Migration in Bulgaria: Current Challenges and Opportunities

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Abstract

This paper presents evidence on trends, profiles, drivers, and impacts of Bulgarian emigration. The analysis shows that emigration is mostly led by sizable wage differentials and that emigrants tend to be young, contributing to a decrease in the working-age population in the country, particularly in rural regions. Emigration is not associated with unemployment reductions, evidencing rigidities in the labor market, but leads to wage gains for workers with similar skills. Furthermore, migration has not led to national skill shortages of doctors, and the rate of return migration is high, especially for Bulgarians who migrated to other EU countries. Some challenges emerge when returnees try to reintegrate into the Bulgarian labor market, calling for potential policy interventions to address these issues.

JEL Codes: E24, F22, F24, J61, J64, K37, O15, R23

Keywords: migration, emigration, Bulgaria, migration drivers, skill shortages, return migration, reintegration

1 Daniel Garrote-Sanchez, dgarrotesanchez@worldbank.org; Janis Kreuder, jkreuder@worldbank.org; Mauro Testaverde, mtestaverde@worldbank.org. This paper builds on previous work conducted under the task “Supporting the Implementation of Romania’s Human Development Operational Programme (POCU) 2014-2020” carried out under the leadership of Sandor Karacsony, Manuel Salazar, Victor Sulla and the technical guidance of Mattia Makovec. We would like to thank Mattia Makovec for providing access to data and other supporting material, and to Reena Badiani-Magnusson, Desislava Enikova Nikolova, Kristina Noelle Vaughan, Lucian Pop and Michael Weber for useful comments and suggestions.
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1. Introduction

In the last three decades, the emigration of Bulgarian citizens overseas has become an important phenomenon in the country. As in other Eastern European countries that joined the EU since 2004, Bulgaria’s accession in 2007, combined with the persistent differences in wages, income, and welfare with other EU countries, led to an acceleration of Bulgarian emigration. These trends have raised fears of a “brain drain” of qualified professionals out of Bulgaria. However, evidence from other Eastern European countries and across the world shows that emigration leads to more complex impacts, both in terms of costs and benefits. In fact, in the longer run, the emigration of high skilled workers from some countries has been shown to incentivize human capital accumulation of the native population given the higher expected returns to education, which can transform the “brain drain” into a potential “brain gain” (Beine et al. 2001; 2008).

There is a large body of literature on the impact of migration in receiving countries, which tends to show modest or even positive effects on the native population (Altonji and Card, 1991; Borjas, 2003; Dustmann, Frattini and Preston, 2013; Peri and Sparber, 2009). From the sending country perspective, the literature on the impact of migration is more incipient although it has rapidly developed in recent years.

With respect to education, different cross-country studies find a positive correlation between emigration rates and average education levels in sending countries (Beine et al. 2001; 2008). At the individual level, Batista et al. (2010) and Chand and Clemens (2008) observe an incentivizing effect of skilled emigration on the human capital accumulation of those left behind. In Romania, Ambrosini et al. (2015) find that given the rates of temporary migration and the aforementioned positive effects on schooling, emigration had long-term positive effects on the average skill level in the country. With data on Eastern and Southern EU countries, Farchy (2009) also finds evidence in support of the brain gain hypothesis, with an overall increase in human capital. Looking at a particular group of skilled workers in EU New Member States, Bossavie et al. (2021) observe net increases in the stock of medical professionals since the accession to the EU, in spite of the larger outflows of doctors to
Western European countries. However, the increase in the overall supply of doctors only occurs in countries such as Romania where the supply of education expands to accommodate the increase in demand of education in the medical field. Another key variable to understand the longer-term impact of emigration on education in sending countries is their capacity to attract the return of the diaspora, which is associated with knowledge transfer and an increase in productivity (Boeri et al. 2012; Mayr and Peri 2008).

In the labor market of sending countries, empirical evidence on the effects of emigration in other Eastern European countries is rather mixed and depends on the timeframe of analysis or the elasticity of the labor demand. On the one hand, several studies highlight that emigration reduces the excess supply of labor and, thus, unemployment (Hazans and Philips, 2011; Pryymachenko, Fregert and Andersson, 2013; Zaiceva, 2014). This effect can particularly benefit the youth. On the other hand, emigration might not lead to unemployment reductions if there are rigidities in the labor market as found by Kaczmarczyk (2012) in the case of Poland. In this case, emigration can create labor shortages with persistent high unemployment. Emigration in some instances can hurt firm productivity and entrepreneurship (Anelli et al., 2019; Giesing and Laurentyeva, 2017). In line with these findings, Škuflić and Vučković (2018) find that emigration increases the unemployment rate for a panel of Eastern and Southern EU countries.

The overall impact of emigration on wages of natives at origin tends to be positive as found in Romania (Ambrosini et al., 2015) and the Republic of Moldova (Bouton, Paul and Tiongson, 2011). However, the impact tends to be asymmetric depending on the characteristics of migrants and natives that remain in the country, with more positive impacts on those with similar skill levels, given the reduced competition, and more negative impacts on those with skills that are complementary to those that migrate (Docquier, Özden, and Peri, 2014). In Poland, this meant that emigration led to increases in wages of high-skilled workers and wage reductions for low-skilled workers (Dustmann, Frattini, and Rosso, 2015). Elsner (2013a) finds that emigration benefited young workers in Lithuania, who saw a 6% increase in their wages, while the effects were minimal for older workers.
This paper analyzes the trends, drivers and impacts of labor emigration from Bulgaria during the last decades, shedding light on some of the main questions found in the literature on the selection of emigrants and their impacts in the context of Bulgaria. The study of emigration in Bulgaria provides valuable learning experiences for other Eastern European countries that have followed (or will follow in the next decades) a similar process of accession to the EU. Beyond the EU, this case study can be a reference for migrant-sending countries in other regions that have already started a certain process of reducing barriers to labor mobility such as countries pertaining to the Eurasian Economic Union (EaEU) or the Economic Community of West African States (ECOWAS).

The paper finds that Bulgarians emigrate to other EU countries to take advantage of large wage gaps between Bulgaria and wealthier EU economies. Depending on the skill level of migrants, destination choices vary as skill premiums differ across countries. As Bulgarians migrate primarily for economic reasons, lagging regions experience larger outmigration flows directed both domestically and internationally. Overall, many of the drivers of Bulgarian emigration are structural and are likely to continue until a higher level of convergence with the EU is achieved.

The large-scale emigration of people of working age has contributed to Bulgaria’s depopulation, further exacerbated by negative natural population growth and especially pronounced in the country’s lagging rural regions. The data do not indicate an alleviation of unemployment due to outmigration. Furthermore, outmigration of medical professionals seems to have been balanced out by an increasing number of medical graduates, possibly due to the prospect of migration offering higher incentives to invest in education.

The tendency to return is high among Bulgarians abroad, however, higher for low-skilled than for high-skilled Bulgarian migrants. Bulgarians abroad are more likely to be employed, yet also more likely to experience occupational downgrading. There is space to further improve the reintegration into the Bulgarian labor market of return migrants, as they tend to be less likely to be employed, while also obtaining on average higher wages.
Bulgarian migrants were likely to be significantly affected by the COVID-19 pandemic, as they tend to be employed in jobs that are more vulnerable to the income and health risks of the crisis. An unprecedented number of Bulgarian migrants returned to Bulgaria, as they lost their employment abroad or had only limited access to healthcare in their host countries. The long-term implications of this large-scale return migration of Bulgarians is not yet clear, as both the avenues of re-migration and permanent stay in Bulgaria remain viable for migrants that returned during the Covid-19 pandemic.

The remainder of the paper is structured as follows. Section 2 provides a historical overview of the recent trends in migration in Bulgaria, covering mostly the emigration of Bulgarians abroad but also the inflows of immigrants from other countries to Bulgaria. Section 3 analyzes the main drivers of the migration phenomenon in the country. Section 4 describes the profile of Bulgarian emigrants to understand the selection into migration and potential associated impacts in the country. Section 5 analyzes the different impacts of emigration in Bulgaria. Section 6 studies the prevalence and profile of return migration in the country. Section 7 briefly assesses the potential impact of the COVID-19 pandemic on Bulgarian emigrants’ labor market outcomes and on migration flows to the country. Finally, Section 8 concludes and provides actionable policy recommendations in order to enhance the potential benefits of migration in Bulgaria and address some of its associated costs.
2. Migration Trends

Bulgaria has one of the largest emigrant population in the Europe and Central Asia region. According to data from UNDESA, approximately 1.7 million Bulgarians lived abroad in 2020. The population of Bulgarians abroad is the third largest amongst the EU new member states (NMS), only behind Romania and Poland (left panel of Figure 2.1). The emigration rate, which illustrates the size of the emigrant population relative to the population in the home country, is equally high (right panel of Figure 2.1), at 24% in 2020, the second highest among the NMS and higher than in most ECA countries.²

**Figure 2.1. Number of emigrants and emigration rates in 2020 across ECA countries**

Bulgarian migrants primarily live in OECD countries, with the majority staying in the EU. Most Bulgarians abroad live in the OECD (86%), while the remaining 14% are in non-OECD

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² In this context, the regions displayed are classified as countries from the countries that joined the EU after 2004, excluding Malta and Cyprus (Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia), Eastern Europe (E. Europe) (Belarus, Moldova, the Russian Federation and Ukraine), Western Balkans (W. Balkans) (Albania, Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia), Caucasus (Armenia, Azerbaijan, Georgia), and Central Asia (C. Asia) (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan).
countries. Within the OECD, Bulgarians primarily live in other EU-28 countries, where the Bulgarian emigrant population is estimated at above 800,000 people. Turkey is another major host country for Bulgarian migrants in the OECD, with more than 300,000 Bulgarians. The remaining 8% of Bulgarian emigrant in the OECD live primarily in the US, Canada and Israel.

**Since 2007, migration of Bulgarians to the EU has increased, as restrictions on labor movements were lifted.** Migration to OECD countries overall has been increasing since 2007, primarily driven by an increased inflow in EU countries (left panel of Figure 2.2). As Bulgaria joined the European Union on January 1st, 2007, most legal restrictions on labor movements were lifted since the EU accession. The subsequent increase in migration movement is evident in the immediate spike in inflows to the OECD in 2007 (blue line in the right panel of Figure 2.2). In the years following, migration to the OECD (primarily the EU) increased continuously. In 2014, the last remaining restrictions on labor movements for Bulgarians to the EU were lifted\(^3\), once again culminating in a spike of migration from Bulgarians to the OECD. Since 2007 the outflow of Bulgarian migrants from the OECD (either to a third country or to Bulgaria) has equally been increasing (red line in the right panel of Figure 2.2). As restrictions on labor movements for Bulgarians were lifted, legal circular migration became easier, allowing Bulgarians to work temporarily abroad.

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\(^3\) Austria, Belgium, United Kingdom, France, Germany, Luxembourg, Malta, the Netherlands and Spain joined the other 19 EU member states in removing all temporary restrictions to the freedom of movement for Bulgarian workers.
The financial crisis of 2008 and the accession to the EU changed Bulgarian migrants preferred destination from Spain to Germany. Until 2008, Bulgarian migrants’ preferred destination was Spain, where the population of Bulgarians peaked in 2009 at more than 150,000 (left panel of Figure 2.3). Since 2008, the flow of Bulgarians to different EU destination countries has been changing, as the accession to the EU gave Bulgarian migrants more choices. The financial crisis of 2008 severely affected southern European countries, including Spain. As wages and economic opportunities for Bulgarians in Spain decreased, migration flows redirected to less affected European countries (right panel of Figure 2.3). The stock of Bulgarians in Spain started to fall in 2010, and in 2015 it was surpassed by the stock of Bulgarians in Germany. As Germany and the UK lifted their remaining restrictions for Bulgarian workers in 2014, Bulgarian migration flows to Germany and the UK increased.
Historic data back to 1962 shows that overall Bulgaria has been a country of emigrants. Data on net migration rates for Bulgaria between 1962 and 2017 shows negative values throughout the entire period, suggesting that outflows have consistently been larger than inflows. Emigration from Bulgaria was especially pronounced in the period following the collapse of communism and the subsequent economic recessions, spanning from the late 1980s to the early 2000s. As shown in Figure 2.4, net migration dropped in 1992: between 1988 and 1992 the difference between the people who left and those who arrived was above 350,000. Scholars find that migration flows during this period are commonly associated with permanent migration, as Bulgarians left their home to escape poverty and political instability (Bogdanov & Rangelova, 2010). In the following periods, which include the period of economic stabilization prior to the EU-membership (from 2002-2006) and EU-membership since 2007, overall net migration decreased. During this time, migration of Bulgarians increasingly became seasonal/temporary rather than permanent.

Source: Eurostat.
The foreign-born population in Bulgaria is small but increasing. The foreign population in Bulgaria has more than doubled in the last 10 years, from less than 80,000 immigrants in 2010 to close to 190,000 by the end of 2019, but still only accounts for 2.7% of the total population, the second lowest in the EU (Figure 2.5). In 2019, the largest groups of immigrants in Bulgaria came from Russia and Turkey (Figure 2.6). Following the refugee crisis, Syrians have become the fastest growing group of immigrants: in 2019 15,000 Syrian nationals were residing in Bulgaria. Other immigrant groups come from EU countries (Germany, UK, Greece, Spain, Italy) and non-EU Eastern Europe (Ukraine, North Macedonia).
Figure 2.5. Share of foreign-born population across EU-27

Source: Eurostat

Figure 2.6. Foreign-born population in Bulgaria (as of 1st of January of each year)

Source: Eurostat
3. Migration Drivers

Bulgarian emigrants, as those from other sending countries, migrate to improve their living situation. Multiple recurring factors emerge when analyzing migration patterns. Economic factors, related to wanting to improve ones’ living situation, are primary drivers for labor migrants and for refugees. Differences in wages, economic development, unemployment and job quality shape global migration movements (World Bank, 2018). The same factors also apply to flows of Bulgarian migrations, as described below.

Bulgarians migrate to countries where they can earn higher wages. Migration allows individuals to take advantage of wage differences between countries, obtaining better wages for similar work (Gibson et al. (2018) and McKenzie et al. (2010)). There are substantial wage gaps between Bulgaria and the main destination countries for Bulgarian migrants across all education levels. For example, according to 2019 data, low-skilled Bulgarians in Spain could expect wages 170% times higher (284€) than those in Bulgaria. Bulgarians with high education levels have an expected wage gap of 102% (1055€) if they migrate to the UK. However, Bulgarians with similar qualifications who migrate to Spain can only expect to earn on average 2% (19€) more than in Bulgaria (left panel of Figure 3.1). Worldwide, higher wage returns to education or skill (skill premiums) lead to more high-skilled migration between countries (World Bank, 2018, p. 248). This is also the case for Bulgaria, as the share of high-skilled Bulgarian emigrants in a destination country increases with wage premiums for higher skill levels (right panel of Figure 3.1). For example, in Austria the expected return to emigration for high-skilled Bulgarians is substantially higher than for low-skilled Bulgarians. It is therefore not surprising to see that emigrants with high skills are overrepresented amongst Bulgarian emigrants in Austria.
Figure 3.1. Expected wages of Bulgarian emigrants in 2011 by education level

Source: Authors’ calculations based on EU-SILC and OECD-DIOC databases.

Note: Wages based on EU-SILC 2019 for all the resident population in a given country, assuming there are no gaps between nationalities, for each education and occupation skill level cell. Therefore, gaps vs. non-migrants only show differences in employment status and occupation levels for each level of education. Wages are deflated by the price levels in each country based on Eurostat statistics (prc_ppp_ind). Expected wages are calculated by multiplying the gross wage in each country of residence-education-occupation skill level cell by the employment rate in that cell. The right graph shows the gap in wages for high skilled (HS) and low skilled (LS) Bulgarians = (Wage HS in country i - Wage HS in Bulgaria) - (Wage LS in country i - Wage LS in Bulgaria).

Bulgarian regions with more limited economic opportunities experience larger migration outflows, both domestically and internationally. Within Bulgaria, economic differences across regions can explain migration patterns. On average, Bulgarian regions that are poorer are more likely to experience larger net emigration in the subsequent years. For example, regions with a lower GDP per capita in 2001 had larger migration outflows between 2002-2019 (left panel of Figure 3.2). The same is true when the focus is on internal migration flows (right panel of Figure 3.2). Unemployment is another push factor for Bulgarian migrants. Figure 3.3 shows that Bulgarian regions with higher unemployment in 2003, experienced more emigration in the following 15 years.
The uneven distribution of quality jobs across Bulgarian regions also contributes to unequal migration flows. Regions in the NMS with a higher availability of quality jobs tend to experience larger migration inflows (left panel of Figure 3.4). While regions with a prevalence...
of high-quality jobs attract migrants and manage to keep their local population, regions with more limited availability of these jobs experience large outmigration.\(^4\) In Bulgaria high quality jobs are concentrated in more prosperous urban centers, while they are sparser in rural regions. In 2016, the concentration of high-quality jobs across the country, measured as the standard deviation in the share of non-routine jobs across NUTS 2 regions, was the fourth largest in the EU, behind Slovakia, Romania and Finland (right panel of Figure 3.4). The concentration of quality jobs within Bulgaria has been increasing compared to 2008 and 2012. If continued, this development could lead to further unequal migration flows across Bulgarian regions, as those looking for higher quality jobs will continue to migrate to urban regions.

**Figure 3.4. Share of non-routine cognitive jobs (NRC) and net migration by NUTS2 region**

\(\text{Source: Authors' calculations based on EU-SILC and Eurostat databases.}\)

\(\text{Note: The left panel includes the share of non-routine cognitive jobs and net migration in each NUTS2 region in New Member States of the EU. The label includes the ISO 2-digit code of the country, and the two-digit number referring to the NUTS2 region. The right panel shows the regional variation in the share of non-routine cognitive jobs (NRC) within each country. The}\)

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\(\text{High quality jobs refer to non-routine cognitive jobs (NRC), which involve non-repetitive, problem-solving and analytical tasks that require higher levels of education, including public relations, analytical, medical or technical positions.}\)
variation is measured by the standard deviation of the gap between the share of NRC jobs in each NUTS2 region and the country average. The higher the number, the more concentrated good-quality NRC jobs are in specific regions of a country.

Many drivers of migration from Bulgaria are structural and will continue until a higher level of convergence with the EU is achieved. While substantial wage, prosperity and life quality gaps persist between Bulgaria and wealthier European migrant-destination countries, migration flows are likely to continue (Bobeva et al., 2019; Bogdanov & Rangelova, 2010). Conversely, convergence with the EU can lead to higher return migration or lower migration outflows. Figure 3.5 presents GDP per capita as a share of the EU average – which is a measure of convergence with the EU – (left panel) and net migration (right panel) for the three most recent EU member states (Bulgaria, Romania and Croatia) and Estonia. Since EU membership, Estonia has experienced strong economic growth, accelerating its convergence to the EU-27. This development has impacted net migration flows, which since 2015 have been positive, e.g., larger migration inflows than outflows. Economic convergence to the EU took place at a slower rate in Bulgaria, Romania and Croatia and, while emigration has decreased, net migration flows remain negative. In 2020 though, the impact of the COVID-19 pandemic shock led to an abrupt change in migration flows in Bulgaria, which recorded its first net inflows in recent years given the increase in return migration.
4. Profiles of Migrants

Consistent with the economic motivation to migrate, working-age people are overrepresented in the Bulgarian migrant population. Comparisons of Bulgarian emigrants and non-migrants using 2019 EU population statistics indicate that Bulgarians abroad are more likely to be of working age. In fact, the demographic distribution for Bulgarian migrants is concentrated around the working-age years (between 25-54 years old) and is lowest near the edges of the demographic distribution, with young migrants outnumbering elderly migrants. The gender ratio of Bulgarian migrants is balanced, with the age distribution not differing between male and female migrants (left panel of Figure 4.1). In comparison, the demographic distribution of Bulgarians that remain in the country peaks in the edges, with elderly Bulgarians (65+) being the most populous age group. The working-age population of migrants is around 30% of the total male migrant population, where the equivalent age group only represents around 20% of the total non-migrant male population. The same comparison is valid for female migrants and non-migrants. The gender ratio within Bulgaria is again balanced, while women are on average older than men (right panel of Figure 4.1). The results
are consistent with the evidence that Bulgarian migration is primarily driven by work-related factors such as wages. Bulgarians not in working age, who are less likely to reap the benefits of migration, are less likely to migrate.
Newer cohorts of Bulgarian migrants move to high-income EU countries for a shorter period, while older waves of migrants are found in Israel, Eastern Europe, and Turkey and migrate permanently, indicating different motivations for migration. Destination choices and length of stay differ between younger and older Bulgarian migrants which reflects different waves of migration (newer vs older cohorts) rather than age differences when migrating. Older Bulgarian migrants (55+) who migrated a longer period in the past are more likely to be in Israel, Slovakia, Hungary, Russia, and Turkey, where there are large communities of Bulgarian ethnic minorities. The Bulgarian population in these countries is tilted more strongly towards older age than the population of Bulgarians in Bulgaria, suggesting that family reunification may be a factor influencing the migration decision of older Bulgarian migrants. Whereas newer cohorts of young Bulgarians are more likely to migrate to high-income European countries in search for better economic opportunities, with the top 5 migration destination countries in the latest five years being Germany, UK, Netherlands, Spain and Austria (left panel of Figure 4.2). Countries with an older Bulgarian emigrant population are the same where migrants tend to stay longer. For example, in Israel, 88% of Bulgarians are above 55 years old and 99% have been abroad for more than ten years, whereas in countries that primarily attract younger Bulgarian migrants, the length of stay is
much shorter. For example, in the UK, only 6% of Bulgarians are above 55 years old and only 10% have been abroad for more than ten years (right panel of Figure 4.2).

Figure 4.2. Destination country and length of stay of younger and older Bulgarian migrants

Bulgarian migrants abroad are more likely to be from the top or bottom of the education distribution compared to non-migrants. In 2011, 28% of Bulgarians abroad between 25-64 years old had completed tertiary education, compared to 23% in Bulgaria. Bulgarians abroad are less likely to have upper secondary education as their highest level of education (38% to 57%) and more likely to only have lower secondary education (33% to 20%) (left panel of Figure 4.3). Data on skill levels of Bulgarian migrants are not available, however, data on skill levels of migrants from the 3 newest EU-member states (NMS3) (Bulgaria, Croatia, and Romania) yield a good approximation. Comparisons of trends in skill levels of NMS3 migrants with those of Bulgarians in Bulgaria show that the skill levels of the former have been increasing since 2010. Similarly, the overall skill level in the Bulgarian population has been increasing between 2010 and 2019, as the share of high-skilled Bulgarians rose by 6


Note: The top 5 destination countries of cumulative flows of Bulgarian migrants between 2014 and 2019 are colored in green (with the exception Germany for which data is not available).
percentage points (p.p.) to 29%, while the share of low-skilled Bulgarians decreased by 4 p.p. to 17% (right panel of Figure 4.3).

**Figure 4.3. Selection of Bulgarian adult migrants (ages 25-64) on education**

![Bar chart showing education levels of migrants vs. non-migrants in Bulgaria and abroad.](chart)

**Source:** OECD-DIOC based on census, administrative data or LFS (2011) and EU-LFS (2010-2018).

**Note:** Low-skilled are workers with less than upper secondary education completed. Mid-skilled are workers with upper secondary education completed. High-skilled are workers with tertiary education.

**Bulgarian migrants with high education concentrate in high-income EU countries, while those with low skills are primarily in Southern Europe.** Bulgarian migrants with low education levels, who tend to find opportunities in low-skilled jobs such as agriculture, tourism and construction, are concentrated in countries with relatively high wage premiums for such jobs, such as Southern Europe (Italy, Portugal, Greece) and Belgium (left panel of Figure 4.4). In contrast, Bulgarians with tertiary education, have higher expected wage premiums in countries with better opportunities for high-skilled migrants, such as Luxembourg, the UK, Austria, Denmark, France, Ireland, Sweden, and Switzerland. Low-skilled Bulgarians are less likely to migrate to these destinations (right panel of Figure 4.4).
Migration increases the likelihood to be employed for most groups of Bulgarian migrants. According to the 2018 EU Labor Force Survey, migration is associated with a higher likelihood to be in employment. Comparisons between male Bulgarian emigrants and non-migrants show that employment is 7 p.p. higher for migrants with mid-education levels and 20 p.p. for migrants with low-education levels. For both groups, the increase in employment is driven by a fall in the inactive status (neither employed nor actively looking for employment). The employment outcomes for male Bulgarians with higher education levels are the same in Bulgaria and abroad. For female Bulgarians, the likelihood to be employed increases by 13 p.p. for those with low levels of education and is the same for those with mid-education levels. In contrast, the employment situation for female Bulgarians abroad with high education is worse, as employment abroad for this group is 9 p.p. lower than in Bulgaria (Figure 4.5).
Figure 4.5. Labor market outcomes of Bulgarian emigrants abroad compared to non-migrants (2018)

![Labor market outcomes of Bulgarian emigrants abroad compared to non-migrants (2018)](chart)

Note: The labor market status refers to migrants from NMS3 countries (Bulgaria, Romania and Croatia). Migrants from NMS3 have very similar labor market outcomes to that of Bulgarian migrants according to the latest data available (census 2011).

Many Bulgarian emigrants suffer from occupational downgrading while working abroad. While migration can increase the likelihood of employment, it also commonly comes at a cost of some occupational downgrading. Data from the 2018 EU-LFS shows that employment in jobs classified as high-skilled is less likely for Bulgarians abroad than in Bulgaria, regardless of their own educational level (Figure 4.6). The reduction is especially pronounced for Bulgarians with high education levels, as employment in high-skill jobs decreases by 28 p.p. for this group. In Bulgaria, those with high education levels are rarely employed in low-skill jobs (less than 1%), while 14% of highly educated Bulgarian migrants are employed in these jobs. Similar occupational downgrading occurs for Bulgarians with mid or low education levels, as those abroad are more likely employed in low-skilled jobs and less likely employed in high-skilled jobs compared to non-migrants.
Figure 4.6. Quality of employment of Bulgarian emigrants abroad compared to non-migrants (2018)

Source: EU-LFS 2018.

Note: Occupation levels are divided by the OECD into high-skilled (ISCO levels 1 to 3), medium-skilled (ISCO levels 4 to 8) and low-skilled (ISCO level 9), depending on the complexity of the tasks involved. The occupation profile abroad refers to migrants from NMS3 countries (Bulgaria, Romania and Croatia). Migrants from NMS3 have very similar labor market outcomes to that of Bulgarian migrants according to the latest data available (census 2011).
5. Impacts of Migration

Migration and population developments

Over the last decades, Bulgaria has experienced substantial depopulation, primarily driven by negative natural population growth. Since 1988, the Bulgarian population has decreased by two million people. Both negative natural population growth, i.e., number of deaths larger than number of births, and outmigration have contributed to this development. In the years following the fall of communism in the early 1990s, outmigration was the primary driver of depopulation (Angelov & Lessenski, 2017). Figure 5.1 displays population declines and their drivers between 2002 and 2019. Overall, the population during this period declined by 12 percent. 80% of that decline was due to natural population decline, while net outmigration accounted for the remaining 20%. The contribution of net migration on the population decline has overall decreased. At the beginning of the 2000s, net migration accounted for around 30% of the population decline. This share spiked in the first years of the EU accession (2007/2010) at 40%. In the most recent years, the share decreased substantially to 5% in 2018/19. Research from Romania also underlines that emigration rates and the negative population growth can be strongly interlinked (Alexe et al., 2012). As migrants are disproportionately in the child-bearing age, their migration can lead to a postponement or reduction of marriages and childbirth, thereby negatively affecting the natural population decline. This indirect effect is particularly prevalent when emigration is of permanent nature (Roman and Voicu, 2010).
Regionally unequal impacts of migration

Over the last decades, urban regions in Bulgaria have experienced significant migration inflows while the opposite is true for rural regions. Migration has been an unequal phenomenon across Bulgarian regions. Figure 5.2 shows net migration in Bulgarian regions between 2002 and 2019, measured as the share of the 2001 population. Net migration across the regions varies significantly, between -15% in Smolyan to +15% in Sofia. Only 5 regions in Bulgaria did not experience negative net migration (net outflows) between 2002 and 2019. These include the urban center around Sofia, the semi-urban regions of Varna, Burgas, Plodiv, and the rural area of Kardzhali, where migration flows have been balanced.
Regions with more domestic outmigration have also experienced larger outflows of migrants to other countries. Regions with high shares of international migrants largely overlap with areas with high internal migration outflows, with some exceptions (Figure 5.3). For instance, the regions around the capital Sofia, Plovdiv, and Varna are net senders of international migrants, while at the same time experiencing significant inflows of domestic migrants. Further, the region of Shumen, reports net domestic outflows while experiencing sizable net international inflows. The region reports the highest increases in new residency registration of people from abroad, most likely related to the return of Bulgarian migrants to their region of origin.
Figure 5.3. Regional trends in net internal/international migration between 2007 and 2019

Source: Authors’ elaboration based on Bulgarian National Statistics Institute data.

Figure 5.4. Combined with the rapid aging of the Bulgarian population, no region in Bulgaria experienced an overall increase in their share of working-age population out of their total population (right panel of Figure 5.4).
The unequal distribution of migration has had important consequences on population changes across the country. Comparing population declines between the whole country and the top 10 net emigration/immigration regions displays substantial differences (Figure 5.5). Between 2001 and 2019 the largest net emigration regions lost approximately one-fourth of their population. In contrast, in the regions with the most favorable net migration, the population only declined by 3%. In these regions, low international migration outflow and natural population decline were mostly compensated by large internal migration inflow.
Figure 5.5. Population changes according to high and low emigration regions

Source: Authors’ elaboration based on Eurostat data.

Notes: The top ten net emigration NUTS 3 regions, or districts, between 2002 and 2019 are: Smolyan, Razgrad, Vidin, Vratsa, Pleven, Sliven, Yambol, Lovech, Silistra, and Pazardzhik. The top ten net immigration districts are: Sofia city, Varna, Burgas, Plovdiv, Kardzhali, Sofia, Pernik, Stara Zagora, Ruse, and Haskovo.

Migration and labor markets

Emigration can impact labor markets in sending countries through a number of channels. The following section will primarily focus on the effects that emigration had on unemployment, wages and labor shortages in key Bulgarian industries.

Emigration can reduce unemployment in the short term if local workers have the skills to fill the jobs left by emigrants. The direct effect of emigration is a short-term reduction in labor supply in the regions and sectors where emigrants were employed (Lucas, 2005). If increasing job vacancies are filled by those remaining, emigration can alleviate unemployment (Katseli et al., 2006). However, if the unemployed non-migrants are poor substitutes for those leaving, structural mismatches persist in the economy of the sending region and emigration can instead lead to a higher rate of unfilled vacancies without reducing unemployment (Škuflić & Vučković, 2018).

In Bulgaria emigration does not appear to systematically alleviate unemployment. While earlier findings suggest that higher initial unemployment rates are associated with larger
migration outflows in the following years, less conclusive evidence is found on the opposite effect, i.e., the impact of emigration on unemployment. Figure 5.6 plots changes in the unemployment rate of Bulgarian regions between 2003 and 2019 and net migration during the same period. Except for one region (Montana), unemployment decreased in all Bulgarian regions. As such, there appears to be no systematic relationship between net migration and the size of the unemployment reduction. Regions with substantial outmigration, e.g. Smolyan, experience reductions in unemployment similar to those in regions with substantial immigration, e.g. Sofia.

Figure 5.6. Net migration and changes in unemployment

[Graph showing net migration and changes in unemployment (2003-19)]

Source: Bulgarian National Statistical Institute and Eurostat.

Migration and labor earnings

Emigration has increased the wages of certain groups of non-migrants in comparator countries. In a number of EU countries, a decrease in labor supply due to migration has resulted in a wage increase for non-migrant workers with similar skill profiles. For instance, emigration increased after EU accession in Lithuania, leading to wage increases between 5 to 8 percent for comparable non-migrant workers. However, the wages for older Lithuanians, who were less suitable substitutes for emigrants, were unaffected (Elsner, 2013b, 2013a). Similarly, in Poland, the emigration of migrants with medium education levels led to large
earning gains for non-migrants with similar education, due to a decrease in competition (Dustmann, Frattini and Rosso, 2015).

In line with other evidence from Eastern Europe, emigration seems to support an increase in wages of Bulgarians that remain in the country with similar skills to those that emigrate.

Applying the findings of the literature in neighboring countries to the Bulgarian context, we would expect emigration to have positive effects on the earnings of young Bulgarians with low or high education levels, as these would be the closest substitute to emigrants. While detailed wage and migration data for Bulgaria are very limited, we explore this question using data from the EU-LFS that contains information on wage deciles for every worker, as well as data from the Bulgarian National Statistic agency. Results in Appendix 1 show that higher emigration rates increase wages of workers of similar education levels and age groups that stay in the regions of origin in Bulgaria.

Emigration of Bulgarian medical professionals

Since EU membership in 2007, Bulgaria has been a net exporter of doctors. Between 2007 and 2018 the outflow of doctors in Bulgaria has outnumbered the inflow of doctors. Approximately, 2% of the doctor population in 2007 has emigrated from Bulgaria between 2007 and 2018 (Figure 5.7). The scale of the negative net migration of doctors in Bulgaria is on the lower end compared to the outflow of medical professionals in other European new member states. Outmigration of doctors in countries like Estonia, Romania or Hungary exceeds that in Bulgaria.

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5 Data is aggregated at the year (2011-18), NUTS2 region (6 regions), education (low, middle and high educated) and age category (young (15-29); prime (30-49) and elder (50-64) workers) level. Data on emigration is approximated using Bulgarian National Statistics at the year and NUTS2 level and multiplying that by the share of emigrants from Bulgaria in European countries in each age category and education level obtained from the EU-LFS. Appendix 1 shows a negative correlation between emigration rates and wage decile for each type of worker (age, education level) in each region, suggesting that Bulgarians tend to emigrate in areas, education levels and age groups that have lower wages. Once we partly control for this endogenous behavior by using fixed effects at the year and region/education/age level, results show a positive relation between emigration rates and wages of comparable workers.
Increases in the number of medical graduates have led to an overall expansion of the stock of doctors in Bulgaria. The left panel of Figure 5.8 displays changes to the stock of doctors in Bulgaria between 2000 and 2018. After a decrease shortly before EU membership in 2006, the stock of doctors in Bulgaria has been on the rise. The increase in doctors has been primarily driven by an expansion in the number of medical graduates, while net migration of doctors has been consistently negative since 2006. The number of medical graduates decreased between 2000 and 2006 and has been increasing since then. Overall, the supply of doctors in Bulgaria is above the EU average and the per capita ratio of doctors has been increasing from 345 in 2001 to 425 in 2019. However, compared to the rapid aging of the Bulgarian population, the growth in the number of doctors and medical graduates is not sufficiently high. The ratio of doctors per elder population (above 65) has been falling since 2009. While the ratio is still 7.6% above the EU average, the decrease in the EU was smaller than that in Bulgaria (right panel of Figure 5.8).
Further increases in medical graduates would be essential in Bulgaria, as the doctor population is also aging. Bulgaria has the second oldest population of doctors in the EU; only Italian doctors are older on average. In 2018, 53% of doctors in Bulgaria were above 55 years old, whereas the EU average was 38% (Figure 5.9). Together with the increase in the elderly population, this development contributes to the need for further acceleration of medical graduates in Bulgaria.
Data suggest that the migration did not lead to a national shortage of doctors in Bulgaria, likely driven by increased incentives to study medicine. The above data shows that while there are net migration outflow of doctors in Bulgaria, this phenomenon did not lead to a long-term national shortage of doctors. Medical coverage in Bulgaria is above the EU average. The increase in medical graduates since EU membership could be indicative of increasing incentives to medical education, due to migration movements in the medical profession.

Regions with higher net migration are not systematically correlated with higher or lower decreases in the stock of medical professionals. At NUTS3 levels of disaggregation, increases in medical stock between 2005-2019 differ substantially across regions (Figure 5.10). While in Sofia the per capita ratio of doctors has been constant since 2005, in Pleven the number of doctors per 100,000 inhabitants has increased. There appears to be no systematic correlation with net migration rates, as areas with higher net migration did not experience decreases in the stock of medical professionals. A likely interpretation is that short-term ‘brain drain’ and longer-term ‘brain gain’ effects of the emigration of doctors balanced each other out for most Bulgarian regions.
Beyond overall increase in the stock of doctors in the country, certain medical specialties and the number of nurses have shown a reduction during the last decade. Data by specialty shows that, while in most cases the number of practitioners increased between 2010 and 2019, there has been a substantial reduction in the number of physicians in internal medicine, pediatrics and general practitioners (National Statistical Institute, Republic of Bulgaria, 2020). Furthermore, the number of healthcare assistants and nurses has also decreased in the country, affecting particular regions where shortages have emerged. Data from Eurostat shows that the number of nurses in the country fell from 31,609 in 2011 to 30,546 in 2019, representing a 3.4% drop. Furthermore, when considering the increasing needs of an aging population, the reduction in the availability of nurses as a share of the elder population (65+) was even larger (11.3%, from 2,289 nurses per 100,000 elders in 2011 to 2,031 in 2019).

Migration and remittances

Remittances of Bulgarian migrants are increasing in absolute terms yet decreasing in relative importance for the Bulgarian economy. Remittance payments to Bulgaria have increased until 2019 in absolute terms, however, decreased in importance to the Bulgarian economy. Recent World Bank data shows that the volume of remittances as the share of GDP
has decreased from 8% in 2003 to approximately 3.5% in 2019 (Figure 5.11). Remittances in 2020 decreased sharply due to the Covid-19 pandemic in line with the overall trend in the Europe and Central Asia region (World Bank, 2021a). While remittances have a high potential as development drivers, evidence suggests, that remittances sent back to Bulgaria are primarily used for consumption, especially for families of seasonal migrants, while investments into businesses are rare (Bogdanov & Rangelova, 2010).

**Figure 5.11. Personal remittances received in Bulgaria**

Source: World Bank and Bulgarian National Bank
6. Return Migration

Return migrants can have a positive impact on the development of sending countries. Extensive evidence shows that return migrants can be beneficial to origin countries by bringing productive skills, technological knowledge, international networks and professional experience needed in the domestic labor market (Clemens et al., 2014; Le, 2008; Rapoport, 2004). Further, positive productivity spillovers have emerged in several contexts as a result of entrepreneurial activities of return migrants (Hausmann & Nedelkoska, 2018; Kilic et al., 2009; Piracha & Vadean, 2010).

Attracting more high-skilled return migrants is a key political target in Bulgaria. The Bulgarian government identified the return migration of high skilled Bulgarians as a key political target in the National Strategy on Migration and Integration (Zareva, 2018a). Initiatives to encourage return migration include online information portals, consultation services and annual career fairs to inform Bulgarians abroad about opportunities in Bulgaria (Zareva, 2018a).

The rate of return is high for Bulgarian migrants, especially those who migrated to EU countries. Rates of return are significantly higher for Bulgarian emigrants in the EU compared to those that migrated to non-EU OECD countries. Since the year of EU accession, the annual outflows of Bulgarian migrants residing in EU countries have increased, ranging between 8.7 and 12.9 percent of the total stock of Bulgarians in the EU, with a peak in 2013 (left panel of Figure 6.1).6 The free mobility associated with the EU accession not only has accelerated emigration flows, but also brain circulation, with a higher share of migrants returning to Bulgaria. On the other hand, less than 1% of Bulgarian emigrants in non-EU OECD countries

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6 These estimates are only approximations, as annual outflows of migrants residing in OECD countries (e.g., departure to either EU Member State or a third country or back to Bulgaria) overstate the size of return migrants as not all that leave a country return to Bulgaria. However, they show that migration in Bulgaria is by large a temporary phenomenon and an intention to return is widespread.
(in particular, Turkey, the United States, Canada) return home every year. To estimate the relative size of the return migrant population in Bulgaria we take the number of returnees over the total Bulgarian population without direct migration experience. The return migrant population corresponded to approximately 2.8% of the Bulgarian non-migrant population in 2014. In comparison, the overall Bulgarian migrant population (outside of the country) corresponds to 11% of the Bulgarian non-migrant population in 2010. The relative size of the Bulgarian return migrant population is similar to that of other countries in the NMS-11 (right panel of Figure 6.1).

**Figure 6.1. Approximating the extent of return migration in Bulgaria**

<table>
<thead>
<tr>
<th>Annual returnee rate (outflow/stock t-1)</th>
<th>Ratio of emigrants and returnees (% of non-migrants)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OECD</strong></td>
<td><strong>EU</strong></td>
</tr>
<tr>
<td>0%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: EU-LFS, OECD-DIOC and OECD International Migration Database.

A combination of economic and non-economic reasons determines returns. Surveys among return migrants suggest that factors such as a ‘feeling nostalgic’ or ‘missing family’ play a role in the return decision. Economic push factors such as job loss abroad or end of seasonal work

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7 The lower return rates of Bulgarian emigrants in countries like Turkey or Israel might be associated with their different profile and drivers of migration in the first place, with a high presence of minorities sharing ethnic ties with populations in these two destination countries. The migration motivated for ethnic reasons has been shown to be of a more permanent nature than the one motivated by economic factors (see Bossavie et al., 2021).
are also important, while economic pull factors such as better professional opportunities in Bulgaria are only a minor influence (Bakalova & Misheva, 2018; Nonchev, 2019).

Profiles of return migrants

**Bulgarian return migrants are slightly negatively selected on education level.** Findings from immigrants in Canada suggest that the likelihood to return is higher for highly qualified migrants compared to those with lower qualifications (Aydemir & Robinson, 2008). However, the same findings do not necessarily hold in settings where large gaps in wages, social services and other economic factors between the sending and receiving country exist. In fact, EU-LFS data show that return rates of highly educated migrants differ substantially between wealthier EU15 countries and less wealthy NM13 (Bossavie et al., 2021). Furthermore, comparisons of Bulgarian returnees, migrants and non-migrants, show that return migrants seem to be slightly negatively selected on education. The share of adult returnees with tertiary education in 2014 was 23%, while the comparative share for migrants was 28% and for non-migrants 27% (**Figure 6.2**).

**Figure 6.2. Return migration of highly educated migrants**

![Return migration of highly educated migrants](chart.png)

**Bulgarian return migrants are more likely in working age and male than non-migrants.**

Bulgarian returnees are differently selected on age and gender compared to emigrants and non-migrants. According to EU LFS 2014 data, returnees are more likely to be in prime working age (35-64) than non-migrants and emigrants and equally more likely to be in young working age (25-34) than both groups. Return migrants in pension age are practically non-existing, while these constitute large groups for emigrants and non-migrants. 14% of Bulgarian return migrants are children under 15 years old, which are likely children of migrants who worked abroad temporarily and brought their families with them (left panel of Figure 6.3). Related to the gender ratio of Bulgarian return migrants, male returnees are overrepresented compared to females. 62% of return migrants in 2014 were male, whereas the gender ratio within Bulgaria or among Bulgarian emigrants is mostly balanced (right panel of Figure 6.3). Returnees tend to concentrate in the areas with higher emigration, which is indicative of migrants returning to their regions of origin (Figure 6.4).

**Figure 6.3. Age structure, education and gender of Bulgarian return migrants**

Bulgarian returnees are less likely to be employed and more likely to be unemployed. Data from the 2014 EU-LFS ad-hoc module show that Bulgarian return migrants were 4 p.p. less likely to be employed and 4 p.p. more likely to be unemployed compared to non-migrants, even after taking into account characteristics such as age, marital status, gender, education levels and NUTS-2 region of residence (Column 1 and 2 of Table 6.1). These findings are in line with evidence showing that Bulgarian return migrants rarely have employment lined up upon return (Zareva, 2018a, 2018b, 2019).

In line with international evidence, return migrants are more likely to select into self-employment. Return migrants are 3 p.p. more likely to be self-employed than non-migrants (Column 4 of Table 6.1). Evidence from Albania suggests that the higher rates of entrepreneurship among return migrants could be beneficial to the overall economy, through creating jobs and increasing wages (Hausmann & Nedelkoska, 2018). The higher rate of selecting into self-employment could both be the result of experiences and skills obtained abroad that could be valuable in starting a business or an increase in starting capital, due to the increased earnings abroad (Mahé, 2021).
Return migrants tend to experience a wage premium. Return migrants in 2014 were 26 p.p. more likely to be in the top three percentiles of income (Columns 5 and 6 of Table 6.1) than non-migrants. The positive earnings gap between return migrants and non-migrants is observed across all education levels, although it is higher for low-educated workers. This wage premium of foreign work experience for Bulgarians is in line with international literature that shows a positive wage premium for return migrants compared to non-migrants. Evidence from Eastern Europe suggests income premiums are about 40 percent in Hungary (Co et al., 2000), 10 to 45 percent in a selected group of EU New Member States (Martin & Radu, 2012) and close to 100 percent in Albania (de Coulon & Piracha, 2005).

No occupation premium is observed for returnees. Non-migrants have very similar chances to be employed in high-skilled jobs as returnees, once controlling for differences in education levels, age, gender and region of residence (Column 7 of Table 6.1). Bulgarian return migrants with higher education seem to face an occupational downgrade compared to higher-educated non-migrants (Column 7 of Table 6.1).
<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) Unemployed</th>
<th>(2) Employed</th>
<th>(3) OLF</th>
<th>(4) Self-employed</th>
<th>(5) Top 3 deciles</th>
<th>(6) Top 3 deciles</th>
<th>(7) High-skill occupation</th>
<th>(8) High-skill occupation</th>
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<td>Age</td>
<td>0.014***</td>
<td>0.083***</td>
<td>-0.097***</td>
<td>0.011***</td>
<td>0.023***</td>
<td>0.023***</td>
<td>0.006***</td>
<td>0.006***</td>
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<tr>
<td></td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.003)</td>
<td>(0.003)</td>
<td>(0.002)</td>
<td>(0.002)</td>
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<td>Age^2</td>
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<td>0.001***</td>
<td>-0.000***</td>
<td>-0.000***</td>
<td>-0.000***</td>
<td>-0.000</td>
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</tr>
<tr>
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<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
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<td>Male</td>
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<td>0.075***</td>
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<td>0.186***</td>
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<tr>
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<td>(0.006)</td>
<td>(0.005)</td>
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<td>(0.008)</td>
<td>(0.008)</td>
<td>(0.006)</td>
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<td>-0.134***</td>
<td>-0.005</td>
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<td>0.124***</td>
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<td>(0.007)</td>
<td>(0.005)</td>
<td>(0.013)</td>
<td>(0.014)</td>
<td>(0.010)</td>
<td>(0.011)</td>
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<td>Tertiary education</td>
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<td>(0.007)</td>
<td>(0.009)</td>
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<td>(0.015)</td>
<td>(0.011)</td>
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<td>0.031***</td>
<td>0.257***</td>
<td>0.002</td>
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<td>2.208***</td>
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<td>-0.553***</td>
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<td>YES</td>
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<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Own elaboration based on EU-LFS ad-hoc module (2014)
7. Implications of COVID-19 on Bulgarian Migrants

To counter the spread of the coronavirus, the Bulgarian government enforced strict restrictions on mobility during the first wave (March-May 2020) and second wave (Nov. 2020 – Jan. 2021) of the Covid-19 pandemic, also affecting commuting to the workplace. According to Google mobility data, between January and late April 2020, commuting to work dropped by 50% percent (Figure 7.1). In the months following, mobility to work increased, even if remaining at any given moment at least 10% below pre-pandemic levels. During the peak of the second wave in January 2021, commuting to work once again decreased sharply to levels similar to those in the first wave. Throughout the pandemic, changes in mobility to work compared to pre-pandemic levels in Sofia were on average more than 10% higher than the national average. The difference between Sofia and the top 10 emigration countries was even higher. In parallel, between 2019 and 2020, unemployment in the Sofia region increased at a higher rate than the national average (56.5% or 1.3 p.p. compared to 21.4% or 0.9pp).8

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Figure 7.1. Changes in mobility to work since the COVID-19 pandemic across regions


Notes: The top ten net emigration NUTS 3 regions, or districts, between 2002 and 2019 are: Smolyan, Razgrad, Vidin, Vratsa, Pleven, Sliven, Yambol, Lovech, Silistra, and Pazardzhik. Other top net immigration districts are the top ten excluding the city of Sofia: Varna, Burgas, Plovdiv, Kardzhali, Sofia, Pernik, Stara Zagora, Ruse, and Haskovo. Changes in mobility to work are based on the weighted average of counties where migrants reside.

Bulgarian emigrants are vulnerable to the risks of the COVID-19 pandemic. Especially during the first wave, the intensity of the COVID-19 pandemic was on average higher in the countries where Bulgarian migrants reside than in Bulgaria. Figure 7.2 shows that until the beginning of the second wave in November 2020 the potential exposure to COVID-19 was higher for high and low-skilled Bulgarian emigrants than for non-migrants. This pattern shifted during the second wave, as COVID-19 death rates in Bulgaria were higher than in the major receiving countries of Bulgarian emigrants.⁹

⁹ Figure 7.2 measures exposure to COVID-19 pandemic for Bulgarians at home and abroad, by weighted averages of death rates related to COVID-10 per million people across the main receiving countries of Bulgarian immigrants. The weights correspond to the share of Bulgarian emigrants in each receiving country, varying for high-skilled and low-skilled.
Figure 7.2. Exposure to COVID-19 pandemic, as death rate in country of residency

Notes: COVID death rates are based on the weighted average of countries where migrants reside. For high-skilled Bulgarians the largest destination countries according to the OECD-DIOC database are: 19% Turkey, 17% US, 14% UK, 13% Spain, 6% Canada, 4% Greece, France and Italy. For low-skilled Bulgarian migrants (no college degree): 44% Turkey, 16% Spain, 11% Greece, 6% Italy, 5% US, and 4% UK.

Bulgarian emigrants abroad are employed in occupations more vulnerable to the health and job-loss risks of the COVID-19 pandemic. While detailed data on employment trends of Bulgarian migrants abroad is not available, pre-pandemic information on job characteristics can provide insights into vulnerability of jobs to COVID-19. Following Fasani and Mazza (2020) and Garrote-Sanchez et al. (2020), we use ONET surveys and the EU-LFS 2018 to categorize jobs into three categories depending on their task content: (a) Income-risk jobs, which are jobs that cannot be performed from home nor are deemed essential by governments so they are more vulnerable to supply restrictions and dismissals; (b) Health-risk jobs, which are considered essential by governments but are not amenable to telework and require high levels of face-to-face interactions, exposing workers to higher risks of COVID contagion (e.g. public transport drivers, or healthcare workers); and (c) Safe jobs, which are all other jobs that are telework-able or that are essential and require low face-to-face interaction. These categorizations provide measures of the ex-ante vulnerability of jobs to COVID-19, with strong predictive power in explaining employment outcomes.)
compared to non-migrants with similar education. Similarly, high-skilled Bulgarian emigrants are more likely to be employed in occupations with health risks and income risks and less likely in safe jobs compared to non-migrant counterparts. Overall, the higher level of exposure to the economic and health risks of Bulgarian migrants due to their migration destination and occupation abroad is likely to have exerted pressure to return to Bulgaria.

Figure 7.3. Comparing vulnerability of jobs of NMS-3 emigrants (Romanians, Bulgarians and Croatians) and Bulgarian non-migrants to the COVID-19 shock

![Bar chart showing vulnerability of jobs of NMS-3 emigrants and Bulgarian non-migrants]

Sources: Own elaboration based on the EU-LFS (2018).

Data collected during the first lockdown in 2020, indicates that an unprecedented number of emigrants returned to Bulgaria during the COVID-19 pandemic. Migration statistics between EU countries are available only with delay, requiring the need to use alternative data sources to assess the impact of the COVID-19 pandemic on Bulgarian migration flows. During the beginning of the pandemic, controls of border crossings in Bulgaria were strengthened, as quarantine requirements for new arrivals were enforced. This allowed to capture detailed entry data, including the final destination of travel in Bulgaria. Using these data, Georgiev (2020) estimates that 558,000 Bulgarians entered the country between March and May 2020. While unable to distinguish return migrants from returning Bulgarian tourists, it is likely that
a substantial share of the arrivals was made up of return migrants, who intended to stay in
the country at least during the peak of the pandemic. The return to Bulgaria was driven by
necessity for many, as a large number of Bulgarian migrants lost their jobs abroad or lacked
healthcare coverage in their host countries (Georgiev, 2020; Paul, 2020).
8. Conclusions and Policy Implications

Similar to workers from other Eastern European countries, many Bulgarians engage in temporary labor migration to the EU. Especially young Bulgarians of working age at the top and bottom of the education distribution migrate to take advantage of higher wages in other European countries. By migrating, Bulgarians can improve their likelihood of employment, although are also more likely to experience occupational downgrading.

Migration is uneven across Bulgaria, as rural lagging regions experience larger migration outflows than other parts of the country. Lower wages and higher unemployment are push factors for migration, implying that lagging rural regions are more likely to see large emigration flows both internationally and to wealthier Bulgarian regions. As a result, depopulation is especially pronounced in these regions of the country.

The tendency to return to Bulgaria is high among migrants and has increased substantially during the Covid-19 pandemic. While before the pandemic Bulgarian return migrants were slightly less likely to be employed than non-migrants, they were paid higher wages on average. Return migrants were also more likely to select into self-employment, possibly due to skills, experiences, and capital accumulated abroad.

Policy interventions could further enhance the benefits and reduce the risks of migration from Bulgaria. Better preparing migrants before they leave or return to Bulgaria can prevent skills mismatches or occupational downgrading, which would represent a missed opportunity not only for migrants themselves, but also for the economies and productivity of sending and receiving countries. Similarly, policies to strengthen the ties with the Bulgarian diaspora, facilitate returnees’ reintegration, or prevent potential brain drain issues could maximize the development impacts of migration for Bulgaria. These policies to enhance brain circulation are particularly necessary in a context where there is free mobility of workers to other countries that are part of an economic union, as in this case sending countries can not directly prevent outmigration by restricting physical mobility. Therefore, interventions in these policy
areas would not only be useful for Bulgaria, but also for other countries facing similar challenges.

**Providing information to migrants in a clear and easy-to-access way before they start their journey can help them prevent risks and maximize benefits.** Economic migrants take the decision to migrate based on their perceived costs and benefits from migration. Evidence from different contexts shows that migrants tend to have biased priors on the returns to migration, in some cases underestimating potential earnings (McKenzie, Gibson, and Stillman, 2013; Seshan and Zubrickas, 2017), while overestimating it in others (Shrestha, 2020). Lack of information may make migrants particularly vulnerable and subject to various forms of exploitation or make them miss better economic opportunities. To address these challenges, sending countries have increasingly introduced pre-departure orientation programs focused on increasing migrants’ awareness of their rights, obligations, risks, as well as of job opportunities, rules and local culture abroad. Philippines and Bangladesh are examples of countries with comprehensive pre-departure programs, which in the case of Bangladesh are supplemented by a strong involvement of local communities to further limit the role of smugglers (Testaverde et al., 2017). While the evidence on the impact of pre-departure training is limited (McKenzie and Yang, 2015), making information accessible to migrants is shown to have an impact on their likelihood to migrate (Shrestha, 2020) and improving their employment outcomes. For example, job fairs have been shown to increase migrant workers’ chances of getting a job in the formal sector while abroad (Beam, 2016). Information interventions seem to particularly benefit migrants with fewer networks overseas (Barsbai et al., 2020).

**Reintegration programs could play an important role in facilitating labor market reinsertion for returnees.** Already prior to the pandemic, return migrants in Bulgaria were more likely to be unemployed than non-migrants, indicating barriers to finding employment upon return. Given the severe economic impact of the pandemic globally, economic opportunities for the recent returnees are likely to be even scarcer. As Bulgarian returnees are unlikely to have employment lined up upon return and might have more limited networks to connect them
with job opportunities, matching programs between returnees and viable employers could contribute to reducing job search friction. Broader orientation sessions before or upon return could also be helpful to facilitate reintegration. These sessions could provide information on access to public services and on how to navigate bureaucratic processes. Similar reintegration services are provided by a number of sending countries around the world. For example, in the Philippines the Assist WELL program (Welfare, Employment, Legal, Livelihood) provides a mix of benefits and services to returnees, including accommodation assistance, job search services, skills certification and training (Republic of the Philippines Department of Labor and Employment (DOLE), 2021).

Outreach campaigns and networking events could incentivize the return of high-skilled Bulgarian migrants. Outreach campaigns or networking events to inform Bulgarians abroad about career opportunities in Bulgaria could help foster an interest in returning. Such tools could especially be effective for migrants unfamiliar with the Bulgarian labor market, such as Bulgarian studying abroad, whose number has been increasing in recent years. An example of such efforts is the annual career forum “Career in Bulgaria. Why not?”, organized by two organizations, Tuk-Tam and Back2bg. The career forum connects Bulgarians with international experience and employers looking for professionals with more than 100 companies offering career opportunities in Bulgaria (Krasteva, 2019). Another important aspect to promote return migration is providing assistance during the process of return. For example, the Spanish government created in 2019 the “Plan to Return to Spain”, which contained 50 measures to remove personal, professional, and administrative barriers to return to Spain, including assistance during planning the return and support defining a professional plan (SGIE, 2019).

Strengthening links with the Bulgarian diaspora could yield returns, such as improved knowledge sharing and foreign investment. Establishing professional knowledge sharing

11 Eurostat data (EDUC_UOE_MOBS02) indicates that, between 2013 and 2019, the number of Bulgarians enrolled in tertiary education in the EU increased by 39.6%, from 10 473 to 14 622.
channels with high-skilled Bulgarians abroad could help Bulgaria benefit from the skills and experiences obtained abroad by Bulgarian migrants, even in the absence of return migration. Establishing stronger connections to the Bulgarian diaspora could also be valuable in attracting foreign investment either directly from Bulgarians abroad or through their international networks. Especially, for entrepreneurs in Bulgaria the involvement of the Bulgarian diaspora can be beneficial. Already to-date the Bulgarian diaspora is strongly involved in the Bulgarian start-up environment, providing funding and expertise (Schmutzler et al., 2021). For example, in 2019 the Bulgarian Innovation Hub was established in Silicon Valley by Bulgarian diaspora members, which supports Bulgarian Start-ups in securing investments and through mentorship (Andonova, 2021). Several other countries have implemented programs attempting to create linkages and promote exchanges with members of the diaspora living abroad. Examples are Argentina’s Research and Scientists Abroad-RAICES, the Philippines’ Brain Gain Network, Jamaica’s diaspora mapping project, Colombia’s RedEsColombia, and Bosnia and Herzegovina’s Who Is Who in BiH project. These programs create detailed databases of high-skilled diaspora, including their location and skillset, to promote knowledge and capital circulation (Özden & Dickerson, 2018). Romania developed in collaboration between its public employment services and that of Italy the MEDIT project with the objective of informing Romanian migrants in Italy about the labor market opportunities in Romania and provide institutional support for those migrants that decide to return to Romania (OECD, 2013).

**While brain drain of doctors is not a pressing issue in Bulgaria at the moment, innovative financing approaches could be considered in the future if the country faces shortages in key medical occupations in which students receive subsidized tertiary education and then work abroad.** The introduction of repayment schemes can address some equity concerns and fiscal losses that sending countries face when large numbers of workers with publicly financed education migrate to work in other countries, which in turn benefit from this human capital inflow without having invested on it. In the context of intra-European migration, income contingent student loans have been often suggested as a potential instrument to address
these challenges (Bossavie et al. 2021; Poutvaara 2004; World Bank 2021b). Introduced in Hungary, Ireland, Netherlands and the UK, this instrument envisions the loan repayment only once students start earning above a certain amount. However, this would require coordination between sending and receiving countries through some form of bilateral agreements by which the receiving country would collect the repayment and send it to the source country. Collected as a payroll tax from the salaries of migrant workers, this amount could then be matched with a contribution of the receiving country’s government to compensate for the provision of tertiary education by sending countries to migrant workers. In the absence of bilateral agreements, monthly direct transfers based on an agreed repayment scheme could be required by sending governments. To make these payments incentive-compatible, governments could link the repayments to the provision of essential government services such as passport renewal (World Bank, 2021b).
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### APPENDIX 1: Regressions on the Impact of Net Migration on Wages in Bulgarian Regions

Dependent variable: Wage income decile of workers per year, NUTS2 region, age group (15-29, 30-49 & 50-64) and education level (low, mid & high)

<table>
<thead>
<tr>
<th></th>
<th>Model 1 (OLS no FE contemporaneous DV)</th>
<th>Model 2 (OLS FE contemporaneous DV)</th>
<th>Model 3 (OLS no FE lagged DV)</th>
<th>Model 4 (OLS FE lagged DV)</th>
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<tbody>
<tr>
<td>Emigration (% population)</td>
<td>-0.178*** (0.031)</td>
<td>0.064** (0.031)</td>
<td></td>
<td></td>
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<tr>
<td>L1. Emigration (% population)</td>
<td>-0.174*** (0.036)</td>
<td>0.064* (0.036)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Male</td>
<td>1.241*** (0.744)</td>
<td>0.884 (0.824)</td>
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<tr>
<td>Constant</td>
<td>5.451*** (0.111)</td>
<td>1.526*** (0.435)</td>
<td>5.435*** (0.124)</td>
<td>1.607*** (0.469)</td>
</tr>
<tr>
<td>Observations</td>
<td>486</td>
<td>486</td>
<td>432</td>
<td>432</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.047</td>
<td>0.935</td>
<td>0.046</td>
<td>0.938</td>
</tr>
<tr>
<td>Year (2010-18) FE</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>NUTS2 region * Education * Age category FE</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
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Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Own elaboration based on EU-LFS and Bulgaria National Statistics.
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ABSTRACT

This paper presents evidence on trends, profiles, drivers, and impacts of Bulgarian emigration. The analysis shows that emigration is mostly led by sizable wage differentials and that emigrants tend to be young, contributing to a decrease in the working-age population in the country, particularly in rural regions. Emigration is not associated with unemployment reductions, evidencing rigidities in the labor market, but leads to wage gains for workers with similar skills. Furthermore, migration has not led to national skill shortages of doctors, and the rate of return migration is high, especially for Bulgarians who migrated to other EU countries. Some challenges emerge when returnees try to reintegrate into the Bulgarian labor market, calling for potential policy interventions to address these issues.

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