

Migration intentions in CESEE – a descriptive analysis

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Against the background of high emigration from Central, Eastern and Southeastern Europe (CESEE) in the past few decades, we study the current migration intentions of individuals in ten CESEE countries using individual-level data from the 2014 wave of the OeNB Euro Survey. Apart from the overall share of people that intend to leave their home countries, we identify the gender, age and education profiles of these prospective migrants. Using population pyramids for visualization, we compare the current population structure with a hypothetical one that would arise if all people planning to emigrate would in fact do so. We find that, on average, 11.4% of individuals aged 25 to 39 intend to leave their CESEE home countries, a share that represents a lower-bound estimate. Migration intentions vary considerably across countries; in general, they appear to be more common among men and among individuals with a relatively low level of education.

JEL classification: F22, J11, O52

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The countries of Central, Eastern and Southeastern Europe (CESEE) are currently suffering the strongest declines in working-age populations in Europe. This is attributable not only to unfavorable demographic developments, but also to high emigration (IMF, 2016). In particular skilled emigration can have adverse effects on the sending region of migrants, potentially provoking skill shortages, which impair productivity growth and convergence (IMF, 2016; IMF, 2017).² It has been shown that emigrants from CESEE are younger and better educated than the remaining population, and that large-scale emigration has caused declines in the supply of skilled labor (“brain drain”) and increases in fiscal burdens due to higher dependency ratios (Atoyan et al., 2016).

Against this background, it is of particular interest to assess possible future patterns of emigration from these countries and the sociodemographic profiles of prospective emigrants. The economic literature that attempts to assess future migration can be divided into two strands: the first uses historical data to project or forecast future migration; the second addresses the issue by working with migration intentions on the basis of micro-level data (Zaiceva and Zimmermann, 2008). This is also the approach followed in this study. The advantage of this method is that individual-level characteristics – to the extent that they are available in the data – can be included in the analysis. Furthermore, apart from the sheer number of individuals with migration intentions, sociodemographic profiles can also be assessed. A drawback of this approach is, however, that it is unclear to what extent people will realize migration intentions (see section 1 for a discussion).

The literature on migration intentions in CESEE is scarce, and, if available, it focuses mainly on the impact of the 2004 EU enlargement (Zaiceva and Zimmermann, 2008) and/or on Eastern European countries only (Liebig and Sousa-Poza, 2004). We can contribute to the literature by using recent and coherent individual-level data from ten

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² In this context, see also Schreiner (2008) for a study on the development of net migration in CESEE in the course of EU accession.

selected CESEE countries. Specifically, we use individual-level data from the 2014 wave of the OeNB Euro Survey, which covers six EU and four non-EU CESEE countries, to study the level of migration intentions in the ten economies. We descriptively compare the age, education and gender profiles of individuals that intend to emigrate with those of individuals without migration intentions. For the graphical representation of our findings, we use population pyramids that allow the visualization of gender, age and education profiles. In addition, we indicate in the pyramids the share of individuals with migration intentions in each subgroup. That allows a comparison of population pyramids showing the status quo and *hypothetical* pyramids that would emerge if *all* migration intentions were realized. These hypothetical pyramids do not represent forecasts of future population sizes and structures. Rather, they should be seen as thought experiments based on given data, as there is no way to assess how many of those individuals with migration intentions will actually emigrate from CESEE.

The data suggest that, on average, 11.4% of 25- to 39-year-olds in the ten selected CESEE countries intend to emigrate. Due to the nature of the data, we can assume that this is a lower-bound estimate of actual migration intentions. Migration intentions are very heterogeneous across countries and higher for men than for women. They are less common among older cohorts, where the gender gap is narrower. Interestingly, we do not find evidence for an above-average desire to emigrate among the highly skilled. On the contrary, the share of individuals in CESEE that intend to emigrate is highest among the low skilled and lowest among highly skilled young people. This finding holds not only for the CESEE average, but also for all countries except for Hungary and Serbia.

This paper is structured as follows: Section 1 introduces the data source and sections 2 and 3 discuss the descriptive results for the region as a whole and for the individual countries. Section 4 concludes. Three annexes provide an overview of the basic shapes of population pyramids, a comparison of the results with other data sets as well as additional figures and tables.

1 Data

We rely on data from the OeNB Euro Survey, an individual-level data set the Oesterreichische Nationalbank (OeNB) started to compile in 2007 in ten CESEE countries: six EU countries (Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania) and four non-EU countries (Albania, Bosnia and Herzegovina, FYR Macedonia, Serbia). The survey collects unique information about people's (euro) cash holdings, saving behavior and debt, and about respondents' economic opinions, expectations and experiences. The samples consist of 1,000 randomly selected respondents per country and represent the entire population over the age of 14.³ The samples are representative with respect to age, gender and regional distribution. In the 2014 wave, respondents were asked whether they or a member of their household had the intention to move abroad within the next 12 months.⁴

³ Samples are generally selected via a multistage stratified random sample procedure. An exception is Bulgaria, where a variant of random quota sampling is applied. For more information on the sampling design of the survey, please refer to Brown and Stix (2015).

⁴ The precise wording of the question was: "I would like to ask your opinion about the housing situation in [your country]. Please tell me whether you agree or disagree with the following statements on a scale from 1 (strongly agree) to 6 (strongly disagree). I intend/a member of my household intends to move abroad within the next 12 months." Unfortunately, this question was not included in the more recent waves of the survey.

The choice of responses is based on a Likert-type scale (“*strongly agree*,” “*agree*,” “*somewhat agree*,” “*somewhat disagree*,” “*disagree*” and “*strongly disagree*”). Individuals that responded either “*strongly agree*” or “*agree*” were categorized as having the intention to emigrate.⁵ In addition, a number of socio-economic characteristics are available in the data, most importantly gender, age and education.⁶

Using data based on the question on migration intentions involves several difficulties. First, the question addresses not only the migration intentions of respondents, but also those of other household members (see footnote 5). This can lead to an overestimation of migration intentions, especially for older cohorts, as, for example, parents might talk about their children’s migration intentions. In addition, the socio-economic profile of the respondent does not necessarily correspond to that of the prospective migrant. In order to limit biases due to this allocation problem, we restrict much of the interpretation to individuals aged 25 to 39, as in this age group people are less likely to have children old enough to have migration intentions.⁷ Second, it is possible that other household members intend to leave together with the respondent; in this case, we might underestimate actual migration intentions. That, together with the rather strict definition of the variable, suggests that our estimates for the young cohorts are the lower bounds of actual intentions. Third, the question does not address whether individuals intend to migrate permanently or just for a short period, and we cannot distinguish between temporary and permanent migration. Fourth, it is not straightforward how migration intentions translate into actual behavior.⁸ The empirical literature indicates, however, that migration intentions are strong predictors of actual migration. Dustmann (2003), for example, studies return migration of migrants in Germany and shows that about 25% of those who indicate the intention to return to their country of origin actually move. Similarly, Van Dalen and Henkens (2008) find for the Netherlands that emigration intentions serve as good proxies for actual migration: 24% of those who report migration intentions actually leave the country. They also show that those who stayed despite having previously said they intended to leave do not differ in terms of the characteristics observed from those who moved. More recently, Creighton (2013) shows for Mexico that the intention to emigrate to the U.S.A. predicts subsequent migration (this holds also for intermunicipal and interstate migration).⁹

⁵ Arguably, also individuals that “*somewhat agree*” could be included in the group of individuals that have migration intentions. However, to avoid overestimation we decided not to include this response.

⁶ Education is retrieved based on ISCED 1997 categories (also “*don’t know*” and “*no answer*” are possible responses), which are combined into three groups: low (primary), medium (lower and upper secondary, post-secondary but nontertiary) and high education (first and second stage of tertiary).

⁷ According to UN data (United Nations, 2014), mothers’ mean age at first birth in 1995 (or the closest available year) ranged between 22.2 in Bulgaria and 25.0 in Hungary. Therefore, parents in the 25 to 39 years age group in the survey year are not likely to have children old enough to intend to emigrate.

⁸ Zaiceva and Zimmermann (2008) argue that the gap between intentions and behavior increases with entry barriers in the destination countries and information deficiencies of the prospective migrants.

⁹ See also Manski (1990), Gordon and Molho (1995) and Docquier et al. (2014) for further reference.

2 Migration intentions in CESEE: the region as a whole

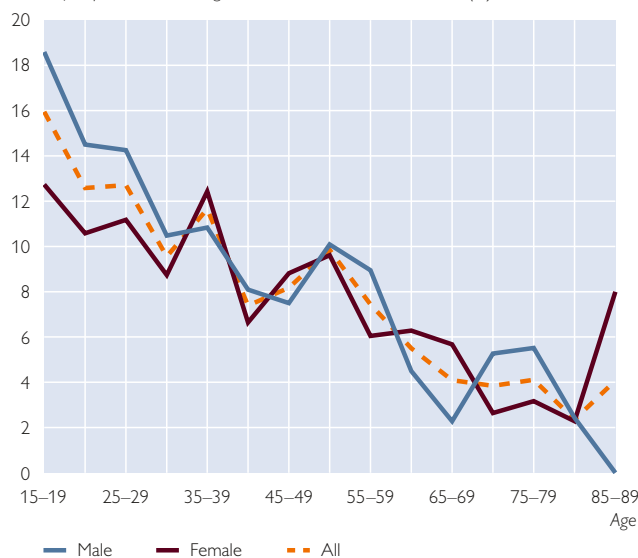
In all ten CESEE countries taken together, 8.9% of respondents state that they or a member of their household have the intention to move abroad within the next year.¹⁰ Chart 1 shows the intention to move abroad by age and by gender- and education-specific subgroups.¹¹ As expected, migration intentions decline with age: Approximately 1 in 6 individuals between 15 and 19 intends to move abroad (16.0%), 1 in 8 among those aged 20 to 29 (12.6%), and 1 in 12 among the 30- to 64-year-olds (8.6%). Due to the framing of the question in the survey, it is likely that the typical age of an individual with the intention to emigrate is overestimated among older cohorts and the decline in the share can be expected to be steeper than displayed in the chart. Among the younger cohorts (aged 25 to 39), men are more likely to have migration intentions (12.0%) than women (10.8%). This finding is predominantly driven by the low- and medium-skilled male population. The distinction by education level shows that the pattern of migration intentions declining with age prevails in all skill groups. The dimension of education is of particular interest when seeking to answer the question of whether economies are affected by brain drain, i.e. increased emigration of the highly skilled. For low-skilled, young individuals, the number of observations is very low, however (see the figures in annex 3 for a graphical representation at the country level).

Chart 1

CESEE average: migration intentions by age groups

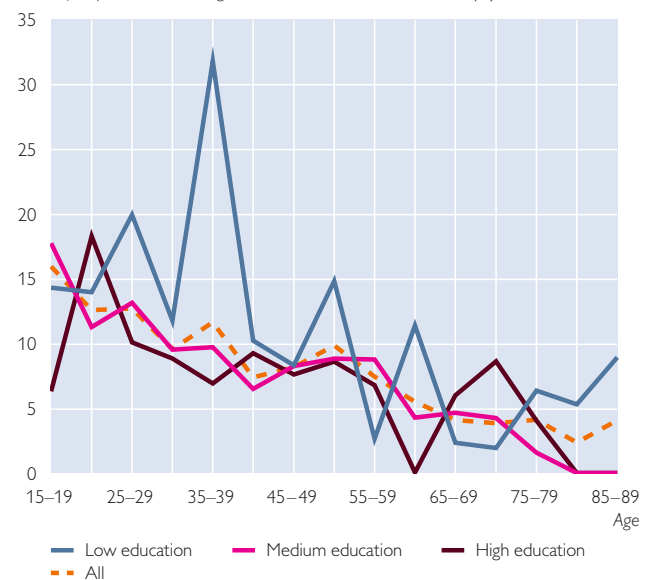
By gender

Share of respondents with migration intentions in next 12 months (%)



By education

Share of respondents with migration intentions in next 12 months (%)



Source: OeNB Euro Survey (2014).

Note: Due to a lack of sufficient observations for the age group 90--94, the respective data are not included in the charts.

¹⁰ All CESEE averages are calculated based on a pooled data set of all ten countries under the application of (individual) survey weights, which are needed for data representativeness with respect to gender, age and regional distribution. The reported means represent averages for a "typical" CESEE country, not an overall average of the CESEE region. In other words, the results are not weighted by population size, as that would imply that all figures were strongly driven by Poland, the largest country in the sample.

¹¹ Due to space limitations, additional figures and tables with breakdowns by age, education and gender are not included in the study but are available from the author upon request.

Thus, these estimates have large standard errors and low precision. The spike for low-skilled 35- to 39-year-olds in chart 1 is likely due to this imprecision. The low number of low-skilled individuals in the sample also implies that the respective share contributes only to a limited extent to the overall mean.

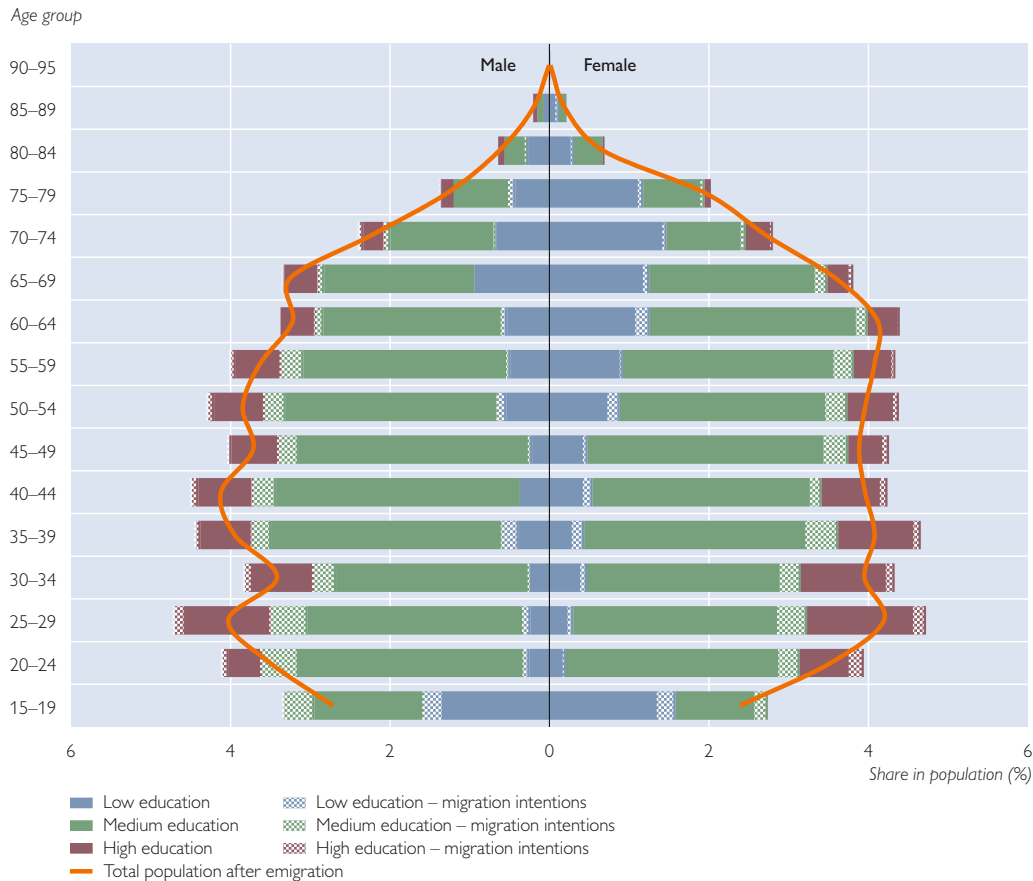
Aggregated over all age groups, low-skilled individuals have an above-average likelihood of having the intention to emigrate. 10.0% of low-skilled individuals intend to emigrate; this value is higher than the overall average of 8.9% and higher than the share of medium- (8.7%) and high-skilled (8.6%) individuals intending to emigrate. Because the skill level of the respondent does not necessarily correspond to that of the prospective migrant, this breakdown by education can be biased. In particular, if parents talk about the migration intentions of their – on average better educated – children, the level of education of the potential migrants could be underestimated. In order to reduce this bias, we concentrate on the younger age groups. On average, 11.4% of the population aged 25 to 39 intend to emigrate from a CESEE country. Previous research suggests that approximately one-quarter of migration intentions are realized (see section 1). If this realization ratio held for CESEE countries as well, an average CESEE country could lose approximately 2.9% of its young working age population within one year – a non-negligible effect. Among the young individuals with migration intentions, the difference in migration intentions across education levels is even more pronounced than among the overall population: 22.6% of low-skilled individuals aged between 25 and 39 intend to emigrate, while only 10.8% and 8.9% of medium and highly skilled in the same age group do. The group of highly educated individuals has the lowest migration intentions. Especially when in their mid-twenties and thirties, people's, especially women's, aspiration to leave the country is low. Hence, the data do not indicate evidence for a severe brain drain in an average CESEE country.

Chart 2 presents similar information by means of a population pyramid. The size of the bars indicates the share of each subgroup in the total population. The subgroups are defined by gender, age, education and migration intentions. The vertical axis represents 16 five-year age groups, and the colors of the bars indicate the level of education. For each age, gender and education group, the shaded parts of the bars highlight the share of individuals that have the intention to emigrate. Finally, the orange line indicates a hypothetical population pyramid for an average CESEE country that would be expected if migration intentions were actually realized, *ceteris paribus*. The hypothetical pyramid does not take into account return migration by previous migrants or immigration from other countries. It merely displays what the pyramid could look like if all individuals with migration intentions left the country immediately and contemporaneously.

The pyramid for CESEE can be described as a constrictive population pyramid¹² (see annex 1 for a discussion of typical shapes of population pyramids). In the reproductive age groups, the age groups are of similar sizes, whereas in the cohorts above and below reproductive age, the age groups are smaller. The shape of the

¹² All population pyramids based on OeNB Euro Survey data are compared with pyramids based on data from the Wittgenstein Centre (www.wittgensteincentre.org/dataexplorer/), which rely on more exhaustive data, include individuals aged 0 to 15, and allow a more precise assessment. All conclusions with respect to the pyramids' shape, broad education tendencies, etc. are cross-checked with this alternative data source. The Wittgenstein data do not contain information on migration intentions of individuals, however, and an indication of those is a novelty that the OeNB Euro Survey data allow.

Chart 2

CESEE average: population by education level and migration intentions (2014)

Source: OeNB Euro Survey (2014).

pyramid clearly indicates that there are more women than men in the region.¹³ This finding is not new and attributed predominantly to the higher life expectancy of women but also to gender differences in past migration behavior. Due to the former, the man shortage increases with age: Among younger cohorts, there are more men, because the gender ratio at birth is 106 male newborns per 100 female newborns (data for Europe, United Nations, 2010). The pyramids also highlight the improving overall level of educational attainment, as the share of individuals with a low level of education is declining and the share of people with higher education is increasing, especially among women. The shaded parts of the bars indicate for each subgroup the proportion of individuals who intend to emigrate. These parts are larger on the left side of the pyramid, as more men than women intend to emigrate, and they are larger for younger cohorts and among the less well educated. Under the assumption that individuals with migration intentions

¹³ To verify this finding, we compare the gender shares based on OeNB Euro Survey data with data from the UN Population Prospects (2015 Revision). According to the UN, the average gender ratio in the ten CESEE countries, calculated as the proportion of males over females, was 0.924 in 2015. When calculating the ratio based on OeNB Euro Survey data for 2014, the gender ratio is 0.921 and therefore virtually equivalent. An additional comparison to IIASA-VID data leads to similar results.

(or a representative sample of them) left the country, our data suggest that the remaining population would be relatively better educated; it would be older and the share of women would be higher.

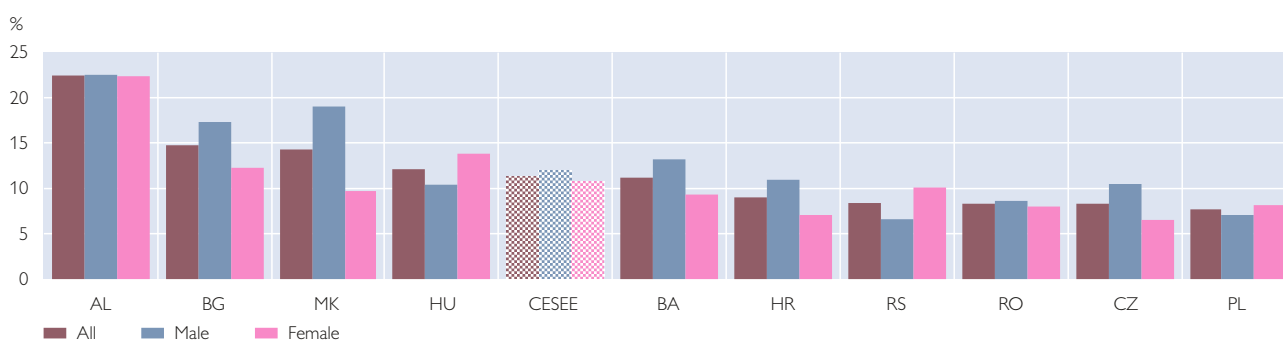
3 Migration intentions at the country level

Chart 3 and table A1 in annex 3 display the shares of young individuals that have the intention to emigrate for all ten CESEE countries in the sample and for various subgroups.¹⁴ The frequency of migration intentions in the population is heterogeneous across countries and across different sociodemographic groups. While more than 20% of young Albanians intend to leave the country, only approximately 8% of young people do so in Poland, the Czech Republic or Serbia. At 10.0%, the average share of young individuals with emigration intentions in EU CESEE countries is lower than in non-EU CESEE countries, where 14.0% of 25- to 39-year-olds plan to emigrate.

The figures in charts A2 and A3 in annex 3 display the corresponding population pyramids for the six EU CESEE and the four non-EU CESEE countries.¹⁵ Like the pyramid for the CESEE average, the country-level pyramids have a constrictive shape: the size of young cohorts is relatively smaller than the size of the cohorts of reproductive age, which indicates aging and declining populations.¹⁶ The pyramids further show that the improvement of educational attainment across generations found for the CESEE average is broad-based across countries. In all countries, the share of individuals with primary education only is relatively higher among older age groups, and the share of individuals with tertiary education is relatively higher among younger cohorts. This finding is more pronounced among non-EU

Chart 3

Share of individuals with migration intentions in 25 to 39 years age group by gender



Source: OeNB Euro Survey (2014).

¹⁴ The pyramids in annex 3 show that the number of young individuals with a low level of education is relatively small in most countries. The shares of migration intentions among young, low skilled individuals is thus based on a relatively small population and even a high share is likely to represent relatively few individuals and contribute little to the overall average.

¹⁵ In annex 2, we compare the country-level results with other evidence from the literature. Although such a comparison is difficult, the correlation between our results and those from the literature is high.

¹⁶ The constrictive shape is even more pronounced when the pyramids are designed for the full population, i.e. including 0- to 14-year-olds (using Wittgenstein data). This holds for all ten countries.

countries, but also CESEE EU countries show significant improvements in education attainment.

Migration intentions in the full population vary between 16.7% in Albania and 5.5% in Romania. Due to the aforementioned reasons, we focus on migration intentions among the young, i.e. the 25 to 39 years age group. Our data suggest that in all countries with the exception of Poland, migration intentions are more common in the 25 to 39 years age group than in the 40 to 64 years age group. Migration intentions among the young are highest in *Albania*. The proportion of 25- to 39-year-olds wishing to emigrate is 22.5%. More specifically, 34.8% of those with a low level of education, 14.9% of those with a medium level of education and 16.2% of those with a high level of education intend to emigrate. Contrary to our findings for most other countries, for *Albania* we find no evidence for a gender gap in migration intentions, and the relative frequency of migration intentions does not differ between men and women. *Bulgaria* exhibits the highest share of young individuals with migration intentions (14.8%) among the six EU countries and the second-highest in the sample. Based on our data, a considerable gender gap exists, and young men are more likely to have migration intentions (17.3% as compared to 12.3% for women). The share of young individuals with migration intentions among the low skilled is considerably higher (25.3%) than among the medium (14.1%) or highly skilled (13.3%). In *FYR Macedonia*, the share of young people that intend to migrate is very similar to that found in *Bulgaria* (14.3%), but the gender gap is even more pronounced, and it is the largest gap in the sample based on percentage points as well as in relative terms. While 19.1% of young men have migration aspirations, only 9.8% of women do. Migration intentions among the medium and highly skilled range between 12.0% and 13.8%, whereas a larger share of low-skilled individuals intend to emigrate (17.9%).

Migration intentions in *Hungary* are also above the CESEE average. 12.1% of 25- to 39-year-olds intend to emigrate (13.8% of women and 10.4% of men in this age group). The gender gap in *Hungary* is reverse compared to that observed in the CESEE average, where the share of men with migration intentions is higher than that of women. The case of *Hungary* is striking not only because of the reverse gender gap, but also because migration intentions in the country are more common among the highly skilled than among those with a low or medium level of education. 17.7% of highly skilled young people in *Hungary* intend to emigrate, a share that is considerably above that of those with a low and medium level of education (12.3% and 10.1%, respectively). For *Serbia*, too, the data suggest that among the highly skilled, emigration aspirations are more common than among lower-skilled individuals, and that migration intentions among young women are relatively higher than among young men.

In *Bosnia and Herzegovina* and in *Croatia*, the share of young individuals with migration intentions is just below the CESEE average. 11.2% and 9.0% of those aged 25 to 39 intend to emigrate, and relatively more men belong to this group of prospective migrants. In *Bosnia and Herzegovina*, we find that migration intentions are most common among those with low levels of education, whereas in *Croatia*, those with medium levels of education are most inclined to migrate.

In *Serbia*, *Romania* and the *Czech Republic*, the average shares of individuals with migration intentions are at similar levels (8.4%, 8.3% and 8.3%, respectively), but rather heterogeneous for different subgroups. While in *Serbia* migration intentions

are more common among young women and among the highly educated, the reverse is true for the Czech Republic: Migration intentions are more prominent among young men, and only 2.0% of the young and highly skilled intend to emigrate vis-à-vis 32.1% of the low and 9.6% of the medium skilled. In Romania, no significant gender gap is found and migration intentions are most common among those with a medium level of education.

The lowest share of migration intentions in the sample is found in *Poland*, where 7.7% of young individuals intend to emigrate. The prospective migrants have predominantly a medium level of education, and only 2.2% of those with a high level of education intend to emigrate.

These descriptive results indicate that a realization of migration intentions in CESEE, i.e. the actual emigration of all individuals with migration intentions or of a representative sample thereof, would lead to a shrinking population that would be relatively older; also, the share of women and the level of education would be relatively higher. Exceptions to this finding are Hungary, Serbia and Poland, where men are less likely to emigrate. These countries would see a relative increase in the male population. In addition, in Hungary and Serbia, migration intentions are relatively more frequent among the highly skilled, and emigration of those with migration intentions would result in a decline in the educational attainment level of the remaining population.

4 Conclusions

Using individual-level data for ten CESEE countries from the 2014 wave of the OeNB Euro Survey, we find that, on average, 8.9% of the population intend to emigrate within the next year. Among 25- to 39-year-olds, for whom we obtain more reliable statistics than for older age groups, migration intentions are more widespread: 11.4% of the younger population in an average CESEE country intends to leave. Across countries, considerable heterogeneities exist: Migration intentions are more common in non-EU CESEE countries than in EU CESEE countries. The country where migration intentions among young individuals are highest is Albania: more than 22% of young Albanians intend to emigrate. Countries with comparably low rates of people planning to emigrate are Poland, the Czech Republic, Romania and Serbia.

On average, migration intentions are higher among men (12.0%) than among women (10.8%), and this pattern is observable also in most individual countries. Exceptions to this finding are Hungary, Poland and Serbia. In these three countries, more young women than men state that they intend to emigrate. In Albania and Romania, we find virtually no gender differences with regard to migration intentions.

Using the full CESEE sample, we find no general evidence for above-average migration intentions among the highly skilled. On the contrary, the highest share of individuals with migration intentions is found in the group of low-skilled individuals. In the Czech Republic and in Poland, only 2.0% and 2.2% of young, highly educated people intend to leave the country. Also in Albania, Bosnia and Herzegovina, Bulgaria, Croatia, FYR Macedonia and Romania, rates of highly skilled people wishing to emigrate are lower than those of people with a lower level of education. In Hungary, by contrast, migration intentions among the young and highly educated are highest in the sample: 17.7% intend to migrate, a share that is considerably above that of people with low and medium education levels.

Likewise, for Serbia, the data suggest that the desired emigration of highly skilled people is above that of lower-skilled individuals.

Our data suggest that assuming that all individuals that have the intention to emigrate (or a representative sample thereof) would leave CESEE, on average, the remaining population would be relatively older, the share of women would increase and average educational attainment in the population would improve.

This study assesses individual characteristics of prospective migrants in order to learn about possible demographic consequences of future migration. It relies solely on descriptive methods, and does not inform about possible underlying reasons for migration intentions. People might aspire to emigrate because of a lack of economic opportunities, due to network effects or pull factors from possible destination countries. A thorough assessment of the drivers of migration intentions is a particularly interesting path of further research. Starting out with the descriptive analysis in this study, a follow-up study will address the issue of the drivers of migration intentions based on the same data source.

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Annex 1: basic shapes of population pyramids

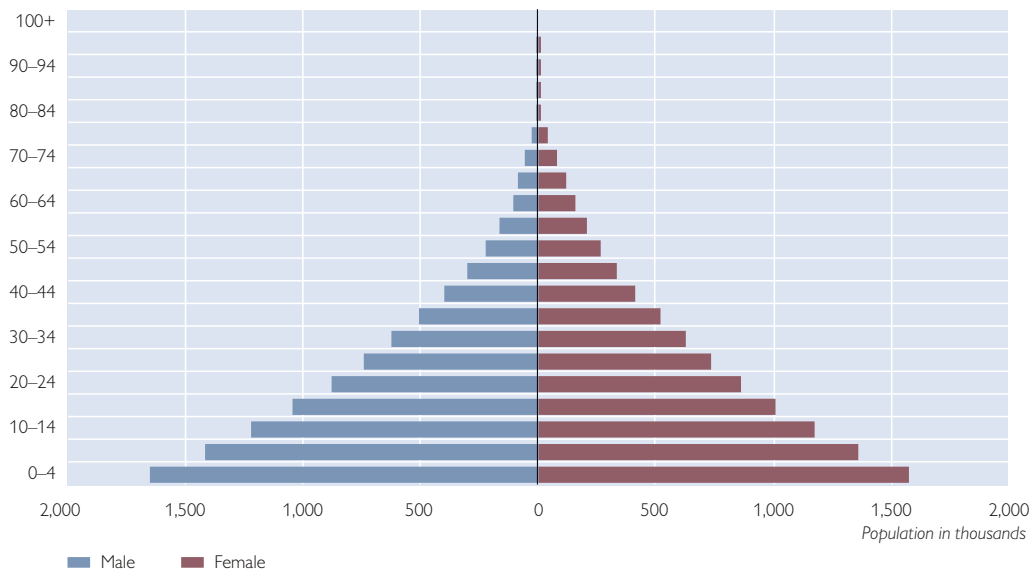
Population pyramids are common graphical representations of the age and gender structure of a population. In addition, other characteristics can be visualized in the pyramids, most prominently educational attainment (Lutz et al. 2014). The

Chart A1

Basic shapes of population pyramids

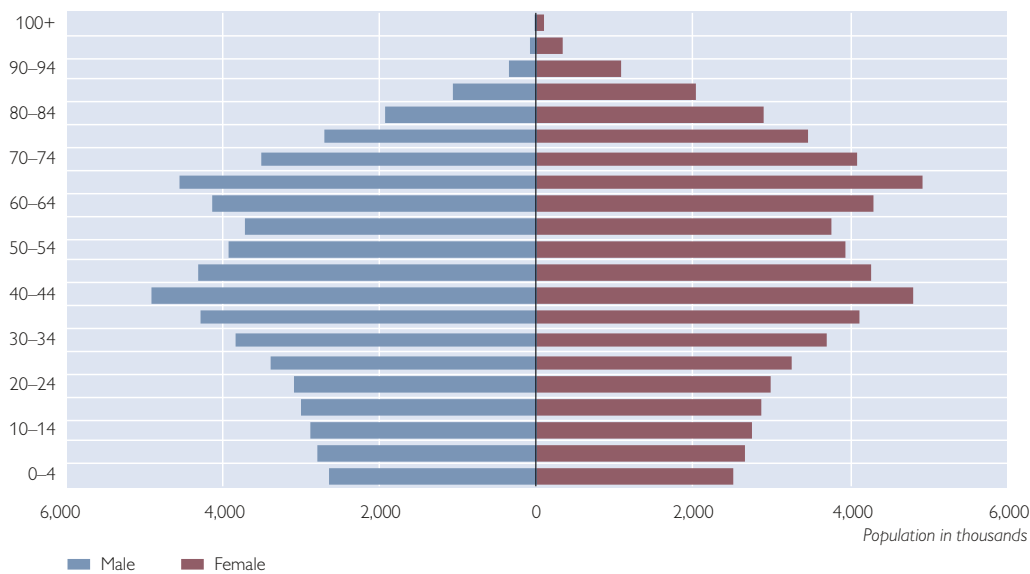
Expansive: Burkina Faso, 2015

Age group



Constrictive: Japan, 2015

Age group

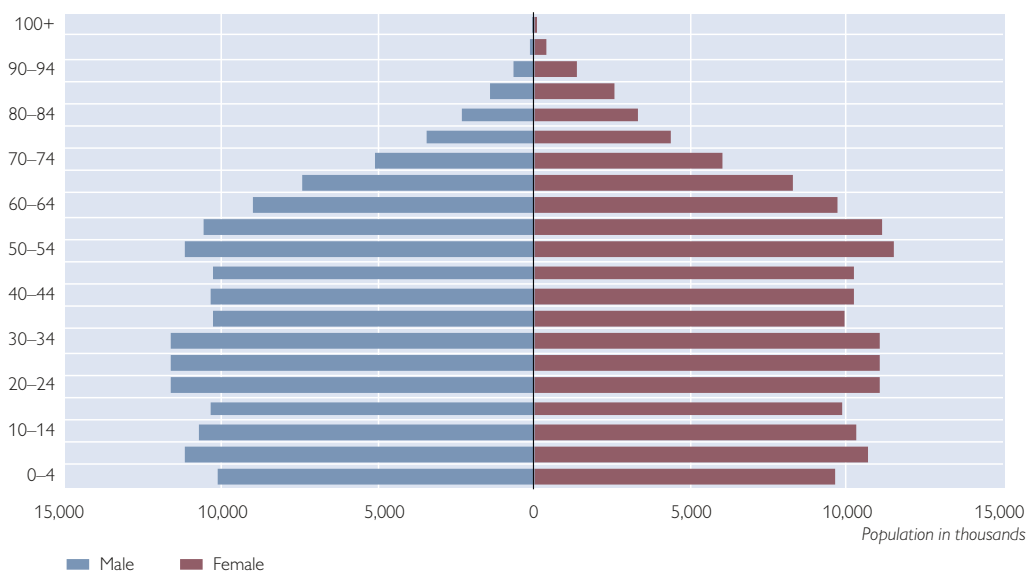


Source: Wittgenstein Centre.

Basic shapes of population pyramids

Stationary: U.S.A., 2015

Age group



Source: Wittgenstein Centre.

overall shape of population pyramids depends on a country's fertility and mortality rates. The following three prototypical shapes are typically distinguished.¹⁷

Expansive (expanding) pyramids represent populations that are young and growing. They have a triangular shape typical of pyramids, with a wide base and a narrow top. Usually, the number of individuals in each age group is larger than in the age group above. Expansive population pyramids are characteristic of developing countries with high birth rates and relatively low life expectancies.

Constrictive (contractive, contracting) pyramids represent populations that are aging and shrinking. They often have an inverted shape, with small proportions of young people. Constrictive population pyramids are characteristic of countries with low birth rates and/or very high levels of social and economic development.

Stationary (stable) pyramids represent populations that are not growing. They have a rectangular shape, with the base being of a similar width as the middle, representing the reproductive-age population, and declining population sizes at the top. Stationary population pyramids are characteristic of developed countries with low birth rates and high life expectancies.

Irregularities at the sides of the pyramids indicate special occurrences in countries, e.g. wars, baby booms or large-scale emigration.

¹⁷ For a good summary, see e. g. Korenjak-Černe et al. (2008).

Annex 2: comparison with other data sources

Docquier et al. (2014) use data from representative Gallup polls for 138 countries between 2007 and 2013 and report desired migration rates for all of our ten countries. The Gallup question is formulated more broadly (*“Ideally, if you had the opportunity, would you like to move permanently or temporarily to another country,…”*), and sets no time limit for the planned migration. Possibly for these reasons, and the fact that we aimed at obtaining lower bound estimates, the desired emigration rates reported by Docquier et al. (2014) are higher than those based on OeNB Euro Survey data. The correlation of results, however, is very high (0.76, all age groups). According to both data sources, Albania and FYR Macedonia are the two countries that exhibit the highest shares of migration intentions, and the Czech Republic and Croatia are two countries with particularly low shares. The results differ significantly only for Romania, for which Gallup poll data indicate considerably higher rates of migration intentions. This may be attributable to the data corresponding to the period prior to 2014, the year in which Romanians gained unrestricted access to the labor markets in all EU countries.

Taleski and Hoppe (2015) provide another source for comparison, which is based on data collected by the Friedrich Ebert Stiftung in eight Southeastern European countries between 2011 and 2015, six of which are also covered by OeNB data. According to them, between 67% (Albania, 2011) and 27% (Croatia, 2012) of 14- to 29-year-olds answer the question whether they intend to leave with *“very”* or *“somewhat.”* It is likely that our stricter definition of migration intentions (with respect to the re-coding of the Likert-type responses) can explain a part of the difference in levels. Qualitatively, the results are similar: For the six countries covered in both data sources, the correlation coefficient is very high (0.85).

Liebig and Sousa-Poza (2004) use survey data collected under the 1995 International Social Survey Programme (ISSP). The data cover 23 countries, among them four CESEE countries. Based on this data source, the emigration intentions in 1995 were higher and more diverse across the four countries. In Bulgaria, one-third of respondents (33.1%) answered the question *“Would you be willing to move to another country to improve your work or living conditions?”* with *“very willing”* or *“fairly willing.”* According to OeNB Euro Survey data from 2014, less than 10% of respondents answered in a similar way in Bulgaria. In Poland, almost one in four people (23.1%) was *“very willing”* or *“fairly willing”* to move abroad in 1995, while our data source from 2014 suggests that only 8.4% have the intention to emigrate. Migration intentions in the Czech Republic and Hungary in the 1995 data are considerably lower and closer to OeNB data estimates. Overall, the correlation coefficient based on the four countries included in both data sources is 0.69.

It is particularly difficult to compare the migration intentions found on the basis of the OeNB Euro Survey to those based on other sources, because the wording of the questions differs across surveys, and so does the time of the survey and the underlying population. The three sources for comparison confirm, however, that our data of the desired migration rates indeed appear to be lower-bound estimates. In spite of this level difference, the correlation between our estimates and other sources is high.

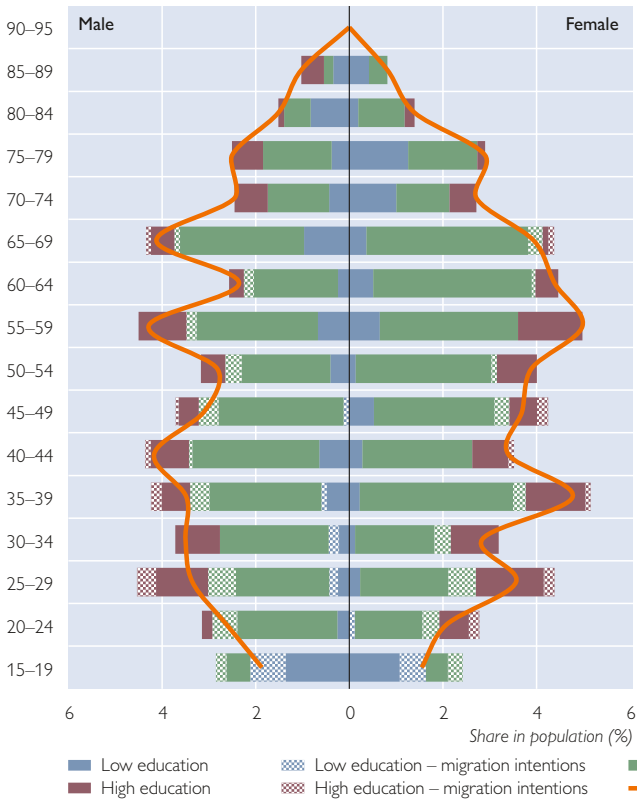
Annex 3: additional charts

Chart A2

CESEE EU countries: population by education level and migration intentions (2014)

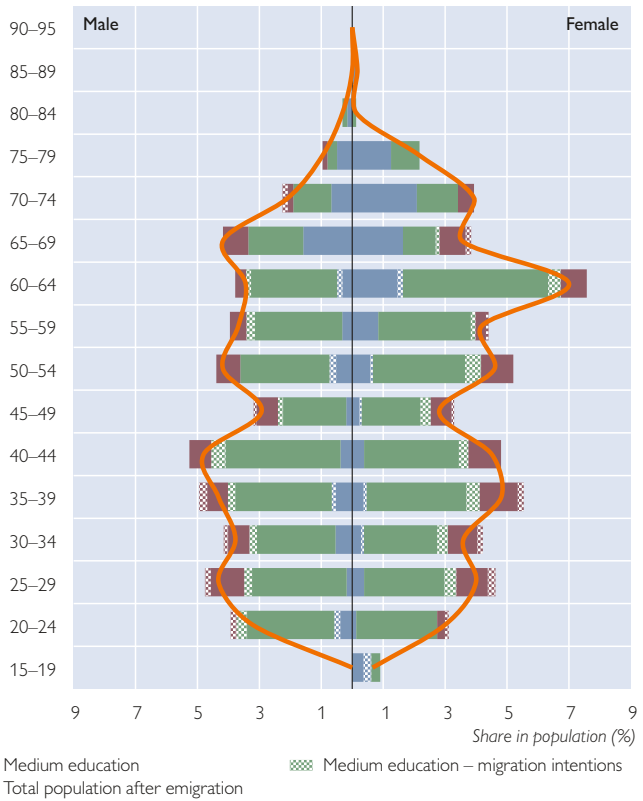
Bulgaria (N=890)

Age group



Hungary (N=953)

Age group

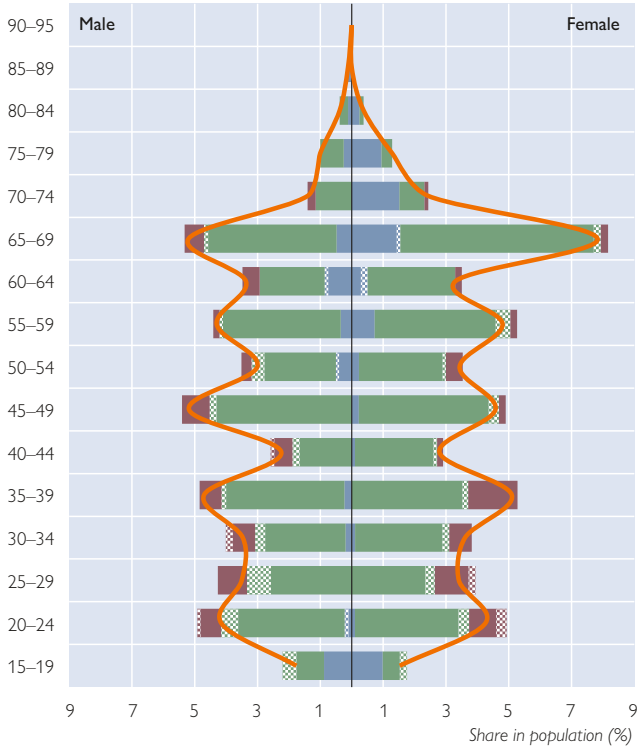


Source: OeNB Euro Survey (2014).

CESEE EU countries: population by education level and migration intentions (2014)

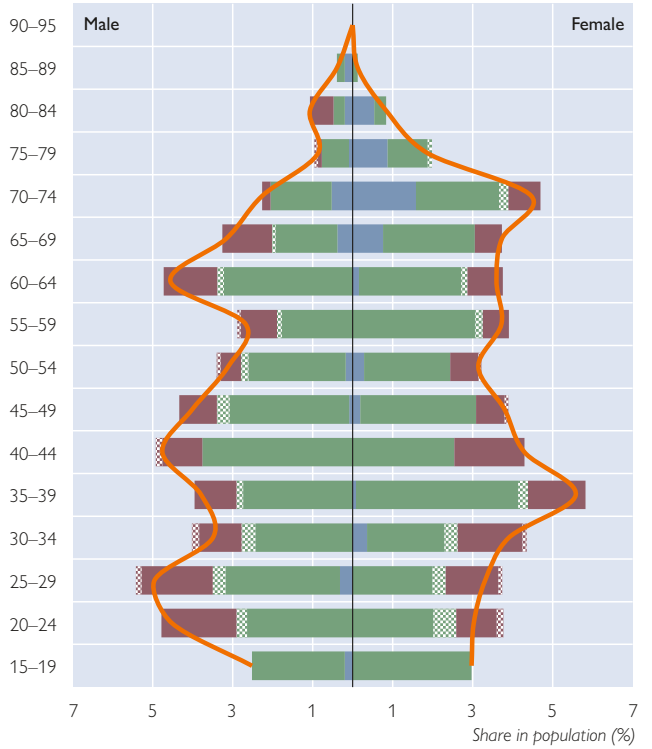
Croatia (N=912)

Age group



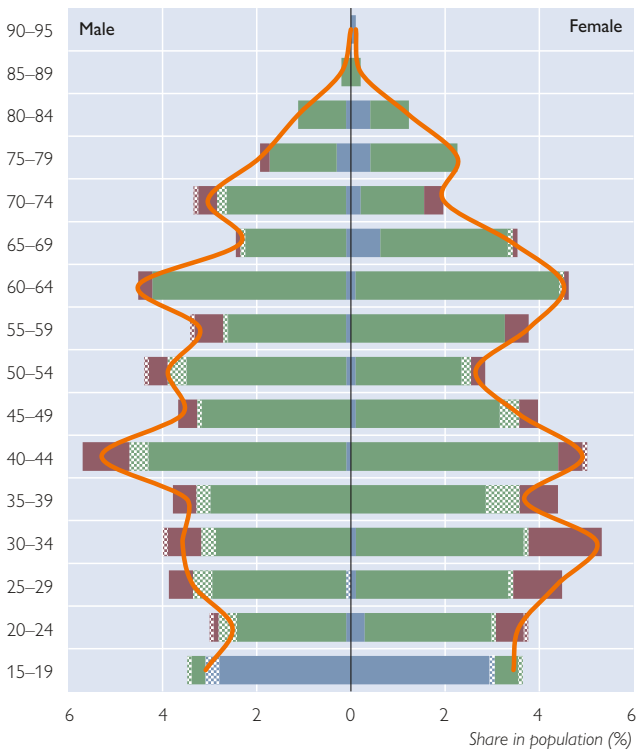
Romania (N=864)

Age group



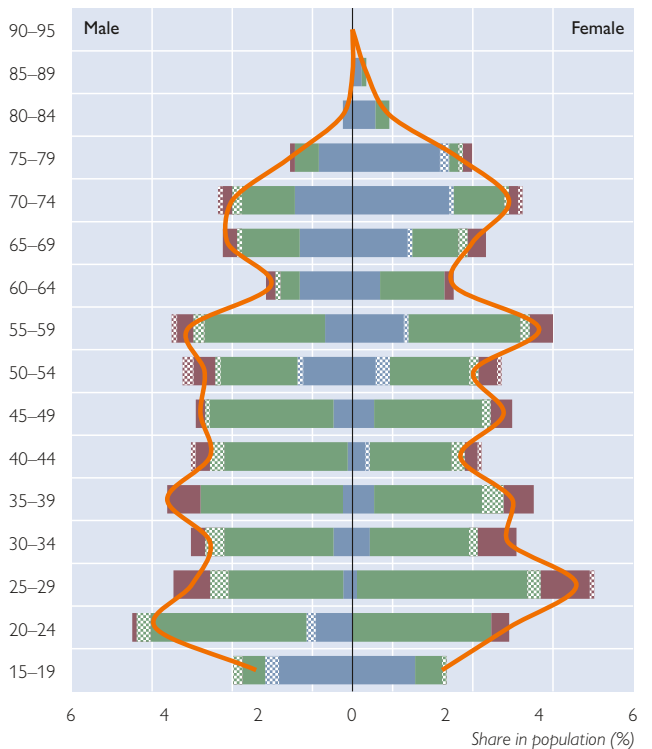
Czech Republic (N=988)

Age group



Poland (N=862)

Age group



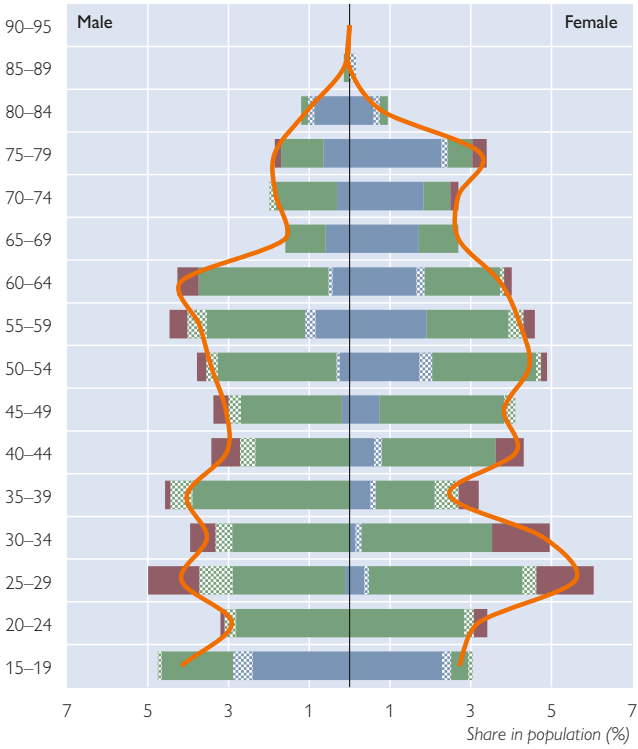
■ Low education ▨ Low education – migration intentions ■ Medium education ▨ Medium education – migration intentions
■ High education ▨ High education – migration intentions — Total population after emigration

Source: OeNB Euro Survey (2014).

Non-EU CESEE countries: population by education level and migration intentions (2014)

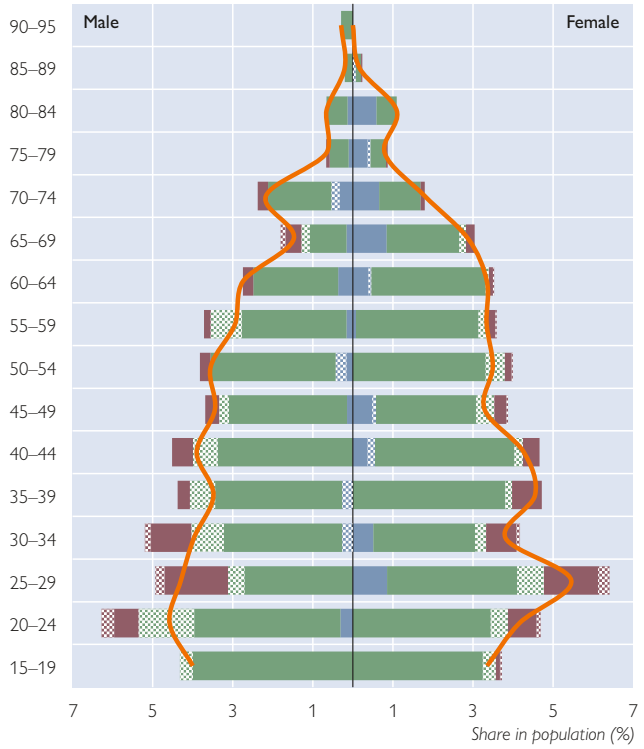
Bosnia and Herzegovina (N=831)

Age group



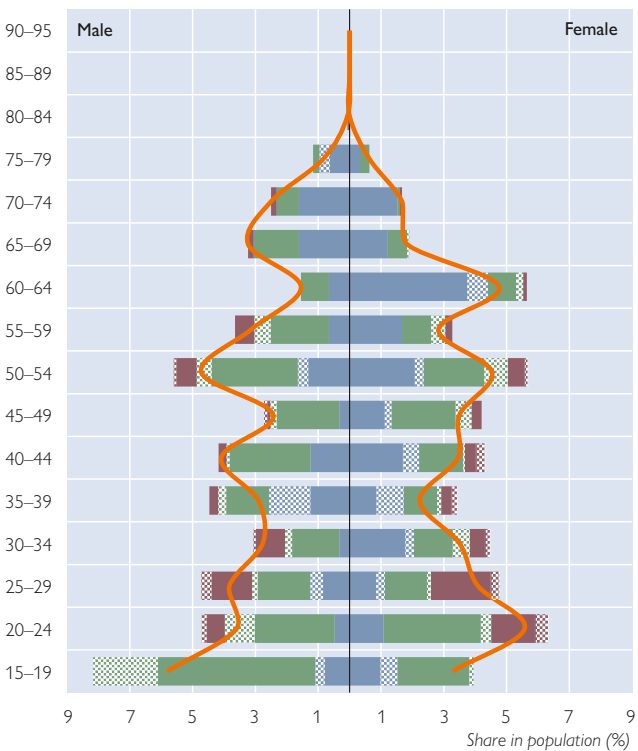
FYR Macedonia (N=972)

Age group



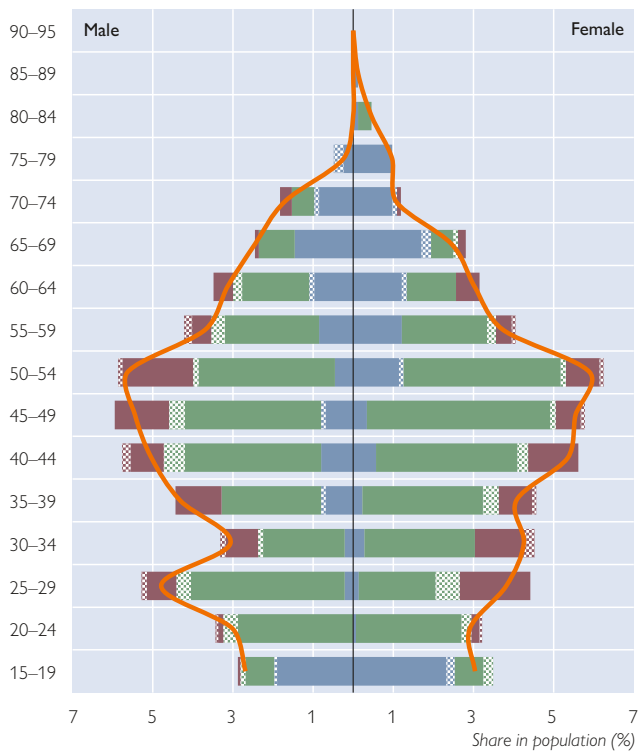
Albania (N=964)

Age group



Serbia (N=906)

Age group



■ Low education ▨ Low education – migration intentions ■ Medium education ▨ Medium education – migration intentions
■ High education ▨ High education – migration intentions — Total population after emigration

Source: OeNB Euro Survey (2014).

Table A1

Share of individuals with migration intentions by subgroups

| Country | Age group | All | Gender | | Education | | |
|------------------------|-----------|-------|--------|--------|-----------|--------|-------|
| | | | Male | Female | Low | Medium | High |
| | | % | | | | | |
| Albania | 25–39 | 22.46 | 22.53 | 22.40 | 34.84 | 14.89 | 16.18 |
| Bulgaria | 25–39 | 14.77 | 17.29 | 12.29 | 25.33 | 14.12 | 13.25 |
| FYR Macedonia | 25–39 | 14.28 | 19.06 | 9.75 | 27.94 | 13.80 | 11.89 |
| Hungary | 25–39 | 12.13 | 10.39 | 13.80 | 12.28 | 10.07 | 17.71 |
| CESEE | 25–39 | 11.38 | 11.97 | 10.83 | 22.58 | 10.83 | 8.85 |
| Bosnia and Herzegovina | 25–39 | 11.21 | 13.20 | 9.32 | 25.83 | 13.05 | 0.00 |
| Croatia | 25–39 | 9.04 | 10.97 | 7.09 | 0.00 | 9.85 | 7.25 |
| Serbia | 25–39 | 8.40 | 6.63 | 10.11 | 6.10 | 8.40 | 9.02 |
| Romania | 25–39 | 8.33 | 8.64 | 8.04 | 0.00 | 9.80 | 6.09 |
| Czech Republic | 25–39 | 8.31 | 10.49 | 6.52 | 32.10 | 9.58 | 1.98 |
| Poland | 25–39 | 7.68 | 7.11 | 8.20 | 0.00 | 9.82 | 2.16 |

Source: OeNB Euro Survey (2014).