

# HOW MIGRATION, HUMAN CAPITAL AND THE LABOUR MARKET INTERACT IN NORTH MACEDONIA

Report drafted for the European Training Foundation by Marjan Petreski,  
under the supervision of the Vienna Institute for International Economic Studies (wiiw).

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# PREFACE

The countries of the Western Balkans are characterised by declining populations driven by low birth rates, ageing populations and ongoing migration. Emigration from the region has been constant since the 1990s, evolving from irregular, low- to medium-skilled labour migration to regular family reunification, international students and, more recently, high-skilled labour migration.

In 2020, the European Training Foundation (ETF), together with the Vienna Institute for International Economic Studies (wiiw), launched a regional study entitled 'Migration dynamics from a human capital perspective in the Western Balkans'. Its aim was to shed light on the triangular relationships between human capital formation, labour markets and migration, and to determine how the current functioning of the education system and the labour market affects migration in each country.

This report, which is one of six country reports produced within the context of this study, was drafted by Marjan Petreski based on a common analytical framework developed by the ETF and wiiw. The study involved an analysis of the existing literature and reports and the development of tools to analyse flow and stock data on Macedonian migrants, based on available international statistics. A separate statistical analysis based on data from the Macedonian labour force survey (LFS, 2010–19) was conducted using the cohort approach. This work was led by the wiiw's Sandra Leitner who provided the key findings used in this report.

The report benefited from extensive discussions with, guidance from and comments by the wiiw team (Michael Landesmann, Hermine Vidovic, Sandra Leitner, Isilda Mara) and the ETF team (Ummuhan Bardak, Mariavittoria Garlappi, Cristiana Burzio and Mirela Gavoci). The final report was presented in a webinar on 10 March 2021 to the main stakeholders in North Macedonia, including representatives of public institutions and civil society, and researchers.

The ETF would like to thank all the institutions and individuals who shared information and opinions, and actively participated in the webinar. In particular, the ETF is grateful to the employees of the State Statistical Office of North Macedonia who, in accordance with their internal rules, provided access to the LFS data. This report would not have been possible without their contributions.

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## KEY MESSAGES

- North Macedonia has been an emigration country since the post–World War II period, with emigration accelerating in the past decade. The country does not have its own statistics on migration stock or flows in the past few decades. UN data suggest a migration stock of roughly 650 000, or almost one-third of the population, at the end of 2019.
- As of 1 January 2008, emigration from North Macedonia began accelerating because of the visa-free entry of its citizens into EU Member States in the Schengen area that was a result of the visa facilitation and readmission agreements signed in 2007 between the EU and North Macedonia. In addition, a trend of obtaining Bulgarian citizenship began in the 1990s. According to Bulgarian authorities, over 90 000 Macedonians have obtained Bulgarian passports since 2002.
- Macedonian emigrants are more often young, while their skills composition is mixed. Higher-educated emigrants predominantly live in overseas countries such as the US, Canada and Australia, while low- to medium-skilled emigrants mainly reside in Western European countries, which host the bulk of North Macedonia’s emigrants.
- In general, emigration has been skewed towards people with a low level of education and, to a smaller but still substantial extent, people with a medium level of general education. This largely invalidates the brain-drain hypothesis, although particular occupations – most notably doctors, nurses and midwives – have exhibited intense emigration.
- The largest stock of Macedonian emigrants resides in Turkey, followed by Germany and other old Member States of the EU. Migration stock within the Western Balkans is mainly composed of emigrants to Serbia, but there has also been an emerging trend of emigration to some new Member States of the EU (e.g. Croatia and Slovenia), which likely involves circular migration.
- Germany plays an important role as North Macedonia’s key trading and investment partner. Over the years, Germany has showed persistent demand for medium- to high-skilled emigrants and enthusiasm for their eventual naturalisation. Germany’s newly adopted Skilled Labour Immigration Act provides an opportunity for both North Macedonia and Germany to benefit by balancing Germany’s growing skills needs with North Macedonia’s desire to improve human capital and minimise the effects of its erosion in the domestic labour market.
- Pull factors for Macedonians include decent jobs, higher wages and better standards of living at destination. Push factors are multiple and more complex, ranging from the society’s widespread politicisation to dissatisfaction with the education system, healthcare and weak governance. The initial triggers, however, are low wages, long job queues, the wage premium in the public sector, and insecure jobs in the private sector. Over time, earning a better income has outpaced family reunification as a reason to emigrate.
- The Macedonian labour market was performing quite well until the pandemic hit. In addition to emigration, both the inflow of foreign direct investment (FDI) since 2007 and the government’s active labour market policies had sharply reduced unemployment. At the same time, however, emigration and FDI have predominantly sourced medium-level skills in the labour market. Vocational education and training (VET) and the development of the dual education system, which receives support from German-owned companies in North Macedonia, work to bridge the gap between the departing medium-skilled labour force and the domestic labour market’s growing demands.
- Skills obtained in the domestic education system play a mixed role in emigration. Some emigrants find their skills to be sufficient and relevant at destination, while others acquire additional skills either prior to departure or at destination. In addition, reforms in the education system have promoted the acquisition of IT and language skills that may ultimately foster more emigration.

- Among Macedonian emigrants, the propensity to return remains low. This implies that any skills learnt abroad are unlikely to contribute to the aims of domestic development. Although government policies to re-import skills have been weak in recent decades, the economic context has not been conducive either. Nor has the country been able to compete well against the targeted skills attraction strategies devised by more advanced countries with accelerated ageing and skills replacement needs.
- North Macedonia needs a comprehensive policy on economic migration, with a cross-institutional approach and effective coordination. The country's stakeholders need to find the most efficient approach to cross-institutional coordination on all aspects of migration. This may involve a need to designate a body to provide coordination between various government institutions relevant for migration and non-governmental economic organisations, such as chambers of commerce, employers' organisations, trade unions, think tanks, etc. Alternatively, migration issues may be mainstreamed within existing inter-institutional and social dialogue mechanisms.
- The government should ensure that all labour market policies, particularly those that affect medium- to high-skilled workers, are mutually consistent and attenuate the propensity to emigrate. For example, subsidising high wages and introducing progressive taxation are not mutually consistent and, if applied to high-prospect sectors and/or occupations like IT professionals, may spur rapid emigration. Moreover, the country needs mechanisms to regularly analyse and monitor emerging skill gaps at national, regional and local levels for counter measures.
- Policies aimed at acquiring human capital and skills, particularly outside the formal education system, should be strengthened. A robust evaluation of current active labour market programmes could help for a more efficient and targeted support. As a complement to such policies, the validation and/or recognition of skills acquired outside the formal system or abroad (mostly in non-formal and informal contexts) is also necessary. In terms of the risk of emigration, the education system should focus on tailoring skills to match current demand in the labour market, especially any skills where fast gains can be made. Dual VET education is an example to get strong policy support.

# 1. INTRODUCTION

North Macedonia has been an emigration country ever since the post–World War II period. Among all the republics of the former Yugoslavia, it had the lowest post-war standard of living, which helped to spur accelerated emigration in the 1950s and 1960s to Western European countries, but even more frequently to the US, Canada and Australia. These are the origins of today’s ‘old’ Macedonian diaspora, whose second- and third-generation successors are frequently naturalised and retain only weak connections to their homeland. The 1990s brought successive new waves of emigration, largely driven first by the perils of systemic transition in the early 1990s, followed by the visa liberalisation process with the European Union (EU) in 2009 and the relaxation of migration regimes in key destination countries like Germany.

North Macedonia’s emigration trends, probably like few others, are also distinctive because of their history and ethnic composition. Bulgaria grants citizenship to Macedonians who can prove Bulgarian ethnicity<sup>1</sup>. Since a Bulgarian passport allows the holder to work in many EU countries, the acquisition of Bulgarian passports by citizens of North Macedonia since 2002 has been one way for Macedonians to circumvent the stringent migration policies of their main EU destinations. This trend has intensified since Bulgaria’s accession to the EU in 2007. As a result, the number of Macedonians obtaining a Bulgarian passport has approached 100 000 (Committee of the President of the Republic of Bulgaria on Bulgarian Citizenship). Another distinctive feature of the country’s migration flows relates to Macedonian citizens of Turkish origin: according to the 2002 census, ethnic Turks in North Macedonia made up the third largest ethnic minority (77 959 people, or 3.8% of the population) (see also İçduygu and Sert, 2015; Korfali and Acar, 2018).

Between 1990 and 2019, it is estimated that more than 200 000 Macedonians departed for a better life abroad, bringing total emigration to a staggering 32% of total population (UN statistics). However, even this figure may well be underestimated. The country has not conducted a census since 2002, and the existing statistics provided by the Ministry of Interior significantly deflate current population figures. Owing to intense emigration since the last census, therefore, the population may have shrunk to levels that bring the emigration-to-population ratio to 40%. According to official estimates, remittances account for about 4% of GDP (Balance of payments, 2019), while unofficial estimates put their share of GDP as high as 10% (Petreski and Jovanovic, 2013). In any case, the share of remittances in GDP is higher than the average share of FDI and official aid received by the country in the post-independence period, and serves to soften the incidence of poverty in the country to an extent similar to or greater than that of social assistance.

Each wave of emigration has sought to make a better living abroad. Joblessness, long job queues, low-paid jobs and widespread politicisation have all contributed to an accumulation of dissatisfaction, especially in the latest waves and especially among young individuals. With visa liberalisation and a general easing of travel restrictions, reaching Western Europe has become easier. Hence, the topic has often ignited public debate in the past decade, with the usual implication being that the smartest, most educated and most talented people leave. It is not uncommon for such stories to receive a great deal of

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<sup>1</sup> The procedure requires providing their family name and birth certificate and filling in complex paperwork. According to some commentators, virtually every Macedonian of Slavic origin is eligible to claim a Bulgarian passport. Since Bulgarian laws allow dual citizenship, there is no need to renounce one’s Macedonian documents. Given the complicated history of the Balkans, this has led to tense relations between the two countries (Hristova, 2010).

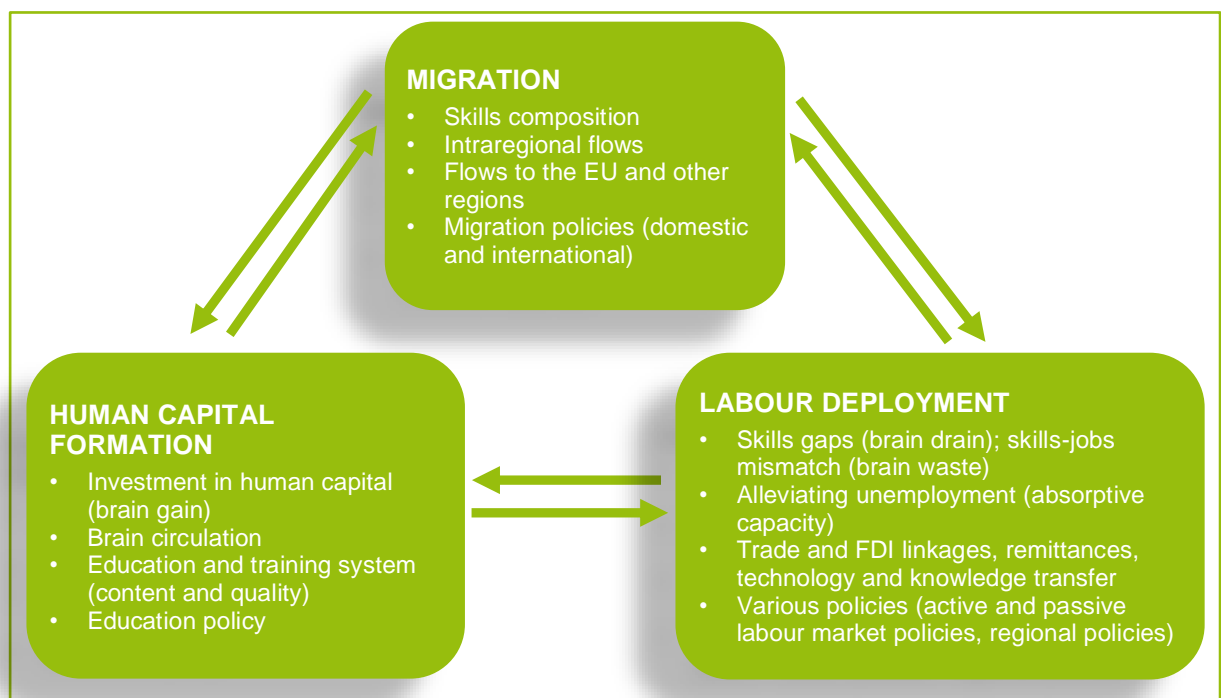


attention in the media, but they mask the reality that low-income and middle-class individuals, usually in entire families, have also been departing for jobs elsewhere in manufacturing and in sales and craftsmen services, thereby depleting North Macedonia and begrudgingly redefining it as a land of old people.

On the other hand, the economy has been doing quite well over the past decade or two. GDP has grown on average by 3% per year, which is nevertheless below the estimated potential of about 4%. At the same time, the economy has been hit frequently by external shocks (e.g. the global financial crisis of 2008–09) and domestic shocks (e.g. the political crisis of 2015–16). Remarkably, the unemployment rate fell continuously from about 37% in 2005 to 16% just before the pandemic hit in 2020. One public fallacy is that the decline in unemployment was due to emigration, which would be true if mostly unemployed people were emigrating, thus countering the brain-drain argument. On the contrary, however, employment surged because of the 2006 FDI attraction policy, which provided generous support to foreign factories to set up production in North Macedonia, and because of supplementary employment policies like active labour market programmes and ad hoc government subsidisation of new jobs. While the labour market has significantly improved overall, wages have grown rather tepidly, possibly as a consequence of the initial environment of high unemployment. However, the weaknesses in public policies – most notably to make progress on education, healthcare, clean air and good governance – have created the picture that there is ‘no future’ in North Macedonia.

The objective of the current study is to gain a comprehensive understanding of the nexus of migration, human capital development and the labour market in North Macedonia. The study makes no assumption that emigration is either good or bad. Both outcomes are possible and so are a range of intermediate results. The various interrelationships that we shall try to capture in our analysis are depicted in [Figure 1.1](#).

**FIGURE 1.1 RELATIONSHIPS BETWEEN MIGRATION, HUMAN CAPITAL FORMATION AND LABOUR DEPLOYMENT**



Source: wiiw.

Plagued We have relied on various sources of quantitative data, most notably from the United Nations, Eurostat and the State Statistical Office of North Macedonia (SSO). Some of the findings (or lack thereof) are supplemented by unstructured interviews with three officials from the Ministries of Labour and Social Policy and of Education and Science and with two researchers or think-tankers who work in the area. For the reasons noted above, however, there is a lack of reliable, detailed data on migration, which makes our analysis at points speculative and based on rather anecdotal evidence. As a result, the report includes different data sources that might be plagued by variety of underlying methodologies, sometimes not comprehensive enough for a rigorous scientific interpretation or conclusion. This needs to be borne in mind when reading the report, but it is still worth attempting due to the importance of the topic. As a consequence, the need to shed light on the triangular relationships depicted in [Figure 1.1](#), which to our knowledge has not yet been done, outweighs the need to base the argument solely on strict scientific methods.

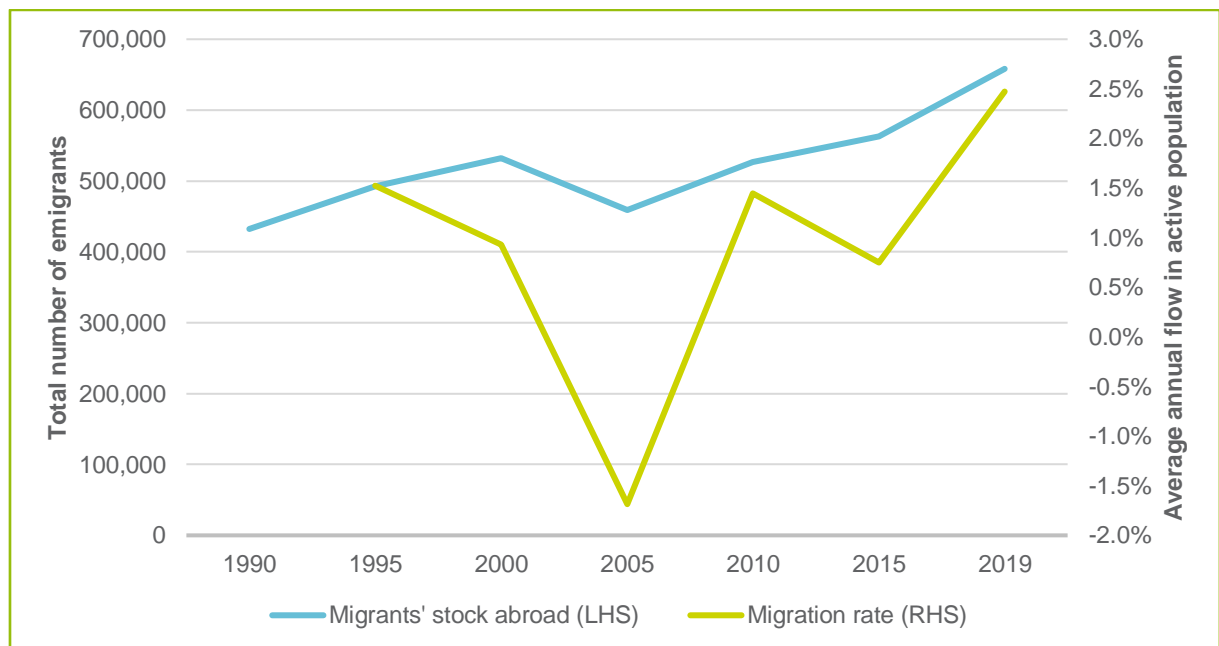
The study is organised as follows. [Chapter 2](#) presents the basic facts on emigration trends, such as the size and structure of Macedonian emigration, based on available data from the UN and Eurostat. We pay some attention to the role of Germany in this regard. [Chapter 3](#) links migration trends with developments and structural features of the Macedonian labour market. In this chapter, we make limited use of the findings of a cohort analysis carried out by the wiiw team involved in the project, based on data from the LFS. [Chapter 4](#) links migration trends with the set-up and outcomes of the education system. [Chapter 5](#) discusses the key features that characterise the nexus of migration, human capital and the labour market. [Chapter 6](#) discusses policy implications and sets out conclusions.

## 2. BASIC FACTS ON THE MIGRATION TRENDS

As a result of intensive outward migration over the past half-century and longer, North Macedonia has a large migrant stock abroad. Official figures on the stock of emigrants of Macedonian origin who live abroad are lacking, the most notable reason being the absence of a census since 2002. Moreover, the country's long history of emigration has resulted in an absence of reliable data on 'old' migrants and their descendants, as well as migrants who have returned home.

However, UN data based on country of birth criteria provide estimates of Macedonian migratory stock obtained from destination countries. At the end of 2019 (see [Figure 2.1](#)), the total was 658 000, or 32% of total domestic population: 29.7% live in Turkey, followed by Germany (13.8%), Italy (11.1%), Switzerland (10.3%), Australia (7.9%) and Serbia (7.2%). Other destination countries include the United States, Austria, Croatia, Slovenia and Canada. On the other hand, the five-year average emigration rate (in active population)<sup>2</sup> reveals a calmer yet accelerating pace of emigration (2.5% in 2019). Given the overestimated active population in the country due to long-delayed census, however, this number could have been diminished as well.

**FIGURE 2.1 STOCK OF MIGRANTS ABROAD SINCE 1990 AND MIGRATION RATE**



Note: According to the UN, the data refer to foreign-born population.

Source: UN statistics and SSO.

The data suggest two broad emigration trends: one after the declaration of independence in 1991 and the other after the fall of the Schengen wall in 2009. Bornarova and Janevska (2012) argue that the wave in the 1990s has been more permanent in character, while recent waves have been more temporary and include some circular migration. Nevertheless, visa liberalisation, together with the

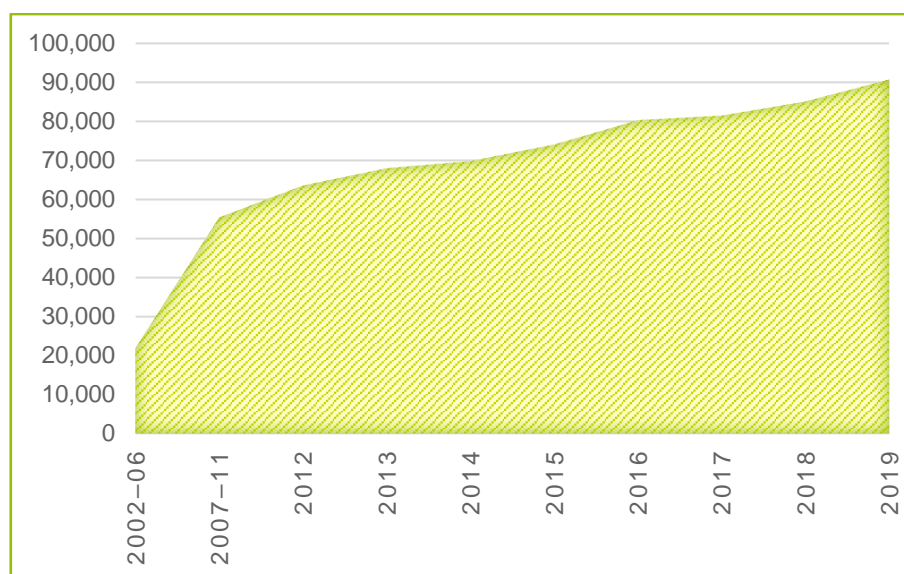
<sup>2</sup> As only five-year differences of the emigration stock are available, the five-year average means that the change of emigration stock in five years is divided by five.

acquisition of Bulgarian passports by citizens of North Macedonia, has provided broader access to EU labour markets and given an impetus to longer-term Macedonian emigration in the period since 2007.

Our own forecasting based on the Delphi method<sup>3</sup> (Petreski et al., 2017) shows that the current pace of emigration from North Macedonia may largely be sustained, even though the country's deteriorating age structure, the pre-pandemic improvement in labour-market conditions and the circumstances of the pandemic itself may somewhat curb the inclination to emigrate. Sustaining the pace of emigration implies that the stock of emigrants abroad will continue to rise. However, the pandemic may alter such inclinations and reduce opportunities to depart.

The scarcity of migration data is further exacerbated by the unique trend mentioned above: Macedonians claiming Bulgarian citizenship as a vehicle for easier emigration to Western European countries. The past two decades have been characterised by Macedonian citizens claiming Bulgarian citizenship in order to reap the benefits of a Bulgarian passport, especially those resulting from Bulgaria's accession to the EU in 2007 (full labour market access to EU labour markets was granted to Bulgarian citizens in January 2014 after the end of transitory regulations). Data from Bulgaria's Committee on Bulgarian Citizenship estimate that over 90 000 citizens of North Macedonia obtained a Bulgarian passport between 2002 and 2019 (Figure 2.2). This figure represents nearly 5% of North Macedonia's population and would account for 14% of its migration stock. This is not to claim that all new holders of Bulgarian passports have emigrated, and we have scant information on whether those who emigrated with a Bulgarian passport have been registered at destination as Bulgarians, which if prevalent may downplay the Macedonian migrant stock abroad.

**FIGURE 2.2 NUMBER OF MACEDONIANS IN POSSESSION OF BULGARIAN CITIZENSHIP**

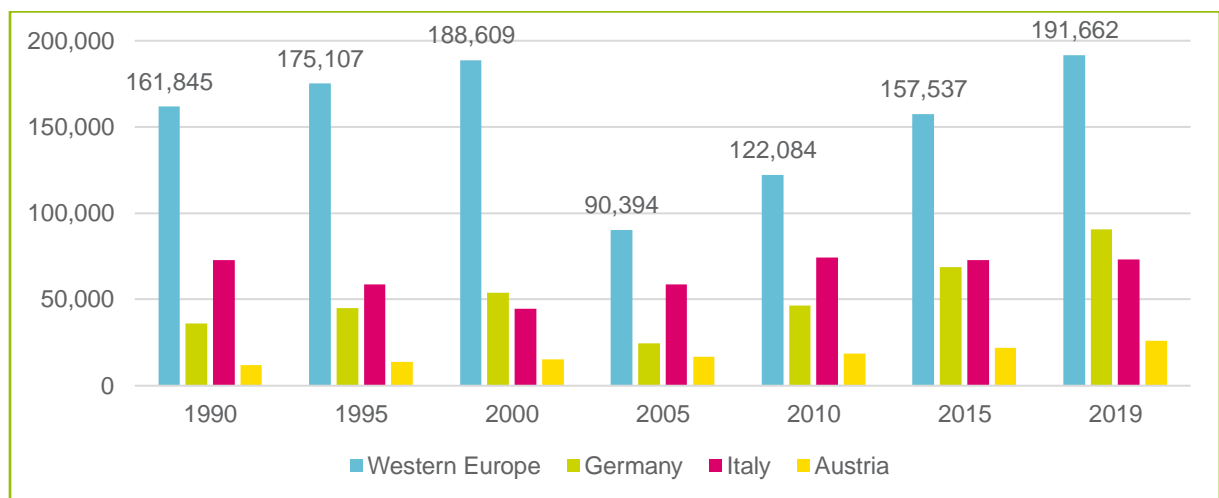


Source: Committee of the President of the Republic of Bulgaria on Bulgarian Citizenship (<https://m.president.bg/bg/cat22/Balgarsko-grajdanstvo>).

<sup>3</sup> The Delphi method is an exploratory technique that aims to structure group thinking and communication to reflect on complex issues. It gathers input from experts in two or more learning rounds. The experts can revise their initial responses after a facilitator summarises their input.

Developed countries, in particular the EU-15, remain the most attractive destination for Macedonian citizens. In 2019, the number of emigrants to Western Europe rebounded to its 2000 level, with emigration to Germany playing a key role (see [Figure 2.3](#)). Germany is the top trading partner of North Macedonia, capturing about one-fourth of the total volume of trade, and it is one of the few countries where Macedonian exports exceed imports. Likewise, German investment in North Macedonia tops the list with an average of 13.6% of the country's entire inflow of FDI in the past decade. German FDI in North Macedonia produces spillover effects for the economy, not only through the creation of value added and employment, which has helped the country's reindustrialisation in the past decade, but also by providing support for the integration of local economies into global value chains and exposing domestic workers to German working culture. Germany's large, strong economy and the strong economic ties between the two countries also exert a permanent pull effect on Macedonian labour.

**FIGURE 2.3 STOCK OF MIGRANTS IN TOP THREE DESTINATION COUNTRIES OF THE EU**



Note: Western Europe comprises Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, Monaco, the Netherlands and Switzerland.

Source: UN statistics.

The number of Macedonian emigrants to Germany almost quadrupled between 2005 (i.e. using a data point prior to visa liberalisation in 2009) and 2019 (see [Figure 2.3](#)). While the pace was initially driven by the proliferation of Macedonians acquiring Bulgarian passports, the 2016 changes in Germany's migration regime have also contributed significantly. Specifically, Germany proposed a labour migration scheme (known as Westbalkan-Regelung) for citizens from Albania, Bosnia and Herzegovina, Kosovo<sup>4</sup>, Montenegro, North Macedonia and Serbia, which was approved in October 2015 and went into effect from January 2016 (Bither and Ziebarth, 2018).

The new scheme was a response to the disproportionately high number of asylum applications submitted in the wake of the 2015 refugee crisis, when in only the first nine months of the year 41% of all first-time asylum applicants in Germany came from the Western Balkans, but fewer than 1% met the protection requirements (OECD, 2020). Any asylum seekers from the region who immediately withdrew their application and left Germany were entitled to re-enter the country under the new scheme, which allowed citizens from the region to work in Germany from 2016 to 2020, regardless of

<sup>4</sup> This designation is without prejudice to positions on status and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence – hereinafter 'Kosovo'.

their formal qualifications or German language level. Migrants needed a labour market-tested job offer and they had to apply for their visa at a German mission in their country of origin. Following the introduction of the programme, the number of first-time asylum applications submitted in Germany by citizens of the Western Balkan states fell sharply, and some 65 000 visas were issued through the programme (OECD, 2020). As a result, the number of long-term visas requested and issued increased in 2016 and 2017. The increase is reflected in the 2019 numbers that appear in [Figure 2.3](#).

In the years 2016 and 2017 alone, Macedonians received nearly 21 000 approvals from Germany's Federal Employment Agency and almost 8 000 newly issued visas. Nearly half of all approvals (to WB-6<sup>5</sup> nationals) were issued in the category of 'skilled worker', while the industries for which approvals were most frequently granted in 2017 were construction and hospitality (Hoffmeyer-Zlotnik, 2019). The new Skilled Labour Immigration Act (Fachkräfteeinwanderungsgesetz), which was adopted in 2019, entered into force on 1 March 2020, just before the pandemic hit. The new law aims to provide easier access to the German labour market for qualified workers from non-EU countries. The pandemic, however, is likely to force changes in Germany's current migration regime, which will almost certainly involve curbing the latest wave of emigration from the Western Balkans<sup>6</sup>.

The top 10 destination countries are home to 92% of Macedonian emigrants ([Table 2.1](#)). Most of the 10 countries have not seen any dramatic change in their flow-to-stock ratios in the past decade. Turkey is the major exception: the trend of emigrating to Turkey has recently accelerated as a consequence of the non-negligible share of Macedonian citizens of Turkish origin (about 5% of the total population) and increasing economic ties with Turkey over the past decade or two. The changes in the other countries are much smaller.

**TABLE 2.1 ANNUAL FLOW AS A SHARE OF THE STOCK OF MIGRANTS – TOP 10 DESTINATION COUNTRIES**

	Emigrant stock		Average annual flow		Flow as a % of stock	
	2015	2019	2015	2019	2015	2019
Turkey	144 544	195 449	431	12 726	0.3	6.5
Germany	68 560	90 542	4 396	5 496	6.4	6.1
Italy	72 699	73 343	-305	161	-0.4	0.2
Switzerland	60 503	67 668	1 765	1 791	2.9	2.6
Australia	49 990	52 201	-296	553	-0.6	1.1
Serbia	46 737	47 482	-212	186	-0.5	0.4
United States	28 018	30 256	810	560	2.9	1.8
Austria	21 921	25 877	636	989	2.9	3.8
Slovenia	15 637	16 507	261	218	1.7	1.3
Canada	10 236	10 969	125	183	1.2	1.7

Source: Author's calculation based on UN statistics

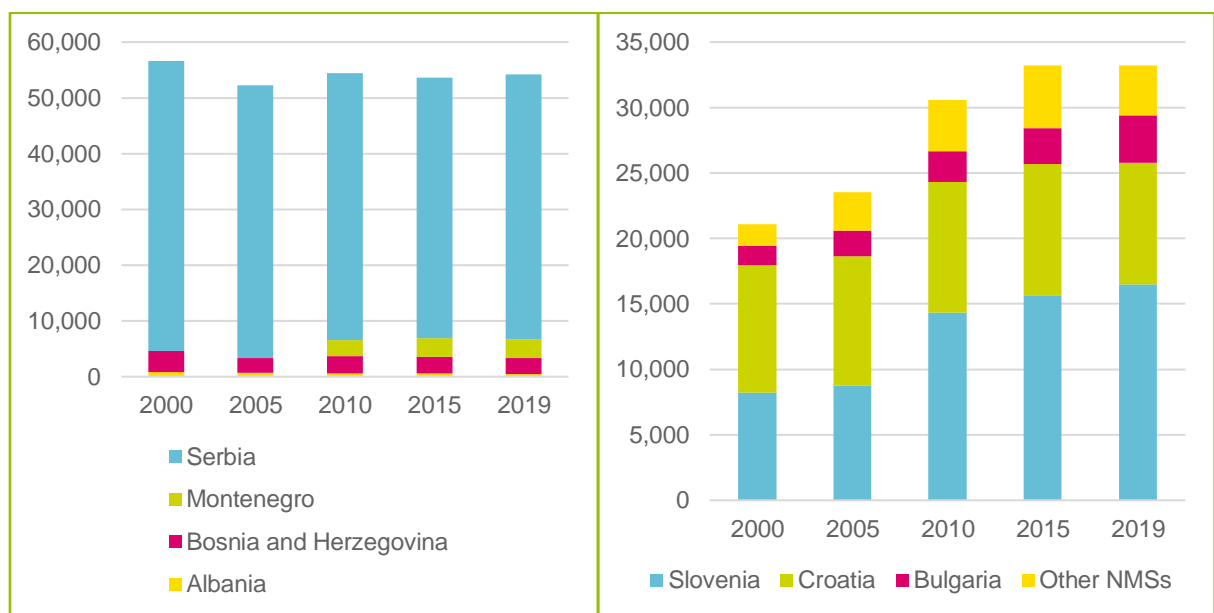
<sup>5</sup> Western Balkan six: Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia.

<sup>6</sup> A recent discussion of the issue can be found here: [www.dw.com/en/germany-merkels-cdu-eyes-western-balkans-immigration-curbs-amid-coronavirus/a-53969751](http://www.dw.com/en/germany-merkels-cdu-eyes-western-balkans-immigration-curbs-amid-coronavirus/a-53969751)

Roughly 5% of the migrant stock of North Macedonia lives in new Member States of the EU (see [Figure 2.4 right](#)). New Member States started attracting Macedonians in 2009 because of visa liberalisation. Prior to 2009, the data consisted mainly of Macedonians in Croatia and Slovenia, both former Yugoslav republics. Since 2009, Slovenia has attracted Macedonians at a slightly accelerated pace, mainly driven by proximity and a migration regime that guarantees a favourable environment for certain occupations (most notably doctors and dentists). Likewise, Bulgaria has received an accelerated inflow of Macedonians, who have primarily gone for studies and then remained. Other new Member States have not experienced high levels or inflows of Macedonians, although Malta and Czechia have recently attracted a growing Macedonian labour force.

The low level of Macedonian emigration to new Member States could also be considered part of a chain reaction. As new Member States have been confronted by the emigration of their own citizens to Western Europe and overseas, they have come to regard immigrants from the Western Balkans as a suitable replacement. On the other hand, the diaspora of about 54 000 Macedonians in the other Western Balkan countries in 2019 has remained stable over time. [Figure 2.4 left](#) shows that the largest part of the diaspora is based in Serbia, mainly because of ties (including marriages) inherited from the former Yugoslavia, while Montenegro and Bosnia and Herzegovina are home to the next largest portion (data on Kosovo are not available).

**FIGURE 2.4 MIGRANT STOCK OF MACEDONIANS IN OTHER WB-6 COUNTRIES (LEFT) AND NEW MEMBER STATES (RIGHT)**



Note: other new Member States include Czechia, Hungary, Poland, Romania, Slovakia, Estonia, Latvia, Lithuania, Malta and Cyprus.

Source: UN statistics.

The Development on the Move Survey 2010<sup>7</sup> finds that the main reason for emigration is economic, i.e. the search for better jobs and higher living standards. For example, 58% of respondents who have had a family member emigrate report that he/she departed to find a job, earn money or send money back to the family. The second most important reason is to reunite a family or marriage

<sup>7</sup> See: [www.un.org/en/development/desa/population/events/pdf/9/ippr-gdn.pdf](http://www.un.org/en/development/desa/population/events/pdf/9/ippr-gdn.pdf)

(21%), which does not preclude an emigrant also earning a living<sup>8</sup>. The acquisition of skills ranks third (16%). Within the latter group, almost half seek to study abroad, one-third aim to learn a foreign language, and the remaining 20% leave to learn useful skills by working in another country. These results are also confirmed by the first-time permits issued at destination on specific grounds: **Table 2.2** suggests that most first-time permits were issued for family reasons, even though their share declined from 55.4% to 36.3% between 2010 and 2019 at the expense of work permits<sup>9</sup>, whose share increased from 32% to 42.8%.

**TABLE 2.2 FIRST-TIME PERMITS IN THE EU-27, BY SPECIFIC REASON**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>Total</b>	12 649	10 187	9 317	9 213	9 853	11 764	13 948	16 404	24 058	26 717
<b>Structure (%)</b>										
Work	32.0	18.5	17.4	13.8	11.6	11.9	19.3	28.0	40.9	42.8
Family	55.4	59.9	59.2	61.7	64.1	69.0	58.3	52.1	41.9	36.3
Education	4.5	7.2	8.4	8.3	7.1	7.4	6.9	6.3	4.7	4.2
Other	8.0	14.4	15.0	16.2	17.2	11.7	15.5	13.6	12.4	16.7

Note: Data refer to the EU-27.

Source: Eurostat.

In addition to receiving the highest number of Macedonian emigrants in Western Europe, Germany also stands out as the key destination for work. As noted earlier, there has been a significant shift since Germany changed its migration regime in 2016. Subsequently, the number of work permits compared to the number of permits for family reunion has increased ninefold (see **Table 2.3**). While we do not yet find any indications of circular migration in the current data, the new scheme may give rise to such developments in the future, particularly amid the pandemic. This will depend on how the destination labour market is affected. Italy, on the other hand, observes the opposite development, likely owing to its sovereign debt crisis after the global financial crisis of 2008. However, in the absence of firm data, we can only speculate that these workers have moved to other destination countries rather than returning home. The work to family reunion ratio has held steady in Austria and Switzerland. Such developments are not unusual: a large part of the old Macedonian diaspora settled in these countries, so family reunification persists over time, although it has dipped slightly in relative terms. Logically, the picture is different in new EU Member States. In the absence of old emigration, particularly in the cases of Czechia and Malta, Macedonians depart more for work, and their emigration, though very limited in size, is likely to be more temporary and circular in character based on the high ratio of work to family reunion.

<sup>8</sup> Nor does it preclude that the category of 'family reunion' might contain a significant number of young people going into further education and studying. Similarly, the entry for 'education' does not give the full picture of young people migrating to study or obtain other training abroad.

<sup>9</sup> Between 2017 and 2018, the sharp increase in the 'work permit' category likely correlates with the change in German migration policy towards the Western Balkan countries.



**TABLE 2.3 RATIO OF WORK TO FAMILY REUNION OF THE NUMBER OF FIRST PERMITS – SELECTED COUNTRIES (%)**

	2010	2014	2019
<b>Old Member States and Switzerland</b>			
Germany	7.2	7.7	67.5
Austria	4.6	7.5	4.4
Italy	78.1	13.6	14.3
Switzerland	–	3.9	4.9
<b>New Member States</b>			
Czechia	100	122	286
Croatia	–	18	2 031 <sup>‡</sup>
Slovenia	67	26	154
Malta	100	571	882

Note: The four countries with the most Macedonian emigrants in each group are presented.

<sup>‡</sup> This number is very high because approximately 4 000 left for work and approximately 200 left for family reunification.

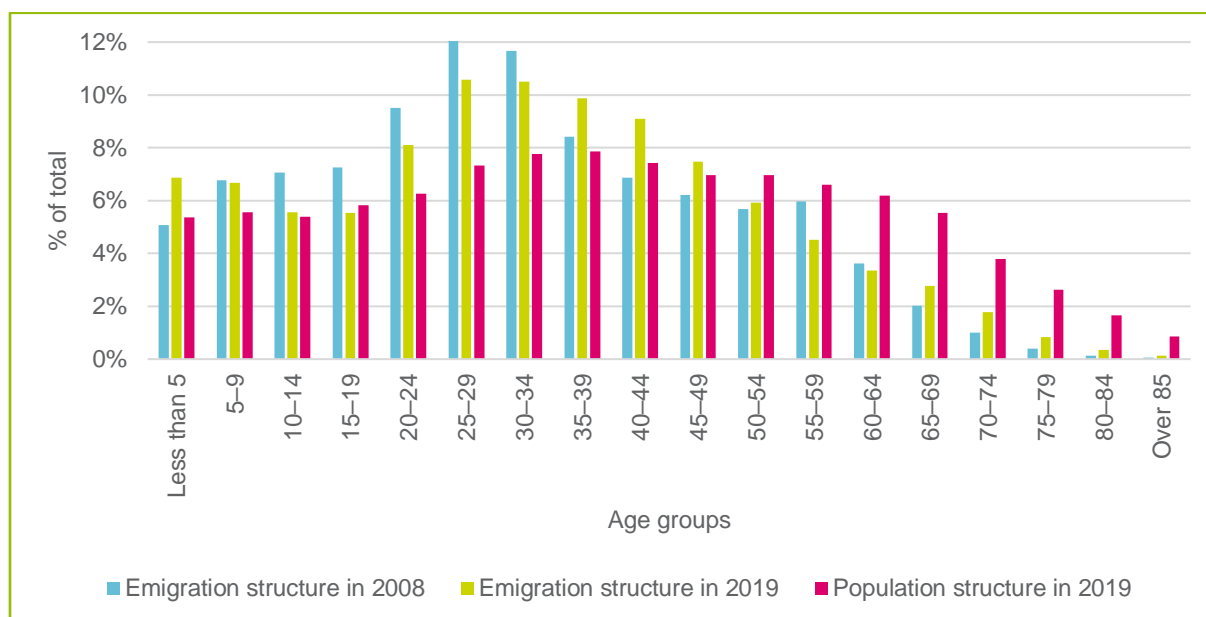
Source: Eurostat.

Macedonian emigrant stocks are fairly young (see [Figure 2.5](#)) and equally distributed among the two genders. When compared to the population structure in 2019, the emigrant stock tends to be younger, i.e. tilted towards children and members of the working-age population up to about 49 years of age. On the other hand, the population in North Macedonia is clearly ageing, both because of increasing life expectancy and because of intense emigration among younger cohorts.

[Figure 2.5](#) clearly shows the growing share of emigrants in the 35–49 cohort, which is considered to be the most productive with respect to the labour market. This fact provides indirect support for the notion that the main reason for emigration has been the search for better, higher-paid jobs abroad. These observations are generally corroborated by Petreski and Petreski (2015), who identified that the inclination to emigrate grew until the mid-30s. The 2015 study found that people in their late 20s or early 30s were becoming more dissatisfied with the societal context in North Macedonia and more incentivised to emigrate. The usual pattern is that the male head migrates first, usually when a demand for his level of skills emerges. Later, his wife and/or his children follow when his remittances match the costs needed for their departure. Likewise, Topuzovska-Latkovikj et al. (2013) find that 53% of youth considered departing (31%) or decided to depart (22%).

The picture is further corroborated by the cohort approach analysis conducted by Sandra Leitner from wiiw (for more explanation, see Leitner, 2021). This approach uses LFS (2010–19) microdata, whose stratification and weighting scheme allow for the identification of representative groups (age cohorts, defined in five-year bands from 15 to 39) that can be traced over time. Under zero fertility and in the absence of (substantial) mortality, any difference in the size of an age cohort between two consecutive years gives a good approximation of the (cohort-specific) net migration in a year. In this context, an increase in the size of an age cohort is indicative of net immigration, while a decrease points to net emigration (Leitner, 2021).

**FIGURE 2.5 BREAKDOWN OF EMIGRATION BY AGE (SHARES OF TOTAL), 2008 AND 2019**



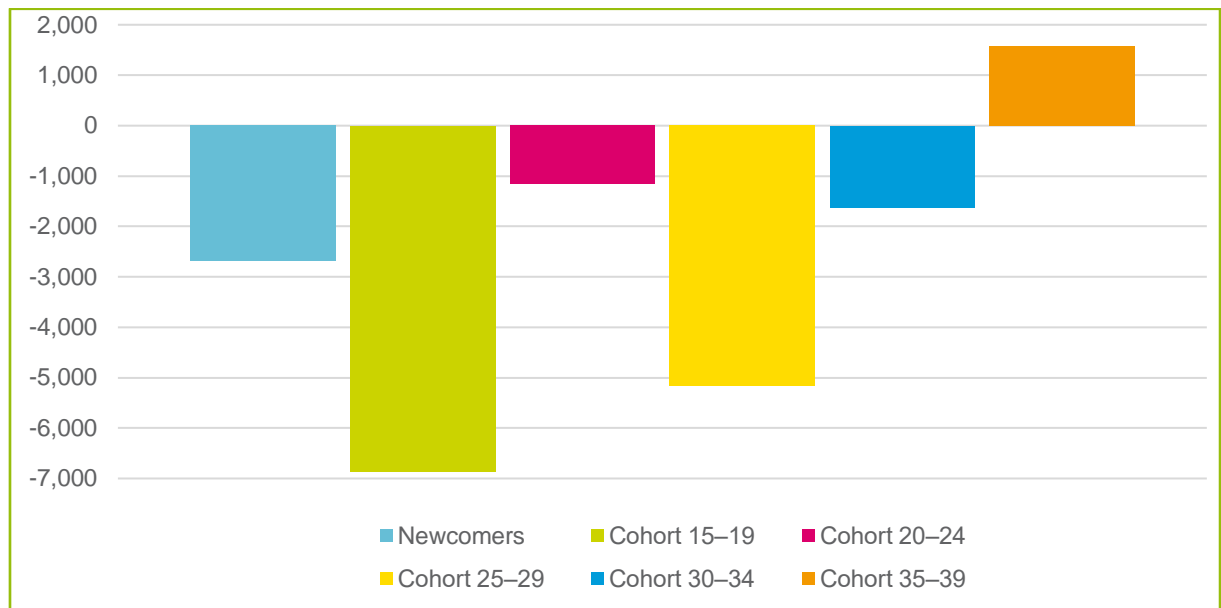
Source: Eurostat.

The results from the cohort approach analysis show that North Macedonia over the years 2011–19 experienced net emigration of about 16 000 persons (15–39), which is a significant underestimation compared to the data from the United Nations presented in Figure 2.1, namely 131 000 emigrants over the same period for the entire age span<sup>10</sup>.

Figure 2.6 presents net migration by cohort and shows that the youngest cohorts have the highest tendency to emigrate: net emigration flows are the strongest among the two youngest age cohorts (newcomers and 15–19) and the cohort 25–29 (between 2011 and 2019, people in this cohort were in their mid-20s to late 30s). Evidence of net immigration is present in later life among older individuals (in the oldest age cohort 35–39, members were in their mid-30s to late 40s between 2011 and 2019).

<sup>10</sup> This is a clear reflection of the fact that North Macedonia has not conducted a census since 2002 and any survey is designed on the basis of census numbers from 2002. This implies that the LFS weights that underlie our cohort approach reflect a somewhat increasing population and considerable neglect of the emigration phenomenon. However, given that the structural shifts and composition identified by the cohort approach are our prime interest, the weighting is not expected to affect the structure in any statistically significant manner. Still, the interpretation of the results needs to be treated with caution in this respect.

**FIGURE 2.6 NET MIGRATION BY COHORT – CUMULATIVE 2011–19**



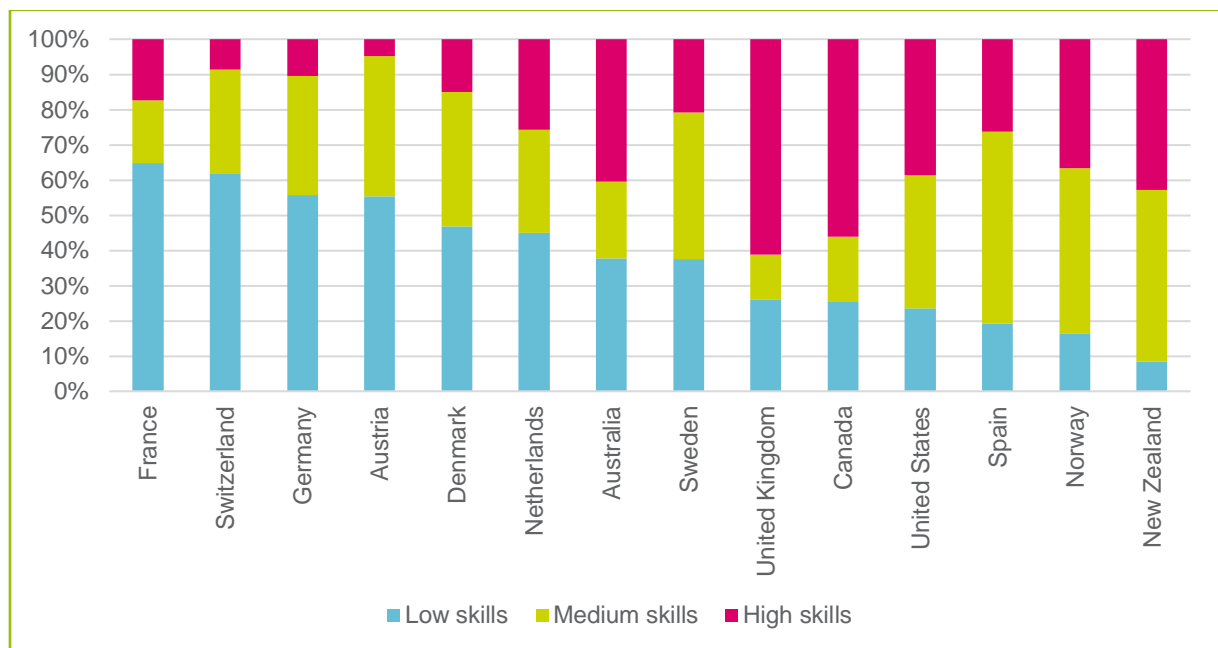
Note: These age brackets refer to the age of individuals in 2011 at the beginning of the period.  
 Source: Leitner (2020) based on the LFS (2010–19).

In conclusion, with an emigration-to-population ratio of 32%, North Macedonia remains an emigration country. A large part of the existing migrant stock of a more permanent nature is based in Turkey and Western Europe, although there is a recently emerging trend of likely circular migration with the EU’s new Member States. Emigrants have been younger than the population left behind, potentially aggravating the effect of the depletion of the country’s population on its age composition and development trajectory.

### 3. LABOUR DEPLOYMENT – MIGRATION

Based on the Institute for Employment Research (IAB) brain-drain database up to 2010, the majority of North Macedonia’s emigrant stocks were low-skilled (43%) and medium-skilled (30.7%), although the picture varies widely by country of destination (see Figure 3.1). High-skilled emigrants mainly populate transcontinental countries like Australia, Canada, New Zealand and the US, while low- to medium-skilled emigrants are mainly concentrated in Europe, most notably in Germany and Switzerland, which top the list by size of diaspora. This may be related to the waves of emigration: the earlier waves had a higher inclination to be transcontinental, so that emigrants and their successors had more time and opportunity to acquire skills at destination. On the other hand, recent waves of emigration have populated European countries more than others. Most notably in Germany, low-skilled emigrants predominate at more than 55%, while medium-skilled emigrants account for an additional 35%. It is also worth noting that in all countries, the share of medium-skilled emigrants is high, persistent and frequently predominant. The number of medium-skilled emigrants, especially those who are vocationally educated, does not exclude brain drain, but nor does emigration from North Macedonia to Western Europe provide strong support for the brain-drain hypothesis.

**FIGURE 3.1 BREAKDOWN OF EMIGRATION BY LEVEL OF SKILLS IN SELECTED COUNTRIES, 2010**

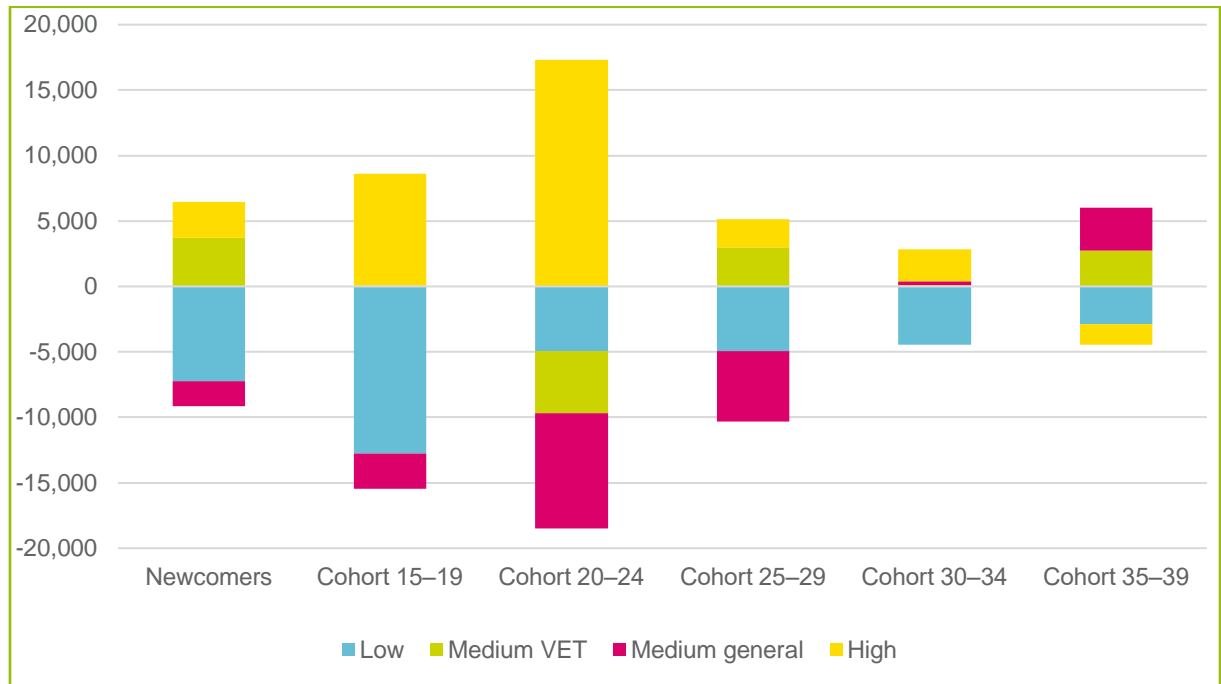


Source: IAB brain-drain database (Brücker et al., 2013)

For the period since 2011, low- and medium-skilled individuals are predominant in the country’s migratory outflows (see Figure 3.2). The figure presents net migration by age cohort and educational attainment for the period 2011–19 based on the cohort approach (Leitner, 2020). It strongly suggests that emigration is skewed towards people with a low level of education and, to a smaller but still substantial extent, people with a medium level of general education. On the other hand, there is consistent net immigration of secondary VET-educated individuals among all age cohorts (with the exception of 20–24). Moreover, net immigration is observable among higher-educated people and among the youngest cohorts, which suggests that young Macedonians (mainly with general secondary

education) emigrate to pursue further/tertiary education abroad and return in larger numbers as university graduates (in their mid-20s to early 30s). Therefore, Figure 3.2 does not provide support for the brain-drain hypothesis.

**FIGURE 3.2 NET MIGRATION BY COHORT AND EDUCATIONAL ATTAINMENT LEVEL – CUMULATIVE 2011–19**



Note: Educational levels are divided into four categories: low (primary or lower secondary education), medium general (upper-secondary general education/gymnasium), medium VET (upper-secondary VET) and high (tertiary education), based on the International Standard Classification of Education (ISCED).

Source: Leitner (2020) based on the LFS (2010–19).

The Macedonian labour market has been performing quite well in the past decade. While participation rates have grown slowly, employment and unemployment rates have shown remarkable improvements (see Table 3.1). The employment rate (15–64) rose from 44% in 2011 to 54.7% in 2019, while the unemployment rate (15–64) declined from 31.9% to 17.5% over the same period. Youth, who have faced particular hurdles in the labour market, now encounter more favourable conditions, which are nonetheless still far from the conditions existing in the EU-27. The youth unemployment rate fell from 55.5% in 2010 to 35.8% in 2019, while over the same period, the share of young people not in employment, education or training (NEETs) declined from 25.1% to 18.1% (ETF, 2020a). Contrary to the overall improvements in the labour market, however, the gains related to youth are mostly recent and the result of policies (e.g. the Youth Guarantee) that have been pursued more robustly than before. At the same time, wage growth was rather tepid (1.3% over 2011–14) and accelerated only around 2017, when the government started increasing the minimum wage (2017) and introduced subsidisation of social contributions for wage increases (2019).

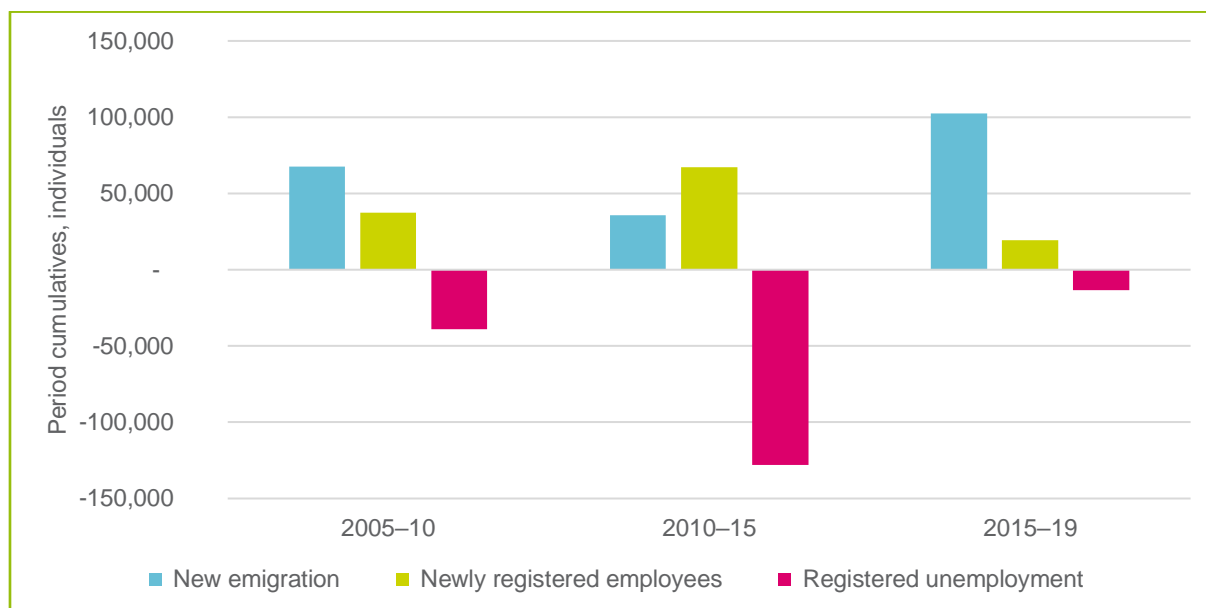
**TABLE 3.1 BASIC LABOUR MARKET INDICATORS (%)**

		2011	2015	2019
<b>Participation rate (15–64)</b>	All	64.6	65.3	66.4
	Women	51.5	52.3	54.9
	Men	77.4	77.9	77.5
<b>Employment rate (15–64)</b>	All	44.0	47.8	54.7
	Women	35.2	38.8	44.7
	Men	52.5	56.6	64.5
<b>Unemployment rate</b>	All (15–64)	31.9	26.8	17.5
	Youth (15–24)	55.5	48.0	35.8
<b>NEET rate</b>	Youth (15–24)	25.1	24.7	18.1
<b>Wage growth (net)</b>	Average annual growth, four-year sub-periods		1.3	3.6
	Average annual growth, 2011–19			2.3

Source: SSO.

One question yet to be addressed is the labour market status of migrants prior to departure. However, in the absence of firm data, it is only possible to draw tentative conclusions from the existing data on registered employment and unemployment (excluding informal employment). **Figure 3.3** compares changes in the stock of migrants abroad with increases in the number of newly registered employees (data from the Health Insurance Fund) and decreases in registered unemployment (data from the Employment Service Agency) over the same periods. In the period 2005–10, the increases in registered employment offset the decreases in registered unemployment. Given new emigrants of nearly 70 000 in the period, it appears that emigration was equally widespread among all labour market statuses. In the period 2010–15, however, there is a sharp decline in registered unemployment, which is only half offset by an increase in the number of newly registered employees, providing some support for the claim that foreign factories being set up in industrial zones were increasingly demanding workers and that a proportion of them were likely recruited from among the unemployed. It should be remembered that this is the immediate period of visa liberalisation, suggesting that individuals who were ‘desperate’ in the labour market – that is, unemployed and/or confronted by long job queues – fled very quickly and more often than their employed counterparts. That and the domestic political crisis of 2015–16 may have further fuelled emigration in the period 2015–19, which was once again more widespread across all labour market statuses and tilted only slightly towards the employed.

**FIGURE 3.3 EMIGRATION STOCK VERSUS REGISTERED EMPLOYMENT AND REGISTERED UNEMPLOYMENT**



Note: 'Newly registered employees' are calculated as the number of newly insured workers with the Health Insurance Fund (HIF), while 'registered unemployment' is the number of individuals registered with the Employment Service Agency who are actively searching for a job.

Source: UN, Employment Service Agency, Health Insurance Fund.

Overall, the preceding observations provide limited grounds to support the claim that emigration accounts for the declining unemployment rate in the period 2006–19. On the other hand, the increasing trend of emigration in the past decade has occurred in spite of consistently improving conditions in the labour market, mainly in terms of chances of finding a job. As a result, the key question is why emigration has been happening (and accelerating). There is no doubt that one part of the answer lies in so-called pull factors, i.e. conditions at destination, primarily wages. For example, the ratio of the average net salary in Germany and North Macedonia in 2019 is about 5.6 (OECD data). In both countries, the average salary is about three times the average consumption basket per capita, so the gap narrows substantially in terms of purchasing power<sup>11</sup>. Still, one pull factor may relate to sectoral wage differences. Figure 3.1 showed that Germany has exerted a strong pull on the pool of low- to medium-educated individuals; the average salary for a manufacturing job is 7.2 times greater in Germany than in North Macedonia. On the high-skills side, the average salary of a cardiovascular specialist in Germany is as much as 10 times greater than the average salary of a specialist in public health in North Macedonia, notwithstanding recent increases. Such differences in certain sectors and occupations strongly outweigh the more favourable tax environment that exists in North Macedonia, where the tax wedge is among the lowest in Europe, despite some lingering regressivities<sup>12</sup>.

Despite the importance of pull factors, push factors may play an even greater role. These include the quality and/or accessibility of various services, most notably education (discussed in the next chapter),

<sup>11</sup> To understand the impact of remittances, earnings (and therefore wage differentials) at current exchange rates is an important variable.

<sup>12</sup> For example, the tax wedge on the lowest salaries is still estimated at 50% of the average wage, while social security contributions are limited to a ceiling of 16% of the average wage.

healthcare and public services, as well as emerging demands for clean air. One study (Petreski and Petreski, 2015) finds that overall dissatisfaction with life in North Macedonia fuels the inclination of individuals to depart, and this inclination is increasing among young people. Given the constraints of space, we shall focus here on only a few push factors related to the labour market. The primary push factor for emigration is the low quality of jobs created in the country, particularly in the 'low-tier' private sector. This issue needs to be understood in its broadest sense: low pay, limited contracts, informal jobs, inappropriate jobs (skills mismatch), etc.

For example, a quick look through a multitude of vacancies published by the Employment Service Agency shows that for jobs that do not seek prior experience, the minimum wage is usually offered, even in industries that are generally not low payers. Informal employment in the country stands at about 17%, which is the same share of workers who receive an 'envelope wage'<sup>13</sup> (Finance Think, 2017), while underemployment in its various forms<sup>14</sup> soars to a staggering 60% among youth, according to a recent study by Petreski et al. (2020). Likewise, young people experience a long school-to-work transition, which is estimated at an average of 25 months by Mojsoska-Blazevski et al. (2017), while the average Macedonian woman faces a roughly 40% greater chance than her male counterpart to find herself in inactivity (Mojsoska-Blazevski et al. 2020). Hence, any individuals who more often face the 'low-tier' labour market, but particularly youth, are incentivised to depart.

The labour market for the public sector in North Macedonia is a special push factor. Not only does the public sector still have a wage premium of 10–20% (World Bank, 2018), but it also possesses other peculiar features that make it more attractive than the private sector, most notably job stability. Over the past decade, however, the public sector has witnessed a decline in productivity of about 13%, compared to an increase of about 1% in overall productivity for the same period (Finance Think, 2019).

These developments stem largely from the ongoing erosion of public sector work that has resulted from moving the queue for public-sector jobs from the Employment Service Agency to the offices of political parties. It became an open secret that the only way to obtain employment in the public administration was to be a member of or close to a political party. This has prompted highly productive public employees to leave for higher-paid jobs in the private sector (or emigrate), once they have acquired years of experience. Over time, the resulting perception (as well as the real situation in all likelihood) is that there is now a discrepancy between the effort required and the money earned in the public administration. This has generated a vicious cycle where less capable individuals apply increased pressure to get these jobs. Hence, individuals, particularly educated youth, who face political barriers to enter the public sector, are incentivised to depart.

The growth in domestic demand for medium skills over the past decade has been exacerbated by emigration. Primarily, the FDI attraction policy that was pursued more forcefully from 2007 (see Chapter 5) brought manufacturing companies (in the automotive and electronic industries), which significantly increased the demand for medium-skilled (particularly VET-skilled) individuals. In reality, however, multinational companies – irrespective of whether they set up operations in North Macedonia, new Member States or Western Europe – have intensified competition for the same

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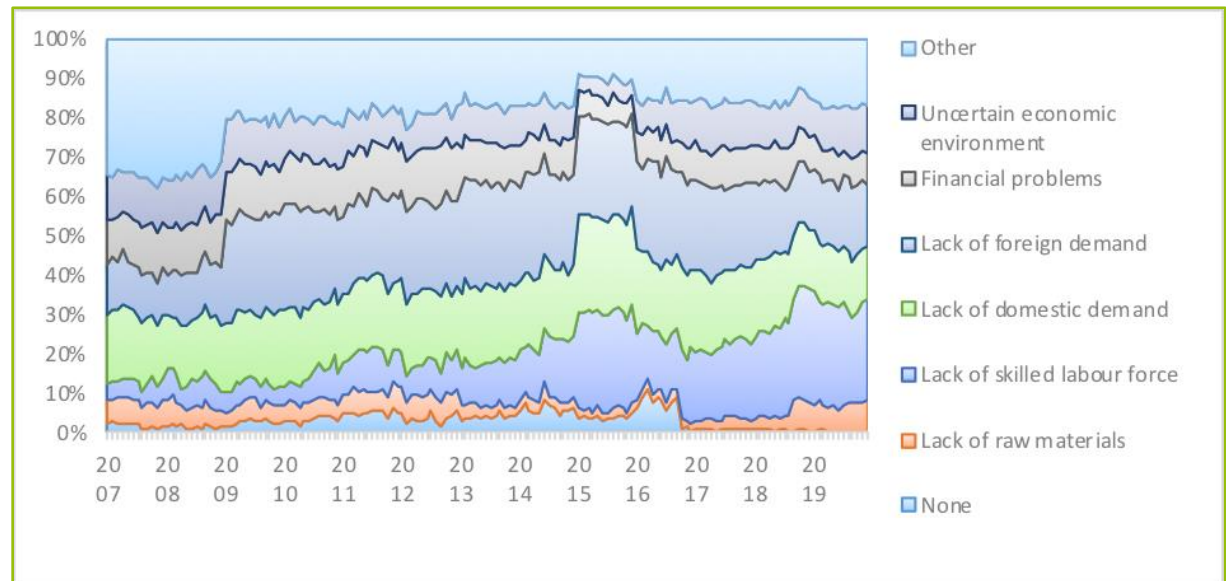
<sup>13</sup> The term 'envelope wage' refers to the informal receipt of cash payments to compensate for low formal wages. Envelope wages are used as a vehicle to circumvent the tax wedge.

<sup>14</sup> This includes people who work less than 35 hours but want to work more (ILO indicator); people who are overqualified; and people who say they have job insecurity. It also includes people whose salary is below the reservation wage or who have a temporary or no written contract.



medium-educated labour force, which has also prompted more intense wage increases. The demand for jobs requiring medium-level technical and vocational skills has intensified, as a variety of studies attest (ESA, 2017; World Bank, 2016; Petreski, 2016). The resulting skills scarcity lay at the heart of debate in the country before the pandemic. Indeed, Figure 3.4 shows that the lack of skilled labour force has been the only limiting factor for manufacturing that has grown in importance from the beginning of the 2000s, when virtually no company reported the problem, to 2019, when more than 20% of companies did so. All other limiting factors have largely maintained their level of importance.

**FIGURE 3.4 LIMITING FACTORS FOR MANUFACTURING**



Source: SSO, Business tendencies in manufacturing.

The scarcity of medium-level skills in the Macedonian labour market does not preclude that brain drain has not been a serious issue. The media are frequently full of stories about the brain-drain phenomenon<sup>15</sup>, with highly educated individuals giving their accounts of low salaries and precarious jobs that do not match their high level of skills, thereby rendering staying in the country unproductive. Similarly, the emigration of doctors is widely discussed in the society, creating a widespread perception that only the highly educated depart<sup>16</sup>. The OECD database on foreign-trained doctors in OECD countries is fairly limited and, in the case of North Macedonia, the figures are blurred by the fact that many doctors have obtained their degrees in Bulgaria and so might be registered as Bulgarian citizens at destination. However, the number of Macedonian-trained doctors in Germany is illustrative (OECD data): it rose from only 3 in 2000 to 30 in 2007, and then surged to 385 in 2017. The loss of qualified healthcare personnel threatens the functioning of the healthcare system and undermines any intention to make an improvement or even stop the decline in key health outcomes, although there has as yet been no rigorous investigation to document the severity of the issue.

High-skill emigration exists in other sectors too. The government's National Diaspora Cooperation Strategy (2019) documents the emergence and growth of a 'scientific diaspora', made up of high-skilled individuals who either obtained their degrees at home and departed, or went on to complete

<sup>15</sup> For example, see: [www.aljazeera.com/ajimpact/north-macedonia-battles-youth-brain-drain-190813151030745.html](http://www.aljazeera.com/ajimpact/north-macedonia-battles-youth-brain-drain-190813151030745.html)

<sup>16</sup> For example, see: [www.slobodnaevropa.mk/a/26577811.html](http://www.slobodnaevropa.mk/a/26577811.html)

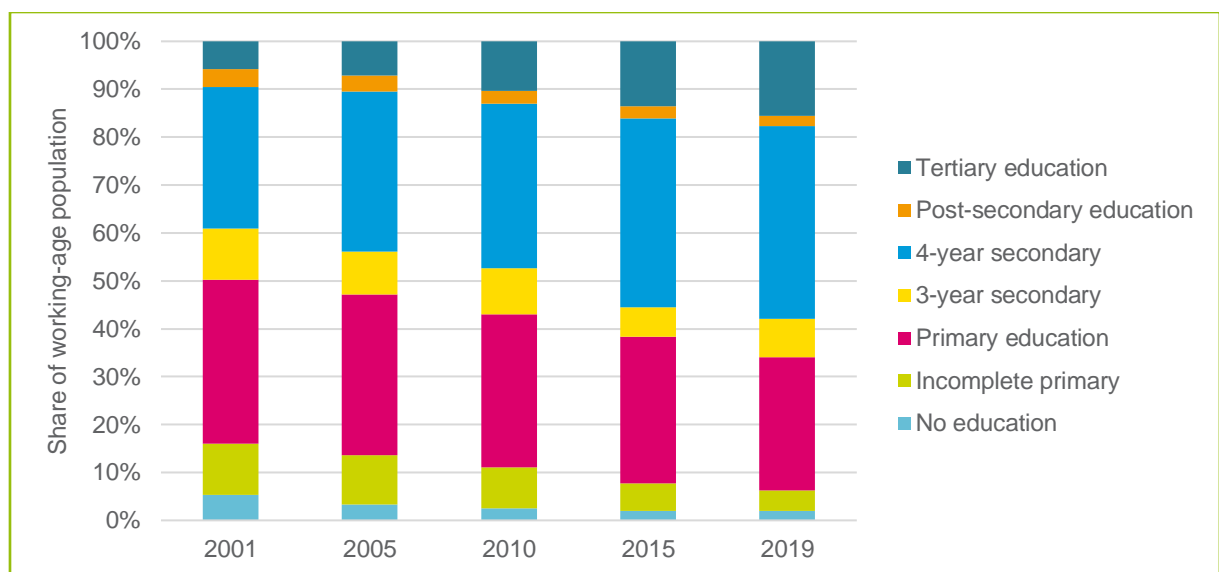
their degrees abroad and did not return. However, there is no register of such a diaspora and its size and development potential remain unknown. Another case is telemigrants, i.e. Macedonians who reside in North Macedonia but work for foreign companies through online platforms, engaging in freelancing occupations such as the creative industries and multimedia, software development and technology, sales and marketing support, and economic consultancy. Data on digital freelancers (analyticshelp.io, 2018) indicate that there are over 7 000 Macedonian teleworkers and that about 1 500 of them are active. This ranks North Macedonia second worldwide in per capita terms with 3.41 freelancers per 1 000 inhabitants, surpassed only by neighbouring Serbia. Likewise, the number of Macedonian workers in the gig economy has hovered around 1 000 (since 2017), according to the iLabor Project (Kässi and Lehdonvirta, 2018). In any case, teleworkers, although not emigrants per se, may easily turn into emigrants, if and when conditions and/or policies at home deteriorate rapidly.

In conclusion, the labour market in North Macedonia has been depleted by pervasive emigration, but medium skills account for the largest share of shortages in the domestic labour market. Joblessness, low pay, insecure jobs and compromised queues for jobs in the public sector (as push factors), as well as large sectoral wage premiums and good governance at destination (as pull factors) have contributed to accelerated emigration. Domestic demand for low- to medium-skilled workers has further aggravated the problem, but wages have been rising only tepidly for a prolonged period of time (see [Table 3.1](#)). While the issue is a source of much debate in the public domain, we have not found any strong evidence that brain drain is a greater problem than the overall scarcity of labour resulting from emigration. However, some high-skilled segments of emigration may have created severe shortages in specific areas, particularly doctors, midwives and nurses, whose numbers abroad have soared in the past decade (Mara, 2020).

## 4. HUMAN CAPITAL FORMATION – MIGRATION

North Macedonia inherited from the former Yugoslavia an education system that had produced relatively high literacy rates. This foundation, together with a growing awareness of the role of education, has continued to raise the educational level of the working-age population (see an overview of the Macedonian educational system in Annex). **Figure 4.1** suggests that the greatest expansion has been in the completion of upper secondary education, followed by tertiary education. Of the first group, 58.2% are considered graduates of vocational programmes (ETF, 2019a). Hence, the growing pool of secondary-school graduates has become a solid base for both increased employment (particularly in FDI-related factories since 2007) and increased emigration (as shown in **Figure 3.1**).

**FIGURE 4.1 CHANGES IN THE EDUCATIONAL STRUCTURE OF THE WORKING-AGE POPULATION, 2001–19**



Source: SSO, LFS.

A child who starts school in North Macedonia at the age of 4 can expect to complete 11 years of pre-primary, primary and secondary school by age 18 (World Bank, 2020). However, when years of schooling are adjusted for quality of learning, the result is equivalent to only 7.3 years. In other words, there is a learning gap of 3.7 years. According to PISA (Programme for International Student Assessment), Macedonian pupils lag significantly behind their international peers, despite notable progress between 2015 and 2018. **Table 4.1** shows that in the three ranking areas – maths, reading and science – Macedonian pupils achieve scores significantly below the international average, which is lower than the scores in the OECD. Girls scored higher than boys by 7 points in mathematics and by 19 points in science. The PISA results also show that 7% of the variation in pupils' performance is explained by socio-economic background, that is, pupils with a disadvantaged background fare worse than their peers, all else being equal. These developments have occurred in parallel with a decline in state expenditure on education, which fell from 4.5% of GDP in 2010 to 3.8% of GDP in 2018 (Petreski and Petreski, 2018).

**TABLE 4.1 PISA SCORES AND STUDENT UNDERACHIEVEMENT – NORTH MACEDONIA, 2015 AND 2018**

		Mathematics	Reading	Science
<b>Underachievement – 2015</b>	Score	371	352	384
	% of students	70.2	70.7	62.9
<b>Underachievement – 2018</b>	Score	394	393	413
	% of students	61.0	55.1	49.5
<b>International average – 2018</b>	Score	489	487	489

Source: OECD (2019).

Weak performance extends to secondary education: according to official statistics<sup>17</sup>, low levels of completion (47.2%) and high rates of out-of-school children (16.2%) suggest that actual attendance may be significantly lower than the gross enrolment figure (76%). Also, the skills shortages addressed in Chapter 3 have been corroborated by the World Bank (2016), which argues that the problem of lack of skills is not tied to a specific industry or occupation but is rather a general problem of low-quality skills acquired during education and training.

A loose comparison of the educational structure of the population in North Macedonia and the indicative skills structure of Macedonian migrants (Figure 4.2) does not provide firm grounds to support the claim that Macedonian migrants are on average better skilled than their peers of the same age who remain in the country, although the domestic population does retain a higher share of medium-skilled individuals. As Figure 3.1 showed, overseas countries remain the main destinations for high-skill emigration. This is not unusual, given that countries like Canada and Australia have adopted migration policies that favour high-skill immigration, particularly in the 1990s. Other high-skill destinations for Macedonians remain the US for scientists and artists, the United Kingdom and Switzerland for technical professionals, and Germany for medical doctors and STEM (science, technology, engineering and mathematics) graduates. Recently, according to some qualitative insights, countries like the United Arab Emirates and Qatar have also managed to attract some high- and VET-skilled professionals.

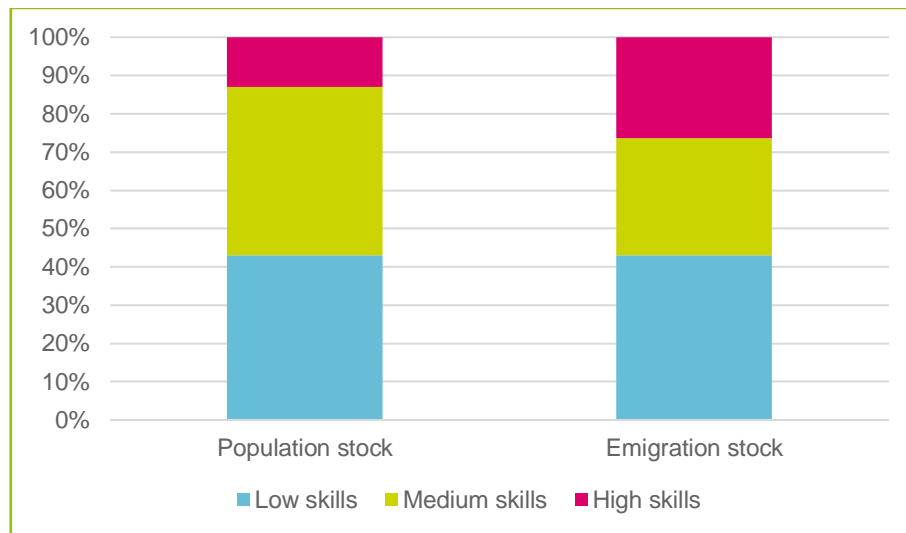
Still, qualitative information does not support the hypothesis that migration prospects act as an incentive for human capital formation, particularly prior to early tertiary education, which is the likely point at which people become more aware of the labour market and general prospects in the country and they begin to make decisions about emigration<sup>18</sup>. Nevertheless, there are mixed views on how the education system might influence emigration, and it is suspected that emigration decisions depend heavily on the field of education. One contingent of emigrants departs to study abroad and their stock has continued to grow at a moderate pace (see Table 2.2). There is limited qualitative and quantitative evidence that return migration is more intense among this group (e.g. Figure 3.2 pointed to net immigration among younger age cohorts with tertiary degrees). However, it is also the case that

<sup>17</sup> [www.stat.gov.mk/OblastOpsto.aspx?id=5](http://www.stat.gov.mk/OblastOpsto.aspx?id=5)

<sup>18</sup> The latter is corroborated by the ETF (2016), which found it uncommon for VET and higher-education graduates to combine work and study or to look for a job while still in education.

circular or return migrants, when they face barriers or underemployment in the Macedonian labour market, will experience skills underutilisation upon their return.

**FIGURE 4.2 EDUCATIONAL STRUCTURE OF THE WORKING-AGE POPULATION VERSUS THAT OF EMIGRANTS (IN % OF TOTAL)**



Source: Statistical Office of North Macedonia, LFS, and IAB brain-drain database (Brücker et al., 2013), both referring to 2010 for comparability.

A second contingent of people departs with skills acquired at home. They are usually VET-educated individuals whose skills earn a high wage premium at destination (the most notable examples include an array of craftspeople, plumbers, electricians, etc.). A third contingent of emigrants find their education acquired at home fairly obsolete in terms of the skills obtained. They usually pursue one of two strategies. On one hand, some depart to take low-skill jobs despite their high level of education. In the past few years, vivid examples include highly educated individuals who accept jobs at McDonalds in Germany. However, such individuals usually claim that they consider jobs of this kind as an entry point into the foreign labour market, even though there is no firm information on the amount of time they need to eliminate the skills mismatch, i.e. to find a suitable job. On the other hand, some get prepared before departure. This is the group that acquires language skills (mainly German) or other specific skills. For instance, Mojsoska-Blazevski and Petreski (2015), when evaluating the active labour market programme in IT training delivered by the Employment Service Agency, found that half of the people who received the training were not reachable (which was not the case with some other active labour market programmes) and they rightly speculated that the emigration rate of the trained individuals may have been so high that the effects of the programme could not be unbiasedly evaluated.

Nevertheless, contacted interviewees give mixed opinions on the potential effects of the education system on emigration, and their responses suggest that it depends heavily on the field of education. In the recent past, the education system underwent some basic reforms to adjust the curricula to labour market demands, although the reforms could also be seen as better preparing pupils and students for the global labour market. For example, foreign language was made into a mandatory subject from the first year of primary school. The most popular language is English, followed by German. However, German has grown in popularity in the past decade or so, originally because it was considered closer to English than were Russian or French, which ranked second in the 1980s and 1990s. Later,

however, the popularity of German grew precisely because of the emigration prospects and expansion of German-related business activities in the country.

The other adjustment in the education system has undoubtedly been in the area of IT skills: working with a computer has been an elective module in primary school since the early 2000s and it was made compulsory from the third grade in 2015. The 2010 government programme 'A Computer for Every Child', despite being controversial because of its expense, aimed to rapidly equip all schools with IT equipment and foster the delivery of lectures on computers. However, the programme did not entirely match the available pool of IT skills among teachers. Over time, technical schools (in some cases known as industrial secondary schools) have progressively established IT departments, which increase enrolment and improve their image (they had previously been labelled as lower quality). Likewise, computer science faculties have emerged in virtually every university in the country.

North Macedonia is in the initial stage of developing its IT sector. As a result, it has still had only moderate success in reaping the large underlying potential for retaining high-skill professionals and attracting back educated Macedonian IT professionals who work abroad. According to a MASIT (2019) report, the Macedonian IT sector is relatively small compared to its immediate neighbours – in 2018, it had a value added of about EUR 150 million or 2.1% of GDP – but it is also rapidly growing (up 18.5% from 2017 to 2018) and employs more than 5 700 people. The sector's growth is driven by the presence in the country of a few key transborder IT companies. At the same time, a growing number of IT companies located in Bulgaria and Serbia, which are advanced IT hubs in the region, are hiring teleworkers (see Chapter 3 on teleworkers). In 2019 more than 10 of the largest Bulgarian ITO (information technology outsourcing) and BPO (business process outsourcing) vendors were active in North Macedonia. On the other hand, some Macedonian ITO vendors service countries with large shares of Macedonian diaspora, such as Germany, Turkey, Sweden, Albania and Australia (MASIT, 2019). Such positive developments have been supported by the fact that North Macedonia ranks among the top three South East Europe countries in terms of population aged 25–34 who speak two languages.

The education system has undergone major reforms not only in specific areas, but also in general. For example, the Cambridge Primary programme<sup>19</sup> has been introduced in primary education and become an important milestone, although it has also been the subject of criticism over the extent to which it reflects local needs and context. In addition, a major advancement has been made in the reform of the VET system, focusing on qualifications, work-based learning and the validation of non-formal learning. VET reform has paved the way so that the skills of VET-educated individuals are relevant and reflect the demands of the labour market, but it has also bolstered their ability to earn wage premiums for the same type of jobs abroad. A tracer study of VET and higher-education graduates conducted in 2016 (ETF, 2017) revealed that about two-thirds of the graduates were able to find a job fairly swiftly, even though the vast majority complained either about skills mismatches or about long waiting periods to find a job, during which any career guidance offered by their schools proved unsatisfactory. However, the 2016 study does not even mention the graduates' potential migration outcomes, which is likely a reflection of how the sample was created.

The very limited number of returnees (National Diaspora Strategy, 2019) prevents the reaping of large skills gains and/or spillover effects for domestic development. However, some estimates do gauge the potential impact of remittances on the educational decisions of family members who are left behind.

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<sup>19</sup> Introduction of the curricula of Cambridge International in the study of maths and science

Analytica (2013) finds that a father's absence initially has a negative effect on a child's years of schooling, but that the effect turns positive with a longer stay abroad (possibly linked to the impact of remittances that are then used for education). On the other hand, a mother's long absence is negative for a child's schooling, especially for girls. However, this effect may be significantly attenuated by the departure of entire families.

Debates on educational reform are conducted only in the context of skills, not in the context of emigration. Emigration only recently became a consideration when, in 2019, the government adopted the National Diaspora Strategy, which set out a good assessment of the current state of affairs and an action plan. After the elections of 2020, however, the minister in charge of diaspora was dismissed, suggesting that the government may no longer place importance on the National Diaspora Strategy. In the meantime, no report indicates any progress on the actions stipulated therein.

In conclusion, the Macedonian education system has undergone reform in recent decades in order to reflect global developments. On one hand, the aim is to bolster domestic development objectives, but on the other hand, it is also to facilitate better integration of graduates into the global marketplace. In addition, the country's emerging IT sector and its share of young people who speak two foreign languages may both have contributed to creating a hub of individuals, including telemigrants, who work in industries with development potential. However, there remains a risk concerning the propensity for easy emigration if conditions worsen domestically.

## 5. TRIANGULAR RELATIONSHIPS

High emigration rates from North Macedonia are at least partly rooted in the education system. North Macedonia has been engaged in ongoing reform of the education system at all levels. However, some of the reforms have been shallow, while others have not been well thought out. In addition, they have often been short-lived and subject to political compromises. Indeed, for quite a long period of time (roughly 2007–15), the government focused on a vast expansion of access to higher education by opening branches of universities in small and remote towns, which doubtless severely impaired the quality of the education delivered. Likewise, there are indications that the quality of education at the primary and secondary levels has suffered.

This has produced an army of graduates whose skills do not match the skills required in the labour market: either by level, such that tertiary education diplomas do not reflect the actual acquisition of relevant skills, or by field, such that persistently increasing enrolment in the social sciences and humanities does not mirror the growing need for STEM degrees. Hence, the labour market has faced pervasive mismatches, both vertically and horizontally. This has created stagnation in the labour market (Petreski, 2020): there is still a pool of idle labour force (judging by the relatively high unemployment and inactivity rates, especially among particular groups), while the business community has complained (at least until the Covid-19 outbreak) that they cannot find qualified labour.

The two-way educational exchanges that have become popular in recent years may strengthen how education abroad works for the domestic labour market. In particular, the programmes that offer work and study opportunities to Macedonian students abroad over the summer, as well as educational exchanges through international mobility programmes (e.g. Erasmus+, CEEPUS and the like), are quite popular among students. In terms of our discussion here, however, the programmes are a double-edge sword. On one hand, if the emigration is only temporary, learning a language, new skills, and a working culture and ethics may act as triggers for societal and labour-market change over the long run. On the other hand, the exposure to the global environment, together with the establishment of connections, may lead individuals to seek opportunities abroad once they finish their schooling. Nowadays, various diaspora-related organisations work to support the educational exchanges of Macedonian citizens – students, academics, professionals and executives – in places where the diaspora is located. Similarly, they offer opportunities for the second-generation and later descendants of the diaspora to spend summer back in the homeland. However, to our knowledge, there is no systematic government policy to support these emerging trends or even simply to offer a robust framework for facilitating the return home of people who have obtained their degrees abroad.

Other government policies may have introduced inefficiencies into the nexus of migration, human capital and the labour market. The most notable example is the government policy of 2012 to subsidise postgraduate degrees at prestigious universities (i.e. ranked in the top 500 on the Shanghai ranking list) on the condition that the individuals return and work for the government for a period that is at least as long as their years of subsidised education<sup>20</sup>. There are unfortunately no systematic data on the number of scholarships and their value provided, but the policy was compromised to some extent by a host of examples of recipients who found a way to circumvent the obligation to return home or who returned but were not offered a suitable government job in a reasonable period of time. Such deficiencies may have significantly undermined the programme's initial objective to re-import

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<sup>20</sup> See the initial announcement: <https://vlada.mk/node/1051?ln=en-gb>



human capital to the country and ensure a spillover effect in the Macedonian labour market, not only in terms of knowledge and skills, but also in terms of work ethic and attitudes.

The policy enacted in 2007 to attract multinational companies has also had an impact on migration flows and the two developments have reinforced each other in terms of skills acquisition and labour utilisation. Skills shortages, particularly of VET-educated individuals at present, are a result of the risks involved in the two developments: the FDI policy was well conceived to employ the then extremely large pool of unemployed individuals, but it also drained the labour market. One of the policy's positive spillovers has been the practice of many companies to train their new employees either in country or, more frequently, by sending them to their parent company abroad. This has apparently brought a new pool of skills into North Macedonia, which has been well documented in Trajkovska and Petreski (2018).

The other positive externality is the setting up and the policy support of the dual VET education concept, i.e. the pairing of particular companies (mostly the multinational companies nested in the industrial zones) with nearby secondary vocational schools, which is not only powerful in producing demanded skills, but also securing a shorter school-to-work transition for the VET graduates. In that regard, German companies in the industrial zones are quite prominent in the promotion of the 'dual education' concept. However, there is no indication of the extent to which the newly learnt skills in the mother company or the investment in dual education have then acted as an incentive for the trained individuals to emigrate, including to seek work in the same sector abroad, in order to reap large wage premiums. This is vividly reflected in the sporadic debate in which current and potential employees call on German companies in North Macedonia to pay 'German' wages, to which the companies counter that the salaries they pay in North Macedonia reflect local labour-market conditions.

Although skills shortages have exerted pressure on wages, wage levels remain comparatively low to bridle emigration. However, the government has recently introduced some policies to iron out the problem. For example, the minimum wage was raised by nearly 50% between 2017 and 2020, and generous subsidies were offered for social contributions when wages were increased by up to about EUR 100. The objective of the subsidies was to formalise some income streams and increase job security. Medical staff particularly benefited from several wage rises between 2017 and 2020, which were justified by the high emigration rates in the sector. The Plan for Economic Growth adopted in 2018 also envisaged that salaries higher than twice the average would be subsidised by the government, while youth who obtained employment in manufacturing would be topped up with a monthly allowance of EUR 50. Youth, being a special target of government policy, also gained some benefits from the Youth Guarantee, which offered employment, internships and training to youth within six months of graduation. While the initial effects on youth have been very favourable in terms of employment, however, the potential effect on their migration inclination has not yet been measured. Youth, in particular, have also benefited from other government policies, such as subsidies for the purchase of equipment or a house by young couples. At the same time, some policies have sparked a great deal of controversy in general, but also particularly in relation to emigration inclinations. One example is a progressive tax rate introduced in 2019 on income exceeding EUR 1 500 per month. This was apparently problematic because the threshold actually affected a wide range of professionals in industries with high development potential who have a high inclination to emigrate and are in a position to do so swiftly. They include IT professionals, consultants, teleworkers, etc. Notwithstanding the policy's relevance for social justice and reducing income disparities, it proved poorly timed and insufficiently well thought out, and hence was repealed in late 2019.

Despite recent efforts, the government lacks a unified migration policy that takes into account the triangular relationship between migration, human capital and the labour market. For example, a special minister was assigned a diaspora portfolio in 2017, but the move was reversed in 2020. Under the special minister, the National Diaspora Cooperation Strategy was adopted in 2019 in order to focus on how the diaspora can contribute to local development objectives. However, the strategy does not seek to advance or resolve emigration issues or their effect on local development. For example, simple deficiencies along the lines of the scholarship policy mentioned above have not been resolved. Other initiatives rarely address their own implications for emigration. The Ministry of Education and Science has sought to establish a Skills Observatory, while the Ministry of Labour and Social Policy runs econometric models for skills forecasting. According to the ETF (2018), however, the potential of the two initiatives has not been fully realised, particularly in the case of the Skills Observatory, even though the intention is precisely to act as a management information tool to address the dynamics of labour market conditions and the supply of training, both of which are heavily determined by emigration patterns. Skills needs and mismatches have not been analysed in the context of migration. Still, there have been some positive attempts at analysis. For example, the National Diaspora Cooperation Strategy (2019) narratively articulates the problem of skills erosion in the labour market in relation to the country's growth and development prospects.

All migration patterns, with their implications for the labour market and the education system, may well be halted or permanently or temporarily changed because of the Covid-19 pandemic. Fortunately, North Macedonia has not seen any significant pattern of emigrants returning home because of the crisis. Quite the contrary, limited anecdotal evidence suggests that the emigrants who were 'stuck' in North Macedonia while visiting relatives when the crisis first hit, made every effort to return to their destination as soon as possible, particularly because employers were gradually resuming their volumes of work in late May and early June. However, Covid-19 may still pose two major risks for the nexus analysed here.

First, many Western European countries, most notably Germany, have already announced a tightening of migration policies in accordance with their inward orientation. This may well affect the pace of new emigration and prove to be good news or bad news. It might be good news if it eases the skills strain in the domestic labour market. However, it might be bad news if the crisis hits the domestic economy severely for a protracted period of time, because the result could be a growing pool of unemployed and inactive labour force, which would put pressure on the social protection system and undermine recent development gains over the medium term.

Second, the strength of the economic recovery in destination countries will determine whether current permanent emigration swiftly turns into temporary emigration because Macedonian workers abroad gradually start losing their jobs or their incomes fall to unbearably low levels. This scenario is not unlikely for the next two to four years. Actually, there are some early signs that remittances have declined by 10–20% over the course of the pandemic, indicating that the incomes of senders are falling. The second major risk, therefore, relates to the Macedonian economy's reliance on a significant amount of remittances, which to a large extent cover the current account deficit. If remittances decline sharply, the macroeconomic risks will certainly heighten. This eventuality, together with a prolonged crisis, would impose severe limitations on what macroeconomic policies could achieve. Ultimately, the transformation of the healthcare crisis into an economic crisis must not overlook the potentially serious effects of losing additional qualified healthcare personnel. As the pandemic currently puts unbearable pressure on healthcare workers, particularly in infectious

diseases departments, it may provide fertile ground in countries like North Macedonia for doctors, nurses and midwives to move abroad, as some recent critical cases point out<sup>21</sup>.

Still, we need data to fully understand and analyse the underlying relationships in the triangular nexus of migration, education and the labour market in a rigorous quantitative manner. The deficiencies of North Macedonia's data point first to the need for a new census, which is scheduled to take place in 2021. However, the new census remains uncertain because, for instance, the census law has not yet been fully agreed or formally adopted at the time of writing this paper. In addition, North Macedonia's needs for data extend to issues like a more succinct profile of the existing stock of emigrants, and how it compares to the profile of the current outflow of emigrants. Reasons to emigrate should be understood in a scientific light, with a proper identification of causal relationships, and all of these factors should inform a strategy on economic migration. Such a research undertaking calls for contributions from all stakeholders: the government, the business sector, migration-related institutions, academia and non-governmental organisations are all indispensable to ensuring that the society's efforts are focused on maximising benefits within the triangle of interrelationships examined in this study.

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<sup>21</sup> When Covid-19 accelerated in early October 2020, North Macedonia was shocked by two specific, yet very illustrative cases: three experienced nurses left the infectious diseases department of the main clinic in Skopje (see [link](#)), and the chief nurse left the state Covid-19 health centre in Skopje (see [link](#)). Rumours suggest that they switched to private clinics, but the director of the Covid-19 health centre claims that nurses often resign to depart for Germany.

## 6. CONCLUSIONS AND POLICY IMPLICATIONS

North Macedonia has been facing a serious problem of permanent emigration that has worsened in the past decade. However, several notions that are prominent in public debates, such as mass exodus and brain drain, should be approached with caution, because they may contain elements of fallacy that are further complicated by any new realities that may arise from the Covid-19 pandemic in this regard. We conclude that Macedonian emigrants are largely low- to medium-skilled emigrants to Western European countries that are already home to large shares of Macedonian emigrants, although a small share who move overseas (e.g. to the US, Canada and Australia) contains young people with a distribution of skills that tilts towards the brain-drain hypothesis. We also note that emigration, particularly the recent waves, is likely to be more permanent in character, because entire families have departed and no significant return migration has occurred even during the pandemic.

Macedonian emigrants are pulled by decent jobs, higher wages and a better standard of living at destination, while they are pushed by a wide array of challenges at home that range from heavy politicisation of the society to dissatisfaction with the education system, healthcare and weak governance. We find that wage differentials and wage-to-consumption-basket ratios between destination countries and home are very wide and appear both in low- to medium-skill jobs, such as those in manufacturing, and in high-skill specialised jobs. However, some sustained idiosyncrasies of the domestic labour market may be equally or even more important, including the persistent wage premium in the public sector, job queues and the pervasiveness of various facets of underemployment. However, as emigrants are widely distributed along the skills scale, there is no convincing evidence that recent spikes in wage-related migrations have disproportionately depleted Macedonian high-skill professionals, even though they remain vocal in the public debate.

In terms of typical labour migration, Germany remains the most important destination country for Macedonian migrants. While still ranked second behind Turkey as a destination, Germany is nonetheless the key trading and investment partner of North Macedonia, with a growing influx of German FDI in the country and increasing activities by the German–Macedonian Business Association. Germany mainly attracts medium-skilled Macedonian workers, who are increasingly likely to emigrate with their entire family (spouse and children). Over the years, Germany has likewise showed persistent demand for medium- to high-skilled emigrants and expressed an enthusiasm for their eventual naturalisation. In addition, Germany has taken a comprehensive approach to orderly migration. In view of Germany's new Skilled Labour Immigration Act, Western Balkan countries including North Macedonia may attempt to negotiate a comprehensive arrangement with Germany that would benefit both parties by balancing Germany's growing high-skill needs with the Macedonian desire to improve human capital and minimise the effect of its erosion on the domestic labour market. The key German consultant to the Government of North Macedonia, who is a direct support provided by German Chancellor Angela Merkel and may potentially garner the backing of the German–Macedonian Business Association, could create fertile ground for progress on the issue.

The new EU Pact on Migration and Asylum, which was announced by the European Commission on 23 September 2020, might present an opportunity in this regard, as it includes two proposals for the management of labour migration at the EU level (European Commission, 2020). The first proposal is to launch Talent Partnerships with interested third countries in order to create better job opportunities at home and legal routes to the EU, starting first in the EU's Neighbourhood, the Western Balkans, and in Africa. This would entail comprehensive cooperation with partner countries to help boost mutually beneficial international mobility. The second proposal is to set up an EU Talent Pool for

skilled third-country nationals that could operate as an EU-wide platform for international recruitment, enabling skilled workers to express their interest in migrating to the EU and be identified by EU migration authorities and employers based on their needs.

Intense emigration aggravates labour market fragilities. Fifteen years ago, the Macedonian labour market faced a high unemployment rate of over 37%, but since then the growing inflow of multinational companies and the phenomenon of emigration have depleted the market, primarily in terms of skills. In early 2020 the unemployment rate was still at about 16%, but at the same time skills shortages were the most important problem in business climate surveys after having been virtually non-existent in the 2000s. FDI and emigration compete for the same pool of labour, but emigration frequently wins because of wage differentials and robust employment conditions abroad. By contrast, positive examples include the capacity building of new employees by foreign companies, usually at the parent company abroad, and this effort is expected to produce some positive spillover gains. In the same vein, the development of the dual education system, which is heavily supported by German-owned companies in North Macedonia, should be nurtured to bridge the gap between the departing medium-skilled labour force and the increasing domestic demands that are being driven by reindustrialisation.

The education system does not help, at least not sufficiently. Outcomes vary widely. Some emigrants find domestically acquired skills sufficient and relevant at destination, while others need to acquire additional skills either prior to departure or at destination. It is not the role of the domestic education system to prepare pupils and students for eventual emigration. However, a host of factors, such as the increasing propensity to emigrate after graduation and the slow but steady reforms being undertaken in the educational and training system to align particular skills with global demand (particularly language and IT skills), also increase the competitiveness of the domestic labour force in the global marketplace. On the other hand, the effects of emigration on the domestic education system are at best limited: programmes have certainly been reconfigured to reflect global trends, but skills acquired abroad are rarely used fruitfully in North Macedonia, either because the propensity for return migration is very low or because inefficiencies in government policies (e.g. providing scholarships to study at the top 500 universities) deter high-skill returnees even when they are obliged to return.

## Policy implications

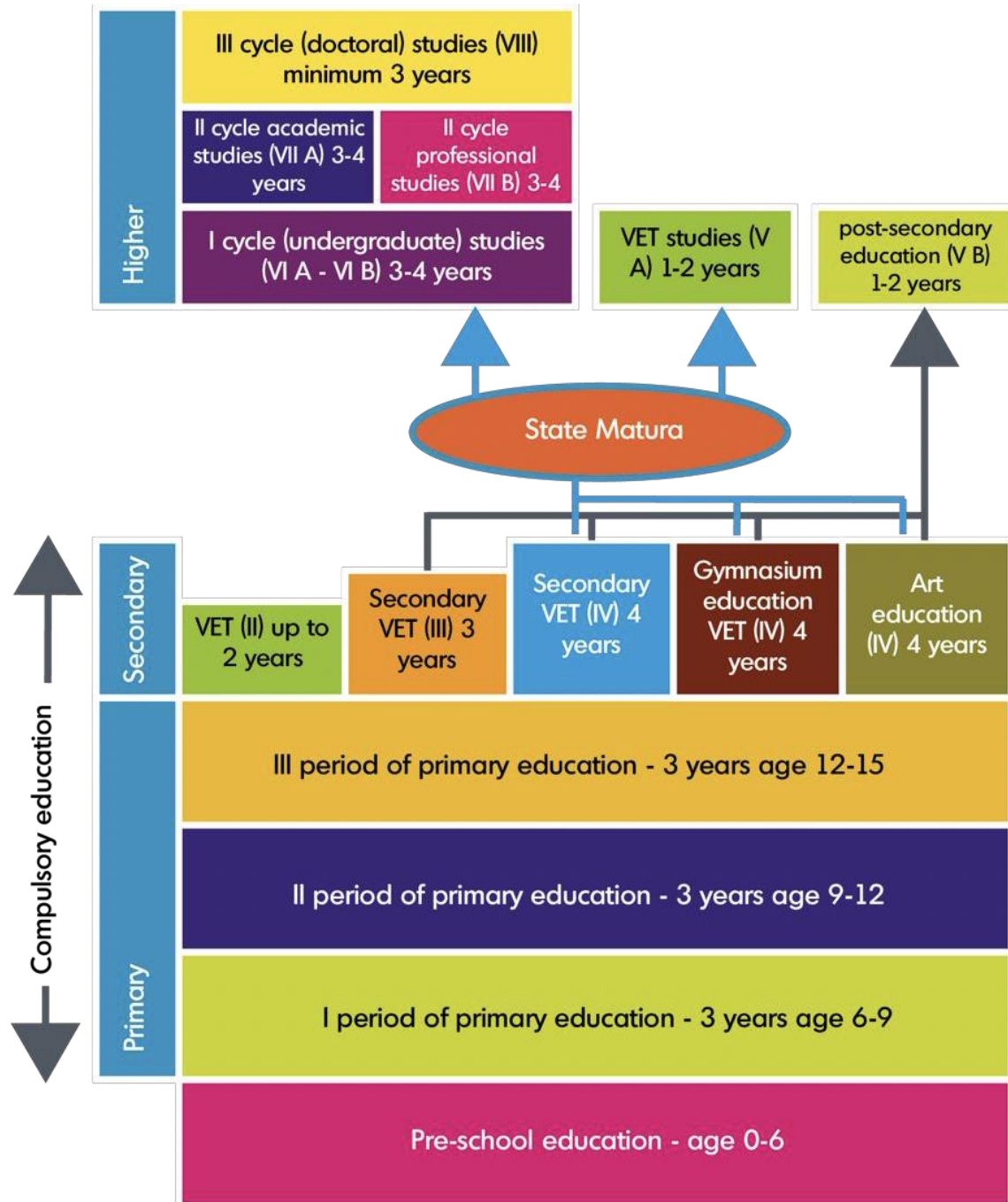
1. North Macedonia needs a comprehensive strategy on economic migration. The existing National Diaspora Strategy can serve as a decent starting point, which may be expanded not only to cover what the diaspora can contribute to the country's development trajectory, but also how to manage potential (post-pandemic) growth in the emigration of labour (low- to medium-skill) and human capital (medium- to high-skill), especially to countries that demonstrate an ongoing appetite for an array of qualified workers, like Germany.
2. North Macedonia needs a cross-institutional approach for handling economic migration. The country's stakeholders need to find the most efficient approach to achieve cross-institutional coordination of all aspects of migration. This may involve a need to designate a body to provide coordination between various government institutions that are relevant for migration (e.g. the Ministry of Labour and Social Policy, the Ministry of Economy, the Ministry of Finance, the Employment Service Agency and the Migration Agency) and non-governmental economic organisations, such as chambers of commerce, employers' organisations, trade unions, think tanks, etc. Alternatively, migration issues may be mainstreamed within existing inter-institutional and social dialogue mechanisms.

3. North Macedonia needs reliable and comprehensive data on migration produced domestically. The Census 2021 will satisfy such a need to a large extent and will provide impetus for new research and validation of previous studies based on alternative data sources, as is this one. However, beyond the Census, the State Statistical Office needs to consider the option to devise a bi-annual module on migration to be attached either to the Labour Force Survey or the Survey on Income and Living Conditions, hence collecting more detailed data on the skills levels and occupations of emigrants abroad and returnees as well as remittances.
4. The relationship with Germany should be nurtured. Given that Germany's Skilled Labour Immigration Act is expected to increase economic emigration from North Macedonia to Germany, the government should seek positive externalities, like re-importing skills acquired in Germany. Important German stakeholders who have set up operations in the country may provide a forum and support for progress on the issue. The resulting effort could serve as an example for cooperation agreements with other EU member countries (particularly in Western and Northern Europe). The newly announced EU Pact on Migration and Asylum (2020) can guide the discussion in terms of developing talent partnerships between Germany and North Macedonia.
5. All labour market policies and programmes that aim to reduce unemployment, increase activation especially among women, and increase decent, well-paid jobs are relevant for emigration. We do not provide specific recommendations in this regard, because any efforts that secure better, higher-paid jobs have the potential – though not on their own – to curb economic migration. This cannot and will not happen overnight, though. One area, however, is especially relevant for the discussion in the current paper: the skills scarcity that was particularly intense before the Covid-19 outbreak. This issue is a matter of concern across education, training, employment and emigration, and it needs special attention. For instance, an approach to improving the skills profile of the unemployed labour force, which still stands at more than 100 000, may provide a solid path toward easing the skills scarcity, i.e. through an array of active labour market programmes that offer training, requalification and new skills. In that endeavour, localization of the labour-market and education policies, e.g. through elevating the role of the Local Economic and Social Councils, may lead to faster gains.
6. The government should ensure that all policies that affect particularly medium- to high-skilled workers are carefully thought out, especially in terms of their mutual consistency and their risk of exacerbating migration decisions. For example, subsidising high wages and introducing progressive taxation are not mutually consistent, especially if applied to high-prospect sectors and/or occupations like IT professionals, and they may actually spur rapid emigration. Moreover, the country needs mechanisms to regularly analyse labour market needs and monitor emerging skill gaps at national, regional and local levels for counter measures.
7. Policies aimed at acquiring human capital and skills, particularly outside the formal education system, should be strengthened. The reform of the education system should continue along the lines specified in the Educational Strategy 2019–2025. The education system has no other option but to gear itself toward the production of a globally competitive labour force, with the risk that some of these workers may ultimately depart to other countries. However, when it comes to the risk of emigration, the system should focus on tailoring skills to match current demand in the labour market, especially skills where fast gains can be made. This could be done primarily through the VET system, whereby the 'dual education' could gain particular prominence and a strong policy support. Equally importantly, specific skills need to be invested in through an array of non-formal courses embedded in active labour market policies. A robust evaluation of current active labour market programmes could help for a more efficient and targeted support. Given the

high share of inactive individuals among the working-age population (almost 40%), activation programmes that specifically target this group with the support of skills development programmes are crucial.

8. Importing skills should be put back on the agenda and redesigned. This does not imply any importing of labour; quite the contrary, the policy to subsidise degrees abroad should be reinforced, with a strong return component and an obligation to transfer learnt skills to the domestic economy. As a complement, the validation and/or recognition of skills acquired outside the formal system or abroad (mostly in non-formal and informal contexts) is also necessary. In addition, the government may consider introducing a programme that offers opportunities for expatriates to return either permanently or temporarily in order to bring spillover knowledge, skills and working culture into the domestic environment.

# ANNEX: STRUCTURE OF THE EDUCATION SYSTEM OF NORTH MACEDONIA



Note: The ISCED levels (primary, secondary, tertiary) used in the source correspond to the ISCED 1997 classification. For information on the correspondence between ISCED 1997 and ISCED 2011, see International Standard Classification of Education (ISCED) 2011 (UNESCO Institute for Statistics (2012)), Section 10. Source: ETF (2019b), cited from the Education Strategy for 2018–2025 (Ministry of Education and Science of the Republic of Macedonia (2018)).



## LIST OF ACRONYMS

<b>ETF</b>	European Training Foundation
<b>EU</b>	European Union
<b>EUR</b>	Euro (currency)
<b>FDI</b>	Foreign direct investment
<b>GDP</b>	Gross domestic product
<b>IAB</b>	Institut für Arbeitsmarkt- und Berufsforschung (Institute for Employment Research) – Germany
<b>ISCED</b>	International Standard Classification of Education
<b>IT</b>	Information technology
<b>ITO</b>	Information technology outsourcing
<b>LFS</b>	Labour Force Survey (SSO)
<b>OECD</b>	Organisation for Economic Cooperation and Development
<b>PISA</b>	Programme for International Student Assessment
<b>SSO</b>	State Statistical Office of North Macedonia
<b>STEM</b>	Science, technology, engineering and mathematics
<b>VET</b>	Vocational education and training
<b>WB-6</b>	Western Balkan six: Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia
<b>wiiw</b>	Wiener Institut für Internationale Wirtschaftsvergleiche (Vienna Institute for International Economic Studies)

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E-mail

[info@etf.europa.eu](mailto:info@etf.europa.eu)



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