Migration in an ageing Europe: What are the challenges?

Working Paper no 79

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Abstract

We use new migration modelling and projection techniques in order to quantify the effect of migration in the context of ageing societies in Europe over the forthcoming decades. Using new empirical results, data and projections of migration flows developed in the framework of the WWWforEUROPE project, we inform the policy discussion concerning the role of demographic change, inequality dynamics, labour market integration of migrants and the sustainability of public finances in the continent.

Contribution to the Project

This policy paper uses the migration modelling efforts developed in WWWforEUROPE in order to assess the future challenges in terms of migration policy for Europe. We use new data and projections employing demographic scenarios and draw conclusions about the role of demographic and migration developments for the sustainability of public finances in Europe, putting special emphasis on policy responses in the framework of aging societies.

Keywords:

Academic research, Challenges for welfare system, Demographic change, Economic growth path, European economic policy, Full employment growth path, Labour markets, Migration, Policy options, Sustainable growth, Welfare state

Jel codes:

E24, F22, H52, J62

Contents

1. Migration in Europe: A Global Perspective

Changes in the size of a population depend on the development of its three main driving factors: fertility and mortality rates (resulting in changes in the so-called natural increase), and migration rates. Fertility rates in Europe declined during the past decades, implying in addition to the direct negative effect on population growth that smaller cohorts of women reached and will reach reproductive age. If low fertility rates persist, the impact on the size of a population will enforce itself over the following generations. Life expectancy in Europe, on the other hand, improved by about 12 years since 1950 and likewise the impact of migration on population numbers increased over the past 50 years in Europe and has been persistently positive since the 1970s (United Nations, 2012). This report assesses how these demographic changes, and in particular migration trends, can influence Europe's economic future. By providing an overview on the characteristics of current migrants – in terms of their age structure as well as in terms of their human capital potential – as well as projecting future flows and by reviewing the current literature on the determinants of migration, an attempt of a simultaneous consideration of the *quantity* and the *quality* perspective of migration is undertaken.

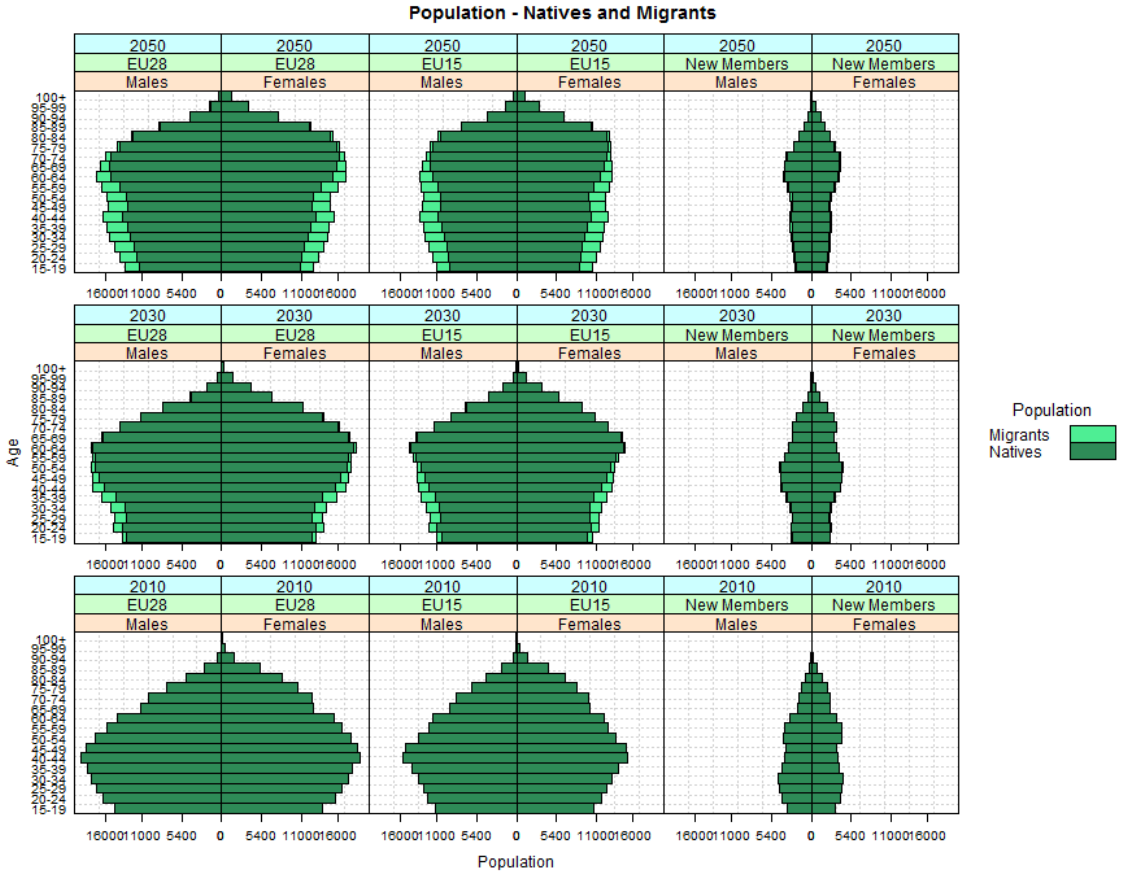
Considering population projections for the EU28 over the 21st century, state-of-the-art middle-of-the-road scenarios (see Lutz et al., 2014) indicate that population will grow for five more decades, peak around 2065 and decreasing by 2100 to the same levels expected by 2020. Current and expected population dynamics across EU countries are relatively heterogeneous. While Germany and many Central and Eastern European economies (Bulgaria, Croatia, Estonia, Hungary, Latvia, Lithuania, Poland and Romania) are already experiencing negative growth rates of population, some EU countries are expected to experience population increases throughout the period 2015-2100 (Denmark, Finland, France, Ireland, Luxembourg, Sweden, United Kingdom).

The low levels of fertility in Europe have led to a steady increase in the proportion of population in older age groups over the last decades. While in 1985 the share of European persons aged 65 or above in the working age population (defined as people aged 20 to 64) was approximately 19.5%, this figure rose to over 26.5% in 2010. The old-age dependency ratio is expected to increase further in the decades to come and the potentially painful economic consequences of such ageing trends for Europe are often discussed in the policy arena. It is widely accepted that migration plays a central role as a determinant of both the age structure of Europe in the future and the economic outcomes in a context of ageing European populations.

The importance of future migration flows as a counteracting force for the expected age structure changes in EU 28 are evident from Figure 1, where we depict the projected population pyramid for EU28, as well as those for EU15 (old Western European EU members, whose accession date is prior to 2004) and EU13 (which comprises the new member states, whose accession date is 2004 or later). In Figure 1 we highlight (in light

green in the graphs) the projected contribution of new immigrants to Europe's population over the next four decades using the middle-of-the-road projections in Lutz et al. (2014). The differences between EU15 and EU13 are striking, with EU15 benefiting of a "rejuvenation" of its population thanks to the expected inflow of migrants, while ageing trends accelerate in EU13. The net number of migrants for EU13 countries during 2005 and 2010 – that is the difference between the number of immigrants and the number of emigrants – shows that Bulgaria, Croatia, Estonia, Latvia, Lithuania, Poland and Bulgaria had more emigrants than immigrants and thus migration caused a decline in the population of these countries. Cyprus, the Czech Republic, Hungary, Malta, Slovenia and the Slovak Republic received more immigrants than they lost to emigration, and migration had a positive impact on the size of the population. Considering EU15 countries for comparison, the striking difference is that no country exhibits negative net migration rates during the same period.

Figure 1 **Population pyramids and projections for 2010, 2030 and 2050**



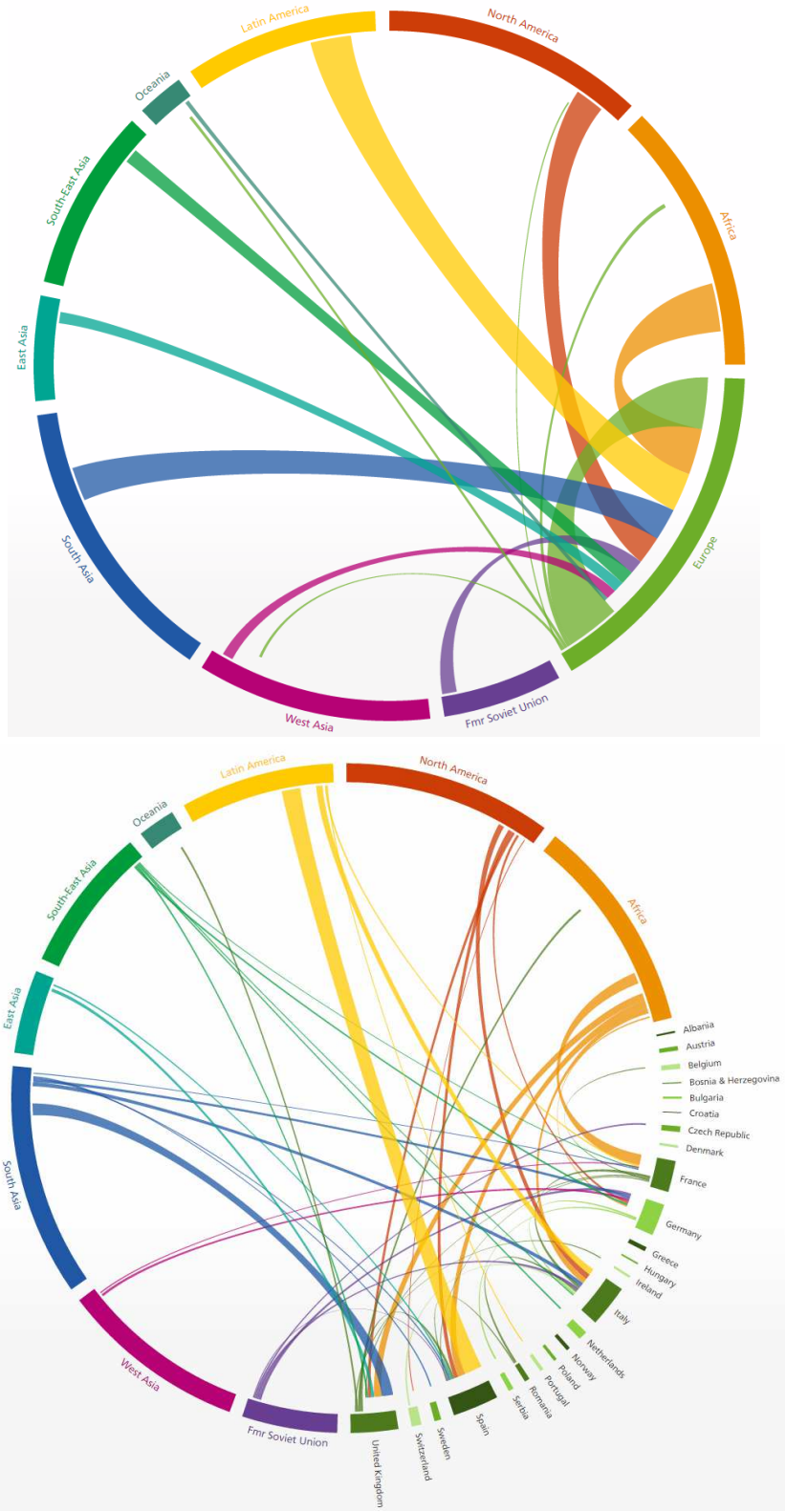
Source: IIASA/VID data (Lutz et al., 2014).

The future of economic growth in EU28 will thus depend to a large extent on whether young migrants possess the skills required to contribute efficiently to the creation of wealth and on their integration in European labour markets. Understanding the consequences of migration flows for the future of Europe implies that we need to carry out a thorough assessment of the characteristics of these migrants. A natural starting point is to study empirically the origin of migration flows to European countries. In spite of the importance of the study of population flows across countries for the social sciences, global datasets on migration flows have not been available until very recently. The research efforts carried out by Abel and Sander (2014) have led to the development of a dataset on bilateral migration flows between 196 countries from 1990 to 2010. Abel and Sander (2014) provide estimated flows using maximum likelihood estimates for the migration movements required to meet the changes observed over time in migrant stock data, which are available.

Using these migration flows, so-called circular migration plots can be used to depict the origin and destination of migrants over a period of time. Figure 2 presents two circular plots that show the flows of migrants from and to Europe as a whole (top panel) and from outside of Europe to each European country (bottom panel) for the period 2005-2010. The circular plots represent migration flows in the form of surfaces linking world regions or countries, which in turn constitute segments of the circle with different colours. The width of the flow is proportional to the size of the migration movement and the region or country of origin determines its colour (see Sander et al., 2014, for a detailed description of circular plots as a data visualization tool in migration research).

From a global perspective, the largest share of the migration flows observed in Europe is composed of population movements across countries within the continent. These are followed by migration flows from Africa, Latin America and South Asia (in this order). The distribution of migrants by country of origin in terms of destination countries is relatively asymmetric in Europe, as would be expected given the differences in language and cultural links in the continent. The largest flows of Latin American migrants in the period 2005-2010, for example, tended to concentrate in Spain and, to a lesser extent, Italy. On the other hand, the largest share of the migration flows from Africa had France, United Kingdom, Spain and Italy as destination countries.

Figure 2 **Migration flows to and from Europe as a world region (top) and by country (bottom), 2005-2010**



Source: Abel and Sander (2014).

2. Who Are the Migrants? Education and Age Distribution of Migrants

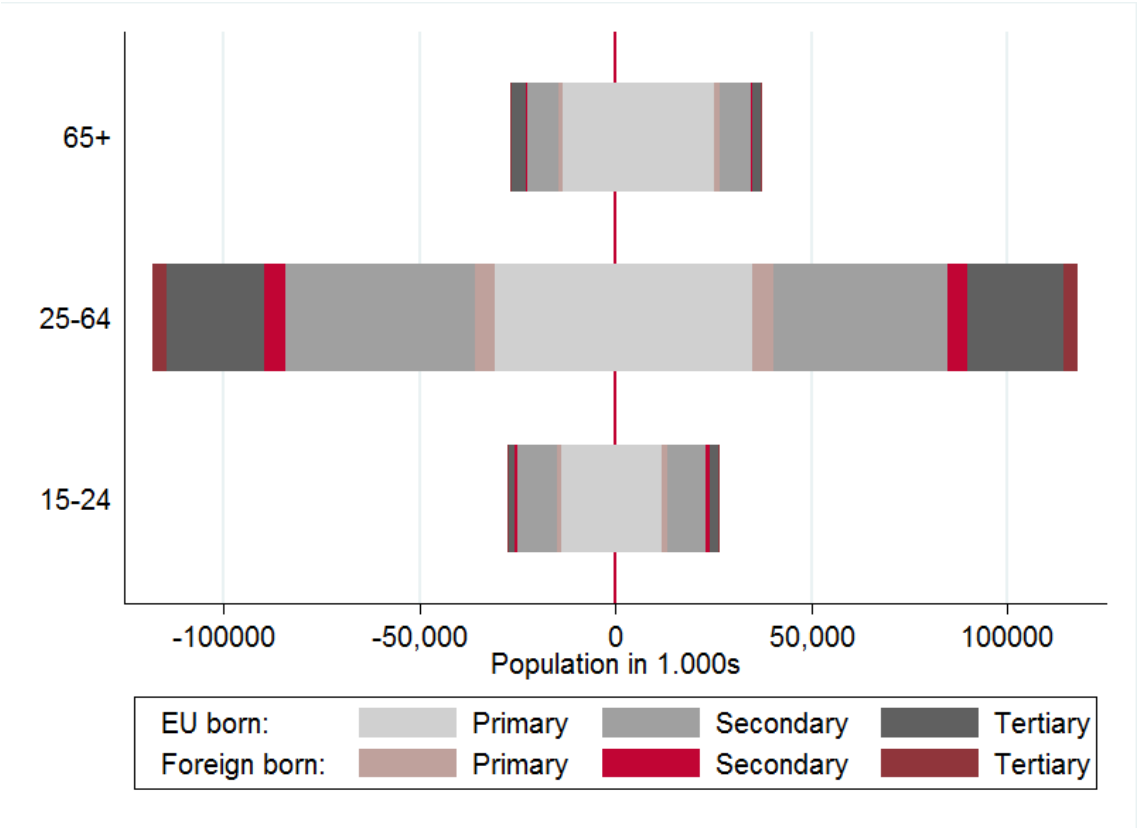
Besides the sheer number of immigrants to Europe, their characteristics in terms of age and education crucially shape the economic impact of immigration. Using data from the stocks of immigrants to 17 EU countries, the population structure, in terms of broad age group, education as well as gender, is visualized in Figure 3. The grey parts correspond to the population born in the 17 EU countries, whereas for immigrants different shades of reds are used. It is apparent that in particular in the age group of 25 to 64 year olds, immigrants constitute a considerable part of the population. Given current and expected demographic trends, the age structure of migrants is thus indeed serving as a mechanism to increase the share of working age population in Europe.

Due to its role in terms of altering the age structure of European population, the effect of immigration on economic growth developments at the macroeconomic level can be analyzed making use of our empirical knowledge of so-called demographic dividend effects. Starting with Bloom and Williamson (1998) and Lindh and Malmberg (1999), the importance of changes in age structure (and in particular, in the relative size of working age population) as a determinant of income growth patterns has been widely recognized in the literature on population economics (see also Bloom et al., 2007). Recent developments in the empirical analysis of the linkage between demographic change and economic growth emphasize the central role that education plays as a catalyst of the economic growth effects of demographic developments which lead to changes in age structure. Crespo Cuaresma and Mishra (2011) or Crespo Cuaresma et al. (2014b), for instance, highlight the importance of analyzing age-structured educational attainment data to assess how changes in age structure translate to income growth changes.

To the extent that migration flows towards Europe alter the relative size of population by age group, their rejuvenation effect on Europe's population can be thought of as creating a *migration demographic dividend,* whose potentially beneficial effects will be realized depending on the skills of migrants. The education level of immigrants will thus be one of the key determinants of future economic growth in Europe.

In Figure 4 the educational attainment of migrants to 17 EU countries is compared to the average education of this destination region. The comparison of education levels is based on the proportion of population with educational attainment level beyond secondary education and is presented for two different age groups: the total population aged 15 and older (top), as well as the young population aged 15 to 24 (bottom). The top chart in Figure 4 shows that a large part of the migrants with above-average education levels correspond to within-EU population flows, and in particular emigrants from France, Austria and the Netherlands as well as Romania, the Czech Republic and Hungary appear to have a considerably higher educational attainment than the average of the destination countries.

Figure 3 **Population of EU15 (+POL, +CZE) by gender (left part: male, right part: female), broad age group, education and migration status, 2005-2006**



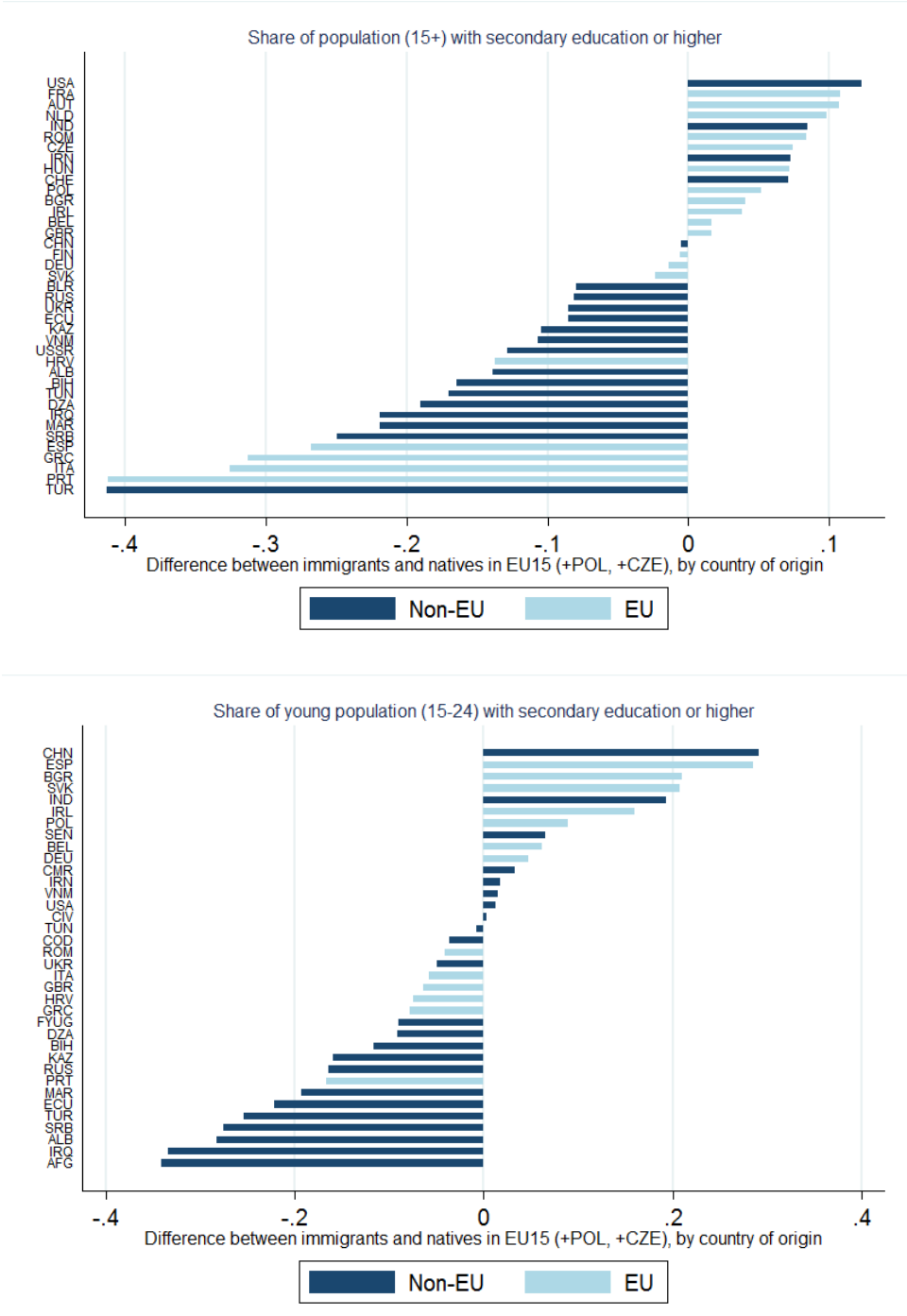
Source: OECD DIOC 2005/06

Immigrants originating in the United States, India, Iran and Switzerland tend also to be better educated than the destination region's population average, and with a share of secondary education or higher of 82%, US immigrants exhibit the highest positive educational gap among the top sending countries.[1]

Immigrants that tend to have lower education than the individuals born in the destination region come from former Soviet republics, South East Europe, North Africa and southern EU member countries. In addition, Turkish immigrants exhibit lower education levels than the population in the destination regions – the difference in the share of individuals with secondary education and above amounts to over 40%.

[1] It should be noted that there is a large number of sending countries whose emigrants are better educated than the EU 15 (+POL, +CZE)'s average – Japan, Mexico, South Africa and several Sub-Saharan Africa countries are just some examples. However, they are not included in the graph since the number of immigrants currently living in the 17 European countries was below the threshold of 100.000 and thus they do not constitute a major sending country.

Figure 4 **Difference between the education of migrants to EU 15 (+POL, +CZE) and the education of EU 15 (+POL, +CZE)-born individuals: age group 15+ (top) and age group 15-24 (bottom).**



Note: Country of origin on the vertical axis. Only origin countries with more than 10.000 (young) and 100.000 (total) migrants living in the 17 EU countries are included in the graph.

Source: Own computations based on OECD DIOC 2005/06 data and IIASA/VID data.

It is important to point out that at this stage no distinction has been made concerning more detailed age groups of immigrants. To the extent that the education composition of migrants changed over time, this descriptive analysis might be of limited use for assessing the educational attainment of future migrants. Thus, in the bottom graph in Figure 4, the comparison of education among immigrants and EU-natives is repeated using exclusively the age group comprising 15 to 24 year-olds. This figure shows that for young immigrants the negative educational differentials are narrower, and positive educational differentials are more pronounced. Among the top sending countries with particularly well educated young immigrants are China, India, Iran and Vietnam, as well as a number of Sub-Saharan African countries, namely Senegal, Cameroon and Cote d'Ivoire.[2] Southern and Eastern EU member countries, as well as South-Eastern European countries appear to have a lower share of secondary and tertiary educated young immigrants, as do immigrants from Central and West Asia.

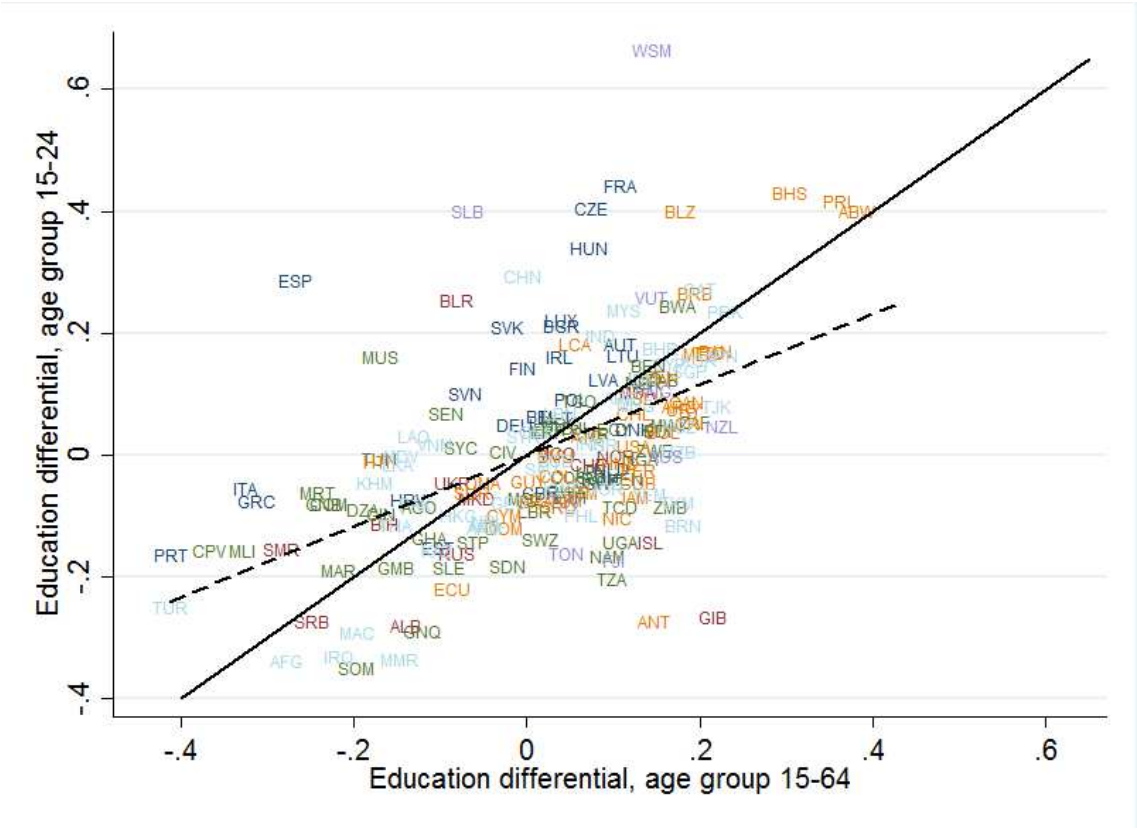
In Figure 5, the education differential between working age immigrants and the population in the 17 EU countries is put in relation with that of the young population (15 to 24 years) in the form of a scatterplot. Higher education differentials among the young immigrants imply an improvement of the education of the young immigrants compared to earlier immigrants,[3] and in that case the respective countries are expected to lie above the 45 degree line. If the educational differential of young immigrants is similar to that of the total working age population of immigrants (above 15 years of age) for a given country, it will be allocated close to the 45 degree reference line, and in case of a decrease of educational attainment, a country would be placed below the line. Countries marked in dark blue correspond to EU member countries.

The insights provided by Figure 5 imply that the skill advantage of immigrants (as measured through educational attainment) compared to individuals born in the destination countries increased. European countries not belonging to the EU are coloured in red, and are mainly placed along or below the reference 45° line. This indicates that young immigrants from sending countries which traditionally send better educated migrants than natives have lost some of their advantage, while immigrants from countries sending less educated migrants have reduced their disadvantage on average. No clear picture, however, is discernible for African immigrants.

[2] Immigrants from other Sub-Saharan African countries that are better educated than the host region are Gabon, Mauritius, Benin, Congo, Mali, Angola or Niger. Also Central American and Caribbean immigrants, although comparably small in magnitude, tend to be better educated on average.

3 For the sake of completeness it should be noted that such a finding could likewise imply that the education of the destination region was decreasing. This, however, can be disregarded as education levels within the EU have improved systematically during the last decades.

Figure 5 **Education differential[4] between immigrants and natives: young cohorts vs. total population. Linear fit (dashed line) and 45 degree line (solid line).**



Source: Own computations based on OECD DIOC 2005/06 data

While for some countries, in particular North African countries as well as Senegal, Cote d'Ivoire or Mauritius, the education differential improved, for others such as Somalia, Tanzania, Kenya, Sudan or Nigeria it decreased.

Older cohorts of most Central and South American and Caribbean immigrants tend to exhibit higher education than EU natives. While this is still true for a set of American countries, the advantages in terms of education declined for most young immigrants.

For Central Asian immigrants a similar pattern is found, but South Asian countries, most noteworthy are China, India, Malaysia, Vietnam, Sir Lanka and Lao P.D.R. the education differential is considerably better for the younger cohorts.

These results need to be put in the context of the existing differentials in intergenerational education mobility between migrants and native populations. In their study of second-generation migrants from non-EU countries to Austria, Schneebaum et al. (2014) present robust evidence concerning the fact that migrants present higher

[4] The education differential is computed as the difference in the shares of individuals with secondary or tertiary education between immigrants to and natives from 17 EU countries. The country labels indicate the source country of the migrants.

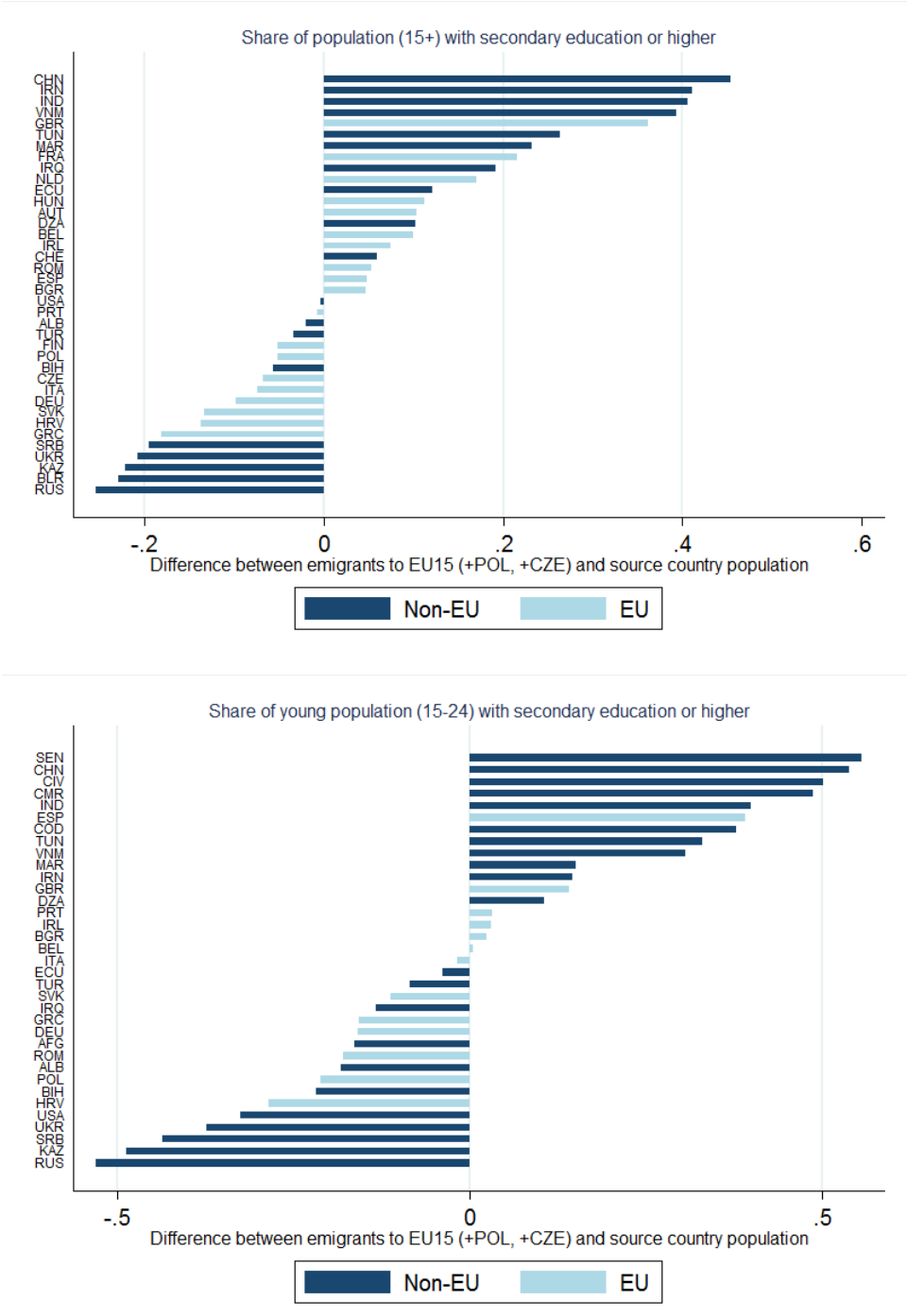
levels of intergenerational educational persistence than natives. Migrant men tend to present higher education mobility than both native men and women, while migrant women face the most stringent degree of intergenerational persistence of educational attainment. Second generation migrant women, thus, confront what Schneebaum et al. (2014) dub a “double disadvantage” in the sense of being the most immobile group in terms of intergenerational education persistence and also present the worst educational outcomes. Improving intergenerational educational mobility for migrants, and in particular for female migrants, appears thus as one of the outcomes that policy should aim for in order to reap the benefits of migration over the forthcoming decades.

Figure 6 approaches the question of how the education structure of emigrants to EU countries compares to the education of the population in their country of origin. Again, the analysis is undertaken for the total population above the age of 15 as well as for the young population aged between 15 and 24. The education differentials are computed for the most important sending countries and are ranked from highest to lowest. The top graph in Figure 6 shows that not only immigrants from China, India, Vietnam or Iran tend to be better educated than the population born in EU countries, but also they constitute a highly positive selection from the origin country population in terms of their average education levels. The share of secondary or higher education among the immigrants to EU countries is roughly 40% higher than in China, India, Vietnam and Iran, respectively. Similarly, immigrants originating in some North African countries are considerably better educated than those individuals in the source countries that decided not to emigrate.

Tunisia, Morocco and Algeria are among the top sending countries of EU immigrants, and the graph shows that particularly those with above-average education are moving to the 17 EU countries. EU countries appear to receive a negative selection in terms of education from South East European countries as well as from selected former Soviet countries. Within EU member states, migrants from Greece, Croatia, Slovak Republic, Germany, the Czech Republic and Poland also tend to be less educated that the non-migrating population. The United Kingdom, France, the Netherlands, Hungary and Austria, however, are EU countries whose emigrants are characterized by high education compared to their national counterparts. Whether similar patterns are observed when only the younger generations are considered is assessed in the bottom chart in Figure 6. An interesting finding is that educational gaps between emigrants and the source country population – positive as well as negative – are higher for younger cohorts. On the one hand, young Asian emigrants, from China, India, Vietnam or Iran, are considerably better educated than the young population in the EU destination regions, but on the other hand, the negative educational differentials of emigrants from South East European and former Soviet countries appear to be even larger among the young emigrants.

The net economic impact of brain drain migration on source countries depends on the relative size of two opposing effects.

Figure 6 **Difference between the education of migrants to EU 15 (+POL, +CZE) and the education of individuals in source country: age group 15+ (top) and age group 15-24 (bottom).**



Note: Country of origin on the vertical axis. Only origin countries with more than 10.000 (young)/100.000 (total) migrants living in the 17 EU countries are included in the graph.

Source: Own computations based on OECD DIOC 2005/06 data and IIASA/VID data.

A positive effect is fuelled by the improved incentives to invest in higher levels of education, while a detrimental drain effect is caused by highly educated natives leaving the country. Empirically, the net effect of brain drain migration on the source country has been shown to be positive for emerging economies (see Beine et al., 2008). The externalities of creating incentives to high-skilled migration can thus contribute significantly to income growth in the sending countries by promoting human capital accumulation.

3. Migration, Education, Income and Inequality

In order to grasp the effects that potential migration scenarios could have on the size and composition of the European labour force, the differences in the determinants of migration rates by educational attainment need to be understood. Most of the contributions within the large body of existing theoretical and empirical literature devoted to the assessment of the drivers of migration concentrate on the role played by wage and income differentials across countries.

That income in both the sending and in the destination countries is an important determinant of the migration decision is widely accepted, and there is little dispute about the relevance of income differentials when explaining migration behaviour using theoretical methods or econometric specifications.[5] Grogger and Hanson (2011) further enrich our understanding of the relationship between income and migration flows by disaggregating the income variable by educational attainment. In their analysis they find evidence for positive selection and positive sorting of migrants. Exploiting information on education-related income differences across and within countries, they show that larger differences in high-skilled and low-skilled income gaps between countries increase the emigration of high-skilled population (positive selection). Thus, (relatively) high rewards to skills in destination countries foster the emigration of (relatively) high-skilled individuals. In addition, large skill-related wage differentials in host countries attract relatively more high-skilled individuals (positive sorting), which can be interpreted as a confirmation of an income maximization behaviour of migrants. Positive sorting is present when both pre-tax and post-tax income is used, but appears considerably stronger for post-tax income.

Due to data limitations, most of the existing empirical evidence is based on a subset of countries and bilateral migration flows are included if the destination country is a developed country. Crespo Cuaresma et al. (2013) overcome this shortfall using a statistical method that allows the identification of parameters in a gravity model without observing bilateral migration flows, but only net migration flows, which are simple aggregates of the desired bilateral flows. This approach allows testing whether income

[5] See Karemera et al. (2000), Hatton and Williamson (2003a, 2003b), Lewer and Van den Berg (2008), Mayda (2010), Beine et al. (2011) or Ortega and Peri (2013) for recent analyses.

elasticities vary across broad migration corridors (as defined by broad South/North migration flows). Their findings suggest that GDP per capita in the destination country is particularly important for South-South migration flows. Although still positive, the effect is significantly smaller for North-North/South-North movements. Low GDP per capita in the origin country acts as a push factor of migration, in particular for South-North and for North-South migratory flows. Studies concentrating on emigration out of developing countries find that the relationship between income in the source country and migration follows an inverse U-shaped pattern (Hatton and Williamson 2003a, Pedersen et al. 2008). Initially poor countries tend to exhibit higher emigration in the course of their development – a finding that seems to contradict the notion of migration being an instrument to improve an individual's economic situation. Hatton and Williamson (2003a) argue that the findings possibly indicate that due to poverty constraints the cost of migrating is prohibitively high for a considerable share of the population and increases in average income relax the constraint and enable emigration. The implications of this result are straightforward: economic development in low income countries must not necessarily lead to lower migration from these countries as implied by the income maximization hypothesis. If the income gains do not outweigh the benefit of the relaxation of the poverty constraint, increased out-migration of low income countries could be observed until they reach a certain level of development.

Theoretical as well as micro data based, empirical evidence has shown that on top of absolute income differences, also the relative position of individuals in the income distribution influences an individual's migration decision. Stark (1984) and Stark and Taylor (1989, 1991) introduce the concept of *relative deprivation* as a driver for migration arguing that the feeling of relative deprivation (or poverty) creates a disutility and affected individuals could choose to migrate in order to improve their relative position in the income distribution. Formally, relative deprivation for a given individual is calculated as the share of individuals being richer times the average excess income, and when aggregated to the regional/country level, this measure is closely related to the Gini coefficient of income inequality. The lack of empirical results in a cross country setting motivates Raggl (2014) to study the impact of relative deprivation/inequality on migration decisions on the cross country level. Exploiting data on migration rates by educational attainment level, heterogeneities among migrants with different educational backgrounds can be revealed. The findings suggest that an increase in relative deprivation, measured by the Gini coefficient, leads to a reduction in total immigration rates of countries, after controlling for GDP per capita, unemployment, human capital, the size of the population as well as country and year fixed effects. As predicted by theory, the impact of changes in relative deprivation on the migration decision varies by the educational attainment of the migrants: Relative deprivation has no impact of the immigration rates of primary educated individuals, but very well on the rates of immigrants with secondary and tertiary education. Higher income inequality reduces the inflow of medium and high skilled migrants, holding all other factors constant. Increases in GDP per capita on the other hand have, although a positive, a comparably

small effect on the immigration of tertiary educated, and appear to be more effective to attract primary and secondary educated migrants.

A similar analysis relates relative deprivation in the sending country to emigration rates of countries. The link between Gini coefficients and emigration rates is positive overall, supporting the hypothesis of income inequality acting as a *push factor* of migration. Allowing heterogeneous effects across education specific emigration rates shows that low skilled individuals react stronger to changes in income inequality. Thus, additional migration induced by widening income gaps in the source countries would be more pronounced among the group of low-skilled migrants. A decrease in relative deprivation in the countries of origin is expected to reduce the number of total emigrants and at the same time to change the educational decomposition of migrants towards higher average education levels of migrants.

The analysis shows that differences in absolute income across countries are by no means sufficient to explain global migration flows. Effective policies require the consideration of the distribution of income, in addition to the level of income and employment opportunities.

Apart from economic reasons, several other determinants of migration have been identified in the empirical literature. Institutional factors and immigration policies in the destination countries, such as accessibility of visas and selective immigration quotas can constitute stringent barriers to entry for prospective immigrants. Clark et al. (2007) assess the determinants of the temporal variations in the source country composition of immigrants for the United States. They find that in addition to income and education variables, migration policy measured by different dimensions of immigration quotas crucially shape both the level and source country composition of immigrants. Related country-specific policies are regulations on the portability of qualifications and social benefits across national boundaries. The importance of the transferability of human capital for a non-discriminatory labour market access of migrants as well as the potential gains for the receiving countries have been emphasized repeatedly in the literature (Bloom and Grant, 2001, Bonin et al., 2008, Chiswick and Miller, 2009). Likewise, the portability of social security benefits – or the lack thereof – has been a subject of analysis in recent literature (Holzmann et al., 2005, Koettl, 2009, Holzmann and Koettl, 2011). Avato et al. (2010) collect and present global data on the degree of social protection among migrants. They observe considerable differences across migrants from different source countries, and find that in particular South-South migrants have poor access to social protection. The highest form social protection guarantees the portability of social benefits upon (further, return) migration. The data suggest that less than one quarter of all global migrants is covered by bilateral agreements that are necessary for portability. Most likely due to the lack of appropriate data these latter factors received scant attention in empirical cross country studies, although they constitute important pull factors of migration.

Additionally, health and demographic factors play an important role in explaining migration flows. Migrants tend to be young, thus countries with a relatively large share

of young individuals are characterized by higher emigration rates (see for instance Hatton and Williamson, 2003b).

In spite of pull and push factors, the desire to migrate can remain unrealized if the cost of migrating are prohibitively high – direct transport and travelling cost are one part, but indirect cost resulting from learning a new language, culture, adapting to foreign institutions and administrative structures, job search and the lack of supportive safety nets provided by the family, must not be neglected. The cost of migration can be significantly reduced by communities of previous emigrants in other countries and the resulting networks that provide information, support and guidance. In addition, family reunification policies can facilitate visa reception. Pedersen et al. (2008) show empirically that the higher the stock of previous migrants from a given country residing in a destination, the higher the subsequent migration flows of individuals coming from the same country. This effect is stronger for migrants originating in poor source countries, indicating that the presence of networks is of particular importance for migrants from developing countries. Communities of previous migrants from a given country are not only found to increase subsequent migration, but also to lower the average educational attainment of the migrants (Beine et al., 2011).

A recent strand of the literature assesses the link between environmental factors and migration. Several studies conceptualize the possible channels through which environmental change can affect migratory behaviour. McLeman and Smit (2006) argue that depending on the vulnerability and the adaptive capacity of individuals, migration can be a possible response to climate change and its consequences such as higher average temperatures, extreme weather events or rising sea levels. Perch-Nielsen et al. (2008) study the impact of rising ocean levels and floods on migration conceptually in the context of other adaption strategies and conclude that floods are not likely to trigger permanent mass migration, whereas in the event of rising sea levels, due to the implied permanent loss of land, migration can be an important coping strategy. Black et al. (2011) argue that in addition to economic, political, social and demographic factors, also environmental factors play a key role in explaining migration flows. They accentuate that environmental factors need to be studied in interaction with other drivers of migration as they are likely to amplify or abate the migratory response. The lack of empirical studies on a global scale impedes a quantitative assessment of the impact of environmental factors on migration.

4. The Future(s) of Migration in Europe

4.1 Projecting migration flows in Europe: Benchmark trends

How are migration flows to Europe expected to change in the future? Given the overall linkages between bilateral migration flows, income and population developments unveiled by Crespo Cuaresma et al. (2013), benchmark projections can be obtained. These embody the expected changes in migration flows based on scenarios for

consistent population dynamics and GDP changes which represent realistic future developments.

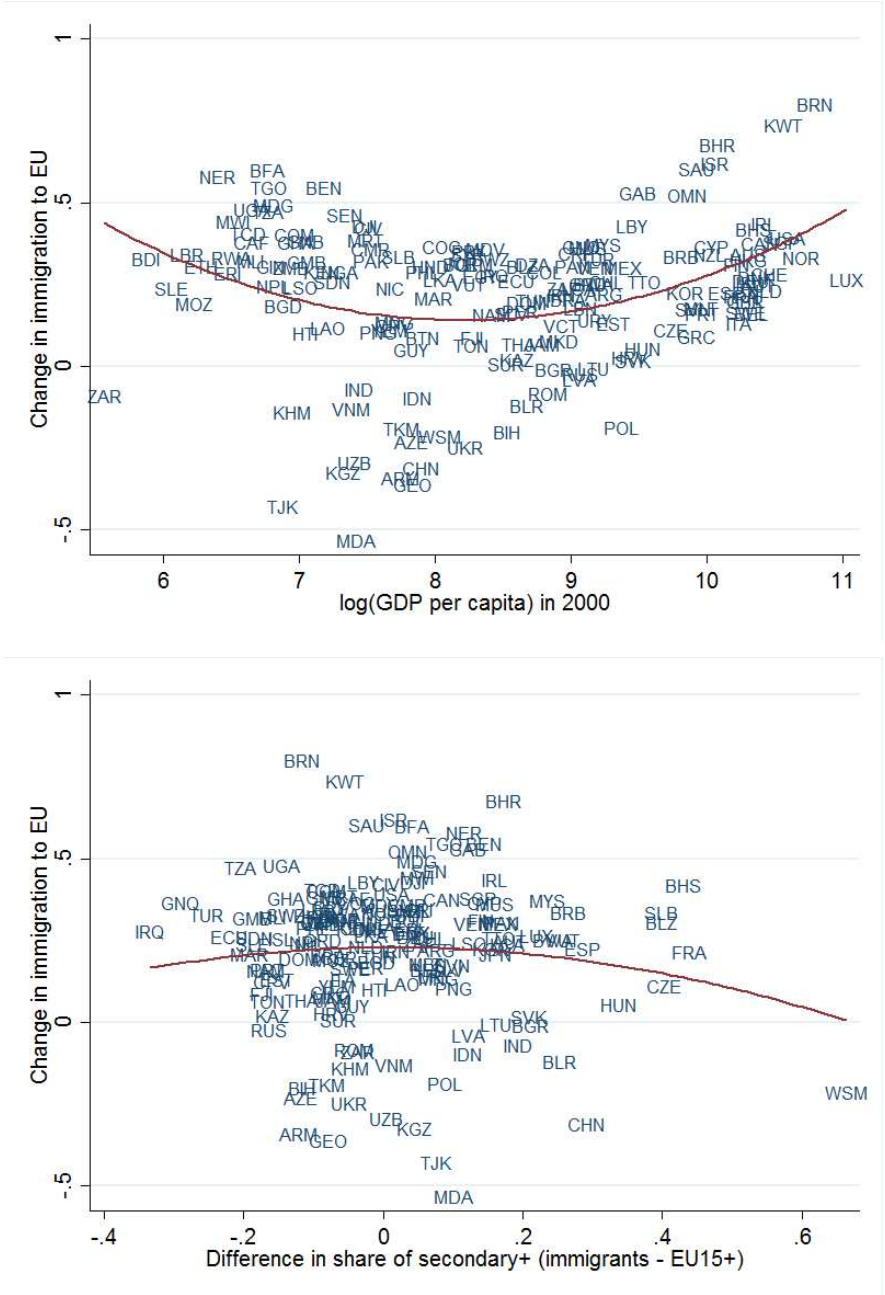
Using the elasticities obtained in Crespo Cuaresma et al. (2013), projections of migration flows to the EU can be obtained for a scenario based on the continuation of existing global trends in human capital accumulation. Using the population growth and GDP projections recently developed by Lutz et al. (2014) and Crespo Cuaresma (2014), respectively, we calculate benchmark projections of migration flows to EU15 for the coming decades (2010-2050). In particular, we use a scenario where we assume that educational expansion patterns at the global level follow the trends observed historically.[6] Income convergence forces, fertility and mortality are assumed to follow benchmark dynamics representing a "middle-of-the-road" scenario.

Figure 7 presents the projected change in migration flows to EU15 countries in the period 2010-2050 against the GDP per capita of the origin country, as well as against the educational difference of immigrants. Based on the projection results, the expected relative increase in migrant population to EU15 appears particularly large for origin countries with relatively low average GDP per capita, as well as for those with relatively high income. While this last group is mostly explained by the continuation of within-EU migration patterns, the projections also imply a consolidation of stable migration flows from many Sub-Saharan African economies. Comparing the expected changes in migration flows with the average education differential of migrants by country of origin (see bottom panel in Figure 7) does not reveal any particular relationship between the two variables. Such a result implies that matching the skills of migrants with the needs of the European labour market so as to efficiently make use of the potential of migration may require targeted policies in destination countries. Programs aimed to adapt the human capital acquired in source countries by immigrants are expected to reduce the incidence of skill mismatch in European labour markets and lead to a better integration of migrants.

The fact that different world regions are going through different phases of the demographic transition and thus present different distributions of population by age group affects the profile of migrants to Europe. As migrants tend to be young, economies with expanding populations and relatively large young cohorts are likely to generate larger emigration flows than relatively "older" countries. Apart from Sub-Saharan African countries, also South-Central and Western Asian countries currently face high young-age dependency ratios. At the same time, the level of economic development of these countries tends to be low, so that in particular for countries allocated at the left in Figure 7 (top) the expected change in immigration could be underestimated by the projected scenario (which does not directly account for age distribution dynamics in source countries).

[6] The projections correspond to the so-called SSP2 projections in the framework of the Shared Socioeconomic Pathways developed for climate research (see Krieger et al., 2014). Lutz et al. (2014) present a thorough discussion of the assumptions concerning changes in fertility by educational attainment level behind this scenario.

Figure 7 **Log change in projected immigration to EU between 2010 and 2050 by GDP per capita in 2000 (top) and by difference in educational attainment between migrants and EU natives (bottom)**



Source: Crespo Cuaresma et al. (2013)

Note: The vertical axis shows the percentage change (0.5 implies an increase by 50%) between the projected immigration to EU15 countries by country of origin in 2010 and 2050.

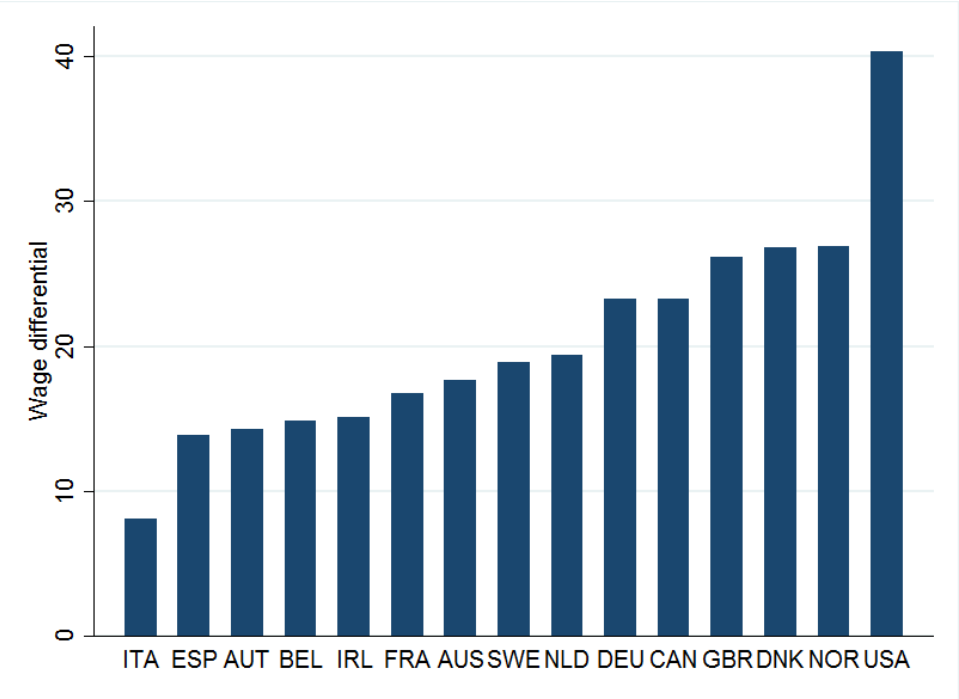
The education of emigrants from these countries that live in European countries is lower on average than that of EU natives. This is little surprising, as low income countries tend to have lower levels of educational attainment than EU countries. That

this finding does not imply that Europe receives a negative selection of the emigrants becomes clear when the education differentials of the emigrants with respect to the source country population are compared. Migrants originating in countries with expanding populations, mainly Sub-Saharan African and Western and South-Central Asian countries, exhibit relatively higher skill differentials between emigrants and the source country population than emigrants from countries with a lower share of young people. Europe, as a host region for immigrants from countries with a large share of young individuals is thus likely to benefit from an educational expansion in these countries.

4.2 Wage differentials and sorting of migrants

Skill related wage differentials in European countries are considerably smaller than in the United States (see Figure 8, based on data of 15 high income countries obtained from Grogger and Hanson, 2011). In Europe, the United Kingdom, Denmark and Norway exhibit the highest wage gaps between low and high skilled individuals, and yet they amount to merely two thirds of the gaps observed for the United States. The empirical evidence provided by Grogger and Hanson (2011) links relatively high skill related wage differentials in the destination countries to increased inflows of highly educated migrants. Countries with low skill premiums (Italy, Spain, Austria or Belgium are examples) appear to be disadvantaged in their ability to attract high skilled workers. A comparison with the experience of Canada and Australia appears worthwhile in this context. Both of these countries present differences between wages of low and high skilled workers that are comparable to those in European countries, but a significantly higher share of skilled immigrants. Such an outcome is the result of migration policies that strongly target skilled migration. As compared to the US migration policy model, that rests mainly on the selection of migrants by employers Canadian migration policy is based on the selection of permanent immigrants using a point systems where skills related to formal education and language constitute the main admission criteria. The Australian model is conceptually between the US and Canadian migration policy frameworks. It uses a point system but involves consultations with industry representatives so as to achieve a realistic assessment of the skills that the labour market requires at a given point in time. While the Canadian approach to migration policy is dubbed a “human capital model”, Australian migration policy is understood as being a “neo-corporatist model” (Koslowsky, 2014). Assessments of such migration policies such as that presented by Koslowsky (2014) indicate that the Canadian model has been particularly successful in attracting migrants with tertiary education attainment levels. The Australian model, however, is deemed more efficient when it comes to utilizing the skills provided by migrants. The “brain waste” that the human capital model can cause has led to calls for European countries not to adopt it (Thränhardt, 2014).

Figure 8 **Wage differentials between high and low skilled for 15 OECD countries**



Source: Grogger and Hanson (2011), http://harris.uchicago.edu/research/data/migration-data; Wage differentials are approximated by the difference between the 80th and the 20th percentile of the income distribution for 25-64 year olds (USD, 2000 prices) obtained using data from the Luxembourg Income Study (LIS) and averaged over 1994-2000.

4.3 How different are migrants? Fertility and intergenerational educational mobility among immigrants

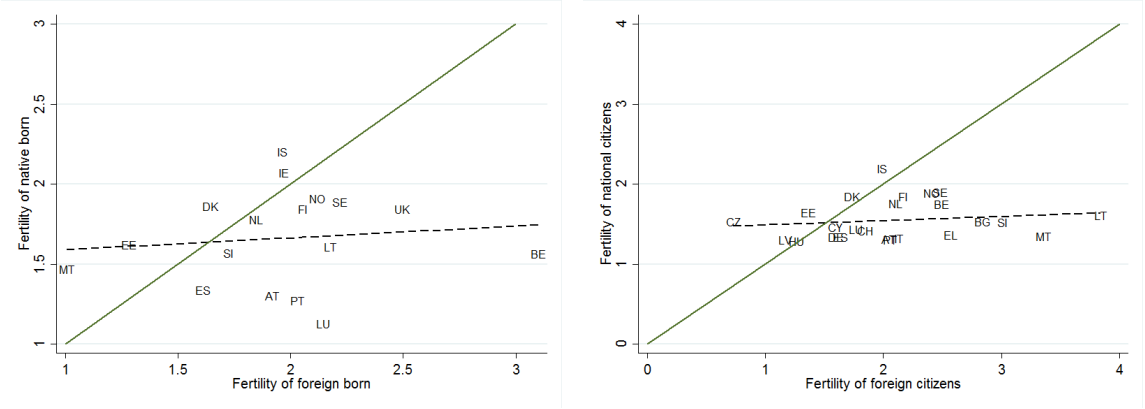
Inflows of young immigrants contribute to population change not only directly, but also indirectly through higher fertility rates. Figure 9 shows total fertility rates of women with a foreign background living in European countries as compared to native European women and women with national citizenships. In most countries, both, women who are foreign born and women who have a foreign citizenship tend to have higher total fertility rates than native born women and women with a national citizenship. Malta, Estonia, Denmark, Ireland, Island as well as the Czech Republic constitute exceptions. [7]

The dynamics of fertility differentials over time are important ingredients to the indirect contribution of immigration on the size of the labour force. The changes of total fertility rates during 2009 and 2011 show that fertility rates of women with a foreign background are more volatile than those of natives. In most countries, fertility rates of both women with foreign and with national citizenship declined after 2009. In Bulgaria,

[7] Also studies relying on individual level data come to similar conclusions. Anderson (2004) studies the difference in fertility rates between native swedes and immigrants and finds that in particular immediately after immigration, fertility rates are higher among migrants. Mayer and Riphahn (2000) use individual level panel data from Germany and find that immigrants tend to have higher fertility rates upon migration, but the gaps decrease with the duration of stay.

Greece, Italy and Hungary and Island, fertility rates of foreign women dropped by more than 15%. In most other countries, the decrease was less pronounced. In Lithuania, and to a lower extent also in Denmark, Latvia and Austria, fertility rates of women with national citizenships were rising and so did the rates for foreign citizenship holders (except in Austria).

Figure 9 **Total fertility for foreign born and native born women (left) and total fertility women with foreign and national citizenship (right)**



The green line is a 45-degree line and the dashed line represents a linear fit. All values represent averages for the period 2009 to 2011.

Source: Own computations based on Eurostat data (Statistics in focus 13/2013)

The most striking change in fertility rates of foreign citizenship occurred in Lithuania: Average fertility rates of women with a foreign citizenship increased from 3.18 to 4.70 between 2009 and 2011.

Overall, the data suggest that on average there is a falling trend in fertility rates of women that hold national citizenships and in most countries also total fertility rates of women of foreign citizenship declined. Comparing simple averages over countries shows that fertility rates of women with national citizenships decreased slightly over the three years under consideration.

While in the majority of countries also the fertility rates of women with foreign citizenship fell, due to a small number of countries that experienced relatively high increases in fertility rates in this group, the European average increased slightly.

Although based on this data no conclusive evidence for the future development can be derived, the currently higher fertility rates among immigrants suggest for most countries a relative increase of the population of second generation migrants. To which extent this expected development is beneficial for Europe's economy is tightly linked to the educational attainment that second generation migrants are expected to achieve. The evidence provided by Schneebaum et al. (2014) shows that intergenerational educational immobility – the dependence of children's educational attainment on their parents' educational attainment – is particularly pronounced among immigrants. Within

the group of immigrants a striking gender difference impedes educational advancement of females to a considerably larger extent than that of males.

This persistence implies that if no counteracting polices are undertaken, the current educational attainment of immigrants will to a great extent determine the education levels of the second generation migrants. Typically, the shares of migrants with low education as well as the shares of migrants with high education are both higher than those of natives and cause an underrepresentation of those with middle (upper and post-secondary) education attainment. Austria, the Czech Republic, Denmark, Luxembourg, Poland, the Slovak Republic, Sweden and the United Kingdom are examples for countries with comparably few immigrants with secondary education, a considerable overrepresentation of immigrants with less than completed secondary education and a slight overrepresentation of immigrants with tertiary education.[8] Hungary, Ireland and Portugal, and to a lower extent also Spain and Italy, accommodate immigrants that exhibit higher shares of tertiary education than their native counterparts.

4.4 How different are migrants? Welfare dependence and migration

Beyond contributing to the productive sector, migrants generate additional revenues to European welfare systems and thus improve the sustainability of public finance in the context of ageing societies. Often, however, the media discourse tends to demonize migration by claiming that immigrants constitute a particularly sizeable burden for European welfare states. Empirical studies aiming at quantifying the differential between natives and migrants in terms of welfare benefits tend to encounter statistical difficulties due to the fact that selection into benefit take-up can differ between the two groups, thus leading to biased inference.

Huber and Oberdabernig (2014) present the most complete empirical assessment available dealing with welfare dependence of migrants in Europe. Once that the potential sample selection bias is taken into account, the results in Huber and Oberdabernig (2014) robustly show that the welfare dependence of European immigrants is at most similar to that of natives. A very large part of the existing differences between natives and immigrants in either benefit take-up or benefit levels can be explained by differences in observable characteristics between the two groups. Once that these are taken into account, the empirical analysis shows that immigrants tend to receive benefits as often or less often than natives and that the size of such benefits tends to be comparable or lower. These results provide further evidence

[8] This comparison is based on OECD (2007). The following EU countries are considered in the analysis: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Poland, Portugal, Slovak Republic, Spain, Sweden and the United Kingdom.

concerning the positive spillovers that migration is expected to provide as a counteracting factor to ageing dynamics in Europe.

5. Policy Conclusions

Based on the theoretical and empirical evidence presented above, this section summarizes a portfolio of policies that can help European countries to benefit the most from its immigrants both in terms of a growing working age population and in terms of human capital accumulation.

The complex nature of migration dynamics and the breadth of influencing factors complicate a clear classification of the policies proposed. We thus merely suggest a loose allocation of the policies to three broad categories that are defined based on the main scope of the policy. We begin with policies that can influence the size and the characteristics of immigrants *prior* to the act of migration. By providing an attractive environment, European countries can improve the so-call “pull-factors” of migration, which contribute to the desirability of Europe as a region of destination. In particular, we suggest that evident differences between EU15 and EU13 countries are addressed, and the institutional environment is strengthened in countries that are currently typical source countries of migrants. Furthermore, we propose that agreements that enable the portability of social security benefits across countries are extended and made inclusive to a large part of the migrant population.

Policies aimed at tackling the observed disadvantages experienced by immigrants already being part of the European population constitute the second block. Establishing equality in the access to education, labour markets and institutions for migrants and their descendants are important prerequisites for a successful integration of migrants. The importance of non-discriminatory admission to (pre-)schools and diploma recognition of foreign-born labour market participants receive particular attention in this context.

Finally, we bring to attention often neglected factors that shape migration dynamics and recommend that policy areas only secondarily linked to migration outcomes should be evaluated also in light of their indirect consequences on migration. Especially, we discuss the role of redistributive policies and their indirect influence on the size and skill-decomposition of migrants.

A clear allocation of policies to the three groups is not always possible, as in particular policies targeted towards a reduction of economic or social disadvantages faced by immigrants will likewise improve the attractiveness of Europe as a destination. Therefore, we refrain in the following from any further classification and discuss each of the proposed policies in the light of the empirical findings and recent literature.

Managing heterogeneity

Throughout the analysis of the challenges of migration to Europe a large degree of heterogeneity across European countries is evident. The comparison of the expected impact of migration on the future age structure of the populations of countries identified a considerable gap between EU15 (accession pre-2004) and EU13 (accession 2004 or after) countries. While the EU15 population is projected to gain substantially from immigration – in terms of the size of the labour force and in terms of its age structure, the demographic structure of EU13 countries is expected not to be affected positively by immigration. On the contrary, some of the new member states are typical emigration countries that lose a considerable part of their (in many cases well educated) labour force to migration. To the extent that the returns to human capital accumulation are higher in countries with high emigration rates for skilled individuals, incentives are expected to lead to better outcomes in terms of educational attainment also in these source countries. The effects of increasing educational attainment in Central and Eastern European economies are expected to fuel growth in the region and income convergence in the continent (see Crespo Cuaresma et al., 2013, for example). However, the challenges posed by ageing populations in these countries need to be explicitly addressed by national governments. Making Central and Eastern Europe an attractive destination for migrants needs to be one of the important elements of such policy efforts.

In addition, ensuring the productive use of remittances in source countries is important for enduring their growth-enhancing effect. In the new EU member states remittances amount to roughly 2% of GDP on average[9], and the implications of remittances on economic development are important indirect consequences of emigration. It is empirically unambiguous that remittances tend to reduce poverty rates of sending countries (Adams and Page, 2005, Acosta et al., 2008 and Gupta et al., 2009) but the impact of remittances on economic growth is much debated. Giuliano and Ruiz-Arranz (2009) argue that remittances can be an important source for liquidity in countries where financial systems are poorly developed and thereby increase growth through investment, while others argue that adverse labour market effects can be a consequence of remittances, as the additional income can reduce the labour force participation in the receiving countries (Barajas et al., 2009). Catrinescu et al. (2009) show that when accounting for the institutional environment of a country, remittances contribute to long term growth and that this effect is particularly large if the institutional quality in the recipient countries is high. Political and economic policies and institutions that favour and incentivize investment and saving of remittances are thus important prerequisites for a beneficial effect of remittances on economic growth.

[9] This is the EU13 average of the share of remittances in GDP for the year 2013 according to the World Development Indicators. For comparison, average remittances amount to 0.8% in GDP in EU15 countries.

Enhance the portability of social benefits across countries

For both the initial migration decision as well as for potential return migration intentions the loss of entitlements for social benefits due to a lack of portability across countries is an influential and potentially harmful factor. If social benefits are accumulated prior to migration, the location choice might depend on bilateral agreements that ensure their portability. In consequence, if such agreements are lacking the implicit cost of losing the benefits can be prohibitively high. Return migration is seriously disadvantaged if social entitlements cannot be transferred back to the initial sending country. In addition, Holzmann et al. (2005) argue that the incentives for contributing to social security systems are lower for migrants that have return intentions whenever the benefits cannot be (fully) transferred to their origin country. A possible result can be increased employment in the informal sector among migrants. Holzmann et al. (2005) estimate that for roughly half of the immigrants to Europe bilateral agreements exist that guarantee an advanced *portability* of social security entitlements between the European host and the initial sending country. For one third of European immigrants there exists the possibility for transfers of the benefits (e.g. the pension when entitled, not the acquired years of contribution) – referred to as *exportability*[10] - to the sending country in the absence of bilateral agreements. The extent of that regulation depends on the national law of the destination country. Roughly 20% of immigrants are estimated to participate in the informal sector and have very limited access to social security which makes the question for the portability of benefits redundant.

Although when compared to other receiving regions the possibility for portability is most advanced in European countries, several shortcomings should be in the focus of European policy makers. While exportability of pension benefits is usually in place in all EU countries (i.e. pensions are paid independently of the country of residence of the recipient), if bilateral agreements do not guarantee portability, the benefits might be lost if the eligibility is not reached upon emigration/return migration (Koettl, 2009). In most continental European countries pension payments are tied to a minimum of 15 years of contribution and if this requirement is not met, in an absence of bilateral agreements all entitlements can be forgone. According to Holzmann et al. (2005) roughly half of all immigrants to Europe are affected by this lack of agreements that allow for portability.

Furthermore, the share of global migrants that are not covered by a bilateral portability agreements varies to a large extent by the income group of the sending countries: While 86% of emigrants from high income OECD countries are covered by a bilateral agreement, only 2%, 15% and 16% of emigrants from low, lower-middle and upper-middle income countries, respectively, are covered by an agreement (Holzmann and Koettl, 2014; for a classification by geographical region of origin see Avato et al., 2010). Although these gaps might partially stem from differential destination choices of

[10] See Avato et al. (2010) for a discussion of portability vs. exportability of social security entitlements, and for a thorough expansion of the analysis to middle and low income host countries.

migrants, they may indicate a discrimination of migrants from other than high income countries. Although systematic differences of social security systems between European countries and many low and middle income countries complicate bilateral agreements, in emerging policies the necessity for an extended, non-discriminatory portability of social security should be considered.

Improving intergenerational educational mobility among immigrants as a policy priority

The fact that total fertility rates of migrant women are larger than those of native women implies that an increase in the relative share of second generation migrants can be expected. High intergenerational immobility of education among immigrants, in particular among female immigrants and immigrants from non-EU countries, impedes educational advancement of the descendants of parents with low educational attainment. Altzinger et al. (2014) elaborate a set of policies that help paving the road towards more equal opportunities for children with different socioeconomic backgrounds. An important prerequisite for smoothing the chances for upward mobility of migrant and native children is public investment in education. Investments should in particular be targeted towards the promotion and expansion of pre-school programs to ensure equal access to education at an early stage. Improving the access to language courses for children – physically as well as financially – is another important precondition for a successful equalization of starting conditions among children with and without migration background.

Early tracking systems that require the choice for an educational path at an early stage of a child's educational career are likely to reinforce intergenerational educational immobility among migrants. Schneeweis and Zweimüller (2014), for instance, show using Austrian data that early tracking significantly harms students from poorer socioeconomic backgrounds. The earlier the choice for a certain school type is due, the more likely it is that the parents – which could have information disadvantages as compared to natives – and family background characteristic influence the choice of the track in a potentially unfavourable way. Tracking programs have also been shown to be associated with inequality in educational outcomes (OECD 2010) and negatively affect immigrants and their families.

Promoting access to vocational training should also constitute a cornerstone of the policy package aimed at improving the beneficial spillovers of migration. Improving access to vocational education for females with a foreign background, a group that has shown to be especially disadvantaged in that respect, appears particularly urgent in this context (see also Altzinger et al., 2014).

Avoiding brain waste and overqualified migrant work

Matching educational background of migrants and employment in an efficient manner is a key requirement to overcome the expected negative effects of demographic developments in Europe. Policies aimed at improving the efficiency and transparency

of administrative processes for diploma recognition appear necessary to avoid skill mismatch. Joint efforts of receiving and sending countries involving social partners and policy makers are required for such policies to be successful. Sending countries need to credibly ensure that their qualification framework is in line with that in EU countries, while targeted bilateral actions in sectors which may benefit from migrant skills should be encouraged in receiving economies (see for example the recommendations in Schuster et al., 2013, and Desiderio and Schuster, 2013).

The existence of migrant networks plays a central role as a pull factor in migration decisions. Attracting migrants from countries which have a limited stock of natives living in the receiving country can thus be difficult due to limitations in information, in particular for low-skill migrants. The promotion of government agencies and non-governmental organizations whose role is the provision of such information can at the same time improve skill matching and enlarge the pool of migrants from relatively underrepresented source countries.

Such actions should ensure an improved labour market matching of migrants and skill demand, as well as improving mobility of educated individuals and facilitating return migration and the subsequent brain gain effects for Central and Eastern European economies and non-EU countries.

Facilitating labour market integration of migrants

The chances of immigration relieving European pay-as-you-go social security systems hinge, inter alia, on whether migrants manage to integrate in the labour markets of host countries. The literature on the labour market integration of migrants, however, often finds that migrants face substantially lower chances of being employed (and higher ones of being unemployed) than natives and that the success of migrants in integrating in host country labour market varies widely across countries (Dustmann and Frattini 2011, 2014; OECD, 2008, Algan et al, 2010, Münz, 2007).

European integration policies towards immigrants have to focus on: a) selecting and attracting migrants that are willing and capable to integrate in the host countries' labour markets through appropriate migration policies, b) devising appropriate regional policies to support integration and potentially also influencing the settlement structure of migrants and c) adjusting the institutional structure of the economy to be better able to integrate migrants.

A number of authors have suggested instruments that could be used to implement these policy objectives. Rendall et al. (2010) and Cangiano (2012), amongst others, argue that migrants entering the host country as refugees or in family reunion schemes often have less favourable characteristics for labour market integration than migrants entering under labour market quota and the welfare magnet hypothesis of migration (Borjas, 1999). While migrants with lower chances of labour market integration may be particularly attracted to countries with a generous welfare state, theories on the self-selectivity of migrants (Borjas 1987, Chiswick 1999) argue that less skilled migrants should be particularly strongly drawn to countries where the wage structure is

compressed. In addition, quite a few studies have also found that integration success varies substantially among migrants from different sending regions.

Devising selective immigration policies that focus on the skills of migrants, providing privileged access to labour migrants and potentially also to migrants from certain regions are likely to be effective in selecting able migrants. Huber (2014), however, finds that countries with generous family migration regulations as a rule tend to get migrants with individual characteristics that make them less likely to integrate into host countries labour markets.

Horvath and Huber (2013) argue that besides networks and segregation, also ethnic diversity may have effects on labour market integration of foreign born. On the one hand, complementarities in productivity of different ethnicities may increase labour demand for the foreign born and increase chances of integration. On the other hand, diversity also increases uncertainty with respect to the quality of migrants of a particular sending country group. In regions where many migrants of the same ethnicity reside, foreign born tend to have lower unemployment and higher employment rates, while in ethnically more diverse regions, all else equal, unemployment among foreign born is higher and employment lower. The results of Horvath and Huber (2013) therefore suggest that successful integration policies will have to take into account the specifics of the region in which they are operating and that influencing the regional settlement structure of migrants and potentially supporting (regional) migrant networks may be another policy instrument that could potentially be used to enhance migrants labour market integration in host countries. Quasi-experimental evidence on the settlement structure of asylum seekers questions the rationale for influencing the settlement structure of migrants. Piil Damm (2009) emphasizes the role played by employed immigrants and co-ethnic contacts in the neighbourhood of residence. An efficient policy mix in this respect may therefore consist on not interfering with migrant settlements, while at the same time integrating migrants in areas where either the share of same ethnicity is very high (to avoid long term disintegration while at the same time reaping the short term benefits from integration) or which have very high diversity (to reap the growth benefits from diversity while at the same time improving integration) or to directly address issues of deprived neighbourhoods (to avoid situations in which migrants have little access to networks of employed migrants).

The results in Huber (2014) suggest that in countries with more centralized wage bargaining, stricter product market regulation (and potentially also employment protection) as well as in countries with a higher union density, labour market outcomes of migrants relative to natives tend to be worse. This implies that at least from the perspective of migrant integration in host countries, flexible labour markets (to allow migrants to more easily enter self-employment), less centralised wage bargaining (to increase wage flexibility for migrants working in low wage jobs) and ensuring inclusive trade unions assist in facilitating the integration of migrants in host countries' labour markets. The differences in institutional frameworks and relative trade union strength in Europe imply that the outcomes of comparable measures aimed at strengthening the

inclusion of migrants have been very heterogeneous across countries and sectors (see for example Hardy et al., 2012).[11] Measures aimed at improving diversity management and the inclusion of migrants from the side of trade unions need to be thus tailored to fit the particular characteristics of the institutional settings in which they operate.

Adding migration impact to the evaluation of redistributive policies

Given their particular relevance as a determinant of migration flows, redistributive policies should be evaluated in terms of their impacts on the numbers and the skill composition of immigrants to European countries.

The level of relative deprivation in destination countries has been shown to be an important determinant of the overall size of migration flows, as well as of the average educational attainment of immigrants to a given destination country. Countries with higher income inequality face lower immigration rates, holding other factors constant, as the expected higher relative deprivation causes a destination country to be less attractive to migrants compared to other, more equal countries (Raggl, 2014).

Besides the effect on total immigration rates, changes in income inequality can alter the skill decomposition of the migrants. First empirical analyses suggest that the immigration rates of individuals with only primary education do not respond in a statistically significant way to changes in inequality. Low skilled immigrants are expected to be allocated at the bottom of the income distribution and their perceived relative deprivation is not significantly affected by the distribution of incomes that are higher than their own, holding other variables constant. If migrants expect to earn wages corresponding to the middle or upper part of the income distribution, they react negatively to an increase in the share of the total product held by individuals with higher incomes. Thus, higher relative deprivation induced by a more unequal income distribution reduces the shares of secondary and tertiary educated migrants, while leaving unchanged the shares of immigrants with primary education, which results in (a) fewer immigrants and (b) a lower average educational attainment of those that migrate.

The average relative deprivation in the destination countries is not the only factor playing a role in explaining migratory flows. The characteristics of the income distribution in the source countries shape the number and the education structure of emigrants in an important way. Neglecting skill differentials of migrants and considering total emigration rates of countries, Raggl (2014) finds a robust positive relationship between the Gini coefficient of income inequality and emigration rates in a global cross-

[11] The different approaches and views of trade unions in Europe with respect to migration policy appeared evident, for instance, in the context of the 2004 EU enlargement. Trade unions in countries like Germany and Austria, which shared borders with accession countries, were in favour of a transitional period in the free movement of labour of the enlarged EU, a view that contrasted strongly with those held by British or Irish trade unions. The relative preference of German and Austrian trade unions for restrictive migration policy has been often reported in the literature (see e.g. Krings, 2009).

section of countries. Again, important differences among emigration rates by different education levels can be observed in the results of the empirical analysis. Rising average relative deprivation in countries causes emigration rates of individuals with (only) primary education to increase by a larger extent than emigration rates of those that achieve some tertiary education. This results in a lower average educational attainment of emigrants.

This set of novel empirical results has implications for the evaluation and design of those policies in Europe which are expected to have redistributive effects. While redistributive policies follow a number of wider goals than those of migration policy their possible effects on the number and the skill composition of migrants to European countries should not be neglected since - abstracting from other consequences of changes in the income distribution, - more equal countries exhibit lower levels of average relative deprivation, which in turn appear to be favoured in particular by secondary and tertiary educated migrants.

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Project Information

Welfare, Wealth and Work for Europe

A European research consortium is working on the analytical foundations for a socio-ecological transition

Abstract

Europe needs change. The financial crisis has exposed long-neglected deficiencies in the present growth path, most visibly in the areas of unemployment and public debt. At the same time, Europe has to cope with new challenges, ranging from globalisation and demographic shifts to new technologies and ecological challenges. Under the title of Welfare, Wealth and Work for Europe – WWWforEurope – a European research consortium is laying the analytical foundation for a new development strategy that will enable a socio-ecological transition to high levels of employment, social inclusion, gender equity and environmental sustainability. The four-year research project within the 7th Framework Programme funded by the European Commission was launched in April 2012. The consortium brings together researchers from 34 scientific institutions in 12 European countries and is coordinated by the Austrian Institute of Economic Research (WIFO). The project coordinator is Karl Aiginger, director of WIFO.

For details on WWWforEurope see: www.foreurope.eu

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