, this paper investigates whether two historical events, namely the Brexit referendum and the COVID-19 pandemic, have contributed to the observed changes in migration trends and the structural shifts in the composition and patterns of migration that have resulted from them. The results show that the Brexit referendum has had a lasting negative impact on Hungarian emigration to the UK and has significantly encouraged the return of Hungarians. Meanwhile, the temporary shifts in Hungarian migration patterns towards EU Member States caused by the outbreak of the COVID-19 pandemic are not similarly reflected in migration patterns towards the UK. The social base of the post-Brexit emigration gradually broadened. Nevertheless, when compared to EU destination countries, emigrants to the UK are characterised by a younger and more positively selected group in labour-market terms.*

**Keywords:** Brexit, COVID-19, Hungary, United Kingdom, emigration, return migration

---

\* HUN-REN Centre for Social Sciences, Hungary; University of Pécs, Hungary. Address for correspondence: ligeti.annasara@tk.hu.  
© The Author(s) 2025. Open Access. This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

## Introduction

Over the past 2 decades, there has been a series of notable shifts in the migration patterns of Hungarians. Following the enlargement of the European Union in 2004, Hungarian emigration reached a peak during the first half of the 2010s. However, during the second half of the decade, emigration numbers declined and return-migration numbers increased. In recent years, a new trend seems to be unfolding, with emigration numbers rising again (Hungarian Central Statistical Office 2024). In addition to the changes in trends, the structure of Hungarian emigration has also undergone a significant transformation. Germany and, in particular, Austria, have become increasingly dominant, while the United Kingdom has lost its significance as a destination (Ligeti 2023).

Two significant historical events have had a considerable impact on migration flows between the UK and Hungary during this period: the Brexit referendum and the onset of the COVID-19 pandemic. Following a referendum held on 23 June 2016, the United Kingdom formally withdrew from the European Union on 31 January 2020, resulting in a significant alteration to the regulations that govern the immigration and residence status of EU citizens within the country. Almost at the same time, the unprecedented disruption of daily life caused by the eruption of the COVID-19 pandemic brought about significant but temporary changes in people's geographical movements.

Focusing on the United Kingdom, the most important destination for Hungarian emigrants of the early 2010s, the present study seeks to answer the following research questions:

*RQ1: How has the structure and social composition of Hungarian emigration and return migration to and from the UK changed in recent years?*

*RQ2: To what degree did the Brexit referendum and the COVID-19 pandemic respectively influence these processes?*

To assess the impact of the Brexit referendum and the COVID-19 pandemic on Hungarian emigration and return-migration flows, Autoregressive Integrated Moving Average (ARIMA) time-series models were used to forecast the expected migration trends that would have occurred in the absence of these 2 events.

## Literature review

Following Hungary's accession to the European Union in 2004, the emigration of Hungarians commenced at a relatively late stage in comparison to other countries in the region and it has never reached the level of emigration rates from a variety of other Central and Eastern European countries, such as Romania or Poland (Hárs 2016, 2020). Since only 3 of the old Member States – the United Kingdom, Ireland and Sweden – did not utilise the temporary labour-market restrictions of up to 7 years following the 2004 Eastern enlargement, the United Kingdom became the primary destination for Hungarians emigrating during the first years of the decade (Blaskó and Gödri 2016). A notable surge in emigration occurred following the 2008 global economic crisis (Egedy 2012) and after the full removal of labour-market restrictions in 2011 (Moreh 2014).

In the years following EU accession, emigration to the UK was characterised by a strong positive socio-economic selection. Emigrants to the UK were found to be significantly younger, more highly educated and predominantly urban. This phenomenon has been observed in relation not only to the population of Hungary but also to other emigrants (Blaskó and Gödri 2014, 2016; Blaskó, Ligeti and Sik 2014; Hárs 2016).

Migration processes in the Eastern European region have traditionally been characterised by long-term, even life-long, outflows due to economic differences across the continent. However, the changing migration context in the 2010s has brought about an emergence of temporary work and – after longer or shorter stays abroad – of onward and return migration. In addition to changes in the general context and conditions – primarily linked to globalisation processes, such as the increasing affordability and speed of transport, communication and information flows (Czaika and de Haas 2014) – migration has also been influenced by region-specific circumstances. The optimal environment of the European Union, with minimal physical and legal barriers, has provided excellent opportunities for the emergence of a mobile group that can quickly change its geographical location in response to socio-political and economic changes (Klimavičiūtė, Parutis, Jonavičienė, Karolak and Wermińska-Wisnicka 2020). As a result, citizens from Central and Eastern Europe establish and maintain multiple ties with both sending and receiving countries and their migration is often characterised by shorter-distance back-and-forth movements and more diverse, fluid patterns (Engbersen and Snel 2013; de Haas, Castles and Miller 2020; Moskal 2013).

Following a referendum held on 23 June 2016, the United Kingdom formally withdrew from the European Union on 31 January 2020. Before this, the principle of free movement allowed EU citizens to reside and work in the UK without the need for prior authorisation. However, as of 1 January 2021, EU nationals seeking to migrate to the UK became subject to a more-restrictive immigration regime, comparable to that applied to non-EU nationals. Under the new system, newly arriving EU citizens and their family members must apply for a visa in one of three main categories: work, family or study. These new rules do not affect EU citizens and their families who were already residing in the UK before 31 December 2020. Instead, they were required to apply to the EU Settlement Scheme (EUSS) between August 2018 and June 2021 to obtain either pre-settled or settled status (The Migration Observatory 2023).

In the period following the referendum, it was unclear how the UK's migration policy would evolve. Potential scenarios included the continuation of the free-movement regime – with minimal changes – or the introduction of significant restrictions on EU nationals (Gellér-Lukács, Tóttös and Illés 2017; Vargas-Silva 2016). There were also varying expectations and predictions of changing migration trends within Europe. There was a relatively unified scientific consensus that inflows to the UK would probably decline in the longer term (Campos and Timini 2019; Portes 2016). Yet many also expected a temporary surge in migration in the period characterised by post-referendum shock, the interval between the referendum and the entry into force of the new, uncertain rules on entry and residence (Di Iasio and Wahba 2023). Disproving this prognosis, the UK's Office for National Statistics (ONS) estimates that the entries of EU citizens began to decline immediately after the referendum. This is particularly notable for citizens of the EU-8 Member States – countries that joined the Union in 2004<sup>1</sup> (Office for National Statistics 2021). As immigration declined, emigration increased, resulting in a negative migration balance for EU-8 citizens in the UK since 2018 (The Migration Observatory 2023).

The 4-year transitional period after the referendum was characterised by a high degree of uncertainty about the future. During this period, EU nationals residing in the UK were compelled to determine their future course of action, including whether to adopt a wait-and-see approach, pursue a permanent resident status or British citizenship or leave the country – emigrate onwards or return home (Lulle, Moroşanu and King 2018; McGhee, Moreh and Vlachantoni 2017; Moreh, McGhee and Vlachantoni 2020; Stawarz and Witte 2023).

For foreign nationals living in the UK, emotional responses to Brexit have often played a role in their decision to leave. Many individuals reported experiencing a range of emotions, including shock, anger and betrayal following the referendum (Brahic and Lallement 2020; Gawlewicz and Sotkasiira 2020; Guma and Dafydd Jones 2019; Mas Giralto 2020). For many, Brexit had a significant negative impact on

the British identity and sense of home and belonging (Guma and Dafydd Jones 2019; Kempny 2022; Miller 2019). Additionally, migrants had to confront the growing anti-immigrant and, at times, xenophobic sentiments generated by the migration discourse that became a central issue during the referendum campaign (Rzepnikowska 2019).

The economic consequences of Brexit have also influenced migration decisions. In general, a negative labour-market outlook in the host country tends to discourage further immigration, while encouraging return migration for those already residing there (Czaika 2015). The economic disparity between the countries of origin and destination is also a significant factor. If the economic difference remains significant following a downturn in the destination country (as has been the case in many Eastern European countries), lower levels of return migration can be expected (Stawarz and Witte 2023). This is further influenced by the length of time spent abroad and the degree of integration. Those who have achieved a high level of integration into the labour market will face greater costs associated with return migration and will be less affected by an economic downturn in the host country (King and Kuschminder 2022; Sjaastad 1962).

The emergence of the COVID-19 pandemic in Europe also had a significant impact on mobility patterns. Firstly, the pandemic and related policies have imposed significant constraints on migration opportunities, with temporary border closures and increased difficulties in border-crossing and travel (e.g. due to mandatory quarantining, testing, vaccination certificates and reduced transport options). Secondly, the pandemic context constituted a crisis in the personal lives of many, bringing about a high level of uncertainty. This encouraged people to be in what they considered the safest environment for themselves, which typically meant closeness to family and friends (Georgiev 2020). This has discouraged further emigration and, for some living abroad, encouraged return migration. Furthermore, in the early days of the COVID-19 pandemic, the issue of international migration was brought to the fore yet again – this time, in relation to the spread of the virus – and anti-immigrant voices appeared to be on the rise once more. This was compounded by the fact that several governments framed the pandemic as an external security threat ‘imported’ by contagious outsiders (Ahmed, Lundahl and Wadensjö 2023; Paul 2020).

In addition to emotional reasons, a number of economic and labour-market factors have encouraged the rapid return of emigrants. Migrants tend to be in a more vulnerable position than the resident population in host countries as their labour-market status, access to social safety nets, financial and housing situations are often more precarious. Therefore, return migration in abruptly changing circumstances has, in some cases, been seen as a necessity rather than a choice (Koroutchev 2021; Martin and Bergmann 2021). The negative economic impact of the pandemic was felt more by those working in more precarious forms of employment, e.g. in temporary or seasonal work, on ‘zero hour contracts’ or in the black or grey economy (Fana, Torrejón Pérez and Fernández-Macías 2020; Lerpold, Sjöberg and Wennberg 2023). Sectors where migrants are typically employed were also particularly affected by the pandemic (Platt and Warwick 2020). A larger number of workers in the tourism and hospitality sectors lost their jobs as a result of the pandemic and most of those in manual labour had no opportunity to switch to home-based forms of work. Since the service and industrial/construction sectors are particularly important for Hungarian emigrants – as will be discussed in more detail later – this may have had a sizeable impact on the return-migration decisions of a larger group. The pandemic is also likely to have had a greater impact on shorter-term and circular movements (Jesline, Romate, Rajkumar and George 2021; Lücke 2020), partly because the increased costs of migration (e.g. more expensive air fares, lost working time due to compulsory quarantine, compulsory and often costly PCR testing) caused by the pandemic were not necessarily recouped in the case of short-term and recurrent circular movements (Lücke 2020). On the other hand, the social and labour-market vulnerability of migrants in host countries decreases with the length of stay abroad and the depth of integration (Ager and Strang 2008).

## Data and methods

The following analysis is based on data from 2 administrative sub-systems of the Hungarian National Health Insurance Fund's (NHIF) social-security register. These databases were supplemented by activity and employment indicators based on National Tax and Customs Administration (NTCA) data. The NHIF databases include Hungarian nationals who establish a social-security status in another country for a shorter or longer period of time and individuals who cease to have an official Hungarian address when they move abroad. The databases listed here were provided by the data-owners (NHIF and NTCA) to the Hungarian Central Statistical Office (HCSO) within the framework of the National Statistical Data Collection Programme. The databases have been used by the author – with the consent of the HCSO – for research purposes only. The results of the analysis cannot be used to identify the persons included in the databases.

The official statistics on the emigration and return migration of Hungarian citizens published by the HCSO annually are also based on National Health Insurance Fund administrative data (Hungarian Central Statistical Office 2021). However, due to the differing definitions, subsets used and approaches, the results of the present analysis cannot be compared to the official data in terms of magnitude or trends. It is also important to note that the NHIF registers only provide information on registered migrations and can only be used to produce flow-type data. They are therefore unsuitable for establishing the total number of Hungarian citizens living abroad (stock-type data).

The data used for the analysis include a total of 578,000 registered emigrations between 2010 and 2022, of which 86,000 were to the UK. Some 42 per cent of emigrations ended in return migration, therefore the database also contains 207,000 return events, of which 37,000 were from the UK (see Annex Table 1).

Although it is a legal obligation (Act LXXXIII of 1997; Regulation (EC) No 883/2004) to notify the NHIF of the deactivation and reactivation of national-health insurance when emigrating or returning, it can be assumed that many people do not comply with the obligation to report their movements to official bodies. Various mirror statistics typically register a larger number of Hungarian citizens abroad than the Hungarian authorities register (see, for example, Eurostat 2024; Office for National Statistics 2024). This also suggests that there is an underestimation in the available data. In the absence of data capturing the precise extent of emigration and return migration, including unregistered events, it is not possible to make an accurate estimation of the number of people who left or returned without having officially reported it to the authorities. Furthermore, it is not possible to determine whether this underestimation varies over time and by social group – e.g. whether citizens are getting more used to notifying the authorities and hence the numbers are becoming more accurate or by establishing whether there are demographics in particular that tend to under-report. However, a comparison of different statistical sources suggests that this coverage gap affects different groups of the population in a similar way and is relatively stable over time (Ligeti 2021). Hence, the findings below can be taken as very close estimates, while bearing in mind that they do not cover unreported events that official bodies are unable to detect.

The NHIF data provide a unique opportunity for analysing the emigration and return migration patterns of Hungarians with a longitudinal<sup>2</sup> approach. This is because they allow the tracing of the migration history of the individuals included in the register, back to 2010. The data over time are also detailed enough to be suitable for applying different definitions of emigration and return migration.

In order to capture the changes of the past decade as accurately as possible and to gain a more-precise understanding of the migration patterns of Hungarians, it was necessary to broaden the official definition<sup>3</sup> of migration to encompass a broader range of geographical mobility, including short-term movements (lasting at least 3 months) within the scope of our analysis. This is so that less-straightforward cases, such as circular mobility patterns or movements involving more than 2 states, can also be captured.

In accordance with the extended definition employed in the analysis, the terms ‘migration’ and ‘mobility’ will, from now on, be used synonymously to cover stays abroad of at least 3 months. Individuals registered on the administrative databases utilised for the analysis will be considered as emigrants and/or returnees.

Circular migration is a complex phenomenon that is difficult to measure due to its systemic nature and the different perspectives of sending and receiving countries (Illés and Gellér-Lukács 2022). According to the United Nations’ (UN) official definition, circular migration consists of at least 4 moves and completes at least 2 migration loops that begin and end in the same country (United Nations 2017). Although the official recommendation would require a 10-year period to measure circular migration (United Nations 2017), the narrower time horizon of the subsections in the present comparative analysis does not allow for the use of a 10-year period but only allows for a simplified definition. Therefore, for the purposes of the analysis, those who have lived abroad for at least 3 months at any other time in the 8 years preceding the migration event under consideration will be classified as circular migrants.

In order to quantify the effects of the Brexit referendum and the COVID-19 pandemic on emigration and return-migration flows of Hungarians, Autoregressive Integrated Moving Average (ARIMA) time-series models were employed to forecast the expected migration trends in the absence of the 2 aforementioned events. An ARIMA model comprises 3 components: an autoregressive (AR) model, a moving average (MA) and an integrated (I) element, which capture the long-term, stochastic and short-term trends of a time series (Schaffer, Dobbins and Pearson 2021). To examine the impact of the Brexit referendum on the emigration and return-migration counts of Hungarians, pre-Brexit data from 2010 to 1 July 2016 were utilised to generate UK-specific forecasts for the subsequent period up until 1 January 2020. For the post-Brexit period, the predicted counts were compared with the trends observed. Similarly, the effects of the COVID-19 pandemic were quantified by contrasting forecasted and factual levels of emigration and return migration in 2020–2022, separately for the UK and for EEA countries. In this case, 2010–2019 data were used to produce the forecast for subsequent years, then observed and predicted levels were compared. This analysis was undertaken using the *auto.arima* function from the *forecast* package in R (Hyndman and Khandakar 2008).

To determine the socio-demographic characteristics of Hungarian emigration to the UK, binomial logistic regression models were used. Models were fitted using the *GLM* function of the *stats* package of R. In order to compare these characteristics in different destination countries and in time, Average Marginal Effects (AMEs) were calculated using the *margins* package of R (Leeper 2021).

The demographic variables included in the models are *sex* (male or female), *age* (0–17, 18–24, 25–30, 31–40 or older than 40) and official *marital status* (married or unmarried). Based on the officially registered address recorded in the year of emigration, 2 variables were created: the *type of settlement of residence* (capital, county capital, other cities and smaller towns or villages) and the *type of household* of emigration. The latter indicates whether a given address can be linked to only 1 or to several persons (typically, family) in the database. This allows for the distinction between individuals who emigrated alone and those who emigrated with a household member.

The economic activity and occupation registered in Hungary can be inferred from (1) the basis of entitlement to health insurance as recorded by the NHIF and (2) the NTCA contribution data. Note, however, that there is a significant portion of missing data in this regard (47 per cent). This is partly due to the fact that those who are uninsured (e.g. not employed) and are not otherwise entitled to healthcare services (e.g. not retired, students or on childcare support) but to whom social-security rules nonetheless apply, pay their own healthcare service contributions. For individuals in this category, the NHIF has no information on their economic activity. Although the NTCA has employment data for a wider range of workers, this database is only available for those who paid a contribution between 2015 and 2022.

Seven categories of economic activity have been created. Employed persons were grouped into 3 occupational categories: (1) tertiary and administrative occupations, (2) service-sector workers (e.g. tourism and hospitality) and (3) manual occupations. The economically inactive population is also divided into 3 categories: students, pensioners and other. Students include those on whom data were not available but who were under 18 years of age in the year of emigration. Similarly, those aged 65 or over at the time of emigration were included in the pensioner category. The 'other' category mainly includes those receiving unemployment benefits, disability allowance or childcare allowance. The final category comprises those for whom no further information was available (44 per cent).

The duration of stay abroad was divided into 2 categories: those who had lived abroad for at least 12 months and those who had lived abroad for 3–12 months. For return migrants, the time span was calculated based on the time between emigration and return migration. For emigrants, the time span was calculated on the basis of the time between emigration and the end date of the interval under analysis (31/12/2022).

In addition to the United Kingdom, analyses frequently encompass migration to the countries of the European Economic Area (EEA), which include Iceland, Liechtenstein, Norway and Switzerland as well as the EU-27.

## Results

### *The changing trends of Hungarian migration to the UK*

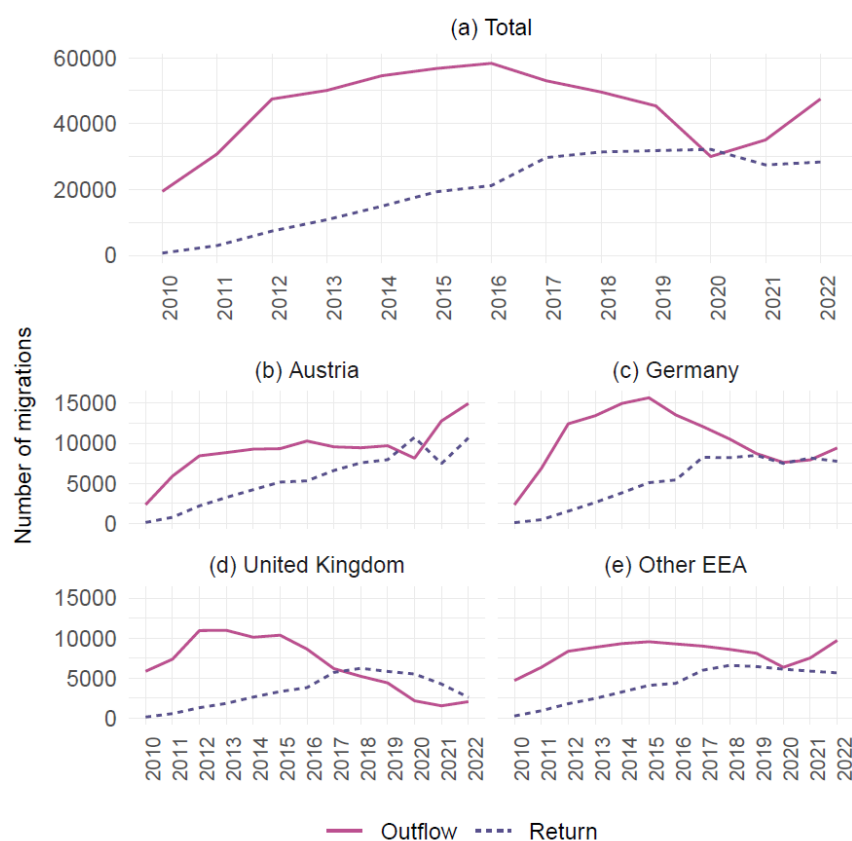
The emigration of Hungarian citizens increased sharply and substantially during the first half of the 2010s and reached its peak in 2016, with almost 60,000 emigrations (Figure 1a). This was followed by a decline, with emigration rates reaching the lowest point in 2020, during the first wave of the COVID-19 pandemic. In that year, the Hungarian authorities recorded around 30,000 emigrations: the lowest number since 2011. In the subsequent 2 years, however, emigration flows started to rise again. At the same time, the number of return migrations increased almost continuously from 2010 onwards and then started to decline after peaking in 2020. In 2020, the number of return migrations exceeded emigrations, making it the only year with a positive migration balance.

Regarding destination countries, there has been a gradual increase in the share of outflows to Austria and a significant decrease in emigration to the UK in the period examined. In 2010, the year prior to the full opening of the EU labour market, a vast segment of emigrants registered in the NHIF database (37 per cent) chose the United Kingdom. This proportion was not reached even by the combined migration rates to the geographically more accessible Austria and Germany (15 and 15 per cent, respectively). Following the full opening of the labour market in 2011, Hungarian migration to Austria and (especially) to Germany increased significantly, while emigration to the UK slowed down. In 2022, only 6 per cent of Hungarian emigrants were bound for the UK, while 40 per cent chose Austria and 25 per cent chose Germany. Based on the data, it can be concluded that the UK is no longer a top destination for Hungarian emigrants. While the UK remains the third most popular destination, it fell significantly behind Germany and Austria and is only slightly ahead of the Netherlands and Switzerland in terms of the share of emigrants from Hungary.

Though the UK's relative popularity (compared to other destination countries) among Hungarian emigrants declined steadily from 2010 onwards, the number of Hungarian emigrants to the UK peaked only a few years later, between 2012 and 2015. Meanwhile, the number of return migrants from the UK

increased gradually until 2016, peaking after a large upsurge, in 2018 (Figure 1d). This is in keeping with broader patterns since, apart from Austria, emigration typically decreased and return migration increased among intra-EU Hungarian migrants in the second half of the decade. However, there are some particularities in the case of the UK. Compared to other destination countries, emigration to the UK began earlier and had already peaked in the first years of the decade. In the context of the subsequent downturn in emigration, the migration balance of Hungarians turned positive, with the number of return migrants leaving the UK exceeding the number of emigrants every year since 2017. It is worth noting that, while the migration balance of the Hungarians for most EEA countries (excluding Austria) has been around zero in recent years, the UK has experienced a strongly positive balance, with a surplus of between 1,000 and 4,000 people per year. Thus, although the UK is no longer a primary destination country, it still has one of the highest numbers of Hungarian nationals returning home (see Figure 1).

**Figure 1. Number of outward and return migrations of at least 3 months (Hungarian citizens)**



Source: Edited by the author using data from NHIF.

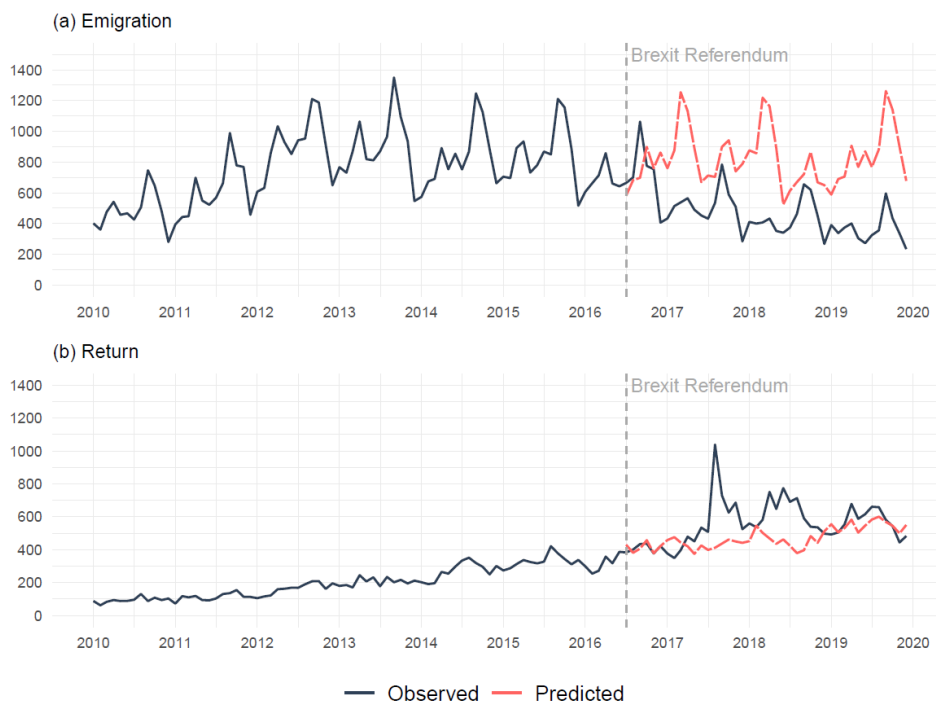
As with the trends in EEA destinations, over the past decade, short-term and circular migration have become increasingly significant between the UK and Hungary. Yet the proportion of short-term movements within the total of UK-bound emigration remained lower than in EEA destination countries. Between 2010 and 2021, the share of one-time short-term movements to Germany increased from 9 per cent to 25 per cent and also increased from 20 to 39 per cent in Austria. In contrast, in 2010, only 7 per cent of Hungarian emigrants to the UK returned within a year, a share which rose at a relatively lesser rate – to only 15 per cent – in 2020, with a slight decrease the following year.

When compared to other destinations, the proportion of circular movements to the UK is much more significant than one-time short-term movements. This, combined with the relatively less significant but still relevant short-term movements, indicates the presence of more ‘fluid’ forms of mobility between Hungary and the UK. In 2022, over half (55 per cent) of Hungarian emigrants were found to have lived abroad for at least 3 months in the 8-year period prior to the emigration examined. The proportion of circular movements is much higher between Hungary and the UK, with Austria at 36 per cent, Germany at 27 per cent and other EEA countries at 31 per cent. Furthermore, circular movements between Hungary and the UK are typically limited to the sending and the destination country. While a notable 20 per cent of circular chains involve a third country, this is still low compared to the 33 per cent observed in the case of Hungarians’ intra-EU circular migration involving third countries besides the main destination.

### *The effects of the Brexit referendum and the COVID-19 pandemic*

In order to quantify the effects of the Brexit referendum and the COVID-19 pandemic on the emigration and return-migration flows of Hungarians, ARIMA time-series models were employed to forecast the expected migration trends in the absence of the 2 aforementioned events.

**Figure 2. Observed and predicted monthly (a) emigration flows from Hungary to the United Kingdom; (b) return flows from the United Kingdom to Hungary after the Brexit referendum**



Source: Edited by the author using data from NHIF.

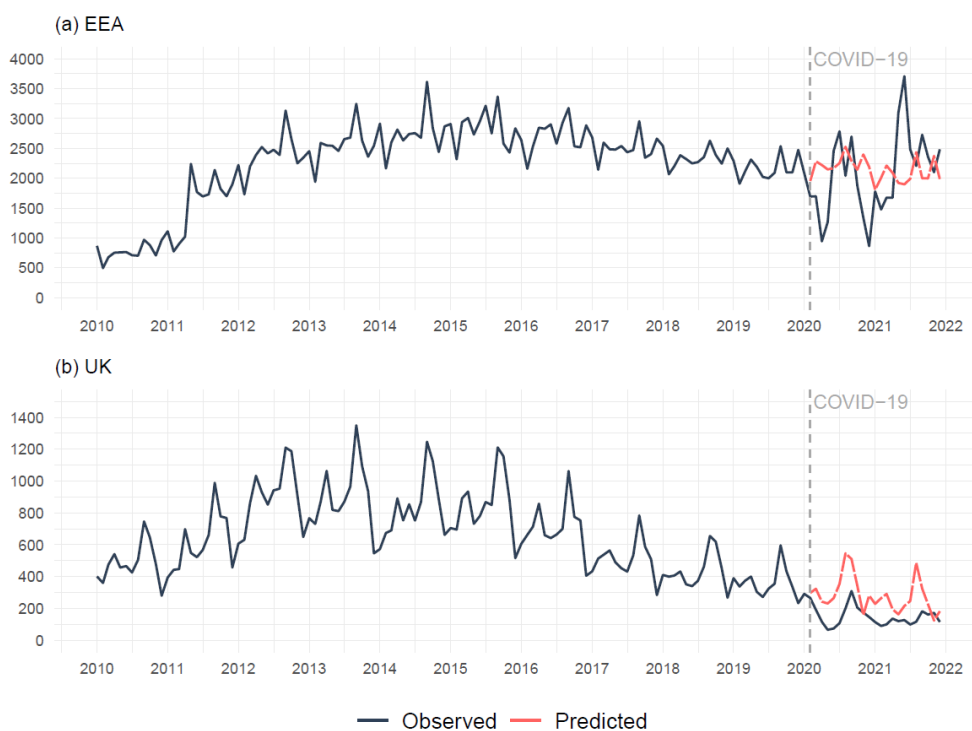
The changing trends in migration to the UK are clearly reflective of the impact of Brexit. While changes are not detectable in the immediate months following the referendum, from December 2016 onwards, observed migration numbers started to fall significantly below predicted levels. The decline was not abrupt, with emigration numbers still showing a steady downward trend over the period.

Furthermore, the seasonal pattern of emigration – which has been observed continuously since the early 2010s – remained prevalent (Figure 2a).

The pattern of return migration differs from that of emigration. Over the course of almost a year following the referendum, no significant change was observed. However, from the summer of 2017, the rate of returns began to increase significantly. In August 2017, returns from the UK reached unprecedented levels, after which the numbers of return migration show wide fluctuation. Two periods stand out where return migration significantly exceeded the predicted levels: from June 2017 to January 2018 and from April to September 2018 (Figure 2b).

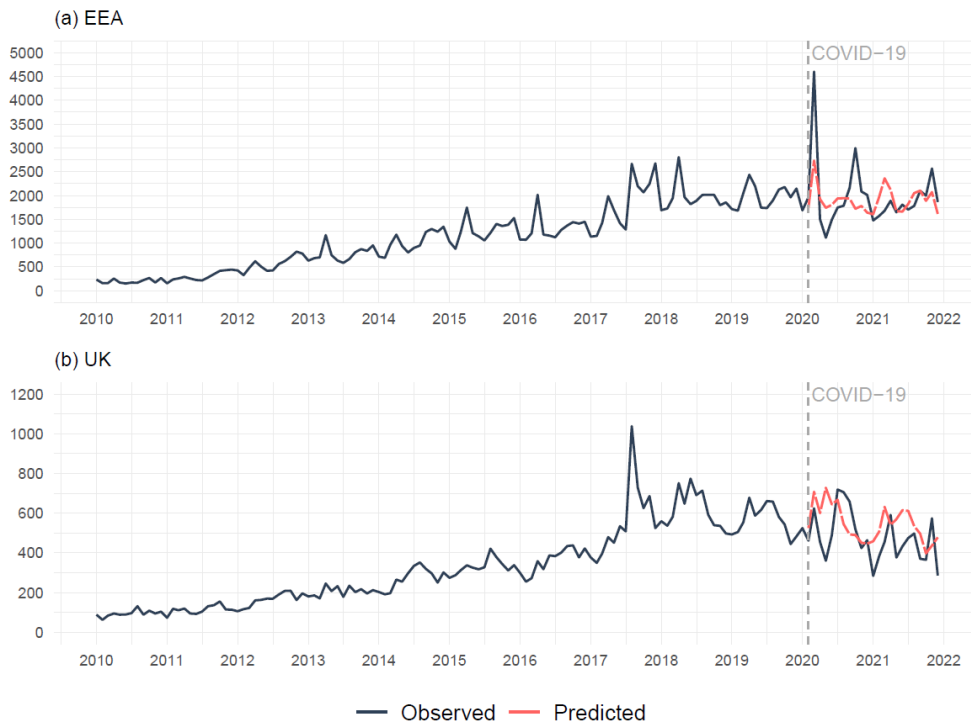
In contrast to the impact of the Brexit referendum, the impact of the COVID-19 pandemic is much less salient in the available data, at least in relation to UK-bound migration patterns. In countries within the EEA, state measures implemented with the aim of containing the epidemic can be well-tracked in the data. Following the outbreak of the pandemic in early 2020, there was an unprecedented surge in return migration, while emigration fell immediately following the first border closures. The impact of government decisions is evident throughout the data in the following months, with a significant drop in movements during the border closures and an increase during the relaxations (Figures 3a and 4a). This was quite different in the UK, where the strong fluctuations observed in EEA countries were not present. The number of Hungarian emigrants to the UK continued to decline after the outbreak and remained somewhat below the values predicted on the basis of the previously declining trends (Figure 3b). With regards to return migration, the impact of the COVID-19 pandemic is virtually invisible (Figure 4b).

**Figure 3. Observed and predicted monthly emigration flows (a) from Hungary to the EEA countries; (b) from Hungary to the United Kingdom after the outbreak of the COVID-19 pandemic**



Source: Edited by the author using data from NHIF.

**Figure 4. Observed and predicted monthly return flows (a) from the EEA countries to Hungary; (b) from the United Kingdom to Hungary after the outbreak of the COVID-19 pandemic**

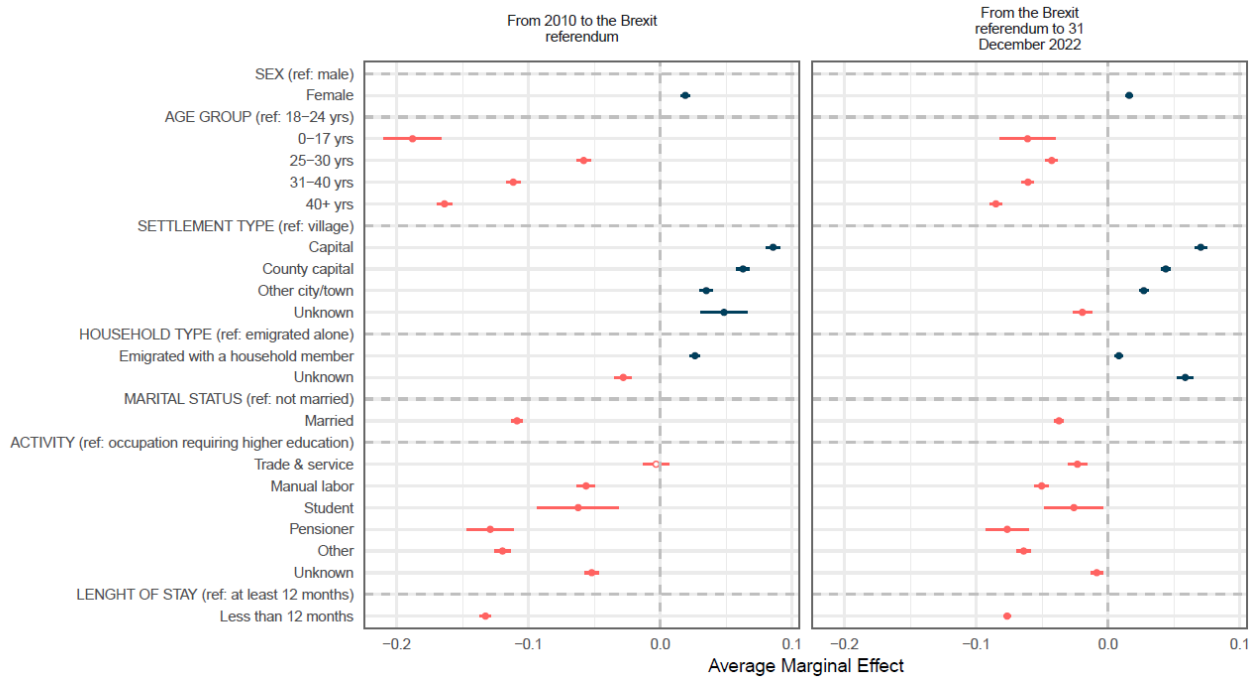


Source: Edited by the author using data from NHIF.

#### *The changing social composition of emigrants to the UK*

In both the pre- and the post-Brexit periods the UK, compared to EEA countries, was more likely to be the destination of choice for *women, young people* (particularly those aged 18–24) and immigrants arriving from *cities* (especially the capital) rather than smaller townships in Hungary. In contrast to other EEA destinations, emigration to the UK is strongly employment-led – particularly for white-collar and service-sector workers – while blue-collar workers are more likely to choose other EU countries. While Hungarian migrants to the UK were more likely to migrate with a household member – since children under the age of 18 and married couples were less likely to migrate to the UK than to other EU Member States – this presumably consists not of families with a child/children but, rather, primarily implies the emigration of young couples. An important difference in migrant profiles among the varying destinations is that short-term migrants (staying for fewer than 12 months) were much less likely to choose the UK than other EEA countries (Figure 5).

**Figure 5: Factors determining the socio-demographic composition of emigrants to the UK from 2010 to the Brexit referendum (23 June 2016) and from the Brexit referendum to 31 December 2022 (Binomial Logistic Regressions, Average Marginal Effects. Reference group: emigrations to EEA states)**

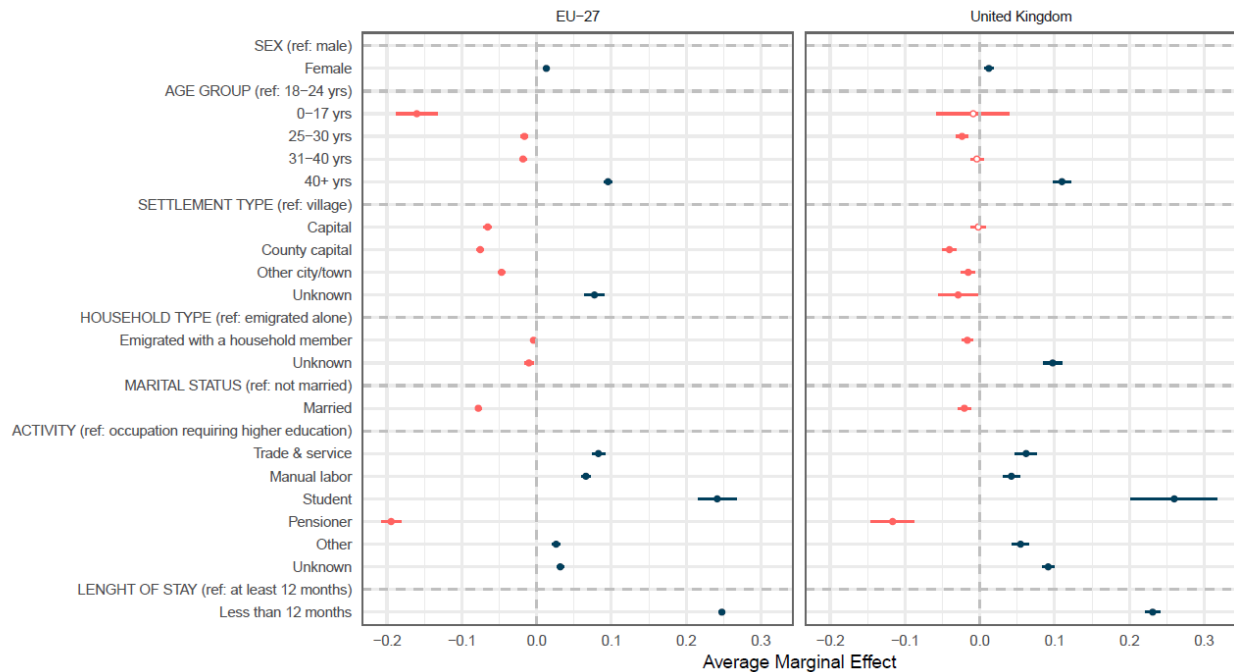


Source: Edited by the author using data from NHIF.

A comparison of the 2 periods reveals that the positive selection advantage for the UK has remained in the post-Brexit period, albeit the differences in the social composition of migrants to the UK and to the EEA countries are gradually diminishing. In recent years, the migration of women and that of the oldest age group (over 40), both to the UK and to the EEA countries, has become more significant compared to the period between 2010 and the Brexit referendum.

Outflows from Hungarian villages have become generally much more significant, yet the UK continues to receive a higher proportion of immigrants coming from the capital (Budapest) and regional capitals. In terms of economic activity, the importance of the service sector and physical labour, as well as the migration of the non-employed, has increased. The most significant difference between the 2 periods under consideration is the aforementioned growing prevalence of short-term movements, which is evident in migration both to the UK and to EEA countries (Figure 6).

**Figure 6. Determinants of the socio-demographic composition of emigrants after Brexit compared to the pre-Brexit period for EEA countries and the UK (Binomial Logistic Regressions, Average Marginal Effects. Reference group: emigrants of 2010-2016)**



Source: Edited by the author using data from NHIF.

## Discussion

Following Hungary's accession to the European Union, the United Kingdom became the primary destination for Hungarian emigrants. However, the high emigration rates observed after the EU accession and at the beginning of the 2010s proved unsustainable. Prior to the EU's enlargement towards the East, Hungary had accumulated a significant migration potential, which was constrained by restrictions on foreign employment. Following the opening of the EU labour market, the hitherto retained potential migrants left the country within a few years. The high emigration rates characterising this initial period could not be sustained in the long term. Consequently, the emigration trend reached its peak in 2016 and emigration began to decline. This was also facilitated by the somewhat decreasing relevance of push factors, such as relative improvements in the Hungarian labour-market environment and high employment rates in Hungary in the second half of the decade (Bakó and Lakatos 2020).

In addition to the general effects mentioned above, the Brexit referendum also contributed significantly to the larger decline in the UK. The number of emigrants bound for the UK started to fall more notably from December 2016 – just a few months after the referendum – and continued to fall until 2020. In spite of 2 major events taking place in 2020 – the entry into force of the legal changes brought about by the Brexit referendum and the outbreak of the COVID-19 pandemic – which may have been expected to have more impact, there were only minor shifts in the number of emigrants from Hungary moving to the UK between 2020 and 2022. This suggests that the referendum itself had the most significant impact on migration choices and emigration numbers, rather than the ensuing legal changes introduced in the following years.

Even though the decline in emigration from Hungary to the UK between 2016 and 2020 was accompanied by a notable increase in return migration, it is important to note that the 2 phenomena are not necessarily linked. Significant return migration can only be expected if there is a sufficient number of individuals already residing abroad – a large enough population from which returning migrants can emerge. Therefore, it can be reasonably assumed that return migration is most probably related to the prior number of Hungarians living abroad – that is, as a consequence of the increase in emigration during the first half of the decade, the number of Hungarian citizens residing in European countries has risen considerably. This was accompanied by a corresponding increase in the number of individuals returning to Hungary in the second half of the decade (Ligeti 2021).

The Brexit referendum also brought about a notable shift in the patterns of return migration, with several pronounced peaks observed in the period following the referendum. This indicates that the referendum did indeed influence the return-migration decisions of Hungarians residing in the UK.

The emergence of the COVID-19 pandemic in 2020 marked a further shift in the migratory patterns of Hungarians. While emigration declined to levels last observed in 2011, return migration reached a peak, resulting in a positive migration balance for that year. However, emigration began to rise again shortly thereafter, while return migration began to decline. The negative economic effects of the pandemic and the postponement of emigration due to border closures undoubtedly contributed to this.

The periodic surge in return migration caused by the pandemic – which was clearly visible in the case of Hungarians returning from EU countries – was barely noticeable for those living in the UK, probably due to a combination of several factors. First, physical conditions have naturally played a role: while there are a number of over-land transport routes from Austria or Germany, those living in the UK are much more reliant on air travel. Second, the socio-economic circumstances of the various emigrant groups also influenced their ability and willingness to return home. Migration to the UK started earlier (immediately after EU accession) and is more characterised by longer-term migration patterns than in other EU Member States. Therefore, it can be assumed that a significant proportion of the Hungarians living in the UK at the beginning of the pandemic were better integrated into UK society and were thus less vulnerable in terms of labour-market and housing conditions. As we have seen previously, a higher proportion of Hungarians living in the UK than in the EU were employed in tertiary and administrative/clerical jobs. Compared to other labour-market sectors, these fields have adapted more quickly and successfully to the new situation resulting from the pandemic and ensuing social isolation measures and other policies (for example, in terms of switching to working from home) and workers in this sector were less affected by pandemic-related layoffs (Fana *et al.* 2020).

The data indicated that, in the first half of the 2010s, Hungarian emigrants to the UK were a more positively selected group compared to emigrants to the EU-27, with the UK being a more popular choice for longer-term emigrants. While the post-Brexit period has seen a broadening of the social base of emigration from Hungary to the UK and a greater prevalence of short-term mobility, these changes have also been largely observed for emigration to the other, current EU Member States. Nevertheless, in comparison to EU destination countries, emigrants to the UK remain a younger demographic, migrating for longer periods, with a higher proportion of urban migrants and of those in white-collar and service-sector occupations.

Although emigration from Hungary to the UK was not unprecedented prior to EU accession, it was nowhere near the scale of emigration after 2004. According to mirror statistics, only 6,000 Hungarian citizens were living in the UK in the year of the accession; this figure increased 6-fold to 36,000 by 2011 (Moreh 2014; Office for National Statistics 2021). In contrast, the number of Hungarian nationals in Germany was already 55,000 in the year of accession. However, due to selective labour-market

openings, the number had increased by only 150 per cent by 2011 – a much smaller increase compared to the UK. A further significant distinction is that the United Kingdom did not play a prominent role in the history of Hungarian emigration prior to EU accession. In contrast, Germany and Austria have long been traditional destinations for Hungarian emigration (Blaskó and Gödri 2016; Faragó 2017). Consequently, the transformation, in their case, with EU enlargement occurred in a more historically embedded context.

In light of this, the initially small number of Hungarians who emigrated to the UK immediately after accession can be identified in the literature as a group of ‘innovators’ or ‘pioneer emigrants’ (Black, Engbersen, Okólski and Pantîru 2010) who emigrated under different conditions to those in previous periods. The process initiated by this group subsequently led to the development of a migration system with its own socio-economic structures, which triggered further outflows from the origin country (Massey 1990). As the group of ‘innovators’ were the first to gain experience of the conditions and opportunities in the destination country, their migration entailed higher costs and risks than that of those who moved after the migration system had already been established. Consequently, the ‘innovators’ were a positively selected group from the origin society; typically, a young population with higher socio-economic status, based on labour-market criteria (de Haas 2010). The continuous feedback on the group’s experience to their respective original communities and the growing accessibility of information reduced the costs and risks of further emigration, thereby making migration available to increasingly broader segments of society. This, in turn, diversified the social base of subsequent migration (Bakewell, de Haas and Kubal 2012; de Haas 2010; Massey, Goldring and Durand 1994).

## **Conclusion**

The phenomenon of emigration has been a subject of intense research in Hungary after the post-2004 EU enlargement and the opening of EU labour markets. The early 2010s were mostly characterised by the long-term emigration of highly educated younger social groups, with a notable proportion of these individuals relocating to the UK. Regarding the second half of the 2010s, there is an unfortunate paucity of available information. In order to provide data that are relevant to policy-makers, it is important to be aware of rapidly changing trends and recent patterns of migration.

Following a period (2016–2020) during which return migration was a more dominant phenomenon, emigration is on the rise once again. However, it is no longer to the UK, as was the case in the early 2010s. The UK has lost its importance among Hungarian emigrants, although it remains a significant emitter of return migrants who left Hungary at the beginning of the decade. The UK’s decision to leave the European Union has been identified as a significant factor in the observed shift in Hungarians’ migration patterns. Prior to the implementation of legal changes, there was already a notable reduction in Hungarian emigration to the UK, while return migration increased. In contrast, the impact of the COVID-19 outbreak has been relatively limited.

Over the past decade, there has been a significant shift in the structure of migration patterns. The importance of fluid forms of migration, short-term and circular mobility and the migration of manual workers and older age groups has increased. It is crucial for policy-makers to recognise that Hungarian migration is no longer a long-term or lifelong migration of highly skilled youth but a much more complex phenomenon. The recent rise of a mobile population, often characterised by back-and-forth movements, is clearly observable, with migration processes involving an increasingly broader section of the Hungarian population.

The research results also highlight the potential of administrative databases with a longitudinal structure, as well as the advantages of using flexible definitions that encompass fluid forms of migration. Furthermore, interrupted time-series analysis methods can be employed to quantify the impact of significant future events and policy changes on migration processes.

## Notes

1. Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.
2. Longitudinal data refer to information which is collected from the same units of analysis, such as
3. individuals or households, over time (United Nations 2020).
4. Official migration statistics are based on the usual residence definition, which requires individuals to have resided abroad for at least 12 months in order to be considered migrants (Regulation (EC) No 862/2007 of the European Parliament and of the Council of 11 July 2007 on Community Statistics on Migration and International Protection and Repealing Council Regulation (EEC) No 311/76 on the Compilation of Statistics on Foreign Workers 2007; United Nations 1998).

## Acknowledgements

Supported by the ÚNKP-23-3 New National Excellence Programme of the Ministry for Culture and Innovation from the source of the National Research, Development and Innovation Fund.

## Conflict of interest statement

No conflict of interest was reported by the author.

## ORCID ID

Anna Sára Ligeti  <https://orcid.org/0000-0002-8261-0552>

## Data availability statement

The data are not publicly available due to privacy restrictions.

## References

- Ager A., Strang A. (2008). Understanding Integration: A Conceptual Framework. *Journal of Refugee Studies* 21(2): 166–191.
- Ahmed A., Lundahl M., Wadensjö E. (2023). Ethnic Discrimination During the Covid-19 Pandemic, in: L. Lerpold, Ö. Sjöberg, K. Wennberg (eds) *Migration and Integration in a Post-Pandemic World*, pp. 291–314. New York: Springer.
- Bakewell O., de Haas H., Kubal A. (2012). Migration Systems, Pioneer Migrants and the Role of Agency. *Journal of Critical Realism* 11(4): 413–437.

- Bakó T., Lakatos J. (2020). Magyarországi Munkapiac, 2019–2020, in: K. Fazekas, P. Elek, T. Hajdu (eds) *Munkaerőpiaci Tükör 2019*, pp. 15–34. Hungary: Centre for Economic and Regional Studies. [https://kti.krtk.hu/wp-content/uploads/2020/12/mt\\_2019\\_mo\\_mp\\_2019\\_20.pdf](https://kti.krtk.hu/wp-content/uploads/2020/12/mt_2019_mo_mp_2019_20.pdf) (accessed 16 June 2025).
- Black R., Engbersen G., Okólski M., Pantîru C. (eds) (2010). *A Continent Moving West? EU Enlargement and Labour Migration From Central and Eastern Europe*. Amsterdam: Amsterdam University Press.
- Blaskó Z., Gödri I. (2014). Kivándorlás Magyarországról: Szelekció és Célország-Választás az „Új Migránsok” Körében. *Demográfia* 57(4): 271–307.
- Blaskó Z., Gödri I. (2016). A Magyarországról Kivándorlók Társadalmi és Demográfiai Összetétele, in: Z. Blaskó, K. Fazekas (eds) *Munkaerőpiaci Tükör 2015*, pp. 59–71. Budapest: MTA Közgazdaság- és Regionális Tudományi Kutatóközpont Közgazdaság-tudományi Intézet. [https://kti.krtk.hu/file/download/mt\\_2015\\_hun/egyben.pdf](https://kti.krtk.hu/file/download/mt_2015_hun/egyben.pdf) (accessed 16 June 2025).
- Blaskó Z., Ligeti A.S., Sik E. (2014). Magyarok Külföldön – Mennyien? Kik? Hol?, in: T. Kolosi, I.G. Tóth (eds) *Társadalmi Riport 2014*, pp. 351–372. Budapest: TÁRKI Társadalomkutatási Intézet.
- Brahic B., Lallement M. (2020). From ‘Expats’ to ‘Migrants’: Strategies of Resilience Among French Movers in Post-Brexit Manchester. *Migration and Development* 9(1): 8–24.
- Campos R.G., Timini J. (2019). *An Estimation of the Effects of Brexit on Trade and Migration*. Madrid: Banco de Espana.
- Czaika M. (2015). Migration and Economic Prospects. *Journal of Ethnic and Migration Studies* 41(1): 58–82.
- Czaika M., de Haas H. (2014). The Globalization of Migration: Has the World Become More Migratory? *International Migration Review* 48(2): 283–323.
- De Haas H. (2010). The Internal Dynamics of Migration Processes: A Theoretical Inquiry. *Journal of Ethnic and Migration Studies* 36(10): 1587–1617.
- De Haas H., Castles S., Miller M. J. (2020). *The Age of Migration: International Population Movements in the Modern World*. London: Bloomsbury Publishing.
- Di Iasio V., Wahba J. (2023). Expecting Brexit and UK Migration: Should I Go? *European Economic Review* 157(C): 1–46.
- Egedy T. (2012). The Effects of Global Economic Crisis in Hungary. *Hungarian Geographical Bulletin* 61(2): 155–173.
- Engbersen G., Snel E. (2013). Liquid Migration. Dynamic and Fluid Patterns of Post-Accession Migration Flows, in: B. Glorius, I. Grabowska, A. Kuvik (eds), *Mobility in Transition*, pp. 21–40. Amsterdam: Amsterdam University Press.
- Eurostat (2024). *Immigration by Age Group, Sex and Citizenship* (No. migr\_imm1ctz) [Dataset]. [https://ec.europa.eu/eurostat/databrowser/view/migr\\_imm1ctz/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/migr_imm1ctz/default/table?lang=en) (accessed 16 June 2025).
- Fana M., Torrejón Pérez S., Fernández-Macías E. (2020). Employment Impact of the Covid-19 Crisis: From Short Term Effects to Long Terms Prospects. *Journal of Industrial and Business Economics* 47(3): 391–410.
- Faragó T. (2017). Az 1851–1910 Közötti Időszak Vándorlástörténetének Újragondolása. *Demográfia* 60(2–3): 197–234.
- Gawlewicz A., Sotkasiira T. (2020). Revisiting Geographies of Temporalities: The Significance of Time in Migrant Responses to Brexit. *Population, Space and Place* 26(1): 1–30.
- Gellér-Lukács É., Tóttös Á., Illés S. (2017). Free Movement of People and Brexit. *Hungarian Geographical Bulletin* 65(4): 421–432.

- Georgiev O. (2020). *The Grand Return: Covid-19 and Reverse Migration to Bulgaria*. European Council for Foreign Relations; Konrad Adenauer Stiftung. <https://ecfr.eu/sofia/publication/the-grand-return-covid-19-and-reverse-migration-to-bulgaria/> (accessed 16 June 2025).
- Guma T., Dafydd Jones R. (2019). 'Where Are We Going to Go Now?' European Union Migrants' Experiences of Hostility, Anxiety and (Non-)Belonging During Brexit. *Population, Space and Place* 25(1): 1–10.
- Hárs Á. (2016). Elvándorlás, Bevándorlás és a Magyar Munkaerőpiac: Jelenségek, Hatások, Lehetőségek, in: T. Kolosi, I.G. Tóth (eds) *Társadalmi Riport 2016* pp. 243–262. Budapest: TÁRKI Társadalomkutatási Intézet.
- Hárs Á. (2020). Elvándorlás, Visszavándorlás, Bevándorlás: Jelenségek és Munkaerő-Piaci Hatások, in: T. Kolosi, I. Szelényi, I.G. Tóth (eds) *Társadalmi Riport 2020*, pp. 115–145. Budapest: TÁRKI Társadalomkutatási Intézet.
- Hungarian Central Statistical Office (2021). *Demographic Yearbook, 2022*. Budapest: Hungarian Central Statistical Office.
- Hungarian Central Statistical Office (2024). *Summary Data of Hungarian Citizens' International Migration* [Dataset]. STADAT. [https://www.ksh.hu/stadat\\_files/nep/en/nep0030.html](https://www.ksh.hu/stadat_files/nep/en/nep0030.html) (accessed 16 June 2025).
- Hyndman R.J., Khandakar Y. (2008). Automatic Time Series Forecasting: The Forecast Package for R. *Journal of Statistical Software* 27(3): 1–22.
- Illés S., Gellér-Lukács É. (2022). Dual Nature of International Circular Migration. *Migration Letters* 19(2): 149–158.
- Jesline J., Romate J., Rajkumar E., George A.J. (2021). The Plight of Migrants During Covid-19 and the Impact of Circular Migration in India: A Systematic Review. *Humanities and Social Sciences Communications* 8(1): 1–12.
- Kempny M. (2022). Brexit, a Hostile Environment, the EU Settlement Scheme and Rupture in the Migration Projects of Central and Eastern European Migrants in Northern Ireland. *Central and Eastern European Migration Review* 11(1): 49–63.
- King R., Kuschminder K. (2022). Introduction: Definitions, Typologies and Theories of Return Migration, in: R. King, K. Kuschminder (eds) *Handbook of Return Migration*, pp. 1–22. Cheltenham: Edward Elgar.
- Klimavičiūtė L., Parutis V., Jonavičienė D., Karolak M., Wermińska-Wiśnicka I. (2020). The Impact of Brexit on Young Poles and Lithuanians in the UK: Reinforced Temporariness of Migration Decisions. *Central and Eastern European Migration Review* 9(1): 127–142.
- Koroutchev R. (2021). The Covid-19 Mobility Impacts on the Migration Flow in South-East Europe: The Situation in 2021 and Before 1989. *Journal of Liberty and International Affairs* 7(1): 39–50.
- Leeper T.J. (2021). *Margins: Marginal Effects for Model Objects* (R package version 0.3.26) [Computer Software]. <https://github.com/leeper/margins>. (accessed 16 June 2025).
- Lerpold L., Sjöberg Ö., Wennberg K. (2023). Migration, Integration and the Pandemic, in: L. Lerpold, Ö. Sjöberg, K. Wennberg (eds) *Migration and Integration in a Post-Pandemic World*, pp. 1–28. New York: Springer.
- Ligeti A.S. (2021). A Földrajzi Mobilitás Változó Mintázatai: Átmeneti Elvándorlás, Tartós Letelepedés és Cirkuláris Migráció a Magyar Állampolgárok Körében. *Demográfia* 64(2–3): 109–135.
- Ligeti A.S. (2023). Magyarok az Egyesült Királyságban: Egy Korszak Vége? *Tér És Társadalom* 37(1): 132–156.
- Lulle A., Moroşanu L., King R. (2018). And Then Came Brexit: Experiences and Future Plans of Young EU Migrants in the London Region. *Population, Space and Place* 24(1): 1–18.

- Lücke M. (2020). Covid-19 Impact on International Migration: Upheaval in the Short Run, but Few Lasting Effects, in: G. Felbermayr (ed.) *The World Economy After the Coronavirus Shock: Restarting Globalization?*, pp. 56–64. Kiel: Kiel Institute for the World Economy. <https://d-nb.info/1213899303/34#page=62> (accessed 16 June 2025).
- Martin S., Bergmann J. (2021). (Im)mobility in the Age of Covid-19. *International Migration Review* 55(3): 660–687.
- Mas Giralt R. (2020). The Emotional Geographies of Migration and Brexit: Tales of Unbelonging. *Central and Eastern European Migration Review* 9(1): 29–45.
- Massey D.S. (1990). Social Structure, Household Strategies and the Cumulative Causation of Migration. *Population Index* 56(1): 3–26.
- Massey D.S., Goldring L., Durand J. (1994). Continuities in Transnational Migration: An Analysis of Nineteen Mexican Communities. *American Journal of Sociology* 99(6): 1492–1533.
- McGhee D., Moreh C., Vlachantoni A. (2017). An ‘Undeliberate Determinacy’? The Changing Migration Strategies of Polish Migrants in the UK in Times of Brexit. *Journal of Ethnic and Migration Studies* 43(13): 2109–2130.
- Miller R.G. (2019). (Un)settling Home During the Brexit Process. *Population, Space and Place* 25(1): 1–11.
- Moreh C. (2014). A Decade of Membership: Hungarian Post-Accession Mobility to the United Kingdom. *Central and Eastern European Migration Review* 3(2): 79–104.
- Moreh C., McGhee D., Vlachantoni A. (2020). The Return of Citizenship? An Empirical Assessment of Legal Integration in Times of Radical Sociolegal Transformation. *International Migration Review* 54(1): 147–176.
- Moskal M. (2013). Transnational Social Networks, Human Capital and Economic Resources of Polish Immigrants in Scotland, in: B. Glorius, I. Grabowska, A. Kuvik (eds), *Mobility in Transition*, pp. 155–168. Amsterdam: Amsterdam University Press.
- Office for National Statistics (2021). *Population by Country of Birth and Nationality* [Dataset]. <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/datasets/populationoftheunitedkingdombycountryofbirthandnationality> (accessed 16 June 2025).
- Office for National Statistics (2024). *Long-Term International Immigration, Emigration and Net Migration Flows, Provisional* [Dataset]. <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/datasets/longterminternationalimmigrationemigrationandnetmigrationflowsprovisional> (accessed 16 June 2025).
- Paul R. (2020). Europe’s Essential Workers: Migration and Pandemic Politics in Central and Eastern Europe During Covid-19. *European Policy Analysis* 6(2): 238–263.
- Platt L., Warwick R. (2020). Covid-19 and Ethnic Inequalities in England and Wales. *Fiscal Studies* 41(2): 259–289.
- Portes J. (2016). Immigration after Brexit. *National Institute Economic Review* 238(1): R13–R21.
- Regulation (EC) No 862/2007 of the European Parliament and of the Council of 11 July 2007 on Community Statistics on Migration and International Protection and Repealing Council Regulation (EEC) No 311/76 on the Compilation of Statistics on Foreign Workers, No. EC No 862/2007 (2007). <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32007R0862> (accessed 16 June 2025).
- Rzepnikowska A. (2019). Racism and Xenophobia Experienced by Polish Migrants in the UK Before and After Brexit Vote. *Journal of Ethnic and Migration Studies* 45(1): 61–77.

- Schaffer A.L., Dobbins T.A., Pearson S.A. (2021). Interrupted Time Series Analysis Using Autoregressive Integrated Moving Average (ARIMA) Models: A Guide for Evaluating Large-Scale Health Interventions. *BMC Medical Research Methodology* 21(58): 1–12.
- Sjaastad L.A. (1962). The Costs and Returns of Human Migration. *Journal of Political Economy* 70(5, Part 2): 80–93.
- Stawarz N., Witte N. (2023). Who Blames Brexit for Their Decision to Leave the UK? The Departure of Skilled Germans From Britain After the Referendum. *European Societies* 26(3): 668–689.
- The Migration Observatory (2023). *EU Migration to and from the UK*. <https://migrationobservatory.ox.ac.uk/resources/briefings/eu-migration-to-and-from-the-uk/> (accessed 16 June 2025).
- United Nations (1998). *Recommendations on Statistics of International Migration*. [https://unstats.un.org/unsd/publication/seriesm/seriesm\\_58rev1e.pdf](https://unstats.un.org/unsd/publication/seriesm/seriesm_58rev1e.pdf) (accessed 16 June 2025).
- United Nations (2017). *Defining and Measuring Circular Migration*. <https://www.un-ilibrary.org/content/books/9789210599535/read> (accessed 16 June 2025).
- United Nations (2020). *Guidance on the Use of Longitudinal Data for Migration Statistics*. <https://www.un-ilibrary.org/content/books/9789210054898/read> (accessed 16 June 2025).
- Vargas-Silva C. (2016). EU Migration To and From the UK After Brexit. *Intereconomics* 51(5): 251–255.

## Annex

**Table 1. Number of migrants and migrations with a stay abroad of at least 3 months in the NHIF register between 2010 and 2022**

|                   | Number of migrants | Number of migrations |
|-------------------|--------------------|----------------------|
| <b>OUTFLOW</b>    |                    |                      |
| United Kingdom    | 74,845             | 85,899               |
| Other and unknown | 413,684            | 492,200              |
| Total             | 488,529            | 578,099              |
| <b>RETURN</b>     |                    |                      |
| United Kingdom    | 36,966             | 43,928               |
| Other and unknown | 169,832            | 214,267              |
| Total             | 206,798            | 258,195              |

Source: Edited by the author using data from NHIF.

**How to cite this article:** Ligeti A.S. (2025). The Role of the Brexit Referendum and the COVID-19 Pandemic in the Changing Patterns of Hungarian Migration to the United Kingdom. *Central and Eastern European Migration Review*, 30 July, doi: 10.54667/ceemr.2025.16.