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***Emigrant Workforce and Remittance Inflows:
Some Evidence from the Western Balkans***

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Abstract

In this contribution, we briefly describe the key features that make Western Balkans a quintessential labour-exporting region – large absolute and relative migrant stocks abroad and remittance inflows. We estimate total employment and employment rates for the *citizens* (and/or *natives*) of the Western Balkans countries, rather than for their residents as in the standard national Labour Force Survey statistics. Two different approaches have been applied to obtain estimates of citizens' employment around the year 2014 and we come up with two sets of estimates, depending on the sources used and the methodology applied. Next we create a simple relative measure of the emigrant employment that we call 'citizen employment surplus' and calculate it for each country within the region. Comparing the citizens' employment surpluses with the recorded remittance inflows, we find relatively weak links between the size of emigrant employment and remittance inflows. We discuss potential factors behind this finding and conclude that further research combining the information obtained at the levels of households with those coming from macroeconomic statistics is necessary.

Key words: migration, remittances, citizens' employment surplus, Western Balkans

1. Introduction

The Western Balkans is a region with notoriously low employment and activity rates. At the same time, it is an emigration and labour exporting region, with the share of citizens (and/or natives) estimated to live abroad ranging from 14% for Serbia to 47% for Bosnia and Herzegovina. Citizens are all persons holding a citizenship of a country,

regardless of their residence. Natives are all persons born in a country, no matter where they currently reside. In the rest of the paper, we use these two terms interchangeably, with the preference given to 'citizens' for practical reasons.

As a consequence of emigration, Western Balkan countries have significantly more employed citizens than employed residents. Likewise, their gross national disposable incomes (GNDIs), comprising income and unilateral transfers (such as remittances and international aid) received by all resident persons and entities within a country, regardless of the location of production and origin of transfer, are significantly higher than their gross national incomes (GNIs) or gross domestic products (GDPs). These simple but important facts have far reaching consequences for understanding labour markets and overall economic dynamics in the Western Balkans.

To the best of our knowledge, our work is the first attempt to estimate total employment and employment rates for the *citizens* (and/or *natives*) of the Western Balkans countries, rather than for their residents as in the standard national Labour Force Survey (LFS) statistics. Since it is a pioneering effort, a variety of sources has been used and two different approaches have been applied to obtain estimates of citizens' employment around the year 2014. Our first approach combines data from national LFSs with data on immigrant population and employment from Eurostat and OECD databases. Our second approach uses sources from the sending countries only, combining LFS data on resident population with the set of census data on emigrants. We come up with two different estimates, depending on the sources used and the methodology applied.

The remainder of the paper is organized as follows. In Section 2 we describe the key features that make Western Balkans a quintessential labour-exporting region – absolute and relative migrant stocks abroad and remittance inflows. In Section 3, we calculate the Western Balkans' emigrant employment based on two different approaches, both yielding similar results. We create a simple relative measure of the emigrant employment that we call 'citizen employment surplus' and calculate it for each country within the region. Comparing the citizens' employment surpluses with the recorded remittance inflows, we find relatively weak links between the size of emigrant employment and remittance inflows. In concluding Section 4, we discuss potential factors behind this finding and conclude that further research combining the information obtained at the levels of households with those coming from macroeconomic statistics is necessary.

2. Western Balkans as a quintessential labour-sending region

Labour markets

The region of Western Balkans currently comprises six countries and territories, which from West to East are Bosnia and Herzegovina, Montenegro, Serbia, Albania, Kosovo and FYR Macedonia. It might rightly be seen as a mere geopolitical construct doomed to further shrinking and eventual disappearance by blending into the wider region of the Balkans or South Eastern Europe once the EU integration of the region is completed. Still, it has some important features that suggest that these countries share much more than just being close neighbours lagging behind the rest of Europe in economic development and political integration.

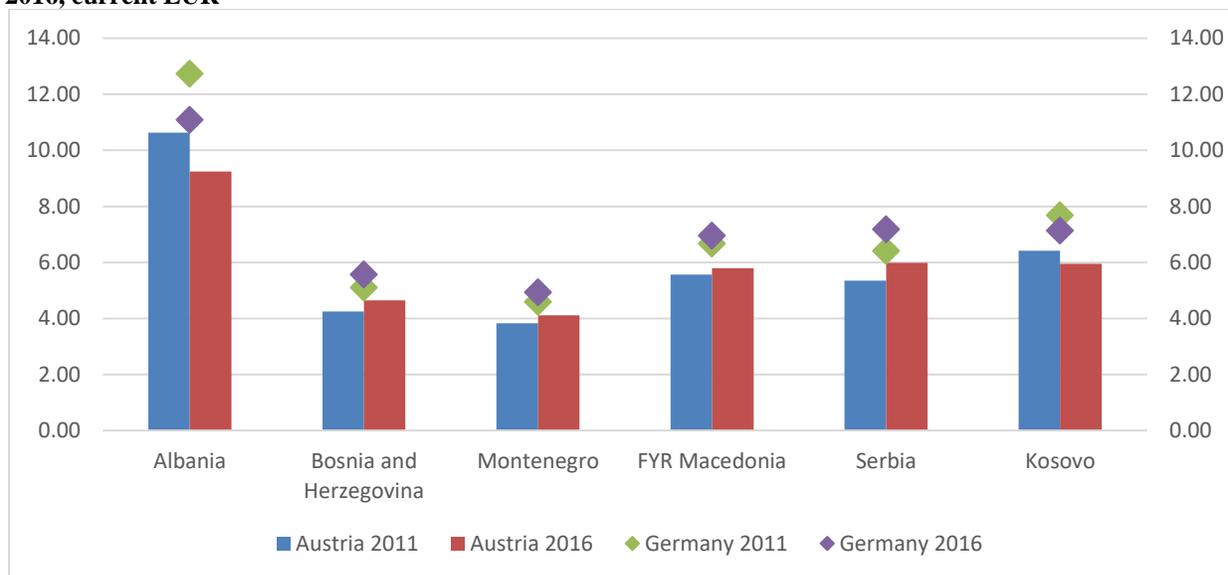
Probably nowhere else are these common features more pronounced than when it comes to labour markets. The regional labour market indicators are, taken together and for each individual country, among the worst in the world. For example, while unweighted average employment to population ratio (15+) in the Western Balkans was only 36.5% in 2013, the world average in the same year was 59.6%, or 23.1 percentage points higher (Arandarenko 2015, ILO, 2014). Furthermore, the employment to population ratio was definitely lower than for any other country groupings or

world regions, such as Advanced Economies and EU (54.8%), East and South East Asia (67.5%), Latin America (61.9%), Central South Europe and CIS (54.9%) and even Middle East and North Africa (43.4%).ⁱ

Furthermore, the quality of resident employment does not make up for the missing quantities. While the shares of informal and vulnerable employment are indeed lower than in most developing countries, they are much higher than in advanced economies and are also higher than in the peer countries of Central and Eastern Europe, including Russia. Estimates of the informal employment share in total employment range from slightly above 20% in Serbia and FYR Macedonia to almost 60% in Albania. However, because of the high share of unpaid family members the structure of informal employment even in countries with moderate informal employment levels is much more unfavourable than in comparable countries of Central and Eastern Europe. The informal employment status thus appears to be a powerful signal of social exclusion risk, much more so than elsewhere in Europe.

The standard of living in the region is very low, and wages are not converging to wages in the European Union. Figure 1 illustrates the latter point, which is crucial to understand powerful pull factors of migration. Gross average wages (expressed in current Euros) in two most popular destination countries for migrants from Western Balkans, Germany and Austria, were four to five times higher than in Montenegro and Bosnia and Herzegovina, six to seven times higher than in FYR Macedonia, Serbia and Kosovo, and around ten times higher than in Albania. Furthermore, in four out of six countries, the ratio of local wages to those in Germany and Austria further increased between 2011 and 2016, while only in Albania and Kosovo the opposite trend was noticed.

Figure 1: Ratios of the gross average wage in Germany/Austria and Western Balkan countries in 2011 and 2016, current EUR



Source: World Bank and WIIW, 2018 and Eurostat

Migration and remittances

There is little doubt that migration and remittances are central to understanding the operation of labour markets and economies in the Western Balkans. And yet, thus far there have been no systematic efforts to fully integrate migration flows into labour market analysis, or remittance inflow into macroeconomic analysis of the countries in the region.

Over the long course of history, this region has been both net emigration and net immigration area for both economic and non-economic reasons. Still, as a rule it has been significantly poorer than most of Europe and the

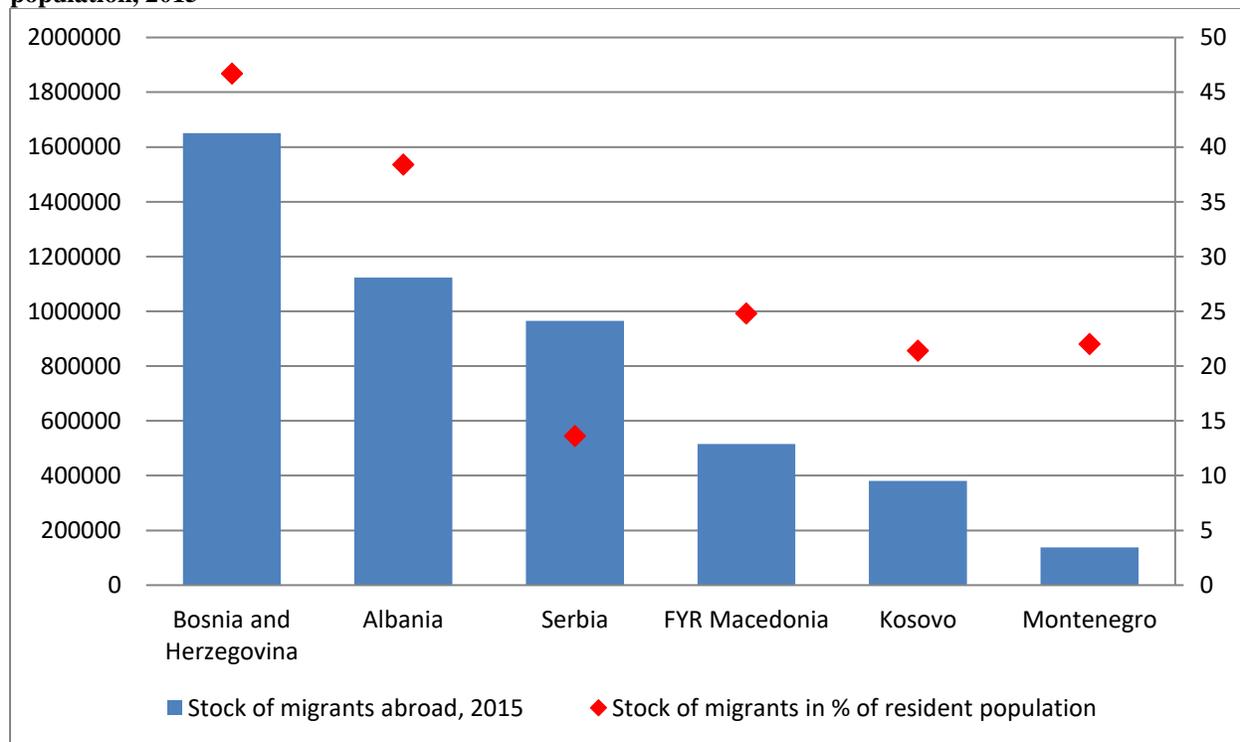
Mediterranean (see for example a sobering map of income levels in the regions of Roman Empire in around 14 A.D. by Maddison, 2007) and hence at times of relative peace emigration tended to be more intensive than immigration.

In more recent times, Albania was effectively locked during the communist rule between 1945 and 1990, while former Yugoslavia intensively exported mostly unskilled labour to Germany and other Western European countries since the 1960s. In 1990, Albania opened its borders and within the following half a decade almost half of its population (46%) already had some personal experience with migration, while at any given moment some 20% were abroad (Konica and Filer, 2009). At the same time, the war in former Yugoslavia created new waves of migrants, including refugees and internally displaced persons. The stock of emigrants from the Western Balkans doubled from 2.2 million in the 1990 to 4.4 million in 2015, a number that represents 24% of the population residing in the region in 2015.

As a consequence of these different recent historical trajectories of migration, the structure of the migrant stock from former Yugoslavia is more mature than that of Albania, with more generational layers and greater variance in attachments of diaspora members to their country of origin. Nevertheless, because of variable impact of economic pressures and war turbulences within the former Yugoslavia, each of its successors has its own idiosyncratic profile of migrants.

Although the migrant stock (all nationals with a residence outside of their country of origin) is notoriously difficult to measure, available official UN statistics confirm the perception of the region as having high share of migrants in the total population. As is visible from Figure 2, the stock of migrants varies from 47% of the resident population in Bosnia and Herzegovina to 14% in Serbia, with all other economies having more than 20% of the population outside their borders. This should be compared with the global migrant stock which comprises about 4% of the world population.

Figure 2: Stock of migrants from the Western Balkans, in absolute numbers and as the share of resident population, 2015



Source: Authors' calculation based on United Nations, Department of Economic and Social Affairs, Population Division (2015). Trends in International Migrant Stock: Migrants by Destination and Origin (United Nations database, POP/DB/MIG/Stock/Rev.2015). The statistics about the stock of migrants from Kosovo are obtained from IOM Migration Profile (2014).

Information on the stock of migrants should be looked at in conjunction with the data on gross and net migration flows. Having an idea about the ratio between the migrant stock and gross migration flows, might potentially provide some insight on which one of the two most influential economic theories of migration might be considered more appropriate in the specific setting of the Western Balkan countries.

The first approach is called the *neoclassical theory of migration*. Within this framework, migration is seen as permanent, typically lifetime decision of an individual migrant based on pre-calculated positive net present value of migration. Basically, it is the theory of human capital investment applied to migration decisions (Sjaastad, 1962). One practical consequence of interest is that the permanent migrant's ties with the home country tend to weaken and eventually often disappear with the passage of time.

The neoclassical theory of migration could be modified from an individual to a family level. However, the basic principle of binary choice remains the same – either a family permanently emigrates as a whole or none of its members leaves the home country. In this case, the decision on leaving is not based on whether a particular member of the household has a greater net present value of income in the destination than in the country of origin, but on whether the family as a whole is better off. In other words, even if the net present value of migration for a particular family member is lower than if he or she stays in the country of origin, a family should move on if its total net present value in the destination country is greater than in the country of origin. The family member who in this sense sacrifices their own welfare for the welfare of the entire family is called a “tied mover” (Mincer, 1978).

The second approach is so-called new economics of labour migration (NELM) as developed by Lucas and Stark, (1985) and Stark and Bloom (1985). This approach views individual migration as part of a household utility-maximization strategy in which a migrant and the family enter into a mutually beneficial contractual arrangement. In this framework, individual migration tends to be seen as a temporary, frequently circular phenomenon. The household in a way ‘sends’ the migrant abroad as a part of its ‘hedging’ strategy, and supports his migration by typically covering his costs of migration and taking over parental care from him, while in return once the migrant becomes established he shares a significant part of his discretionary income with the family by sending back remittances and/or support in kind. In the extended NELM framework, migration is often facilitated by networks, which provide non-pecuniary support by providing direct information and assistance based on solidarity and mutual assistance (Kotorri et al 2016).

There is a strong (but not conclusive) empirical evidence that the recent waves of migration from the Western Balkans predominantly conform to the NELM model (Zbinden et al., 2016). Economic, social and even political economy consequences of this type of migration are far more complex than the relatively simple one-way relationship between a permanent emigrant and his or her relatives at home, where presumably the intensity of interactions and the amount of remitted income after an initial increase, straightforwardly decline with the passage of time.

NELM paints a more nuanced and complex picture. Not only are many migrations temporary and circular, but also it is quite possible for many migrants to build their lives for extended periods of time in parallel in both their country of origin and in the emigration country. Their attachment to their home country remains strong in the long term.

Once we recognize that NELM is a more realistic stylization of migration reality in the region, it becomes clear that focusing only on resident labour market balance does not provide a full account of the labour market activity of households in labour exporting countries of the Western Balkans. To fully account for the impact of migration on the labour market, it would be ideal to develop a citizenship- or native-based labour force survey complementing the currently existing resident-based LFS, to account for the country nationals working abroad. In the absence of such a survey we have developed two proxy approaches that are presented in the next section.

Remittance inflows

The dominant temporary and circular migrations based on household coping (risk-sharing, portfolio investment) strategies have important ramifications for the abundance of remittance inflows. In the absence of external shocks and pronounced business cycles in receiving countries, temporary migration – as long as the balance between outflows

and return migration is stable - tends to be a relatively more abundant and more stable source of remittances compared with permanent migration.

Remittance inflow is a well-established phenomenon, which has been researched in the region mainly at the micro level for its impact on remittance-receiving households. However, remittances also have important implications at the macro level, a fact which has been recognised long ago, but has not been fully integrated in the macroeconomic analysis of labour-exporting countries.

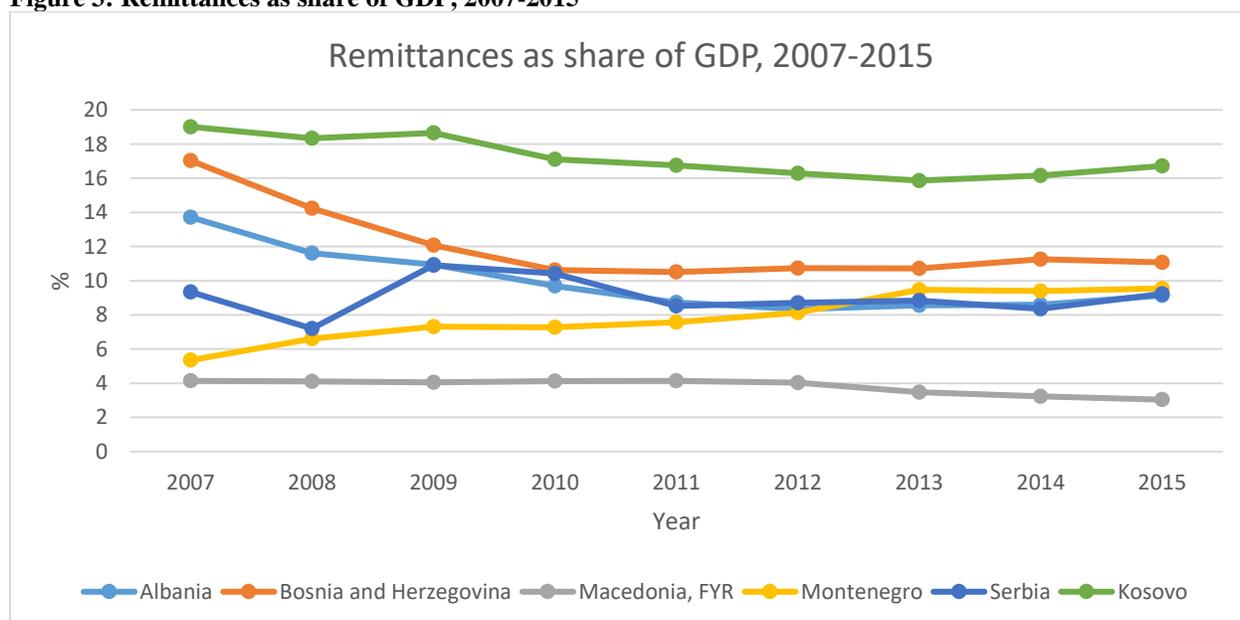
The significance of remittances for all the Western Balkans economies cannot be overestimated. They have strikingly high remittance inflows, which are among the highest in the world. Table 1 presents remittances in absolute amounts, while Figure 3 expresses them as share of GDP.

Table 1: Migrant remittance inflows (US\$ million), 2007-2015

| | Albania | Bosnia and Herzegovina | Kosovo | Macedonia, FYR | Montenegro | Serbia |
|------|---------|------------------------|--------|----------------|------------|--------|
| 2007 | 1,468 | 2,686 | 919 | 345 | 196 | 3,765 |
| 2008 | 1,495 | 2,718 | 1,042 | 407 | 298 | 3,544 |
| 2009 | 1,318 | 2,127 | 1,055 | 381 | 303 | 4,648 |
| 2010 | 1,156 | 1,822 | 997 | 388 | 301 | 4,118 |
| 2011 | 1,126 | 1,958 | 1,122 | 434 | 343 | 3,960 |
| 2012 | 1,027 | 1,846 | 1,059 | 394 | 333 | 3,549 |
| 2013 | 1,094 | 1,947 | 1,122 | 376 | 423 | 4,025 |
| 2014 | 1,142 | 2,086 | 1,192 | 367 | 431 | 3,696 |
| 2015 | 1,087 | 2,003 | 1,122 | 345 | 415 | 3,358 |

Source: World Bank remittances database

Figure 3: Remittances as share of GDP, 2007-2015



Source: World Bank remittances database

In fact, temporary migration is a relatively plentiful source of both cross-border personal transfers and remittances. In practice, it is very difficult to distinguish remittances from personal transfers. A major confusion arises from the way personal transfers and remittances are in practice accounted for in national statistics – in itself a complex issue which is outside of the scope of this contribution. Apparently, at least parts of some personal transfers to residents, most notably foreign pensions, tend to end up in national accounts as remittances even if their beneficiaries currently reside in the country. The same might apply to personal income earned by current residents who are working for non-resident foreign entities on a service or more permanent basis and receive their fees on their bank accounts. More recently, the so-called online labour markets (OLM) have been gaining in importance, with workers' fees often being paid to non-resident accounts but being withdrawn in their country of residence.

Here is the place to introduce an important methodological distinction between three connected concepts of national accounts, GDP, GNI and GNDI. This distinction is of great importance for understanding macroeconomic performance and labour market outcomes in the region.

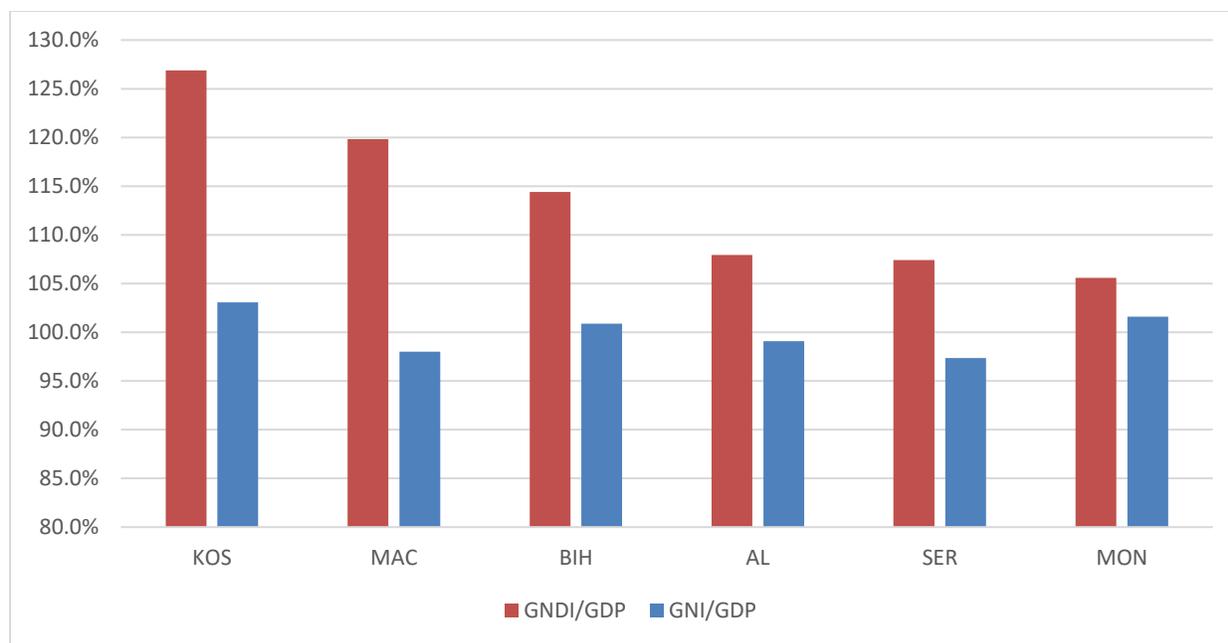
Gross national income, abbreviated as GNI, is the sum of incomes of residents of an economy in a given period. It is equal to GDP reduced by primary income payable by resident units to non-resident units and increased by primary income receivable from the rest of the world (from non-resident units to resident units). Put simply, while GDP is based on location, GNI is based on ownership. If GNI is higher than GDP, it means that the economy's factors are employed in the foreign production process to a larger degree than foreign factors are in the national economy; conversely, if the opposite is the case GNI is lower than GDP. In countries with large foreign direct investment, GNI tends to be lower than GDP.

Gross national disposable income (GNDI) measures the income available to the nation for final consumption and gross saving. According to Eurostat definition, it equals gross national income at market prices minus current transfers in cash (taxes on income and wealth, etc., social contributions, social benefits other than social transfers in kind, and other current transfers) payable to non-resident units, plus transfers receivable by resident units from the rest of the world. In short, GNDI is the sum of the gross disposable incomes of all resident institutional units or sectors.

While GNI records the fact that some factor incomes are generated in another country but accrue to the domestic economy and vice versa it does not record unilateral transfers, most importantly remittances. Worldwide, their value in current prices has increased by seven times between 1990 and 2010 and they represent by far one of the largest types of monetary inflows for developing countries. Thus, GNDI better measures how well-off citizens are on average (Stiglitz et al., 2009). Following Stiglitz et al. (2009) Capelli and Vaggi (2014) claim that the GNDI is a much better indicator than the GNI to measure the standard of living within an economy.

Using the World Development Indicators of the World Bank for 2014, which contain information on all three indicators for all Western Balkan countries, we have calculated the relative differences between GNDI and GDP and GNI and GDP, as presented in Figure 4.

Figure 4: GNDI and GNI relative to GDP in the Western Balkans



Source: World Development Indicators, World Bank

With a GNDI 26.9% higher than GDP, Kosovo is the frontrunner in the region. True, this large difference contains also a large net inflow of foreign assistance transfers, which were estimated in 2012 at about 9% of GNI (Bartlett et al. 2014). Although less pronounced, ODA inflows also add to the GNDI in other countries of the region. FYR Macedonia has GNDI almost 20% higher than GDPⁱⁱ and in Bosnia and Herzegovina GNDI is almost 15% higher. Only a handful of countries worldwide have larger difference between GNDI and GDP than these three economies. For Albania, Serbia and Montenegro the differences are still quite significant: 8.0%, 7.4% and 5.6%, respectively. Furthermore, in Serbia and Albania the difference between GNDI and GNI is larger than the difference between GNDI and GDP.

3. Collecting data on labour migrations and estimating employment indicators

Although there are internationally agreed definitions of an international 'migrant for employment' or 'migrant worker', implying that labour migrations should be distinguished from migrations for other purposes, this is of little practical importance. Actually, the ILO recommends that for the purposes of data collection, the term 'migrant worker' should also cover persons who may not be currently employed or economically active at the time of their migration (World Bank and WIIW, 2018).

Fundamentally, the major challenge in measuring migration stems from the fact that the very event of migration needs to be measured simultaneously and comparably in both the sending and receiving country. The difficulty in pairing the emigration and immigration statistics is further exacerbated if countries apply different rules for registration on arrival and deregistration on departure. (World Bank and WIIW, 2018).

From the sending countries' point of view, the key challenge is how to precisely account for persons who by definition are not there. Several strategies might be implemented, none is perfect, and all are relevant in the Western Balkan context. The first strategy would be to interview residing household members about their household and family members living abroad using household surveys such as LFS and, much less frequently, population censuses. Of

course, such an approach is incomplete since some families move without leaving anyone behind; and besides for various private reasons respondents might decide not to report the exact status and location of their family members. Another way would be to rely on administrative data from the interior ministries, however emigrants typically more often than not do not report their change of residence. The third way would be to indirectly deduce the emigration figures, combining census data and vital statistics over a certain period to estimate net migration numbers and rates. And finally, the fourth way would be to combine available resident statistics with the immigration statistics of the rest of the world, or more realistically with the immigration statistics of the most important destination countries.

In our pioneering attempt to estimate the full scope of the labour market activity of citizens or natives of the Western Balkan Six we employ two strategies. Firstly, we combine resident LFS data from the Western Balkans with the Eurostat and OECD data on immigrant population and on employment in their respective most popular destination countries. Secondly, we combine the data from two sources originating exclusively from the Western Balkans – LFS resident data (the same datasets as in the first approach) and census data on Western Balkans emigrants to OECD countries (although the database on Western Balkans emigrants has been created and possibly adjusted and/or harmonized by the OECD). Below we present the main results of both exercises.

Approach A: Estimation of citizen employment rate for Western Balkans combining resident LFS statistics in sending and destination countries

To calculate approximate citizen employment for the Western Balkans in 2014 we use the following approach. Firstly, we start with the standard LFS data on resident employment. Assuming that the employment of immigrants is negligible, we have treated all residents as citizens.

Secondly, using Eurostat and OECD population statistics, we identify for each Western Balkans country the ten destination countries with the highest number of emigrants (the top five from Eurostat, and then the top five not included in the Eurostat list from OECD). For example, for Serbian citizens the two most frequent destinations are Germany and Austria, while for Albanians they are Greece and Italy. By definition our approach disregards intra-regional migrations, since none of the Western Balkan countries is in the EU or the OECD. The justification is that wage levels are similar throughout the region, and so population movements within the region are not primarily motivated by economic factors.

The Eurostat database contains annual data on population for the EU Member States. It uses the definition of the 'usually resident population', representing the number of inhabitants of a given area at a certain time point. However, the comparability across EU28 is not perfect, since population data transmitted by the countries can be either based on the most recent census adjusted by subsequent components of population change, or based on population registers.

Unfortunately, the Eurostat database does not contain any information on immigrant employment rates. So thirdly, we approximate employment rates of immigrants from each Western Balkan country. To do that, we use the information that exists in the Eurostat LFS country databases – the average employment rates for the resident working age population as a whole, broken down by gender and age into three age groups (15-24, 25-54, 55-64). We apply these rates to the age and gender structures of the immigrant population from Western Balkans.

The OECD database combines four types of sources: population registers, residence permits, labour force surveys and censuses. In countries that have a population register and in those that use residence permit data, stocks and flows of immigrants are most often calculated using the same source. There are exceptions, however, as some countries instead use census or labour force survey data to estimate the stock of the immigrant population.

As already mentioned, the OECD database does contain information about the employment rate of immigrant (foreign-born) population as a whole. This immigrant employment rate is different, and typically somewhat lower, compared with the employment rate of native population in destination countries. Therefore, for the countries drawn from the OECD database we have used average immigrant employment rates broken down by gender and applied

them on the immigrant population from Western Balkans. This database contains information about emigrant population from non-OECD countries, including five from the Western Balkans – all except Kosovo.

In that way, taking into account the gender and age structure of immigrant population, we have been able to roughly estimate the employment rates and total employment of immigrants from each Western Balkans, in their top ten destination countries drawn from Eurostat and OECD.

Fourthly, we sum up resident employment from LFS and estimated emigrant employment to obtain a conservative, or rather incomplete, estimate of total citizen employment – because only employment in the top ten emigration countries for each Western Balkans country has been calculated. This downward bias has been moderated by our decision to apply average resident employment rates from the Eurostat database to the gender-age structures of immigrants. The bias is further reduced once we calculate the citizens' employment rate of sending countries instead of total employment of citizens, since the former is calculated relative to incomplete emigrant population numbers. However, since the employment rate of citizens working abroad is higher than the resident employment rate in sending countries, with the smaller weight assigned to the former due to incomplete coverage, a part of downward bias still remains. Table 2 below summarizes the results of above described procedure for all Western Balkan countries.

Table 2: Estimation of citizen employment rate of working age population for Western Balkans combining resident LFS statistics in sending and destination countries

| 15-64 | Albania | BIH | Montenegro | Kosovo | FYR Macedonia | Serbia |
|---|-----------|-----------|------------|-----------|---------------|-----------|
| 1. Resident LFS | | | | | | |
| Employed | 1,006,075 | 787,000 | 213,200 | 323,508 | 685,432 | 2,430,210 |
| Total | 1,991,419 | 2,021,000 | 423,200 | 1,202,489 | 1,461,171 | 4,823,399 |
| Resident employment rate | 50.52% | 38.94% | 50.38% | 26.90% | 46.91% | 50.38% |
| 2. Immigrant population and employment - top 5 destinations from EUROSTAT | | | | | | |
| Employed | 230,587 | 203,416 | 11,853 | 115,886 | 138,369 | 224,547 |
| Total | 391,472 | 275,431 | 16,263 | 165,180 | 197,229 | 309,185 |
| Immigrant employment rate | 58.90% | 73.85% | 72.88% | 70.16% | 70.16% | 72.63% |
| 3. Immigrant population and employment - top 5 destinations from OECD (not included above) | | | | | | |
| Employed | 261,352 | 148,262 | 17,932 | nn | 69,406 | 136,738 |
| Total | 467,486 | 217,748 | 25,999 | nn | 99,983 | 209,798 |
| Immigrant employment rate | 55.91% | 68.09% | 68.97% | nn | 69.42% | 65.18% |
| 4. Total Western Balkans emigrant population in top 10 destination countries (2+3) | | | | | | |
| Employed | 491,939 | 351,678 | 29,785 | 115,886 | 207,775 | 361,286 |
| Total | 858,958 | 493,179 | 42,262 | 165,180 | 297,212 | 518,983 |
| Immigrant employment rate | 57.27 | 71.31 | 70.48 | 70.16 | 69.91 | 69.61 |
| 5. Citizen employment and population (1+4) | | | | | | |
| Employed | 1,498,014 | 1,138,678 | 242,985 | 439,394 | 893,207 | 2,791,496 |
| Total | 2,850,377 | 2,514,179 | 465,462 | 1,367,669 | 1,758,383 | 5,342,382 |
| Citizen employment rate | 52.55% | 45.29% | 52.20% | 32.13% | 50.80% | 52.25% |

Source: National LFS, Eurostat and OECD database

In line with expectations, the combination of resident and emigrant data on employment and population results in a rise in the employment rate for all Western Balkan countries. The increase in the citizen/native-born employment

rate compared with the resident employment rate ranges from 1.8 p.p in Montenegro to 6.3 p.p. in Bosnia and Herzegovina. Kosovo also has an increase greater than 5 p.p. but this finding should be treated cautiously. As already mentioned, the OECD database lacks data for Kosovo, so our estimation of employed immigrants is solely based on Eurostat data which are probably less accurate. This approach can lead to an overestimation of the overall employment rate of immigrants, given that the Eurostat database of destination countries does not differentiate the rates of employment of foreign-born and native-born population.

Approach B: Estimation of citizen employment rate combining sending countries' resident LFS statistics with their census data on emigration

The first step in Approach B is the same as in Approach A – using the resident LFS data, disregarding any potential immigrant employment within Western Balkans. The OECD collects data from national censuses of non-OECD countries within its extended database on migrants DIOC-E2010_2011. To avoid confusion, although the data are in the OECD database, they originate from national censuses conducted in non-OECD countries around 2010-2011 period. The majority of data were obtained directly from national statistical offices, but some were obtained from the Integrated Public Use Microdata Series (IPUMS).

The key variable for estimating the size of the population of Western Balkans immigrants in OECD countries is country of birth. It should be noted that in the case of immigrants from Albania the data on country of birth are unavailable. Therefore, while for the immigrants from the five remaining Western Balkan countries the criterion for inclusion was country of birth, for those coming from Albania the criterion was nationality (citizenship). Our assumption is that comparability across countries will not be seriously affected, since we do not believe that many native Albanians have managed to acquire citizenship of an OECD country.

In order to estimate citizen/native employment rate of working age population we use data on working age emigrants from Western Balkan countries residing in 35 OECD countries, and combine them with the resident LFS data in the same manner as in the previous exercise. Table 3. below summarizes the results of above procedure for all Western Balkan countries.

Table 3: Estimation of citizen employment rate combining sending countries' resident LFS statistics (2014) with their census data on emigration (2011)

| 15-64 | Albania | BIH | Montenegro | Kosovo | FYR Macedonia | Serbia |
|--|-----------|-----------|------------|-----------|---------------|-----------|
| 1. Resident LFS | | | | | | |
| Employed | 1,006,075 | 787,000 | 213,200 | 323,508 | 685,432 | 2,430,210 |
| Total | 1,991,419 | 2,021,000 | 423,200 | 1,202,489 | 1,461,171 | 4,823,399 |
| Resident employment rate | 50.52% | 38.94% | 50.38% | 26.90% | 46.91% | 50.38% |
| 2. OECD database from Western Balkans censuses | | | | | | |
| Employed | 471,369 | 478,568 | 8,129 | 227,869 | 176,626 | 311,813 |
| Total | 861,408 | 694,973 | 14,008 | 355,517 | 309,748 | 486,553 |
| Immigrant employment rate | 54.72% | 68.86% | 58.03% | 64.10% | 57.02% | 64.09% |
| 3. Citizen employment and population based on LFS and census data | | | | | | |
| Employed | 1,477,444 | 1,265,568 | 221,329 | 551,377 | 862,058 | 2,742,023 |
| Total | 2,852,827 | 2,715,973 | 437,208 | 1,558,006 | 1,770,919 | 5,309,952 |

| | | | | | | |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Citizen employment rate | 51.79% | 46.60% | 50.62% | 35.39% | 48.68% | 51.64% |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|

Source: National LFS, DIOC-E2010_2011, OECD

Looking at the employment rate of citizens of Western Balkans based on the integration of their own data from LFS and from population censuses, one can see two reassuring features. First, there is a relatively high correlation with the results obtained applying our first approach, as can be seen in Table 4 where we have put together the estimates from both approaches. Second, the difference between the resident and native population is somewhat lower according to Approach B compared with Approach A in the three countries with the most reliable data – FYR Macedonia, Serbia and Albania - despite the seemingly wider coverage (all of OECD instead of 10 top destinations). It is in line with our expectation that the census-based data in sending countries tend to underestimate the number of emigrants. Montenegro appears to be an extreme example for this underestimation, with the meagre difference in native vs. resident employment rate of .24 points. However, this is because the OECD database mistakenly does not record any Montenegrin immigrant living in the USA, while according to the US data there are some 8,000 native Montenegrins living there. On the other hand, the census data from Bosnia and Herzegovina and Kosovo imply a larger number of emigrant workers than the data from the destination countries.

Table 4: Comparing two approaches to measuring employment of citizens in Western Balkans

| 15-64 | Albania | BIH | Montenegro | Kosovo | FYR Macedonia | Serbia |
|---|----------------|---------------|-------------------|---------------|----------------------|---------------|
| Resident LFS | | | | | | |
| Employed | 1,006,075 | 787,000 | 213,200 | 323,508 | 685,432 | 2,430,210 |
| Total | 1,991,419 | 2,021,000 | 423,200 | 1,202,489 | 1,461,171 | 4,823,399 |
| Resident employment rate | 50.52% | 38.94% | 50.38% | 26.90% | 46.91% | 50.38% |
| Approach A. Citizen employment and population based on LFS data in sending and receiving countries | | | | | | |
| Employed | 1,498,014 | 1,138,678 | 242,985 | 439,394 | 893,207 | 2,791,496 |
| Total | 2,850,377 | 2,514,179 | 465,462 | 1,367,669 | 1,758,383 | 5,342,382 |
| Citizen employment rate | 52.55% | 45.29% | 52.20% | 32.13% | 50.80% | 52.25% |
| Approach B. Citizen employment and population based on sending countries' LFS and census data | | | | | | |
| Employed | 1,477,444 | 1,265,568 | 221,329 | 551,377 | 862,058 | 2,742,023 |
| Total | 2,852,827 | 2,715,973 | 437,208 | 1,558,006 | 1,770,919 | 5,309,952 |
| Citizen employment rate | 51.79% | 46.60% | 50.62% | 35.39% | 48.68% | 51.64% |

Source: Authors' calculation based on Tables 2 and 3

Overall, total citizen employment in the Western Balkans is significantly higher than resident employment. Based on LFS and census data (Approach B), the employment 'surplus' of citizens / natives over residents ranges from 13% (Serbia) to 70% (Kosovo),

However, as is clear from Table 5 these wildly different estimated employment surpluses do not translate linearly into the differences between GNDI and GNI. While some positive correlation between the citizen employment surplus and remittance contribution to GNDI is visible, the correlation appears to be rather weak, and the differentials between GNDI and GNI are overall far more compressed across countries compared with the citizen employment surpluses.

Table 5: Macroeconomic indicators of labour migration in the Western Balkans, 2014

| 15-64 | Albania | BIH | Montenegro | Kosovo | FYR Macedonia | Serbia |
|-----------------------|----------------|------------|-------------------|---------------|----------------------|---------------|
| LFS employment | 1,006,075 | 787,000 | 213,200 | 323,508 | 685,432 | 2,430,210 |

| | | | | | | |
|--|-----------|-----------|---------|---------|---------|-----------|
| Emigrant employment (Census data) | 471,369 | 478,568 | 8,129 | 227,869 | 176,626 | 311,813 |
| Total employment | 1,477,444 | 1,265,568 | 221,329 | 551,377 | 862,058 | 2,742,023 |
| Total employment/LFS employment | 146.9% | 160.8% | 103.8% | 170.4% | 125.8% | 112.8% |
| GNI/GDP | 99.1% | 100.9% | 101.6% | 103.1% | 98.0% | 97.3% |
| GNDI/GDP | 108.0% | 114.4% | 105.6% | 126.9% | 119.8% | 107.4% |

Source: Authors' calculation based on Tables 2 – 4 and Figure 4

This finding might to a significant degree reflect imprecise or outright erroneous measurements of the citizen employment surplus, net remittance inflows, or some other components of GNI and GNDI. However, at this point in our research it is more interesting and illuminating to assume that our estimates of citizen employment surplus and estimates of the GNDI and GNI data from the World Bank's database are reasonably accurate. This in our view invites for a re-reading of existing literature on migration patterns in the region and for a new research that would attempt to combine the information obtained at the levels of households with those coming from macroeconomic statistics.

4. Avenues for further research and conclusion

Let us consider some potential reasons for the weak correlation between the citizen employment surplus and the difference between GNI and GNDI. First, the different structure of Western Balkan countries' citizen emigrant employment by countries of destination. If a sending country's top destinations are Germany, Austria and Switzerland, this probably means that the wages earned by emigrant workers there are significantly higher compared with another hypothetical sending country whose top destinations are Greece and Italy, for example. Such differentials in emigrant workers' average wages might translate into somewhat less pronounced differentials in disposable wages, taking into account that higher wages typically imply higher costs of living. Nevertheless, higher wages tend to translate into higher 'net' disposable wages – i.e. the average theoretical maximum available for remitting to a home country, and they in turn tend to translate into higher remittances.

Second, immigrants earn on average lower wages and have lower employment rates compared with the native population in sending countries. They typically have lower skills than natives (often because their skills are not fully recognized and face language barriers). Furthermore, the average immigrant wage penalty – the positive difference in average wages for natives and immigrants in destination countries – might be influenced by factors independent of skill structure, or put more plainly, the extent of discrimination of immigrant workers varies across destination countries. Cupak et al. (2018), for example, find that out of 11 European countries wage differentials (at the median) between natives and immigrants vary between around 9% in the Netherlands to more than 40% in Luxembourg,

The third reason for different intensities of remittance flows to sending countries lies in the different composition of emigrants depending on the strength of their ties with the native country. The key question here is what is the dominant pattern of emigration: a NELM or a neoclassical pattern of emigration? If most emigrants were to conform to the assumptions of neoclassical theory of labour migration, total remittance flow may be, ceteris paribus, less than if most of them were involved in temporary and circular migrations.

One way to try to address the question of what is the dominant pattern of emigration would be to look at the dominant family structures of emigrants. In conformity with neoclassical theory, the migrant outflow should be dominated by unmarried individuals and complete nuclear families; while according to NELM, emigrants should more frequently be married individuals or couples leaving the rest of their nuclear and extended family back in home country. Skills of the emigrants might also be a clue – those with higher education will more frequently conform to neoclassical theory, while the trajectories of those without skills will more frequently reflect the NELM theory.

In conclusion, the data collected and the estimates provided, even though preliminary and imperfect, represent an important addition to standard labour force statistics in the Western Balkans. Even more importantly, these data in combination with the existing data on remittances, personal transfers, gross national income, and gross national disposable income could also be used for a more general analysis of the functioning of the labour-exporting economies of the Western Balkans.

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ⁱ Since 2014 ILO has stopped publishing employment rates for world regions in its flagship publications.

ⁱⁱ Note that the difference between GNDI and GNI is much larger than the estimated amount of remittances in FYR Macedonia, as depicted in Figure 3. Both datums come from the same source, World Development Indicators of the World Bank. We do not have a satisfying explanation for this apparent aberration.