HOW MIGRATION, HUMAN CAPITAL AND THE LABOUR MARKET INTERACT IN SERBIA

PREFACE

The countries of the Western Balkans are characterised by declining populations driven by low birth rates, ageing populations and ongoing emigration. 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 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 education systems and labour markets affects migration in each country.

This report was drafted by Mihail Arandarenko. It is the first of six country reports to be produced within the context of this study and is based on a common analytical framework developed by the ETF and wiiw. The study itself involved analysing existing literature and reports and developed some novel tools to analyse flow and stock data on Serbian migrants, based on available international statistics. A separate statistical analysis based on Serbian labour force survey (LFS) data (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 made by the wiiw team (Michael Landesmann, Hermine Vidovic, Sandra Leitner, Isilda Mara) and the ETF team (Ummuhan Bardak, Lida Kita, Mariavittoria Garlappi, Cristiana Burzio and Mirela Gavoci). The final report was presented in a webinar on 9 July 2020 to the main stakeholders in Serbia, 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 Statistical Office of the Republic of Serbia 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

■ Serbia's biggest export 'product' is labour, with some 14% of Serbian natives living abroad at any given time. Private remittances from abroad increase disposable income in the country by more than 8%.

■ Up to 2020, while the total stock of Serbian-born emigrants was increasing only slowly, migration flows were accelerating, i.e. there were more emigrants, but, on average, they were staying abroad for a shorter time.

■ The European Union (EU) remains the main destination for Serbian migrants. In the last decade, there has been a substantial increase in temporary work-related emigration to new Member States (those that joined from 2004 onwards) while emigration to old Member States has stagnated. The exception is Germany, which has attracted more than 30% of the total new inflows to the EU.

■ The educational attainment levels of the Serbian migrant stock roughly reflect those of non-migrants, with medium-skilled migrants being under-represented. However, in recent years, outflows of medium-skilled migrants have increased relative to other skill levels.

■ The proportion of those migrating to the EU for education reasons is stagnating in absolute numbers and steadily declining in relative terms. Moreover, a cohort-based statistical analysis of national LFS data revealed some negative net migration of young adults in recent years, but also a positive migration balance of high-skilled individuals. Both of these findings suggest that widespread perceptions of a substantial 'brain drain' from Serbia are not supported by the facts.

■ By linking the structural features of recent migration with their plausible causes related to characteristics of the labour market and the education system, the following factors can be identified:

 • a dual labour market, with a significant portion of the labour force stuck in insecure or outright informal, relatively poorly paid jobs offering few career prospects;

 • substantial and persistent wage differences between Serbia and the EU countries, especially for low- and medium-skilled workers in the private sector;

 • lengthy school-to-work transition, reflecting skills mismatches and a low general level of quality-job creation in the country;

 • uneven quality of education and over-production of certain medium-skill profiles.

■ Serbia will, in the foreseeable future, remain vulnerable to various undesirable effects of being a labour-exporting country.

■ Circular migration patterns should be promoted over migration pathways leading to permanent migration.

■ Serbia should engage with the European Commission to make sure that the new EU Pact on Migration and Asylum, published in September 2020, lives up to its promise of 'a comprehensive cooperation with partner countries to help boost mutually beneficial international mobility'.

■ The policy of increasing the national supply of skills by redirecting public expenditure towards higher-quality education should be combined with more systematic monitoring of skills shortages and high-demand occupations in the domestic labour market (e.g. information and communication technology (ICT), manufacturing/mechanical engineering, construction, road transport), so that the education and training system can reorient itself towards improving supply for high-demand occupations, even if some of the workers trained eventually emigrate.
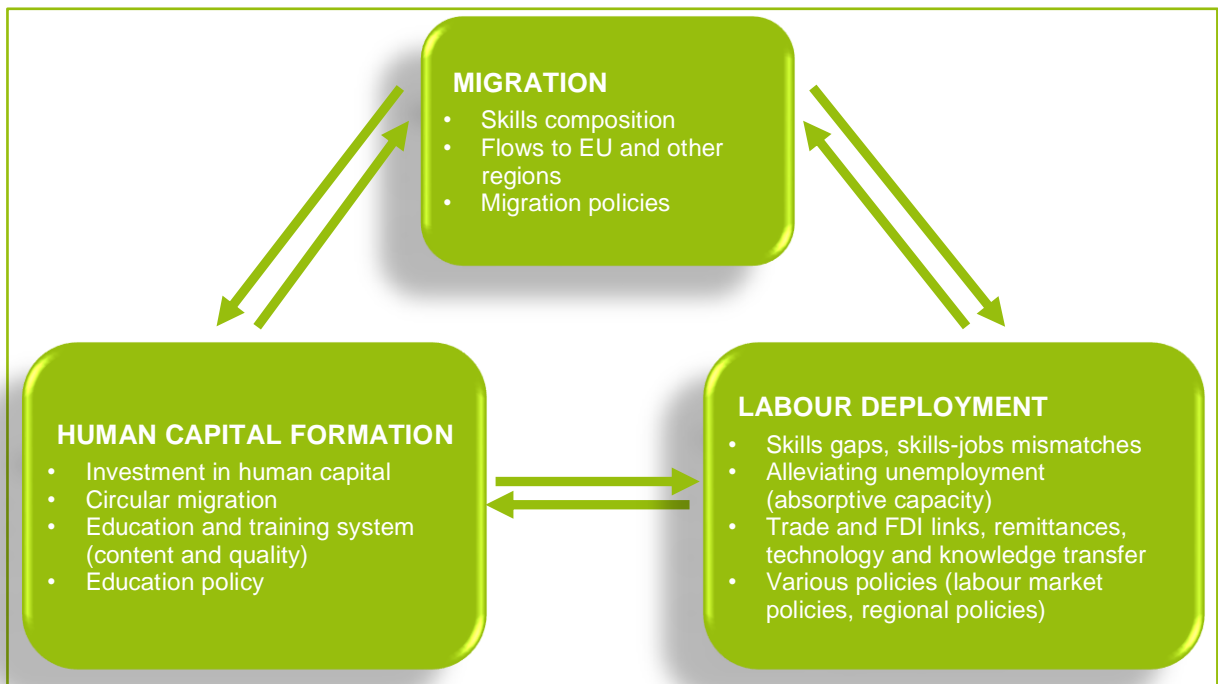
1. INTRODUCTION

Serbia's most significant export item is labour and not – as is commonly presumed – steel, automobiles or raspberries. Some 14% of people who were born in Serbia live abroad, which is four times the world average of around 3.5% (UN DESA, 2019). This implies that Serbia has significantly more employed citizens and natives than employed residents. Similarly, its Gross National Disposable Income is significantly higher than its gross domestic product (GDP). On both accounts, Serbia is close to the top of the global list of labour-exporting countries, especially when micro-states are excluded. Nevertheless, among the Western Balkan countries, Serbia's proportion of emigrants to residents is the smallest, although this is certainly not the case for the share of remittances from abroad, which add a not inconsiderable 8% to its GDP.

Labour migration is therefore one of the long-standing defining features of Serbia's economy and society, and a topic that periodically dominates public debate. This debate is typically conducted with a great deal of passion but little attention to data. Quite often, the debate is framed around the issue of the increasing outflow of the most educated, talented and entrepreneurial individuals, and the presumed inability to control it, coupled with deep concern over the demographic future of a declining and ageing nation that is losing its best and brightest people.

This report focuses on the interaction between emigration from Serbia, human capital formation and labour deployment in the country. It roughly follows an analytical framework outlined by the ETF and further developed by the wiiw that avoids the trap of taking sides and forming a judgement before the facts are thoroughly assessed.

FIGURE 1.1 THE TRIANGULAR RELATIONSHIP BETWEEN HUMAN CAPITAL, THE LABOUR MARKET AND MIGRATION

MIGRATION
- Skills composition
- Flows to EU and other regions
- Migration policies

HUMAN CAPITAL FORMATION
- Investment in human capital
- Circular migration
- Education and training system (content and quality)
- Education policy

LABOUR DEPLOYMENT
- Skills gaps, skills-jobs mismatches
- Alleviating unemployment (absorptive capacity)
- Trade and FDI links, remittances, technology and knowledge transfer
- Various policies (labour market policies, regional policies)

Source: wiiw.

When looked at either generally or specifically in terms of its impact on and interaction with the education and labour-market outcomes for residents in a sending country, migration is not unequivocally good or bad. In principle, there are both negative and positive aspects, as well as a wide range of intermediate outcomes. The simplified version of the original framework is presented in Figure 1.1.

Within this complex triangular relationship, migration is the critical variable but also the most elusive and challenging one to capture. Reliable and detailed data on migration are notoriously difficult to obtain. Nevertheless, understanding its features and recent evolution needs to be the starting point for approaching the triangular relationship, and this is the strategy adopted for this report. Owing to both data gaps and complex links, however, our analysis is often speculative and simplified. While that may look like we have taken the 'soft' rather than the 'hard' approach (Akerlof, 2020), it should mean important topics and issues have not been overlooked.

The analysis in Chapter 2 first sheds some light on the scale and composition of Serbian emigration based on recent data available in the main destination countries (EU and, to some extent, other OECD countries). This chapter also focuses, in particular, on the education levels of emigrants, as well as their reasons for migrating, based on destination-country statistics relating to recent emigration from Serbia and on analyses of the size/education levels of age cohorts (15–39), using national LFS data. Chapter 3 goes on to link the results from migration analyses to relevant features of Serbia's labour market, while Chapter 4 makes the same links to the Serbian education system, including by examining the role of the policy to develop the IT sector in keeping the high-skilled migration under control. The specific role of Germany, as the key destination country, in shaping, to a certain degree, triangular outcomes in Serbia is reviewed in Chapter 5. Migration perceptions, migration intentions and policy responses are analysed in Chapter 6, followed by conclusions and policy recommendations in Chapter 7.

2. LONG-TERM AND RECENT MIGRATION FROM SERBIA: BASIC FACTS

Serbia is a mature emigration country. As part of the former Yugoslavia, Serbia started intensively exporting – mostly unskilled – workers to Germany and other Western European countries in the 1960s. This early migration wave still has great relevance for today's migration outcomes. The next big wave came in the 1990s, as a result of the political turmoil and economic hardship caused by the dissolution of Yugoslavia. This time, the structure of the migrant stock was far more diversified, with many high-skilled people leaving the country for a wider variety of destinations. With the return of stability in the early 2000s, emigration continued at a somewhat slower pace, but it has started to pick up again in more recent years. As the average number of years spent in education as an approximate measure of the human capital endowment has been steadily improving among the resident population in Serbia in recent decades, so too have the educational attainment levels of Serbian emigrants.

Given these various waves of migration and geographical diversity of the destination countries, members of the Serbian diaspora can be found all over the world. It comprises multiple layers of migrants with varying degrees of connection to their country of origin. According to conservative United Nations statistics, the total number of migrants from Serbia is some 950,000, which is around 14% of the total resident population in the country itself[1].

The relatively high level of remittances from abroad, at 8% of GDP, hints at the generally strong ties between migrants and the home country, and suggests that the motives for migration and the high circulation of migrants are predominantly economic. The EU countries receive almost two thirds of Serbian emigrant stock (and more, in terms of labour migration), with Germany accounting for more than 40% of Serbian migrants. Geographic proximity of the main destination countries and improved road and air travel options contribute to the possibility of short-term and circular migration. These trends are further bolstered by the visa facilitation and readmission agreements signed in 2007 between the EU and Serbia, offering, as of 2008, accelerated visa procedures for Serbian citizens in exchange for increased cooperation on migration.

Table 2.1 shows the numbers of Serbian nationals who resided in the EU in the years 2010 and 2018. Somewhat surprisingly, the overall trend is one of decline, but equally interesting is the difference between the trends in migration to the old (pre-2004) and new (2004 and after) EU Member States (OMS and NMS, respectively). While the overall EU migrant stock declined by around 69,000, or 12%, between 2010 and 2018, there is a very variable dynamics among individual countries trend. Germany recorded the largest absolute decline (-57,754 or just under 20%), while Italy saw the largest relative decline, of almost one third. In all other OMS, the decline was more moderate. This reduction in the stock of Serbian nationals in OMS is most likely because the outflow of migrants – driven mainly by naturalisation within the destination country, and retirement and return to Serbia for other reasons – outnumbered the inflow. In NMS, on the other hand, the statistics reveal a large increase in the migrant stock, albeit from a very low base.

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[1] The data refer to the migration stock in 2019, the precise figure being 950,485 people.

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TABLE 2.1 ANNUAL STOCK OF SERBIAN IMMIGRANTS IN THE EU AND IN THE MAIN DESTINATION COUNTRIES, 2010 AND 2018 (END-OF-YEAR)

Country	2010	2018	Compared with 2010
EU	560,631	491,199	no data
Germany*	290,092	232,338	-57,754
Austria*	111,708	104,800	-6,908
Switzerland	no data	61,859	no data
Italy*	61,027	40,797	-20,230
France*	35,141	27,119	-8,022
Slovenia**	8,273	17,766	+9,493
Slovakia**	3,826	13,555	+9,729
Sweden*	12,090	9,060	-3,030
Croatia**	no data	6,001	no data
Malta**	502	5,744	+5,242
Hungary**	18,080	5,434	-12,646
Czechia**	1,933	4,380	2,447
Poland**	701	1,607	906

* Joined before 2004. **Joined in 2004 or later.
Note: These numbers are based on the concept of citizenship, rather than country of birth, so they do not include Serbian-born migrants who have become naturalised citizens of another country.
Source: Eurostat.

While the stock of Serbian *nationals* in the EU is decreasing, the stock of Serbian *natives* in the EU has been gradually increasing since 2010, if the data on their acquisition of EU citizenship are taken into account. Since the total number naturalised in the 2010–18 period is around 117,000, this implies an annual increase in Serbian-born migrants in the (then) EU-28 countries in the thousands, which, by itself, is not excessively alarming and is in line with the long-term trend. What could be more alarming, however, is the rapid increase in flows in recent years, and the potentially altered structure of the new migrant stock in terms of their education level and countries of destination. This is clearly a crucial issue that is worth closer examination.

Regarding the skills structure of Serbian emigrants, there are no readily available data. The most recent relevant data – from the German Institute for Employment Research (IAB) 'brain-drain' database – date back to 2010[2]. These data, based on censuses in 20 destination countries that are members of the Organisation for Economic Cooperation and Development (OECD), cover immigrant populations aged 25 years and older by gender, educational level and country of birth for the period 1980 to 2010 (at five-year intervals). Throughout that period, incomplete emigration rates (migrant-to-resident ratios) for Serbia by level of education followed the same V-shaped pattern, i.e. higher-than-average shares of both low- and high-skilled migrants, and lower emigration rates of medium-skilled migrants. Compared

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[2] See the IAB brain-drain data: www.iab.de/en/daten/iab-brain-drain-data.aspx

with other countries in the database, Serbian emigration statistics were among the least indicative of 'brain drain'[3]. Furthermore, although the emigration rates for all three education levels steadily increased from 1980 onwards, in the 2000s the right tip of the 'V' (high-skilled emigrants) was at roughly the same level as the left tip (low-skilled emigrants), while, in the preceding two decades, it had been significantly higher.

In looking for clues as to what happened regarding the skills level and structure of Serbian net migration since 2010, we adopted two main complementary strategies. First, we looked at the indirect evidence and proxies in the statistics of major host countries. The second strategy was statistically more demanding and innovative, and involved approximating the data on net migration via a cohort approach, i.e. identifying and following age cohorts over time using the data from consecutive LFSs.

2.1 Some leads on the nature and structure of recent emigration from Serbia based on statistics from the main destination countries

Why do people emigrate from Serbia? What is their key reason for migrating: work, education, family reunification, or something else? Do they stay abroad mostly permanently, never returning to their home country, or merely temporarily, often circulating between their countries of origin and destination? Are there now signs that the outflow of high-skilled migrants is increasing disproportionately, relative to their share in the Serbian labour force?

The two major approaches within the economic theory of migration are broadly consistent with the permanent and temporary – or circular – pattern of migration. The first and more longstanding approach is the neoclassical theory of migration. In the context of this theory, migration is seen as a typically lifelong, permanent decision of an individual emigrant or their entire family based on a rational calculation of the positive net present value of migration. In essence, it is the theory of human capital investment applied to migration decisions (Sjaastad, 1962). One practical consequence of interest is that the links retained by permanent migrants with their country of origin gradually weaken and often completely disappear with the passage of time.

The second approach is the so-called new economics of labour migration (NELM), elaborated by Lucas and Stark (1985) and Stark and Bloom (1985). This approach is based on framing an individual migration decision within a household utility maximisation strategy, in which the migrant and their family enter into a mutually beneficial contractual relationship. The family, in a way, 'delegates' the migrant to work abroad as part of its risk-sharing strategy, while, in return, the migrant sends a significant portion of their discretionary income back to what is still their true home.

Although there is not a great deal of direct empirical evidence specifically for Serbia, a recent body of research conducted in the Western Balkans confirms that the dominant pattern of recent migration flows is in line with the NELM model (Zbinden et al., 2016). The economic, social and political-economic consequences of this type of migration are much more complex than those of the relatively simple one-way relationship between a permanent emigrant and their family back home.

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[3] This inappropriate slang term has unfortunately entered scientific literature on migration. In its common everyday usage, it indicates any substantial emigration of high-skilled individuals. However, in its technical usage, 'brain drain' occurs when the share of high-skilled migrants among the total migrant population of a country is larger than the corresponding share of high-skilled residents among the total resident (non-migrant) population of a country.

For policy purposes, it is very important to have an idea of what part of the Serbian emigrant stock most closely matches the neoclassical theory of migration model, and what is most similar to the NELM migration pattern. For example, a sending country with a declining and ageing population should consider the neoclassical theory of migration-type as damaging to its long-term growth and development prospects. NELM-type migration, on the other hand, should be seen in a much more favourable light (Arandarenko and Aleksic, 2020). In the short term, NELM-type migrants relieve the pressure on the sending country's labour market, earning their wages abroad but spending the discretionary part of their earnings mostly at home. In the longer term, they gain knowledge and experience outside of Serbia, which they then bring back with them.

Owing to the aforementioned data limitations, the questions posed at the beginning of this section cannot be answered directly. Indirectly, however, there is enough evidence in the migration statistics of the EU – globally, the most important destination zone by far for Serbian economic migrants – to be able to identify some important clues and leads. A simple but still useful approach is to compare the data on Serbian nationals' gross flow (approximated by the data on the annual inflow of first-time migrants) and stock (the corresponding total number of Serbian emigrants abroad), broken down by destination country. Flow data are available from Eurostat for all legal migrants who obtained residence permits allowing them, for their first stay, to remain in an EU country for three or more months.

Table 2.2 presents gross first-time inflow, as well as stock statistics for 2010 and 2018, and shows the flow-to-stock ratio for the EU as a whole (plus Switzerland) and for the main destination countries, i.e. those with annual inflows of more than 1,000 Serbian migrants).

TABLE 2.2 FIRST-TIME PERMITS AND STOCK OF SERBIAN MIGRANTS IN THE EU AND SWITZERLAND, 2010 AND 2018

Country	Annual flow		Annual stock		Flow as % of stock	
	2010	2018	2010	2018	2010	2018
EU 28 (as was)	22,818	51,942	560,631	491,199	4.1	10.6
Czechia	199	1,693	1,933	4,380	10.3	38.7
Germany	3,327	16,156	290,092	232,338	1.1	7.0
France	1,116	1,149	35,141	27,119	3.2	4.2
Croatia*	no data	4,910	no data	6,001	no data	81.8
Italy	6,631	1,486	61,027	40,797	10.9	3.6
Hungary	1,226	3,767	18,080	5,434	6.8	69.3
Malta	86	2,209	502	5,744	17.1	38.5
Austria	3,577	3,956	111,708	104,800	3.2	3.8
Poland	114	1,151	701	1,607	16.3	71.6
Slovenia	1,040	5,147	8,273	17,766	12.6	29.0
Slovakia	483	4,834	3,826	13,555	12.6	35.7
Sweden	1,228	1,620	12,090	9,060	10.2	17.9
Switzerland	no data	1,553	no data	61,859	no data	2.5

* Joined in 2013.
Source: Eurostat.

For the EU as a whole, the flow-to-stock ratio more than doubled between 2010 and 2018, which, when combined with either the decreasing (without naturalisation) or slowly increasing (with naturalisation) stock data, is indicative of increasing circular migration. This is further confirmed by country-by-country analyses of flow-to-stock ratios, which are well below the EU average for all OMS (except for Sweden) plus Switzerland, and well above the EU average for all NMS. Furthermore, while the flow-to-stock ratio at least doubled for all NMS destinations between 2010 and 2018, among the OMS this was the case in Germany only, where the increase in the ratio was almost sevenfold, albeit from a very low base (from 1.1% to 7.0 %, which was still below the EU average of 10.6%). Nevertheless, Germany alone received more than 30% of the total number of first-time migrants in 2018 and recorded a flow increase of almost 13,000 compared with 2010. Note that if naturalisation, which is widespread in OMS and very rare in NMS, were taken into account, the difference in the flow-to-stock ratio between OMS and NMS would be even starker.

Apart from the special case of Germany, the most dramatic change has clearly been the emergence of NMS as important destination countries for Serbian nationals. They barely figured as destinations back in 2010 (apart from those with substantial ethnic minorities in Serbia, such as Hungary, but in these cases, migration was often preceded or quickly followed by naturalisation). Hence the flow-to-stock ratios increased substantially in all the NMS between 2010 and 2018. It is quite remarkable that more first-time migrants from Serbia are now going to Slovenia, Slovakia, Croatia, Hungary, Malta and Czechia than to the traditionally well-established destination countries, such as Austria, Italy, France and Switzerland.

That being said, most of the migration to NMS is temporary or seasonal/circular, and the potential for permanent migration remains limited. The NMS themselves do not follow a policy of permanent migration/naturalisation, except in the case of foreign nationals who, ethnically, are of that country's origin, and besides, the NMS are still not recognised as desirable permanent destinations by potential Serbian migrants.

Further clues as to the nature and skills structure of recent migration from Serbia to the EU-28 destinations are revealed by examining the reasons for issuing first-time residence permits to Serbian citizens in those destinations, as presented in Table 2.3.

TABLE 2.3 REASONS FOR ISSUING FIRST-TIME RESIDENCE PERMITS TO SERBIAN NATIONALS IN THE EU-28 BETWEEN 2010 AND 2018

Reason	2010	2015	2016	2017	2018
Family reunification	9,699	13,140	12,799	13,681	15,448
Education	2,129	2,384	2,381	2,478	2,477
Remunerated activities	6,719	6,496	9,358	17,333	27,383
Other	4,271	5,175	6,751	6,858	6,634
Total	22,818	27,195	31,289	40,350	51,942

Source: Eurostat.

As is clear from Table 2.3, remunerated activities (work permits) was the reason category in which the number of first-time residence permits issued to Serbian nationals increased most dramatically. The volume of migration for work purposes almost tripled between 2016 and 2018, by which year it

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accounted for 53% of all residence permits issued (up from 29% in 2010), almost twice as many as were issued for family reunification. Up to 2017, the latter had been the most frequent reason (it does not completely preclude migrants from working and also offers a possible track towards naturalisation). While family reunification constituted the reason for almost 43% of total permits issued in 2010, by 2018 it accounted for just 30% and had been overtaken by work-related migration.

Table 2.4 illustrates the ratios of work to family reunification as reasons for issuing first-time visas by destination country.

TABLE2.4 FIRST-TIME VISAS ISSUED IN THE EU-28 AND SWITZERLAND: RATIO OF WORK TO FAMILY REUNIFICATION AS A REASON, 2010 AND 2015–18

Country	2010	2015	2016	2017	2018
EU 28	0.69	0.49	0.73	1.27	1.77
Czechia	0.58	2.59	3.05	3.84	11.31
Germany	0.27	0.15	0.53	0.83	0.74
France	0.34	0.24	0.21	0.26	0.29
Croatia	no data	0.36	1.13	3.01	20.48
Italy	1.68	0.45	0.41	0.28	0.42
Hungary	1.82	4.26	5.64	19.40	19.56
Malta	4.25	4.00	5.50	9.42	7.44
Austria	0.06	0.09	0.09	0.08	0.11
Poland*	6.50	no data	39.18	76.00	19.13
Slovenia	2.85	3.73	4.94	5.52	6.79
Slovakia	2.00	2.01	2.33	9.59	9.74
Sweden	0.20	0.31	0.23	0.28	0.37
Switzerland	no data	0.17	0.21	0.24	0.26

* The number of family permits issued in Poland barely reached double digits.
Source: Eurostat.

As can be seen in Table 2.4, work permits were issued far more frequently in the NMS, while family-related residence visas were more common in the OMS. Overall, gross inflows into the OMS destinations stagnated or slightly declined, and the work/family ratio was well below 1, meaning family reunification was the dominant reason. This likely reflects the mature phase of the NMT migration pattern as well as the more restrictive immigration policies of the OMS countries.

Germany, again, appears to be the only exception to the rule, with the number of first-time work permits issued rising sharply from 2015 and the ratio of work to family-residence permits roughly tripling between 2010 and 2018, reaching 0.74. This is still less than half the 2018 EU average of 1.77, however.

Finally, it is worth noting that the number of people migrating into the EU for education reasons stagnated between 2,000 and 2,500 throughout the period in question, meaning the share of total first-time residence permits issued for this reason steadily declined. This, together with the relatively slow increase in family reunification visas, would seem to indicate that high-skilled, non-work-related inflows did not intensify during the last decade and that, in relative terms, they steadily declined. As for the

potential for high-skilled work-related inflows to increase, this is most likely to apply only to Germany and, in particular, to the medical and STEM (science, technology, engineering and mathematics) sectors.

Although there are no precise data on which to assess the scale of such high-skilled migration to Germany, some indirect indicators, such as the relatively low average earnings of recent Serbian immigrants (IAB, 2020), suggest it is still not strong enough to be recognizable in the German wage statistics. According to Eurostat data on the number of blue cards[4] issued to Serbian citizens in the EU-28, this has risen considerably slower than the total number of work permits issued. In Germany, which accounts for more than 80% of all blue cards issued to Serbian citizens within the EU, the number increased from 453 in 2015 to 594 in 2019 – so, by just under a third, compared with the number of general work permits issued, which roughly doubled. On the other hand, work-related emigration to NMS is mostly directed towards the manufacturing sector and thus mainly comprises medium-skilled vocational education and training (VET) graduates.

2.2. Determining skill-specific migration outcomes in the 2015–19[5] period using a cohort approach[6]

There is generally no comprehensive official, domestic migration statistics for Serbia, particularly relating to the skills composition of migrants. Hence, data on skill-differentiated net migration were approximated and computed using a population cohort approach, in which the size of specific age cohorts were identified and followed over time. Departing from the idea of three drivers of population change – mortality, fertility and net migration, this innovative methodology takes the age cohort of 15–39 and observe their number over time. Assuming little mortality and no fertility to change the size of this cohort, any population change observed could be explained by migration, meaning migration dynamics can be deduced from population changes observable in official statistics.

The methodology used LFS data, whose stratification and weighting scheme allows the identification of representative groups (age cohorts) that can be followed over time. The difference in the size of an age cohort from one year to the next gives a good approximation of (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 in the size of an age cohort indicates net emigration (for more info, see Leitner, 2021).

A sub-population of people aged 15–39 was followed over time. In 2010, the first year of the period analysed, this sample population was divided into five different five-year age cohorts – 15–19, 20–24, 25–29, 30–34, 35–39 – and each cohort was then followed until 2019. Obviously, each cohort aged over time, so that, by 2019, each had aged by nine years. The analysis contains results for the 2015–19 period, so, by the first year of that period, each cohort had already aged five years. Furthermore, from 2011 on, a new group of young people aged 15 entered the survey population every year. Each of these newcomers was also followed separately each year from 2011 to 2019, to guarantee that all relevant age groups, including those younger than the aforementioned five-year age cohorts (and which would potentially become part of the labour force), were captured and that net migration of these

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[4] An EU Blue Card gives highly qualified workers from outside the EU the right to live and work in an EU country, providing they have higher professional qualifications, such as a university degree, and an employment contract or a binding job offer with a high salary, typically minimum 150% of the average salary in the EU country in question.

[5] While the analysis looked at the 2010–19 period, only data from 2014 onwards were used, owing to substantial breaks in the earlier LFS data, which would have biased results.

[6] This section was written by Sandra Leitner of the wiiw.

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newcomer age groups was also estimated. Because of stronger migration dynamics in later years, only those in the newcomer groups aged 18 years or older were analysed (Leitner, 2021).

The sub-population under analysis was further broken down into the following four educational attainment levels: low (primary or lower-secondary education), medium general (upper-secondary general/academic education), medium VET (upper-secondary vocational education and training) and high (tertiary education).

Analysis in more detail according to the International Standard Classification of Education (ISCED) revealed complex changes in the skills/educational composition, especially among those aged under 25. These changes are associated with the transition to higher education levels, as people graduate from lower- or upper-secondary education tracks and transit either to medium general or medium VET, or they graduate from tertiary studies and subsequently transit from medium general or medium VET to high. These changes were corrected using detailed education statistics from administrative sources, so that they would not be erroneously attributed to net migration.

Figure 2.1 depicts a particular life cycle of migration detected for the 2015–19 period. As previously explained, each cohort had already aged by between five and nine years during this period. The figure shows high net emigration among the three youngest age cohorts, and especially among cohort 20–24 (around -18,500); high net immigration (almost 15,000) among cohort 25–29; and, again, high net emigration among the two oldest age cohorts, i.e. those in their mid-30s to late 40s. The cumulative net emigration total within the 15–39 age group is estimated at -37,400 people.

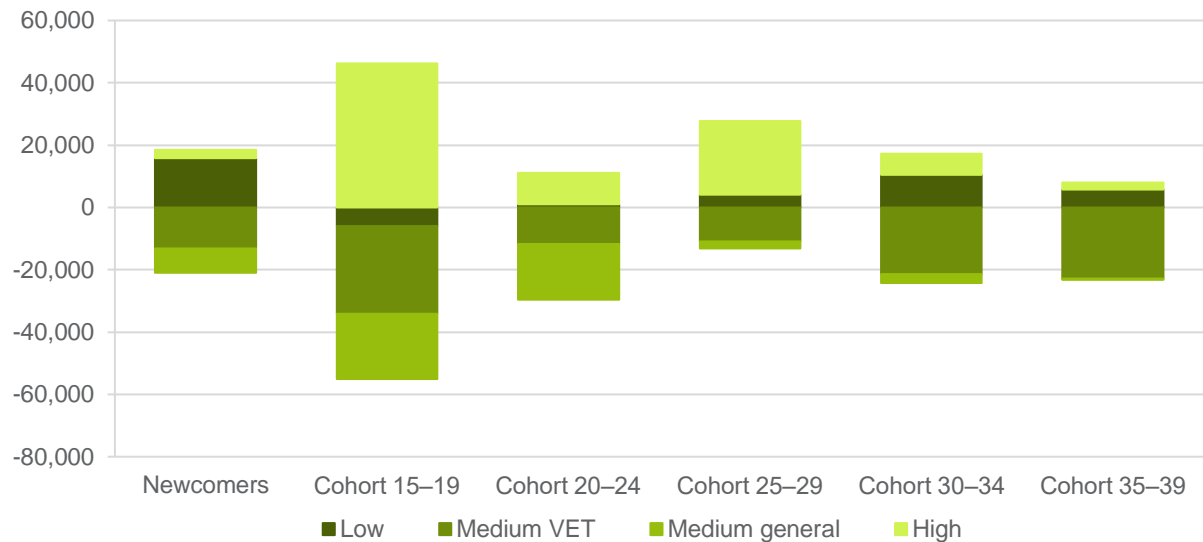**FIGURE 2.1 CUMULATIVE NET-MIGRATION FLOWS BY AGE COHORT, 2015–19**
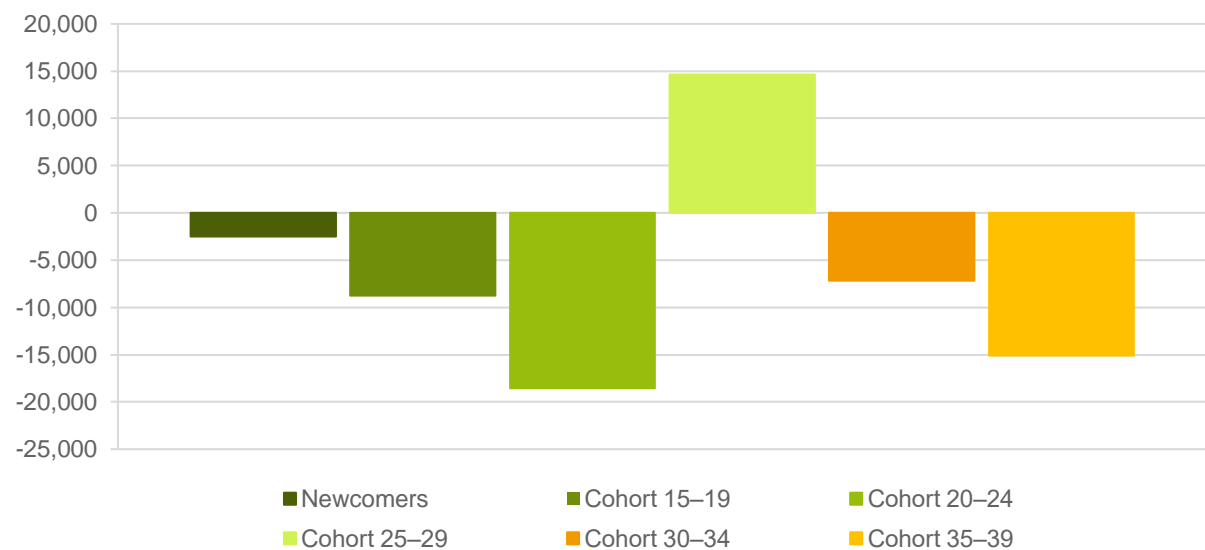
Note: The age brackets refer to the age at the beginning of the period in 2010. Each cohort is followed over time until 2019. In each year, each cohort ages by one year. In 2015, the first year of the analysis, each cohort has already aged by five years and ages by another four years until 2019.
Source: Leitner (2020), calculations based on the LFS data of Serbia (Leitner, 2021).

A breakdown of migration patterns by educational level and type for each of the five-year cohorts is presented in Figure 2.2. The most important conclusions to be drawn from this breakdown can be briefly summed up as follows: there was substantial net emigration of people whose highest educational attainment level was medium VET, irrespective of age cohort; the outflow/loss of medium-

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VET skills was generally highest in the youngest (15–19) and two oldest (30–34 and 35–39) cohorts; since the share of those with medium-general skills, i.e. those who completed academic secondary level, was around 26% of all those educated to medium level, net emigration among these was, in relative terms, equally high, especially in the cohorts below 25 years of age.

FIGURE 2.2 CUMULATIVE NET-MIGRATION FLOWS BY AGE COHORT AND EDUCATIONAL ATTAINMENT LEVEL, 2015–19

Note: The age brackets refer to the age at the beginning of the period in 2010. Each cohort is followed over time until 2019. In each year, each cohort ages by one year. In 2015, the first year of the analysis, each cohort has already aged by five years and ages by another four years until 2019. Educational levels are divided in four categories: low (primary or lower secondary education), medium general (upper secondary general education/gymnasium), medium VET (upper secondary vocational education and training), and high (tertiary education), based on ISCED.
Source: Leitner (2020), calculations based on the LFS data of Serbia (Leitner, 2021).

The most important finding, however, is probably that, contrary to widespread perceptions, there is net immigration of the highly educated, i.e. those with college and university degrees, and thus no evidence of a brain drain. Net immigration is highest in the youngest age cohort (15–19). There are two complementary explanations for that. First, as those in the youngest age cohort had already aged by between five and nine years in the period from 2015 to 2019 and so were then in their early to late 20s, this suggests that young Serbian university graduates who pursued their tertiary education abroad returned in large numbers. The high net-emigration flows of those with medium-VET and medium-general skills from the youngest age cohort would seem consistent with this idea, as both skills groups appear to leave in large numbers after graduating from upper-secondary level and return, while still in their 20s, as university graduates. Second, as the largest country in the Western Balkans, Serbia has universities that attract a sizeable share of students from neighbouring countries, notably Bosnia and Herzegovina and Montenegro, but also from elsewhere. Thus, the annual number of foreign students increased from an already sizeable 9,000 or so in 2011 to around 11,500 in 2018. Of these 11,500, students from Bosnia and Herzegovina comprised 54% (around 6,200), while 26% (almost 3,000) students came from Montenegro (Lutz and Gailey, 2020). Similarly, as the largest economy in the region and with Belgrade as by far the largest city in the Western Balkans and the former Yugoslavia as a whole, Serbia and its capital are increasingly attractive destinations for high-skilled immigrants from the region.

Finally, apart from the youngest age cohort (15–19), there was net immigration of people with a low level of education, which might be the result of expanding employment opportunities. This trend was bolstered by the continuing implementation of the readmission agreement signed in 2007 between the EU and Serbia, under which, from 2008, visa procedures for Serbian citizens were accelerated in exchange for increased cooperation on migration.

Figure 2.3 illustrates how overall net emigration, i.e. the sum of all cohorts in the 2015–19 period, including newcomers, amounted to -37,400 people.

FIGURE 2.3 CUMULATIVE NET-MIGRATION FLOWS BY EDUCATIONAL ATTAINMENT LEVEL, 2015–19
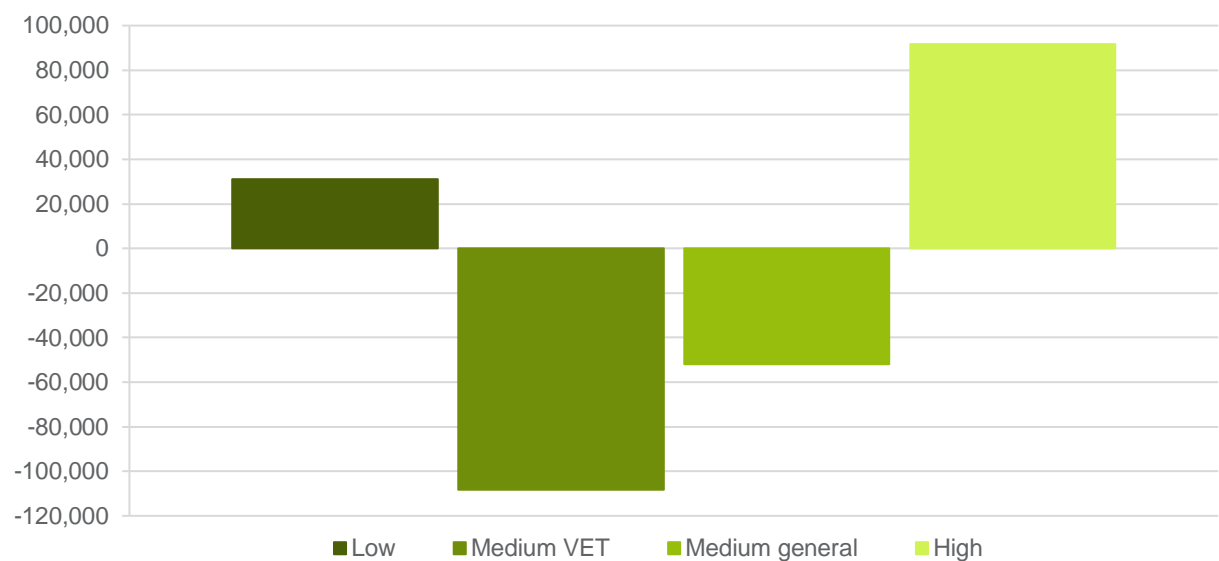
Note: The age brackets refer to the age at the beginning of the period in 2010. Each cohort is followed over time until 2019. In each year, each cohort ages by one year. In 2015, the first year of the analysis, each cohort has already aged by five years and ages by another four years until 2019. Educational levels are divided in four categories: low (primary or lower secondary education), medium general (upper secondary general education/gymnasium), medium VET (upper secondary vocational education and training), and high (tertiary education), based on ISCED.
Source: Leitner (2020), calculations based on the LFS data for Serbia (Leitner, 2021).

Net emigration was mainly driven by those with a medium level of education leaving the country in large numbers. There was substantial net emigration of medium-VET educated people, which was also the largest group among Serbia's medium-educated, representing around 74% in 2018. Nevertheless, in relative terms, the loss of people with medium VET as their highest level of educational attainment was relatively small. Furthermore, there was non-negligible net emigration of medium-general educated people. As this group was rather small (it amounted to just 26% of all medium-educated people in Serbia in 2018), in relative terms, the loss of persons with medium general as their highest level of educational attainment was sizeable.

It is interesting to note that these skill-differentiated emigration patterns in the past five years identified by the cohort approach outlined above are exactly the opposite to those identified on the basis of destination country statistics up to 2010 contained in the IAB's brain-drain database (see Section 2.1). This does not mean that the V-pattern of Serbian emigration stock by skill levels has disappeared or will do so, but it does indicate that the 'V' might have become much shallower in recent years.

3. LINKS BETWEEN THE LABOUR MARKET AND MIGRATION OUTCOMES

In this chapter, we attempt to provide reasonable explanations for the overall and structural migration outcomes in the past decade observed and presented in the previous chapter, by connecting them to features of the Serbian labour market and labour force that could most plausibly have influenced these outcomes.

Migration decisions are heavily influenced by the availability of migration options in the destination countries for potential migrants overall and for certain groups among them. Thus, we also try to infer from the available data whether the size and structure of emigration from Serbia was primarily influenced by so-called push factors (the main ones being expected local earnings and probability of employment without migration) or by pull factors (expected earnings and probability of employment in the potential destination country, as well as the ease of migration determined by the destination country's immigration policy).

At first sight, and somewhat counterintuitively, the rapidly increasing flows to the EU in the 2015–19 period coincided with steady employment and GDP growth in Serbia, as well as a general improvement in labour-market indicators, including a significant reduction in youth unemployment. This indicates that factors on the 'pull' side must have played a very important role. Two obvious ones were the German 'Western Balkan regulation'[7] of 2016 and increased labour shortages in fast-growing economies and/or declining populations in NMS. Serbian workers were very eager to grab the resulting new job opportunities as they appeared. The huge increase in the number of first-time work permits issued in NMS is particularly impressive. The responsiveness and readiness of Serbian migrants to take mostly temporary jobs entailing relatively modest net wage gains and to be flexible regarding their longer-term career paths further confirm our belief that recent migration flows followed the NELM model and were less consistent with the patterns of high-skilled migration.

What makes manufacturing jobs in Slovakia, Slovenia or Poland, typically paying a monthly wage of around EUR 1,000, so attractive to temporary, mostly medium-skilled VET migrants from Serbia? The answers below reveal some important idiosyncrasies of the Serbian labour market that may have more general importance for the inclination among and incentives for different groups within the labour force to migrate.

First, the average and median real-wage levels in most NMS increased steadily throughout most of this decade, while, in Serbia, they remained stagnant, forcing the country to embark on a fiscal austerity programme during the 2015–18 period.

Second, public-sector wages in Serbia are much higher than those in the private sector. Before the fiscal consolidation, the adjusted public-sector wage premium (controlled for education level and other key worker characteristics) in Serbia was as high as 17%, but during the years of fiscal consolidation programme in 2015–18, it dropped to around 6% (Vladisavljević, 2019). In the NMS, on the other hand, adjusted wage premiums are typically a factor in the private sector. As a practical illustrative

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[7] The German Western Balkan Regulation (Westbalkan Regelung) was a response to the disproportionately high number of asylum applications from the six countries of the Western Balkans in the wake of the 2015 refugee wave from the region. In an attempt to transform those asylum applications into labour migration, around 65,000 visas were issued by Germany under this regulation for labour migrants from the region between 2016 and 2020.

example, while the salary of a Slovak teacher might be around 50% higher than that of their counterpart in Serbia, a worker in a Slovak car plant can make at least twice as much as a similar worker in Serbia. Furthermore, the labour taxation system in Serbia, when comparing labour tax wedges, is less favourable to low- and medium-wage labour compared with these systems in the NMS, except for Hungary.

Third, behind the fairly rapidly improving employment statistics, the problem of low-quality jobs remains, especially outside of the public sector. As a share of total employment, informal employment stands at around 18%, and low work intensity and underemployment in various forms are widespread. Between the ages of 25 and 55, the average Serbian man spends more than three out of every ten years in unemployment or economic inactivity, while the average Serbian woman spends 17 years of her working life in unemployment or inactivity, far more than her counterparts in EU and OECD countries (World Bank, 2019). Moreover, relatively a higher share of employment consisted of self-employed individuals (27.7%), which is considered less advantageous, and almost one-quarter of total employment (24.3%) could be classified as 'vulnerable employment'[8] in 2019 (ETF, 2020).

There is a pronounced duality in the Serbian labour market. On the one hand, there are permanent public-sector employees and some primary private-sector[9] employees who enjoy a privileged position, owing to job security, high wages and relatively light taxation. On the other hand, large portions of the working-age population are engaged in low-paid and less protected jobs. Since access to the more stable jobs in the primary labour market is limited (even more so, since the onset of fiscal consolidation programme in 2015), and long-term career-planning is hampered by the precariousness of jobs in the secondary labour market, those in the latter are eager to switch jobs and a significant proportion of these workers is migration-ready. Thus, the lack of availability of good jobs is a stronger determinant of migration readiness within the Serbian labour force than the general unemployment rate and individuals' own employment status.

While the Serbian workforce generally appears to provide an unlimited supply of export-ready labour without this having much impact on labour-market outcomes in the country, this is not so in the case of the growing number of high-demand occupations. Skills shortages have become more common in recent years, including in manufacturing (metal-processing, in particular), construction (owing to the housing-market and civil-engineering investment booms) and road transport (e.g. truck drivers). As Serbian manufacturing firms become more like those in other central and eastern European countries, i.e. more closely integrated into global value chains, they are increasingly competing for the same types of skilled workers and so have to offer more competitive salaries.

Another key group is medical staff (nurses and physicians), whose main destination throughout the past decade has been Germany. The aforementioned public-sector wage premium, together with the

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[8] These rates were down from 32.4% and 28.6%, respectively, in 2010 (ETF, 2020). The incidence of vulnerable employment is expressed by own-account workers and contributing family workers as a proportion of the total employed. This is calculated according to the Resolution concerning the International Classification of Status in Employment (ICSE-93), adopted by the Fifteenth International Conference of Labour Statisticians in January 1993. See: www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_087562.pdf

[9] According to the theory of dual or segmented labour markets, the labour market is not a single arena but it is segmented into two tiers or sectors. In the upper or primary labour market, workers enjoy relatively high wages, fringe benefits, satisfactory working conditions and employment security. In the secondary labour market, wages are low, benefits are minimal or non-existent, work conditions are less desirable, and layoffs and periods of unemployment are more probable.

general prestige associated with the medical profession, have led to a longstanding oversupply of physicians and nurses, resulting in thousands of registered unemployed and lengthy school-to-work transitions, especially for doctors. Serbia's education system produces more health workers than the OECD average, but the significant portion of current medical doctors are considering leaving and there is already a lack of highly sought-after specialists in some health sectors (Institute for Public Health of Serbia, 2015). While Serbia is not yet facing an urgent shortage of medical staff, the increased outflow of experienced staff is already ringing alarm bells. There was a general pay increase for medical workers (15% for nurses and 10% for doctors) in 2019, followed swiftly by another one in 2020, in light of the Covid-19 outbreak.

4. LINKS BETWEEN EDUCATION AND MIGRATION OUTCOMES

Within Serbia, thanks to greater education-system coverage and the substantial differences in the average educational level between young and older cohorts, the educational level is rising quite quickly. For example, in 2019, the education attainment levels of people in the labour force aged 15+ were as follows: low-educated (ISCED 0–2) – 16.2% (down from 21.2% in 2010); medium-educated (ISCED 3–4) – 57.9% (down from 59.4% in 2010); and highly-educated – 26% (up from 19.3% in 2010) (ETF, 2020).

While this means Serbia, in terms of education coverage, still ranks below the NMS average (81.7%), it is catching up with them (CEVES, 2018). The tertiary educational attainment rate in the 30–34 age group stood at 32.8% in 2018, almost 8 percentage points lower than the EU average of 40.7%. According to data from the Statistical Office of the Republic of Serbia, in the 2017/18 academic year, a total of 1.25 million people participated in education (all levels), of whom 17% were in pre-school education, 43% in primary education, 20% in secondary education and 20% in tertiary education. In 2019, almost 74% of all upper-secondary students (ISCED level 3) were enrolled in vocational programmes. In the same year, the net enrolment rate in upper-secondary education was 87.7% of the relevant age group, while the gross enrolment rate in tertiary education was 67.8% (ETF, 2020, based on national estimates sent to UNESCO Institute for Statistics).

Overall, the performance of the education system in Serbia can be assessed as satisfactory. According to the ETF (2019b), the share of those aged 18–24 who leave education early is very low (6.6% in 2019, down from 8.3% in 2010), while participation by adults (aged 25–64) in training is still limited but improving (4.3% in 2019). The somewhat controversial World Bank Human Capital Index (HCI) developed in 2018 ranked Serbia 27th out of 157 countries in terms of human capital potential – higher than the average for its region and income group (World Bank, 2018) and despite the fact that general government expenditure on education was 3.7% of GDP in 2017, compared with 4.6% in the EU in the same year (Arandarenko, 2020).

According to the HCI, the number of years of school a child in Serbia who starts at age four can expect to complete is 14.6 ('expected years of school'), but when what children actually learn is factored in, that drops to 11.1 years ('learning-adjusted years of school'). The HCI also indicated that a child born in 2018 in Serbia would reach 76% of their full potential at the age of 18. However, the HCI was updated in 2020 and now the figure for expected years of school in Serbia is 13.3 years, while for learning-adjusted years it is 9.8 years. Meanwhile, according to the updated index, children born in Serbia today will be 68% as productive when they grow up as they could be if they enjoyed complete education and full health (World Bank, 2020).

On the other hand, the results of a survey in 2018 by the Programme for International Student Assessment (PISA), based on OECD methodology, typically placed Serbia well below the EU average in terms of students achievements, with scores similar to or slightly higher than its south-eastern European neighbours. Serbia was ranked 45th out of 79 participant countries and its scores in reading (439), mathematics (448) and science (440) were well below the OECD averages of 487, 489 and 489, respectively. In the same year, the percentages of 15-year-olds who achieved only the lowest level of proficiency were 38% in reading, 40% in mathematics and 38% in science. The corresponding EU-28 average for the same year was around 22% in all three disciplines.

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A recent ETF (2019b) study of skills mismatches found that most significant mismatches are related to school-to-work transition and seem to be triggered by the difference between the skills taught and those expected in the workplace. The study found that insufficient practical training of graduates is one of the most frequent reasons cited for the difficulty in recruiting and retaining young workers. On the other hand, intermediate and tertiary-level graduates tend to accept lower-level positions, in order to obtain the practical skills and work experience they are lacking.

Based on the indirect evidence from the distribution of migrant stock and migrant flows in recent years presented in the previous chapter, there are few indications that Serbian emigrants have, on average, significantly higher education levels and better skills compared with their peers of the same age who remain in the country.

Traditionally, the Anglo-Saxon countries have been the main migration destinations of high-skilled Serbian natives. Apart from, to a certain extent, the USA, all have adopted migration policies favouring high-skill immigration and discriminating against low-skill immigration. Thus, the migration flows from Serbia to these countries could represent a plausible proxy for the intensity of high-skill emigration. Canada and Australia, in particular, received significant numbers of high-skilled Serbian migrants during the 1990s and this outflow continued, albeit much less intensively, in the 2000s and 2010s. Other high-skill destinations are the USA, for scientists and artists; the United Kingdom and Switzerland, for technical professionals; and Germany, for medical doctors and high-skilled STEM migrants. More recently, the list broadened to include such countries as the United Arab Emirates, for various high-skill technical profiles, and China, for English-language teachers, but data for both destinations are difficult to obtain.

A look at the OECD migration database covering non-EU Anglo-Saxon countries reveals modest and essentially stagnant annual flows from Serbia. For example, between 2010 and 2018, the annual gross flow of Serbian migrants to Australia was between 200 and 300, and to Canada, between 250 and 500, without a clear trend. Only the numbers migrating to the USA increased – to around 1,000 annually (gross) after 2015 (SORS, 2019). Thus, despite the natural tendency of high-skilled migrants to emigrate to Anglo-Saxon countries, further strengthened by the widespread usage of English language in the country, it seems that Serbia has successfully kept in check this tendency for the past two decades. As the immigration rules in high-skill destination countries have not significantly changed, the most plausible explanation lies in the extraordinary success of the Serbian IT sector in attracting and retaining talent, which deserves more detailed elaboration.

Serbia's success as a regional IT hub using local high-skilled talent can be attributed to successful public intervention at primary-school level and a very supportive investment and taxation regime. Serbia is now better integrated into global value chains in the ICT domain. ICT is one of the rare sectors in which Serbia demonstrates a comparative advantage (Ilahi et al., 2019). Between 2007 and 2018, the value of Serbia's IT exports grew from 0.5% of GDP to 2.5%.

Most observers claim that the launch, in 2005, of the Microsoft Development Centre (developing Live Search, handwriting recognition, image analysis and database management technologies) was a turning point, spawning local start-ups around itself. Serbia has also benefited from the continuing boom in software outsourcing, thanks to the quality of the services provided by highly skilled IT specialists and the relatively low cost of production. Other international IT companies have entered the market by buying out Serbian firms that were providing coding services, software development and testing, and web design (Ilahi et al., 2019).

A thriving local IT community gradually emerged, comprising IT enthusiasts, freelancers, technical university graduates and IT returnees who established successful firms in Serbia (e.g. mobile games developer Nordeus), increasingly attracting foreign digital nomads. Many IT professionals benefit from a government tax regime that allows for lump-sum presumptive taxation for unincorporated entrepreneurs, thus effectively taxing their income at a much lower rate.

On top of this can be added the income earned by the growing community of Serbian telemigrants, which mostly gets recorded among the remittance inflows. Tele-migrant freelancers live in Serbia but work for foreign clients via the internet, often using online platforms like Upwork. Data provided by the Oxford Internet Institute[10] indicate that platform work is absorbing 4.5% of the workforce, mainly in 'creative and multimedia' professions, 'software development and technology' and 'clerical and data entry'. According to rough estimates, there are currently more than 20,000 tele-migrants in Serbia for whom foreign clients are their primary source of income, which places the country at the top of the world rankings on a per capita basis. According to an overview of the global internet freelance market in 2018, Serbia is ranked 11th in the world for number of freelancers and first in per capita terms, with 3.52 freelancers per 1,000 inhabitants[11].

Studying a foreign language is mandatory from the first year of primary school in Serbia. English is by far the most popular language, with 95% of students in primary and secondary schools studying it. The second most popular language is German, studied by around 25%. Its popularity has increased over the last decade, thanks to growing direct investment in Serbia from German-owned businesses and to improved job prospects in Germany itself, especially for students in medical disciplines and high-demand occupations covered by VET.

The education system has also prioritised IT knowledge acquisition. Informatics was taught as an elective subject in primary schools from 2002, before becoming mandatory in 2017. More than a quarter of university graduates every year major in technical subjects, more than in any other Western Balkan country, creating a strong pool of computer-science talent (Ilahi et al., 2019). In 2017, the government increased enrolment quotas in IT departments in universities by a further 20%.

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[10] www.oii.ox.ac.uk/blog/where-are-online-workers-located-the-international-division-of-digital-gig-work/

[11] See: https://analyticshelp.io/blog/global-internet-freelance-market-overview-2018/

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5. THE EXCEPTIONAL ROLE OF GERMANY IN SHAPING THE TRIANGULAR RELATIONSHIP BETWEEN MIGRATION, EDUCATION AND THE LABOUR MARKET IN SERBIA

Having identified increased emigration to Germany as the single most important development in Serbian emigration trends in the past half decade, in this chapter we look in more detail at the multiple interactions between Germany and Serbia that have not only shaped migration flows but also had a significant impact on education reform and labour-market trends in Serbia, making them an important case study of a bilateral triangular relationship between migration, education and the labour market.

Germany has been the single largest destination country for Serbian migrants for more than 50 years. During the same period, it has been the economic powerhouse of the EU and, from the second half of the last decade, almost the only OMS with a constantly growing demand for foreign labour, resulting in a more aggressive immigration policy. As already mentioned, the substantial increase in work-related emigration from Serbia to Germany in the past several years has been a direct consequence of the 'Western Balkan regulation' that came into effect in 2016, liberalising access to the German labour market for nationals of the Western Balkan countries.

In a way, the increased migration of Serbian nationals to NMS might also be explained as the result of a double-chain reaction. On the one hand, Germany is attracting labour from NMS, meaning the subsequent void left in those countries has to be filled by increased immigration from elsewhere, including Serbia. On the other hand, the economic growth and growing demand for labour in NMS is fuelled by their successful integration into global value chains, largely thanks to their close economic ties to the German economy (Ilahi et al., 2019).

While not economically interconnected with Germany to the same degree as the NMS, Serbia's economic and political ties to Germany have been greatly strengthened through a variety of channels in the last decade. Germany is Serbia's second most important export market and fourth largest foreign direct investment (FDI) source, with German-owned companies employing around 52,000 people at the end of 2018[12], or almost 4% of formal employment. The public perception of German employers is very positive, as they are considered to be reliable and respectful of collective and individual workers' rights, including fair pay, training and promotion possibilities. Thanks, to a large extent, to direct investment by German-owned businesses, Serbia is better integrated into global value chains, especially those related to the export of manufactured parts and components. This has been instrumental in Serbia's efforts to reindustrialise after the jobless transition to a market economy.

The German International Development Agency (GIZ) has greatly expanded its field of activities in Serbia, supporting economic growth, administrative reforms, youth employment and many other areas. In particular, GIZ has been involved in recent far-reaching VET reform, resulting in the adoption of a law on and subsequent introduction of dual education, where German, Swiss and Austrian dual-education systems have been taken as models for replication. Furthermore, GIZ has supported Serbia

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[12] This is according to a statement by Jörg Heeskens, advisor to the President of Serbia, see: https://novaekonomija.rs/vesti-iz-zemlje/nema%C4%8Dke-kompanije-zapo%C5%A1ljavaju-52000-radnika-u-srbiji

in adopting its Economic Migration Strategy 2021–27 and is currently helping it develop its Migration Action Plan.

In a recent paper, Clemens et al. (2019) favourably described what they call GIZ's three-pronged approach to supporting legal labour migration from sending countries. The authors grouped GIZ projects into those supporting: skilled migration (for example, migration of nurses, involving recognition of existing skills and provision of additional training in Germany); destination training (where migrants access training and apprenticeship programmes in Germany); and origin training (where training is offered to non-migrants in their countries, without direct expectation or encouragement of their migration to Germany).

Recently, Germany adopted the Skilled Immigration Act, which came into force in March 2020. It is expected to further boost immigration of skilled migrants into Germany, making it easier for skilled workers with vocational, non-academic training from non-EU countries to migrate to Germany in order to work. The current conditions for qualified professionals with university degrees will remain in place, with some relaxation of the rules. Now, qualified professionals will have to possess an employment contract, or a specific job offer, and a qualification recognised in Germany. Consequently, the Federal Employment Agency will not conduct a priority check of potentially available workers in Germany or the EU, but it will still verify the employment conditions. Professionals with a German-recognised vocational training qualification are also able to come to Germany to look for a job and will be granted a residence permit for up to six months[13].

While the bilateral triangular relationship between Serbia as the origin country and Germany as the destination country appears to be mutually beneficial, the asymmetry of economic and political power suggests that the current 'tacit arrangements' bring more benefits to the more powerful side. However, this is partly because Germany, unlike Serbia, has, over time, developed a well-thought-out strategic approach to resolving its long-term labour-market and population problems. A possible response by Serbia to the German strategy is addressed in the final chapter, in which Serbia's current migration policy is analysed.

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[13] www.make-it-in-germany.com/en/visa/skilled-immigration-act/

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6. MIGRATION PERCEPTIONS, MIGRATION INTENTIONS AND POLICY RESPONSES

According to public perception, most media articles and the likes of Wikipedia entries, the size of the Serbian diaspora is in the range of 2–3 million, i.e. two to three times the official international estimates. Similarly, the data on first-time residence permits issued to Serbian nationals in EU countries presented in earlier chapters have invariably been interpreted in various media articles in terms of an annual net outflow in the migration balance and, even more dramatically, as permanent departures from Serbia. To create a more informed picture, it would be advisable for the country's Statistical Office to produce annual official estimates of migration flows with detailed explanations.

Without official national statistical guidance, it is difficult to reconstruct with precision what was really going on from around 2015 until the sudden cessation of migration flows in early 2020 due to the Covid-19 pandemic. Nevertheless, based on the data presented in previous chapters, it seems highly plausible that most of the recorded increase in EU residence permits issued to Serbian nationals was due to increased temporary migration rather than a systemic rise in permanent migration. This is consistent with available information on the distribution of permits by destination country and reason for stay. The only important exception might be Germany, where there is an overlap between the skill-neutral family reunification as the final element of permanent migration and the medium- and high-skilled work-related migration of medical staff and other highly sought-after skilled workers.

Despite the lack of confirmed statistics of a brain drain – defined as *disproportional* emigration of high-skilled people – public perceptions of brain drain as an established fact have persisted for a long time in Serbia. The most striking example of this negative perception unsupported by the facts is the Global Competitiveness Index's 2017–18 ranking of Serbia among the worst in the world, in terms of its ability to retain its talent or prevent 'brain drain'. Currently, according to the perception of a representative sample of Serbian executives[14], the country ranks 134th out of the 137 countries included in the assessment. Again, this appears to be significantly at odds with the objective data presented in Chapter 2 or those contained in the International Brain Drain database, which suggest that Serbia is among those emigration countries with a less pronounced brain drain.

Another striking example of how preconceptions can enter public discourse as seemingly objective scientific facts is provided by a recent study on the cost of emigration from Serbia (WFD and IDI, 2019). The study estimated the total societal cost of the brain drain of young people who leave Serbia each year, based on the total cost of their education, estimated at around EUR 1–1.2 billion, which translates into an annual loss of up to 2.1% of GDP. This is the widely publicised headline finding, yet, if net outflow is considered, the share of GDP lost owing to emigration drops to slightly below 1%. This simplistic and erroneous approach, later replicated throughout the Western Balkans, has, to our knowledge, not been applied anywhere else in the migration literature. It conflates individual and social costs of education, neglects multidirectional portability of human capital, ignores secular growth in circular migration and even implies that migrants 'owe' something to the home countries that allegedly raised them, thus potentially encouraging governments to claim 'their' money back from migrants or their families still at home.

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[14] World Economic Forum, 'Country capacity to retain talent', *Executive Opinion Survey*: http://reports.weforum.org/global-competitiveness-index-2017-2018/competitiveness-rankings/#series=EOSQ399

There is abundant literature on migration intentions, often based on special e-surveys or interviews and focus group discussions. In 2019, a group of authors (from the geography faculty of the University of Belgrade) conducted an extensive survey on migration intentions and attitudes towards migration in four Serbian municipalities: Leskovac, Uzice, Zrenjanin and Zajecar. They created a profile of a typical potential migrant: male, aged 20–24, city dweller, living with his parents or as a tenant, completed at least secondary school, unmarried, without a job and has relatives or friends abroad. The authors found that, in this age group, 57.1% considered relocating abroad, but intentions to move abroad reached their peak in the 25–29 age group, with a share of 63.8%. More than a quarter of those intending to emigrate had plans to leave immediately (within a year).

Todorovic and Djordjevic (2020) analysed the motives and characteristics of potential skilled migrants from Serbia based on a sample of 117 people with a mean age of 26 years. Two thirds of those surveyed had a degree in economics. The key question was what wage they would consider acceptable, either abroad or in Serbia. For abroad, the acceptable average was around EUR 2,300, while, for Serbia, it was around EUR 1,050. The survey was based on both quantitative and qualitative questions related to push-and-pull motives for migration.

A Regional Research Promotion Programme study by Pudar-Draško et al. (2015) reviewed and analysed the problems and challenges faced by young researchers when going abroad to study and on their return to Serbia. Students from Serbia are often forced to emigrate because of the low level of investment and lack of capacity of domestic research institutions. The desire to leave is very strong, especially in view of the poor socioeconomic conditions, insufficient employment opportunities and/or the lack of chances for professional development. Young people return to the country mainly when they have to, i.e. because their visa expired, or they were unable to find a permanent job abroad. The study highlights the problem of degree recognition, which has been a major obstacle for young returnees so far. It also provides an overview of the factors that motivate young researchers to stay in Serbia, with scholarships and finding a job definitely the most important considerations.

In another Regional Research Promotion Programme study (Pavlov et al., 2014), spin-off interviews and a small-sample electronic survey were used to analyse the experience of transnational entrepreneur returnees and their contribution to the development of innovative sectors, especially in the field of ICT. Predojevic-Despic et al. (2017) conducted an online survey of skilled Serbian migrants in the USA and Canada, who had emigrated there from 1991. While respondents in Canada mostly cited economic reasons, for those in the USA the most important reasons related to their desire to achieve professional advancement. Vasojevic et al. (2017) conducted an e-survey of scholarship-holder returnees and found that the primary motive for studying abroad was their desire for personal development. An important factor for their return was the expectation of gaining a comparative advantage in the labour market. The scholarship-holders used their acquired knowledge only partially and thus did not have enough influence on the development of their organisations.

In 2019, the government gave in to public demand that 'something needs to be done before it is too late' and passed several ad hoc measures aimed at preventing and reversing migration, especially of high-skilled professionals. In that context, special tax reliefs have been offered to employers hiring high-skilled returnees educated abroad and earning at least three times the average wage, as well as to high-skilled foreign nationals employed in Serbia – the latter apparently in an effort to attract foreign IT talent to support the growing needs of the IT sector. Apart from the aforementioned pay rises for medical staff in public hospitals and health centres, the substantial double-digit increase in the minimum wage in 2020 was partially presented as an anti-migration measure. Similarly, the government has also committed to ensuring the average net wage of EUR 900 by 2025, as well as the

average pension of more than EUR 400. An affordable housing programme for public-sector employees and young researchers has also been announced.

The Strategy for Economic Migrations 2021–27 was adopted in early 2020, with the following priority goals: building and strengthening institutional capacities for monitoring and increasing the quality of data on economic migration; improving living and working conditions in economic and social sectors; aligning the educational system with the needs of the economy, focusing on following up innovations created by the fourth industrial revolution, particularly in relation to developing new occupations and creating conditions to attract foreign students; advancing cooperation between the diaspora and the homeland, and encouraging transnational entrepreneurship; creating conditions for monitoring, encouraging and supporting circular and returning migration; and creating conditions for more efficient management of internal migration flows.

It is interesting that the first draft of the strategy focused much more narrowly on preventing high-skilled migration and facilitating the return of high-skilled migrants, as well as attracting high-skilled immigrants. Fortunately, the strategy adopted has a more comprehensive approach, although it lacks operational details. As of January 2021, an action plan for implementing the Strategy from 2021 to 2023 was submitted for public consultation.

7. CONCLUSIONS AND POLICY RECOMMENDATIONS

Like other Western Balkan countries, Serbia faces a serious emigration problem and needs to address it strategically. Nevertheless, it is probably in a better position compared with its regional neighbours. There is no immediate threat of a mass exodus or migration-driven mass depopulation – a general conclusion unfortunately aided by the crisis caused by the Covid-19 pandemic. Recent increased outflows were shaped by demand rather than supply factors. Most new migrants are apparently flexible and adaptive, eager to grab temporary work opportunities, rather than long term-oriented and proactive. Some of them are not only pulled by positive wage differences abroad but also pushed by the negative idiosyncrasies of the domestic labour market, such as the large public-sector wage premium, regressive taxation of labour and inaccessibility of quality, secure jobs in the primary labour market.

Overall, there are no indications that a recent spike in work-related migration has disproportionately depleted Serbia of high-skilled professionals. On the contrary, the cohort approach based on LFS data shows that the opposite is more likely to be the case. In addition, the fact that Serbia attracts a sizeable number of immigrant students, mostly from the Western Balkans, thus improving its high-skilled migration balance, is often overlooked.

Some people leave Serbia permanently in search of higher living standards and a better life, and so become estranged from their home country over time. Most recent migrants, however, opt for engaging in circular migration, which is intrinsically beneficial, in a Smithian manner, both for themselves and for their home country. They improve their existing or gain new, useful skills, are able to take better care of the needs of their families and contribute to the economic progress of their country by spending at home most of what they earn abroad. In short, it would be a wise migration strategy for a middle-income country like Serbia, situated in close proximity to one of the richest regions in the world, not to attempt to minimise *all* migration. Rather, it should aim to minimise *permanent* migration.

Our analysis has shown that among the Western European destinations traditionally preferred by potential permanent migrants from Serbia, only Germany has an ever-increasing demand for high-skilled migrants and a willingness eventually to naturalise them. At the same time, Germany provides responsible leadership by example to other, less active labour-importing EU countries, pioneering a comprehensive approach to orderly migration. In view of the newly adopted German Skilled Immigration Act, which is expected to further intensify skilled migration, especially once the effects of the Covid-19 pandemic crisis start to fade away, Serbia could attempt to negotiate a comprehensive arrangement with Germany that would benefit both parties by balancing Germany's growing need for high-skilled workers with Serbia's interest in improving the human capital of its resident labour force and minimising permanent migration.

Serbia's negotiating strategy could include: the creation of a joint German-Serbian committee for monitoring migration flows and skills needs in both countries; insistence on expanded training in Serbia for non-migrants; relaxation of age discrimination towards work migrants over 45; and application of a mixed-skill rather than high-skill immigration strategy for migrants from Serbia. Depleting Serbia (or any other European country of origin) of a high-skilled workforce by aggressively pursuing its own high-skill immigration agenda might backfire for Germany in the long run, in that it

would lose the benefits of employing a high level of human capital in its foreign direct investments in the countries of origin and their stronger integration in global value chains.

More generally, Serbia should engage with the European Commission to make sure that the new EU Pact on Migration and Asylum, published in September 2020, lives up to its promise of 'a comprehensive cooperation with partner countries to help boost mutually beneficial international mobility'. Equally important, circular migration patterns should be promoted over migration pathways that lead to permanent migration. As Milanovic (2019) points out, denying work migrants' right to citizenship and permanent residence in a destination country – or making them harder to obtain – should result in more immigration flows and a smaller migrant stock, which, for different reasons, could well be the preferred outcome for both the destination and origin countries.

Even if it manages to devise an optimal migration strategy, Serbia will, in the foreseeable future, remain vulnerable to the various undesirable effects of being a labour-exporting country. The demand for foreign labour in host countries is procyclical, which means that, in good times, Serbian firms can face pronounced labour shortages across the full skills spectrum, while, in bad times, the country might lose a part of the remittance inflow just when it needs it most. On top of that, it would be forced to cope with the needs of a larger resident population due not only to the return of vulnerable temporary migrants but also to the inability of short-term seasonal and circular migrants to travel abroad for work. This is exactly what has been happening since the start of the Covid-19 pandemic, proving that emigration and remittances are not suitable as automatic stabilisers in times of crisis. The projected drop in remittances of 15% would mean that the mild projected decline in Serbian GDP of 1–2% in 2020 would translate into a 2–3% decline in Gross National Disposable Income.

As identified on the basis of the links between migration and labour-market performance analysed in Chapter 3, reforming some aspects of how the labour market functions might be a good strategy, e.g. levelling up the wages and working conditions between public- and private-sector employment, in particular for medium-level jobs. This may also require revisiting the labour taxation system and helping to increase the productivity of certain sectors, which would lead to higher wages in the long run. Providing more opportunities for those in the secondary labour market to facilitate their transition towards better working conditions could help reduce the share of vulnerable employment and thus the share of migration-ready groups. On the other hand, salary differences are still large and a hypothetical strategy to rapidly close the pay gap with the destination countries may prove too costly and risky for macroeconomic stability.

Based on the links between migration and the human capital development system analysed in Chapter 4, the policy of increasing the national supply of skills by redirecting public expenditure towards higher-quality education is particularly important. This can be combined with more systematic monitoring of skills shortages and high-demand occupations in the labour market (e.g. in ICT, manufacturing/metal processing, construction, road transport), so that the education and training system can reorient itself towards improving supply for high-demand occupations, even if some of the workers trained eventually go on to emigrate. This might work much better if there is policy coordination and cooperation between Serbia and potential destination countries. The recent EU communication on launching Talent Partnerships with third countries could help boost mutually beneficial international mobility between Serbia and some EU Member States, such as Germany, if it can be put into practice.

LIST OF ACRONYMS

ETF   European Training Foundation

EU   European Union

EUR   Euro (currency)

FDI   Foreign direct investment

GDP   Gross domestic product

GIZ   Deutsche Gesellschaft für Internationale Zusammenarbeit (German International Development Agency)

HCI   Human Capital Index

IAB   Institut für Arbeitsmarkt- und Berufsforschung (German Institute for Employment Research)

ICT   Information and communication technology

ISCED   International Standard Classification of Education

IT   Information technology

LFS   Labour force survey

NELM   New economics of labour migration

NMS   New Member States of the European Union

OECD   Organisation for Economic Cooperation and Development

OMS   Old Member States of the European Union

STEM   Science, technology, engineering and mathematics

USA   United States of America

VET   Vocational education and training

wiiw   Wiener Institut für Internationale Wirtschaftsvergleiche (Vienna Institute for International Economic Studies)

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