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Net Migration and its Skill Composition in the Western Balkan Countries between 2010 and 2019:

Results from a Cohort Approach

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Abstract

In our analysis we applied the newly developed 'cohort approach' to the six Western Balkan countries (Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia) for the period 2010-2019 to shed light on the total extent and skill composition of net migration, differentiating between four educational levels: Low (primary or lower secondary education), Medium-general (upper secondary general education), Medium-VET (upper secondary vocational education and training), and High (tertiary education). Our results show that during the period analysed all six countries experience net emigration. However, in terms of magnitude and particular age pattern these movements differ across countries. Net migration is particularly prevalent among the young. A high youth unemployment rate, family reunification and education abroad are key drivers behind this pattern. A further breakdown of net migration by highest level of education shows that net emigration in the region occurs mainly among the medium- and low-educated, particularly among those in their early to mid-20s and early 30s. There is evidence of *brain drain* in Albania, Bosnia and Herzegovina and Kosovo. In Albania, net emigration of the highly educated is substantial and accounts for almost 40% of the total estimated cumulative outflow. Brain drain in Albania and Kosovo is highest among recent university graduates. Importantly, and contrary to widespread perception, there is evidence of *brain gain* in some Western Balkan countries, namely in Montenegro, North Macedonia and Serbia. The key drivers of this are students, who return in large numbers to their home countries after graduating from tertiary education abroad. In Serbia and Montenegro immigration of highly skilled workers is also important in this context.

Preface

This report forms part of the regional study on 'Migration Dynamics from a Human Capital Perspective in the Western Balkans'. The study was launched in 2020 by the European Training Foundation (ETF) and carried out jointly with the Vienna Institute for International Economic Studies (wiiw) with the aim of shedding light on the triangular relationship between human capital formation, labour markets and migration and determine how the current functioning of education systems and labour markets affects migration.

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Net Migration and its Skill Composition in the Western Balkan Countries between 2010 and 2019: Results from a Cohort Approach

1. INTRODUCTION

International migration of people is one of the most visible and significant aspects of globalisation. It has reached unprecedented levels as increasingly more people move across borders in search of better labour market opportunities elsewhere and to escape poverty, political unrest, war or the consequences of climate change. Paradoxically, however, data on international migration which countries collect and publish are limited, so that more is known about international trade and investment flows than about the extent and type of migration. This therefore leaves some important questions unanswered (Santos Tomas and Summers, 2009).

This is also true for the six Western Balkan countries (WB6 – Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia), which lack official, comprehensive and home-based migration statistics, particularly in terms of the skill composition of migrants.

In view of the scarcity of reliable and detailed data on migration we developed the novel 'cohort approach', which allows us to deduce from annual Labour Force Survey (LFS) data the extent and skill composition of net migration. This approach borrows from population science the key concept, which considers population change to be determined by its components fertility, mortality and net migration. Hence, put differently, in the absence of fertility and mortality any population changes are the result of net migration. It concentrates on the sub-population of persons aged 15-39, which is characterised by zero fertility, little mortality and strong migration dynamics, so that net migration can be calculated with high precision. This sub-population is further split into five representative age cohorts, who are followed over time and whose change in size and composition provides information about the extent and skill composition of net migration.

In terms of skill composition, we differentiate between four educational levels:

› Low (primary or lower secondary education);

› Medium-general (Med-GEN = upper secondary general education);

› Medium-VET (Med-VET = upper secondary vocational education and training); and

› High (tertiary education).

The period of analysis refers to the period 2010-2019. However, due to substantial breaks in some of the LFS data (resulting, for example, from a change in the ISCED classification, a shift in the sampling frame for the LFS from the previous census to the 2011 census or incomplete compatibility due to methodological changes), we used shorter periods in some countries to avoid break-related biases

(2010-2019 for Bosnia and Herzegovina and North Macedonia; 2011-2019 for Albania and Montenegro, 2014-2019 for Serbia; 2015-2018 for Kosovo).

We differentiate between two different periods (2011-2014 and 2015-2019), which allows us to shed light on general period-specific effects and particular cohort-specific effects, as cohorts tend to display different net migration patterns when they are younger (during the first period) compared with when they are older (during the second period). Since estimated annual net migration tends to fluctuate considerably, we present the results in cumulative numbers by period.

2. NET MIGRATION AT THE AGGREGATE LEVEL

Our results highlight that all six Western Balkan countries experienced net emigration of the target population 15-39 during the period of analysis. However, the extent of net emigration differs across countries, not least because of the different time horizons analysed. Hence, for reasons of comparison we calculated average net migration rates[1] for each Western Balkan country. Figure 1 shows that average net migration rates were highest in Bosnia and Herzegovina (-12), Kosovo (-7) and Albania (-4.5), and lowest in Montenegro, North Macedonia and Serbia with around -1, respectively.

Figure 1 / Average net migration rates (per 1,000 population)
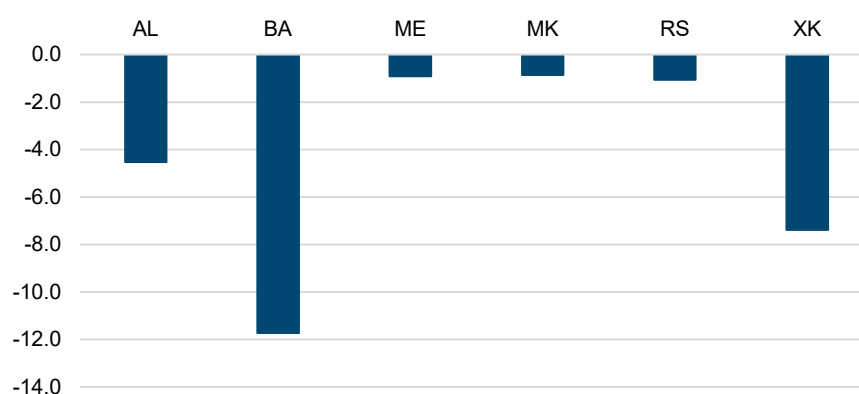
Sources: Labour force surveys for Albania (AL), Bosnia and Herzegovina (BA), Montenegro (ME), North Macedonia (MK), Serbia (RS), and Kosovo (XK); own calculations.

Several potential factors help to explain the non-negligible net emigration flows. First, pervasive poverty, which is particularly high in Kosovo, where in 2017 an estimated 18% of the population lived below the poverty line, with 5.1% of the population living below the extreme poverty line (World Bank, 2019). Second, diaspora networks, which provide information and resources that facilitate emigration. For instance, in 2010 – the first year of our analysis – the worldwide stock of migrants from the region was substantial and amounted to 11% of Serbia's total domestic population, around 25% of North Macedonia's and Montenegro's, and 38% and 42%, respectively, of Albania's and Bosnia and Herzegovina's total domestic population (UN Statistics). Third, a relatively high unemployment rate in the WB6, which improved over the period of analysis but remained nonetheless high at 36% in 2018 (SEE Jobs Gateway

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[1] The average net migration rate is the average of the ratio between the difference between immigration and emigration and mid-year population over 2010-2019.

database). Fourth, more, higher-quality and better-paying employment options in potential destination countries or particular schemes that facilitate migration, such as Germany's Western Balkan Regulation, which entered into force in 2016 and induced numerous Western Balkan nationals to seek employment in Germany. The Regulation was a response to the influx of asylum seekers from the Western Balkans into Germany in 2014-2015, mainly from Albania and Kosovo,[2] who had almost no chance of being granted asylum, and from Syria. It opened the labour market for nationals from the six Western Balkan countries without including any minimum skill or qualification requirements.

Net migration patterns follow a particular life cycle, with substantial net emigration among the young. In North Macedonia and Kosovo the age pattern of net migration is characterised by net emigration among the younger cohorts and net immigration among the older cohorts. In Montenegro net migration patterns are period-specific, with net emigration among the youngest cohort and net immigration among the oldest cohorts during the first period and, conversely, with net immigration among the youngest cohorts but net emigration among the oldest cohorts during the second period. Immigration into Montenegro helps to explain the substantial net immigration among the youngest cohorts during the second period: between 2010 and 2017 around 20,000 work permits were issued annually to foreigners, mainly to persons in their prime years (and mainly to Serbians and Bosnians) (Krasteva et al., 2018). Most of these work permits are of a seasonal nature, for work in construction, tourism and trade (Krilić and Jevšnik, 2018). In Serbia all cohorts show net emigration, with the exception of persons in their 30s between 2015 and 2019, who show non-negligible net immigration. Their high net immigration is probably also related to immigration into Serbia, which is quite substantial: between 2015 and 2019 an average of some 8,000 first permits were issued annually (Commissariat for Refugees and Migration, 2016, 2017, 2018, 2019, 2020), mainly for the purpose of work. In Albania, with only a few exceptions, emigration occurs among all cohorts, although it is most pronounced among the youngest cohorts. Bosnia and Herzegovina experiences net emigration among all cohorts; there are no exceptions, but net emigration is again strongest among the youngest cohorts.

High youth unemployment, family reunification and education abroad help to explain the high net emigration among the youngest cohorts. Generally, the unemployment rate among the two youngest cohorts (aged 15-19 and 20-24) is substantially higher than among the oldest cohort. In particular, our calculations show that in Bosnia and Herzegovina and Serbia the young are three times more likely to be unemployed than the members of the oldest cohort, and twice as likely in Albania, Kosovo, Montenegro and North Macedonia.

Furthermore, a breakdown of the number of first permits issued to WB6 nationals in the EU28+ (EU28 plus Iceland, Liechtenstein, Norway and Switzerland) for the purpose of emigration highlights that family reunification is generally a key reason (see Table 1). This is particularly prevalent among those aged 19 years or younger, followed by those between 20 and 29 years of age.

Moreover, many young people emigrate to pursue further education abroad, particularly those in their early to mid-20s who have finished their upper secondary education – typically between the ages of 18

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[2]   According to the World Bank (2015), an estimated 5% of Kosovo's population left for the EU in 2014-2015. In Germany, the number of asylum applications from Kosovars more than doubled from around 4,500 in 2013 to almost 9,000 in 2014, and in 2015 it more than quadrupled to around 37,000. Similarly, between 2014 and 2015 the number of asylum applications from Albanians in Germany increased almost seven-fold from around 8,000 in 2014 to almost 55,000 in 2015 (Eurostat).

and 19. In particular, a non-negligible number of persons left the Western Balkan countries between 2010 and 2019 for the EU28+ to pursue further education (see Table 1). Additionally, besides the EU28+, Serbia is also an important regional hub which attracts many foreign students to study at its universities (Statistical Office of the Republic of Serbia, 2019b). Finally, while young people have a higher propensity for risk-taking behaviour, they are also more likely to have fewer responsibilities, such as looking after family members, and are more willing to embark on new professional career paths – all of which makes them generally more prone to migrate.

Table 1 / Total number of first permits issued to WB6 nationals in the EU28, Iceland, Liechtenstein, Norway, Switzerland, by reason (2010-2019)

|	Work	Family	Education	Other	Total
Albania	86,073	281,303	18,765	114,959	498,875
Bosnia and Herzegovina	129,585	105,485	17,033	20,722	272,155
Montenegro	5,094	9,313	3,076	4,731	22,080
North Macedonia	40,849	88,267	9,325	23,932	160,633
Serbia	126,119	133,053	24,826	68,953	351,730
Kosovo	46,653	142,604	7,398	51,795	246,540

Source: Eurostat (migr_resfas).

3. NET MIGRATION BY SKILL GROUP

Net emigration in the region occurs mainly among the low- and medium-educated, with the exception of Albania and Serbia (Figure 1). In Bosnia and Herzegovina net emigration is most pronounced among persons with Med-VET skills, who account for almost 60% of the total estimated outflow, followed by the low-educated. In North Macedonia and Kosovo net emigration occurs mainly among the low-educated and those with Med-GEN as their highest level of education. However, in North Macedonia net emigration is mainly concentrated among the low-educated, while in Kosovo it occurs mainly among persons with Med-GEN as their highest level of education. In Montenegro, net emigration is also mainly concentrated among the medium- and low-educated.

By contrast, in Albania net emigration is highest among the highly educated and those with Med-VET skills. The very low net emigration among the low-educated and the high net immigration among those with Med-GEN as their highest level of education in the first period of analysis (2012-2014) is related to the global financial crisis. The subsequent economic depressions in Italy and above all in Greece, which hit the Albanian diaspora in these two key destination countries particularly hard, spurred a wave of mass return migration, especially among these two educational groups (Hausmann and Nedelkoska, 2017).

In Serbia, net emigration occurs solely among the medium-educated but is particularly high among those with Med-VET skills. However, while in absolute terms net emigration of those with Med-VET skills is substantially higher than of those with a Med-GEN education, given the relatively low number of Med-GENs in the population – they only account for around 26% of all medium-educated persons in Serbia in 2018 (UNESCO) – their net emigration is sizeable.

Figure 2 / Cumulative net migration flows by educational attainment level: 2011-2019
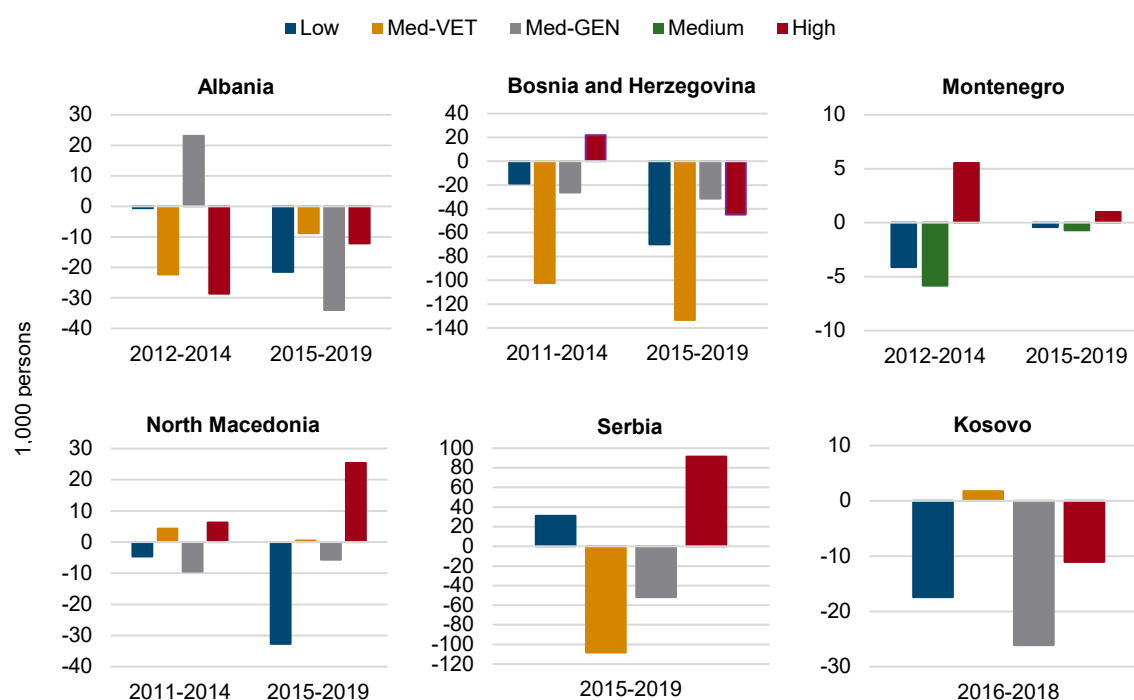
Note: The period of analysis refers to 2010-2019. However, due to different substantial breaks in the underlying data, shorter periods were used for some WB6 countries. The cohort approach approximates net migration through the differences in cohort size between two consecutive years. Hence 2011 – the first year reported here – refers to the difference between 2010 and 2011. Educational levels are divided into four categories: Low (primary or lower secondary education), Med-GEN (medium-general – upper secondary general education/gymnasium), Med-VET (upper secondary vocational education and training), and High (tertiary education), based on ISCED. Negative numbers refer to net emigration, while positive numbers refer to net immigration. The ISCED break in the Montenegrin LFS data between 2013 and 2014 strongly affects how the two groups of Med-VETs and Med-GENs are classified. To facilitate interpretation, net migration flows for both periods are calculated for the aggregate Medium group as the sum of net migration flows of Med-VETs and Med-GENs.
Sources: Labour force surveys for Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia, and Kosovo; own calculations.

Overall, net emigration of the low- and medium-educated is strongest among the younger cohorts, which comprise those who are in their early to mid-20s to early 30s. Employment abroad, family reunification and further education are likely to be the key drivers for this age pattern.

There is evidence of brain drain in Albania, Bosnia and Herzegovina and Kosovo (Figure 2). In Albania, net emigration of the highly educated is substantial and accounts for almost 40% of the total estimated cumulative outflow between 2012 and 2019.

In Bosnia and Herzegovina, migration patterns of the highly educated are complex and differ according to the period under consideration, with net immigration among all cohorts during the first period (2012-2014) but substantial net emigration among almost all cohorts during the second period of analysis (2015-2019). In particular, brain drain in the second period is systematically higher than brain gain in the first period. This suggests that net immigration during the first period was only temporary and probably the result of the global financial crisis, which reduced the employment options of university graduates in their host countries significantly. Once the dust had settled and economies started to recover from the

crisis, net emigration of the highly educated gained new momentum. Overall, however, net emigration of the highly educated is comparatively low and only accounts for 6% of the total estimated outflow between 2011 and 2019.

In Kosovo, net emigration of the highly educated is also substantial, although it is lower than that of the group of Med-GENs and of those with low educational levels.

Brain drain in Albania and Kosovo is highest among recent university graduates. Net emigration of the highly educated is particularly pronounced among the young – more specifically among those who are in their early to mid-20s. This suggests that the majority leave Albania and Kosovo just a few years after graduating from tertiary education. Better employment prospects and higher pay abroad may be their key motives for emigration.

Contrary to widespread perception, there is evidence of *brain gain* in some Western Balkan countries, particularly in Montenegro, North Macedonia and Serbia (Figure 2). In Serbia and Montenegro this is also attributable to the immigration of highly skilled workers who are attracted to work there, in addition to education (see next paragraph).

Students are the major drivers of the brain gain in Montenegro, North Macedonia and Serbia. Generally, the brain gain is highest among the youngest cohorts, particularly among those in their 20s. Since this is also the age at which tertiary education is typically completed, this suggests that net immigration of the highly educated is mainly driven by students who return to their home countries after graduating from tertiary education abroad. The simultaneous strong net emigration of both Med-VETs and Med-GENs among the youngest cohort is consistent with this idea: both groups seem to leave in larger numbers after graduating from upper secondary education and return as university graduates when they are still in their 20s. In the case of Serbia, brain gain is also related to foreign students attending Serbian universities, which report an increase in the number of foreign students (Statistical Office of the Republic of Serbia, 2019a). These students come mainly from neighbouring countries such as Bosnia and Herzegovina and Montenegro (Statistical Office of the Republic of Serbia, 2019b).

4. CONCLUDING REMARKS AND POLICY IMPLICATIONS

The study shows that during the period of analysis (2010-2019) all six Western Balkan countries experienced net emigration. However, net emigration differs across countries in terms of magnitude and particular age patterns. At -12%, the average net migration rate was highest in Bosnia and Herzegovina, followed by Kosovo with -7% and Albania with -4.5%. By contrast, net migration rates were lowest in Montenegro, North Macedonia and Serbia with 'only' -1%. Hence, the global stock of migrants from the region keeps increasing at sometimes astounding rates. Generally, there are different reasons for the substantial net migration rates, such as pervasive poverty, diaspora networks, high unemployment, better income and employment options abroad, particular schemes, etc. Their relative importance, however, varies across the WB6 countries.

The analysis shows that net emigration is particularly high among the young. An important driving factor is the **high youth unemployment rate** in the region: more than a third of young people are unemployed in the WB6. While the need to reduce youth unemployment is already high on the agenda

of governments across the region and some progress has already been made (many countries have included youth-specific policy outcomes in their national employment policies or formulated dedicated youth employment action plans), more and higher-quality efforts are needed in this regard. Furthermore, young people in the WB6 face a **serious lack of quality employment opportunities**. Many young workers are engaged in temporary jobs, often in the informal economy. Hence, policy efforts need to be devoted to creating quality employment (and fairly paid jobs) for the young to guarantee a decent living in their home countries. Otherwise emigration of the young will continue unabated or will even accelerate.

The analysis finds important differences in the migration patterns of the highly educated across the WB6 countries and attributes an important role to students in this regard. It finds evidence of *brain drain* **in the case of Albania, Bosnia and Herzegovina and Kosov**o – especially in Albania. In both Albania and Kosovo net emigration among the highly educated is **driven by university graduates**, who have more recently finished their tertiary education in their home country and decided to emigrate. The non-negligible **unemployment rate among the highly educated** is an importance push factor. In many fields of study there is an oversupply of graduates who face difficulties in finding a suitable job and consequently opt to emigrate. Furthermore, the **mismatch** between the skills needed in the labour market and the skills acquired during their years of study worsens the employment prospects of the highly educated. Hence, higher education policies need to be better aligned with, and more focused on, the requirements of the labour market. For instance, the relevance of study programmes should be improved by encouraging greater cooperation between higher education institutions and employers. Moreover, governments could use scholarship programmes to steer students away from oversupplied subjects towards priority subjects.

Contrary to widespread perception, the analysis finds evidence of *brain gain* in some WB6 countries, namely Montenegro, North Macedonia and Serbia. In view of the dominant role played by highly educated young people in this regard, it is obvious that students who return in large numbers to their home countries after graduating from tertiary education abroad play a key role. Brain gain in Serbia is also related to foreign students (mainly from the region) studying at Serbian universities. Furthermore, in Serbia and Montenegro, in addition to the return of highly educated foreign-trained emigrants, the immigration of highly skilled workers is also important. In this regard, these three WB6 countries are better positioned to attract (and hopefully retain) talent. It is nonetheless important to have policies in place which guarantee that foreign knowledge and know-how have a spillover effect on their local economies.

Related project:

[Migration and Human Capital in the Western Balkans](#)

Related paper:

'[Net Migration and its Skill Composition in the Western Balkan Countries between 2010 and 2019: Results from a Cohort Approach Analysis](#)', by Sandra M. Leitner, *wiiw Working Paper* No. 197, Vienna, March 2021

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