Migration and development – the Central and Eastern European perspective  
Lessons learned from the post-enlargement migration experience\(^1\)  
Paweł Kaczmarczyk\(^2\), Agnieszka Fihel\(^3\), Joanna Nestorowicz\(^4\)

Introduction

The main aim of this paper is to consider the post-enlargement migration from Central and Eastern Europe as a natural experiment and on that basis draw migration lessons for countries aspiring to become a high income country. We will refer predominantly to the experience of Poland as one of the main important migrants’ sending country in the region. In particular the paper will examine to what extent migration understood as Poland’s connectedness to global labor markets helped its economy to develop. In order to distinguish between what is idiosyncratic in the Polish experience from what may be adaptable for others a comparative approach will be applied and we will refer to a set of benchmark countries. This comparison is intended to help distill the migration features that made Poland and these other new high-income countries successful relative to the countries that are struggling to move beyond middle-income countries.

The paper is structured as follows. Section one presents the most important quantitative and qualitative characteristics of migration from Poland and other benchmark countries (from the region). The main section of the paper – section two – is divided into a few subsections devoted to labor market impacts, brain drain / brain gain issue, role of financial and social transfers, return migration and both short- and long-term demographic impacts respectively. Last section concludes and presents a number of lessons to be drawn from the post-enlargement migration experience.

1. Post-enlargement migration from Central and Eastern Europe – scale and structural characteristics

Post-enlargement migration from the EU8 and EU2 countries is commonly treated as one of the most important migratory flows in recent Europe. Despite the fact that after 2004 majority of EU15 countries introduced restrictions on the free movement of workers (transitory measures) first post-accession years saw a substantial increase in scale of migration from the region. Based on the LFS data Holland et al. (2011) claimed that the stock of EU10 (EU8 plus EU2) nationals residing in the EU15 countries tripled between 2003 and 2009 (from around 1.6 million to 4.8 million). According to this study, between 2004 and 2009 (end of year) about 1.8% of the EU8 population moved to the EU15 countries (as a consequence the host countries population raised by approximately 0.3%). In case of the EU2 citizens scale of the phenomenon was even higher: between 2007 and 2009 around 4.1% of the sending populations moved to EU15 countries raising the populations of the host countries by 0.3% (see Figure 1).

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Fihel et al. (2015) based on the EU LFS data demonstrated that within 10 years following the 2004 EU enlargement the total number of migrants originating from EU10 countries and residing in the EU15 countries has risen from 1.1 million (in 2004) to 6.1 million (in 2014; 5.4-fold increase). In net terms it could be translated into an annual inflow of around 0.5 million. The most drastic changes have been noted directly after the enlargement rounds (in 2005 and 2006) and then in 2008 – see Figure 2.

Most of available statistical data documents an unprecedented increase in the scale of migration from EU8 and EU2 countries after the EU enlargement. Moreover, those inflows seem important also in the global perspective. According to OECD data (DIOC database), nearly half of migration within the EU15 countries over the first decade of the 21 century should be ascribed to the EU8+2 citizens (Fihel et al. 2015).
Figure 3 compares stocks of migrants born in benchmark countries and residing in OECD countries to show that except for Mexico, the scale of recent migration from Poland is comparable only to the mobility of Romania citizens. This feature is even more prominent if we consider the relative size of migrants’ stock – with respect to this measure post-accession migration from Poland and Romania is really exceptional (and higher than in case of Mexico).

Against this background, Poland remains one of the most important migrant sending country in the region. Even considering previous massive waves of migration the EU enlargement presents a turning point both in terms of numbers as well as structural features of migrants. In the first post-accession years a drastic change in the stock of migrants residing abroad has been noted. According to the CSO data, it raised from around 790 thousand in 2002 to 1 million in 2004, 1.45 million in 2005 and 2.3 million in 2007 (6.6% of the total population). Since then the number of Polish migrants residing temporary abroad slightly declined to increase again recently (mostly due to increasing flows to Germany).

In terms of structural characteristics one of the most important features of recent migration from Poland remains the predominance of labor mobility. Available data document that over 90% of Polish migrants take up employment while staying abroad (Kaczmarczyk et al. 2010; 2014). In terms of destinations there was a shift observed in the post-2004 period: previously Germany and the USA were the most important destinations, recent Polish migrants target particularly the UK followed by Germany, the Netherlands, Ireland and Southern European countries. Nonetheless, similarly to other EU8 and EU2 migrants an important feature of recent Polish migration is that Polish migrants are present in most of the EU countries (Kaczmarczyk and Okólski 2008). Recent Polish migrants are substantially younger than it was observed prior to 2004 (according to the LFS data median age of all post-accession migrants was as high as 28 years and additionally median age of those choosing the UK or Ireland was 6-7 years lower than in case of those staying Germany, see Kaczmarczyk et al. 2010). In the context of the labor market position the skill structure of migrants is of highest importance. As shown by the LFS data, recent Polish migrants are relatively well educated, with almost 20% of persons with a university degree (as compared to 15% in the pre-accession period). The most numerous group constitute migrants with vocational education but there
is a clear overrepresentation of persons with tertiary education (Brücker et al. 2009) (see also the next section).

Considering structural characteristics Polish migrants are similar to other migrants from the region: post-accession migrants tend to be male, they are on average much younger than the target population (EU15 population): over 80% of migrants are persons aged 15-64 (as compared to 65% in case of the EU15), additionally, the share of migrants aged below 35 is much higher in case of EU8 and EU2 migrants than in host populations (Holland et al. 2011; European Commission 2011c); last but not least, the share of tertiary-educated persons is generally higher among migrants than in the total sending population even if controlled for possible biases resulting from the difference in age structure between migrants and sending societies at large (Brücker et al. 2009).

Considering all information presented above, it is important to emphasize that there exists no single model of recent migration from Poland. This feature is clearly portrayed by the National Bank of Poland survey completed on regular basis in a few major destination of Polish migrants. Data presented in Table 1 demonstrates a significant difference in terms of length of stay (with predominantly seasonal migration in the Netherlands and more long-term in case of Germany), age of migrants (with Ireland and the UK as countries hosting the youngest migrants) and also skill structure of migrant population (as for 2012 share of tertiary educated migrants varied from 23% in the Netherlands to over 30% in Ireland).

Table 1. Selected characteristics of Polish migrants in the Netherlands, Ireland, Germany and the United Kingdom, 2009 and 2012

<table>
<thead>
<tr>
<th>Category</th>
<th>The Netherlands</th>
<th>Ireland</th>
<th>Germany</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average length of stay abroad (months)</td>
<td>34.05 51.61</td>
<td>35.94 68.47</td>
<td>65.19 95.40</td>
<td>41.82 60.85</td>
</tr>
<tr>
<td>Share of migrants staying less than 36 months (%)</td>
<td>69.6 45.0</td>
<td>68.6 9.5</td>
<td>54.0 30.9</td>
<td>52.0 24.0</td>
</tr>
<tr>
<td>Share of migrants staying less than 12 months (%)</td>
<td>28.4 6.8</td>
<td>24.0 1.1</td>
<td>25.0 5.1</td>
<td>21.0 2.5</td>
</tr>
<tr>
<td>Share of migrants aged 25-34 (%)</td>
<td>36.1 43.1</td>
<td>47.5 59.4</td>
<td>32.0 27.7</td>
<td>46.2 50.8</td>
</tr>
<tr>
<td>Share of tertiary educated migrants (%)</td>
<td>41.4 23.3</td>
<td>37.1 31.3</td>
<td>49.0 24.4</td>
<td>40.6 29.5</td>
</tr>
<tr>
<td>Average value of permanency indicator (0-1 scale)</td>
<td>0.34 0.46</td>
<td>0.35 0.56</td>
<td>0.36 0.47</td>
<td>0.39 0.52</td>
</tr>
<tr>
<td>Average value of circulation indicator (0-1 scale)</td>
<td>0.64 0.47</td>
<td>0.63 0.42</td>
<td>0.63 0.44</td>
<td>0.59 0.40</td>
</tr>
<tr>
<td>Sample size</td>
<td>700 700</td>
<td>1000 1000</td>
<td>300 1500</td>
<td>1513 1500</td>
</tr>
</tbody>
</table>

Source: Janicka and Kaczmarczyk 2016, based on the NBP data.

The most important factor seems a steady evolution towards long-term or even settlement migration as clearly shown by the value of permanency indicator which changed substantially between 2009 and 2012 (among others due to a complex set of factors related to the economic crisis).

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5 Both indicators have been constructed as the average of responses to sets of questions referring to the length of stay, migration record, return/settlement plans, reservation wage, ownership of real estate at country of destination, registration in the social security system abroad, presence of family at destination, and remitting behaviour. Higher values of the permanency indicator suggest inclination towards settlement; higher values of the circulation indicator suggest inclination towards temporary presence in the country of destination.
2. Developmental impacts of migration – labor market, human capital formation, financial/social/political remittances, and demographic effects

2.1. Labor market effects of migration

From the perspective of neoclassical economics, in particular labor market economics, as well as foreign trade theory, migration implies temporary or permanent movement of labor, which effects changes within the relative supply of production factors (labor in relation to capital), and, consequently, may lead to further adjustments at the level of pay rates, employment, and unemployment. As a result, in the short run, the outflow of migrants from a given country may be regarded as a sort of supply shock. Studies on migration from Poland and other benchmark countries from the region demonstrate that this type of reasoning does not exhaust the entirety of the issue at stake. Instead, in order to assess the effects of migration at the level of the labor market of the migrants’ country of origin, it is necessary to refer to a variety of time perspectives and consider all the different levels of analysis, i.e. the local, regional, and national one (Borjas 2004, Kaczmarczyk *et al.* 2009, Janicka and Kowalska 2010). In the short term the main effects are related to change in supply of labor and thus refer particularly to change in employment, unemployment (and eventually in number of those who are out of the labor force). In the medium term a tendency to adjust to market equilibrium might be visible which may result, among others, in pressure on wages. Additionally structural features of the outflow are of some importance (stock and quality of human capital – see next section). In the long term more fundamental adjustments are possible including changes in the structure of the economy (capital / labor ratio, demand side modifications), occupational and social mobility of native workers and immigration of foreign labor.

Considering both short- and long-term effects of migration it is important to acknowledge that Poland, similarly to other transition economies, since the onset of transition was struggling with a severe oversupply of labor. As a result, during most of the pre-accession period unemployment rate was as very high and prior to the accession – in 2002 – it amounted to over 20%. Additionally, Polish labor market used to be described in terms of low participation and employment rates, structural mismatches and a large share of long-term unemployment (Kaczmarczyk *et al.* 2009). The situation started to improve already prior to the EU enlargement as the Polish economy grew, which was particularly important directly before the accession (3.9 and 5.3% of GDP growth in 2003 and 2004 respectively). In 2004 the number of unemployed started to gradually decrease: according to LFS data, the number of unemployed decreased from 3.2 million in early 2004 to 1.2 million in the late 2008 (the unemployment rate decreased from 19.1% to 7.1%).

Against this background potential effects of post-accession migration should be assessed. All of the available statistical data prove that along with the outflow of migrants, the situation in the domestic labor market was improving: this pertained to both the decrease of the number of people remaining out of work and the fall of the unemployment rate to a level not registered in the period of transition (from 19.1% in 2004 to 7.1% in 2008). Thus, a back of the envelope analysis may suggest that decline in unemployment might be an outcome of the post-accession migration. Nonetheless, there is a series of arguments challenging this thesis (an ‘unemployment export’ hypothesis). First, the fall of unemployment as observed since 2004 was also strongly correlated with the rise in employment: employment rates increased from 44% to 50.1% between the second quarter of 2004 and second quarter of 2008. Second, the general trends in the labor market continued even once emigration rates had stabilized, i.e. in 2007 and 2008 which points to the fact that changes in the Polish labor market may have resulted primarily from structural and business cycle changes in the whole economy. Third, scale of migration from Poland was not large enough to substantially impact on the unemployment level (e.g. between 2004 and 2008...
unemployment fell by 2 million which is much higher number than the total outflow including also persons not active on the labor market (Kaczmarczyk et al. 2009; Kaczmarczyk 2014).

This approach was heavily supported by study presented by Bukowski et al. (2008) who investigated the impact of demographic structure, changes in economic activity, and changes in employment on unemployment in Poland. They found that the changes in the level of unemployment in case of people in mobile age should be attributed predominantly to a rise (or decline) in the level of employment, i.e. the process of job creation. Effects of both remaining factors were marginal, however there was an impact of changes in economic activity noted which can be attributed to migration. The latter effect seems important particularly in case of persons in the younger age brackets: over the years 2003-2006 the number of unemployed persons in the age group 15-24 decreased by over 260 thousand; out of this number, more than 110 thousand can be attributed to changes in employment, however, the rest mainly to changes in participation patterns. The latter factor is to be linked with two processes: growing tendency to obtain tertiary education and massive post-accession outflow (Kaczmarczyk et al. 2009). This proposition is also supported by study presented by Lo Turco and Parteka (2008) who showed that in case of tradeable sectors domestic employment was positively affected by employment in trade-partner states and a decline in unemployment resulted primarily from the changes in the business cycle in an enlarged EU. Similarly, Budnik (2007) who applied the steady-state solution in order to compare migration scenario versus counterfactual and to evaluate the effect of migration on the Polish labor market over the period 2000-2006. Her study revealed that even if post-accession migration from Poland was relatively massive it had only moderate impact on the estimated steady-state shares of people with different labor market statuses and for the direct post-accession period (2004-2005) the bias in unemployment rate due to migration (difference between unemployment rates estimated for migration and non-migration scenarios) was negligible and was estimated around 0.4 p.p. However, it was clearly stressed that effects of migration can be far more severe for particular regional and local labor markets.

Empirical evidence on Poland demonstrates that in the case of the labor market encumbered by serious structural maladjustments and going through a major demographical change (the entering of the youth into the labor market and the leaving of people being in their pension or pre-pension age) even short-term relations between the supply shock and labor market processes do not have to be so very obvious as predicted by the basic models of the labor market. The already mentioned positive changes at the level of the labor market ought rather to be credited to changes in the sphere of creating (and destroying) job offers, and these, in turn, were to a large degree dependent upon a particular phase of the business cycle, and further enhanced by the influx of EU funds.

This assessment does not change substantially if we extend the time perspective and deal with the medium-term effects. In the medium term, the most important labor market equilibrium adjustment should be wage pressure. This kind of adjustments have been documented in other benchmark countries experiencing massive emigration, particularly in case of Mexico. Aydemir and Borjas (2006) claimed that a 10% change in labor supply is associated with 3-4% opposite-signed change in wage level. Interestingly, they showed that in case of Mexico emigration substantially increased relative wages in the middle of skill distribution but lowered the relative wages at the extremes (among others it reduced the level of wages of low skilled workers who remained in the country). Based on regional data Hanson (2005) documented around 6-9% increase in wages in high-emigration Mexican states as compared to low-migration states. Mishra (2007) referred to the US and Mexican census data from 1970 to 2000 to show that migration from Mexico had strong and positive effect on the level of domestic wages. Additionally he pointed to substantial distributional effects between labor and other factors of production due to high scale emigration.
There are several studies on Poland that address this issue in a direct way. Budnik (2008) measured the impact of migration on wage levels (search and matching model) and concluded that the steady-state impact on the wage rate of an increase in outflow of workers of around 4.5% (as observed between 2002 and 2006) was moderate and lower than 1% (in 2006). Similar results provided Kowalska (2011) who estimated the elasticity of wages in Poland with respect to migration from Poland (based on the LFS data). Her analysis revealed that 10% labor supply shock caused between 2 and 4% increase in wages (on average, depending on assumptions). Interestingly, elasticity of wages with respect to international mobility was higher for men than for women and for employees under 30 than older ones.

The last observation points to selectivity issues as discussed already and to sectoral impacts of migration from Poland. As concluded above the transition period in Poland saw dramatically difficult situation on the labor market marked by severe unemployment. Thus vacancy rates were extremely low for most of that period. The vacancy rate and, particularly, share of firms reporting problems with finding employees increased rapidly from 2005 until late 2007, i.e. in the period of the most dynamic outflow. The number of companies experiencing labor shortages as a barrier to growth varied from practically none prior to 2005 to 14.2% in the third quarter of 2007 and then fall again to around 6% in 2008. Most seriously hit sectors included construction (35% firms reporting hiring difficulties) and manufacturing (over 15%) (NBP 2008). Importantly, throughout 2007, labor shortages were declared the most important barrier to growth (NBP 2008). Nonetheless, as the business cycle phase changed in 2008 labor shortages ceased to pose a serious problem for most firms. As shown by Gumula et al. (2011) in the most critical phase of post-accession migration (mid 2007) almost 30% of employers declared migration of Poles as an important factor responsible for pressure on wages. Within next years this share declined to 1% in 2008 and 2009, and to 0% in 2010, notwithstanding still massive emigration (Janicka and Kowalska 2010; Gumula et al. 2011). It suggests, again, that labor shortages as observed in the post-accession phase were primarily an outcome of favorable economic situation and not necessarily outward migration.

Arguments presented above are to a large extent supported by several studies relying on general equilibrium models (and including long-term perspective as well). Across all of the evidenced cases, the effects of migration for the Polish labor market were evaluated as negligible, but generally positive (Holland et al. 2011; Brücker et al. 2009 – see Figures 4 and 5).

Figure 4. Short- and medium-term effects of post-accession migration, Poland and other benchmark countries, 2004-2010, changes in % or percentage points (unemployment rate)

Note that this effect is smaller than obtained in general equilibrium studies. Apart from different methodology applied the reason lies in shorter time period covered.
Importantly, both studies quoted argued that post-accession migration from Poland and other benchmark countries brought substantial benefits but particularly for receiving economies (and for the UK and Ireland in first place) – see Figure 5. If we consider sending countries, particularly Poland as well as trapped MICs (Romania) and new HICs (Czech Republic, Hungary, Slovakia) effects or outflow are mixed. While in the Polish and the Slovak case effects of migration are low but predominantly positive, in case of those benchmark countries that noted very limited emigration (Czech Republic and Hungary) effects are insignificant and in case of Romania (as well as the Baltic states) massive out-migration contributed to relatively large decline in GDP and did not bring any serious improvement in labor market terms. This would be another argument supporting the thesis that effects of migration depend on the scale of the outflow but are also strongly conditional on structural conditions at origin and general economic performance of sending country.

![Figure 5. Short- and long-term effects of migration for Poland and other benchmark countries, 2004-2007](image)

Source: Own elaboration based on Brücker et al. 2009.

Neoclassical economic theory suggests that in the long run migration is neutral to labor market, i.e. changes in the supply of workers should be internalized by the means of structural changes on the labor market and adjustment in the capital / labor ratio. An exemplification of this thesis is the study presented by Brücker et al. (2009) who argued that 1) post-accession migration brought serious benefits for the receiving countries (particularly the United Kingdom) and reduced the growth potential in migrant sending areas, 2) impacts on wages and unemployment were moderate and rather positive in short/medium-term, and 3) most of labor market effects were negligible in the long run - see Figure 5.

Several papers attempt to enrich this approach as it does not take into account those effects which are related to demographic and regional aspects of migration and possible structural changes on the domestic labor market. Demographic effects will be analyzed in one of the next sections, here we focus on possible structural outcomes of migration. Kaczmarczyk and Okólski (2008) proposed a concept of crowding-out migration to address potential long-term outcomes of recent migration from Poland (and other CEE countries). This idea goes back to the concept formulated by Layard et al. (1994) who suggested that one of the major conditions of accelerating modernization in southern European countries in the aftermath of World War Two was a mass outflow of labor. This outflow led to a sort of ‘crowding out’ of the labor markets, which along with the employment of various labor market policies, allowed for measurable
improvements of their effectiveness. Against this background, Kaczmarczyk and Okólski (2008) argued that in the long-run recent migration from Poland may lead to significant structural changes at the level of allocation of spatial labor resources, and, in this sense, it carries with it a certain modernizing potential, whereby modernization is understood as the transformation of regions, epitomized by a large share of natural economy or partly natural, as well as surpluses of labor resources impossible to absorb into areas capable of joining the competitive global economy. The concept rests both on key reasons of migration as well as its potential impacts. With regard to the first point, available statistical evidence demonstrates that contemporary migrations from Poland involves with particular intensity young and relatively well educated people who, additionally, originate from peripheral regions marked with a large share of the natural economy, as well as poorly developed labor markets. Arguably it is the faint absorbing possibilities of the local and regional labor markets that are responsible for the mass migration scale of post-EU-accession migration. Considering previous barriers to mobility Polish accession to the EU and the resulting mass mobility, have for the first time in Polish history created the basis for, on the one hand, the outflow of workforce surpluses (as in the case of settlement migration), and, on the other hand, the reallocation of labor resources in the domestic labor market (as in the case of temporary migration and return migrations). The mechanism described by Kaczmarczyk and Okólski (2008) ought not to be treated as ultimate or categorical in nature. Dissemination of migration paves the way for structural changes, but in itself does not create them. The outflow of labor surpluses abroad only gives space for the launching of through-over public policies whose aim should be to improve the effectiveness of the labor market, primarily at the local and regional level. Nonetheless, there are pioneer studies proving that there is a positive impact of migration on the effectiveness of regional labor markets (Kaczmarczyk and Okólski 2015). Note that similar effects are to be expected in the case of other benchmark countries – particularly Romania and Slovak Republic. Unfortunately there are no empirical studies available yet to verify the ‘crowding out’ hypothesis with regard to those cases.

2.2. Migration and human capital formation – brain drain/brain gain issue

As suggested above, the selective nature of post-accession migration from Poland and other benchmark countries from CEE manifests itself, above all, in the overrepresentation of the highly educated people. This section is devoted to a statistical assessment of this phenomenon as well as to an analysis of its impacts. The latter aim demands a brief conceptual introduction. The mobility of highly educated people potentially generates medium- and long-term effects that may impact the human resource capital in the migrants’ country of origin, and, therefore, impact its growing potential. The commonly used term to describe this phenomenon – i.e. brain drain – is derived from an approach developed in the 1960s and 1970s, which focused on the negative effects connected to the outflow abroad of highly educated people, such as the fiscal costs covered in view of the education of future migrants, or the negative impact of migration on the productivity of production factors (Grubel and Scott 1966; Bhagwati and Hamada 1974). However, in the 1990s, a new approach has been proposed to challenge already well established perception of highly skilled mobility. The so-called new economics of brain drain rests on an assumption that migration is, in fact, a phenomenon that may be seen through probabilistic lenses, i.e. migration option if available does not have to be completed with certainty. Further, if we also assume that in specific circumstances the possibility of going abroad may induce people to bigger investments in the human capital (expecting a higher return rate from the human capital abroad), even a large scale of migration of highly educated people may lead to increasing human resource capital in the migrants’ country of origin, which in literature is termed brain gain, or beneficial brain drain (Stark 2005; Mountford 1997; Beine et al. 2001). In this section we will follow an approach proposed by Beine et al. (2001) who suggested to
distinct between static (or *ex post*) effects of the outflow which can be termed as drain effect and dynamic (*ex ante*) brain effects related to possible increase in the investment in education induced by the prospect of migration. Consequently, we will start with assessment of the statistical process and then attempt to quantify (if feasible) both drain and brain effects of migration from Poland and selected benchmark countries.

Fihel *et al.* (2009) presented one of the first attempts to quantify the skill selection process in case of post-accession migration. Figure 6 indicates clearly that in most EU accession countries there was a clear overrepresentation of well-educated persons (as compared to the sending population). In case of Poland as well as other benchmark countries (the Czech Republic, Slovak Republic, Hungary and Romania) there was a clear pattern of positive selection of persons who completed tertiary education.

**Figure 6. Share of persons with tertiary education in case of migrant and resident population in the EU8 and EU2 countries**


If we agree on a purely statistical meaning of the term brain drain (selective outflow of well-educated persons) then we can conclude that this is the case of post-accession migration (and it was indicated by a series of other studies: Holland *et al.* 2011; Kaczmarczyk and Tyrowicz 2015; Drinkwater *et al.* 2009; Clark *et al.* 2014; Sporton 2013). Another issue remains how effects of this phenomenon should be assessed (in terms of drain and brain effect).

**Drain effect**

Drain effect implies that the selective outflow of well-educated or skilled persons should impact negatively on labor resources and thus on the economic performance of a sending country. Available statistical evidence shows that it is extremely difficult to assess a direct impact to post-accession migration on the skill mismatches in specific sectors and regions in Poland.

On the one hand, as noted in the previous section, the post-accession period is apparently marked with a growing scale of labor shortages. The number of vacancies increased rapidly from 2005 until the third quarter of 2007 and this process was accompanied with rising number of companies reporting labor shortages as a barrier to growth (see also previous section). On the other, labor shortages ceased to be perceived as a serious issue in the first phase of recession despite still extremely high scale of emigration. Moreover, the shortages of workers were the most apparent in construction (with 35% of firms affected) and manufacturing (more than 15%), and were comprised mainly of qualified workers (in 2007/2008 lack of qualified workers was reported by almost 40% of Polish companies) (NBP 2008; Kaczmarczyk *et al.* 2011; Age adjustment introduced to control for additional selectivity of migrants in terms of age structure.

Note that in most of this section we refer predominantly to formal education and do not address the issue of a quality of education.
Similar situation was noted in other CEE countries, including benchmark countries. Between 2005 and 2007 the average job vacancy rate in the EU8 countries increased by around 60%, with the highest increases noted in the Baltic states (particularly in Lithuania), in the Czech Republic and in Poland. The number of companies reporting hiring difficulties was on the rise as well and (World Bank 2007; Kaczmarczyk and Okólski 2008).

Notwithstanding, Figure 7 shows that over the next period (since 2009 onwards) a gradual decline in number of officially registered vacancies has been noted. Moreover, relatively high job vacancy rates have been recorded in the UK hosting large number of labor immigrants and, with regard to benchmark countries, the Czech Republic and Hungary, i.e. countries not massively involved in international migration.

![Figure 7. Job vacancy rates in selected sectors, benchmark countries and the UK, 2008-2015](image)

Source: Own elaboration based on the Eurostat data.

Importantly, statistical data available suggest that the labor shortages as observed in the post-accession period are comprised mainly of qualified workers but not necessarily those who might be described as highly skilled. Additionally, the main sectors suffering shortage of labor included construction and manufacturing. Considering skill structure and working experience of post-accession migrants it is hardly possible these posts could be filled by migrants choosing EU labor markets. The point is that post-accession migration comprised large numbers of persons with tertiary education and, additionally, persons who were leaving abroad directly after completion of their formal education and without experiences on the Polish labor market and were not interested in taking up low skilled jobs at origin, even if they were ready to take this kind of jobs while staying abroad. Thus it is commonly acknowledged that due to general situation on the Polish labor market (oversupply of labor), post-accession migration is
to be assessed rather in terms of ‘brain overflow’\(^9\) than ‘brain drain’ (Kaczmarczyk et al. 2009; Kaczmarczyk and Okólski 2008; Kahanec and Zimmermann 2009).

Even if the impact of post-accession migration on labor markets in the region seems largely exaggerated and there is no clear evidence of the brain drain on national levels, there is a common perception that effects of migration are clearly visible on the sectoral level, with a particular emphasis on health services. This is mainly due to strong pull factors to encourage migration among medical professionals from the EU8 and EU2 countries resulting in a very high migration potential among health care workers (Andres, Kallaste, Priinits, 2004, Aidis, Krupickaitè, Blinstrubaitè, 2005).

**Brain effect**

As suggested by Beine et al. (2001) the existence of dynamic or brain effect implies increase in the investment in education driven by migration prospects. In case of Poland this point seems well taken. There are over 1.8 million students in Poland and the data from the Central Statistical Office shows that already in the early 2000s, the gross enrollment ratio (the ratio of current students within a given age cohort) in the 19 – 24 age group was close to 50%. Figure 8 shows that this figure is still on the rise and reached 73% in 2011 (age group: 20-24). The question is however whether this change is attributable to migration.

First, it is important to note that the growing scale of mobility of well-educated persons can be a rough outcome of the simple fact that Polish population is better and better educated – according to many studies the recent increase in migration among the highly skilled is to a large extent attributable to the country’s general improvement in terms of human capital and a natural consequence of educational developments in Poland. Along these lines, the high propensity to migrate among well-educated Poles is partially attributable to the low absorptive capacities of the Polish labor market (as clearly suggested by very high unemployment rates among persons aged 25 – 29 who completed tertiary education) (Kaczmarczyk 2014; 2015).

Second, similar patterns in terms of evolution of the enrollment rate are observed in most of benchmark countries – see Figure 8. There is a common pattern of investing in human capital noted in both HICs (Germany, Ireland), new HICs (Czech Republic, Poland, Slovakia) or trapped MICs (Turkey). Importantly, if we consider post-accession countries this group comprises both countries heavily involved in labor migration (Poland, Slovakia) and those with very low emigration rates (Czech Republic). Diverse patterns as noted in case of Hungary or Romania cannot be interpreted with reference to migration factor neither.

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\(^9\) A brain overflow occurs when there is an (intentional or unintentional) oversupply of educated professionals in the sending country, whose abilities cannot be matched to job offers. In such a case, migration of the highly skilled occurs at low or zero opportunity costs and reduces the labour market supply-demand inequality in the sending country.
Third, even if the concept of brain drain is appealing its analysis in methodological terms remains very challenging. Available econometric evidence points to possible brain effects based on macro (Docquier and Rapaport 2008; Beine et al. 2011) or micro level studies (Kangasniemi, Winters and Commander 2007; Lucas 2004; Gibson and Mackenzie 2010). In case of Poland and other benchmark countries we would argue that changes of the structure of educational attainment are caused by set of non-migratory factors (e.g. social change, growing interest in obtaining higher education, structural changes within the system) and, so far, it was impossible to extract any post-accession brain effects.

Fourth, what is of critical importance here is the performance of migrants abroad. One of the key assumptions of the model proposed by Beine et al. (2001) is that the rate of return to education should be higher abroad than in country of origin (which is supposed to induce more people to invest in their education in order to engage in gainful international migration). This assumption is commonly challenged however. E.g. Egger and Felbermayr (2007) argued that returns to human capital abroad are important in the context of (potential) investments in human capital. On the contrary, Bertoli and Brücker (2008) claimed that migration may still create additional incentives for human capital investment if the relative returns to human capital in the receiving countries are below those of the sending countries. Nonetheless, if we observe substantial ‘brain waste’ all possible benefits attributed to brain effect can be overestimated.

Against this background, position of Polish migrants abroad and returns to their human capital are of highest relevance. Several studies looked specifically at this issue. Kaczmarczyk and Tyrowicz (2015) showed that in the case of the British labor market both EU8 and EU14 immigrants are on average better educated than the natives (particularly when it comes to tertiary education: almost 32% of Poles resident in the UK have completed tertiary education, as compared to 21% of natives). Notwithstanding, this does not translate into relevant occupational positions or wages that reflect investments in education. Clearly,
as shown below for the British labor market, natives tend to concentrate in the upper part of the occupational ladder, while immigrants’ occupations are skewed toward the lower end of the distribution. A large majority of Polish migrants are employed in basic occupations (as compared to just over 50% within the Polish labor market), and thus on average earn considerably lower salaries than their British counterparts. This observation is consistent with recent studies (Drinkwater et al. 2008; Dustmann et al. 2010; Fihel et al. 2015) that suggest Polish migrants abroad tend to be employed in positions far below their skill levels (severe over-education). Moreover, Kaczmarczyk and Tyrowicz (2015) demonstrated that the rate of return to education in the case of well-educated Polish migrants in the UK was among the lowest on the British labor market, and was additionally lower abroad than on the domestic labor market.

Similarly, based on the UK LFS data (time period: 2004-2014) Jakubiak and Strawiński (2016) assessed the extent of (possible) wage discrimination on the British labor market. They indicated that Polish and other EU8 migrants are much younger and better educated than natives and possess similar skill characteristics to EU15 migrants. Nonetheless, there are striking differences in real wages noted (see also previous section). Considering post-accession migrants, Poles and citizens of the Baltic states are doing particularly worse as compared not only to EU15 migrants but also TCNs (e.g. Indian or Pakistani migrants). Based on the Oaxaca-Blinder decomposition authors concluded that immigrants from Poland (and other CEE countries, including the Czech Rep. as a benchmark country) do possess lower skills than natives (characteristics effect) but additionally suffer a substantial wage discrimination (coefficient effect) (see Figure 9). Moreover, outcomes of quantile regressions pointed to non-monotonic characteristics of this phenomenon – contrary to other groups studies, in case of immigrants from Poland the wage differential is the lowest in first deciles (10%) and the highest in the highest deciles (around 60% in the 9th decile). Authors concluded that unobserved characteristics may be of crucial importance among the best-paid workers from the EU8 countries (Jakubiak and Strawinski 2016).

Figure 9. Oaxaca-Blinder decomposition of wage differences on the UK labor market, selected origin countries

Source: Jakubiak and Strawinski (forthcoming).
Importantly, similar processes are commonly noted as one of the main features of migration from CEE benchmark countries. Galgoczi and Leschke (2014) stressed that in case of EU10 countries shares of those completed at least secondary education was around 20 percentage points higher than in the case of EU15 native population (and this is one of distinctive features of the post-accession migration). This structural feature, however, is accompanied with a substantial over-qualification or brain waste and this phenomenon has been confirmed by a number of studies for the most important destination countries including the UK, Germany, Italy or Norway (see also: Galgoczi et al. 2012; Bruecker et al. 2009; Bettin 2012; Tijdens and van Klaveren 2012). Importantly, post-accession migrants from CEE countries seem to fare considerable worse in terms of skill-occupation match than migrants from pre-enlargement cohorts. Interestingly, recent studies show that EU8 migrants in the UK do not improve their labor market positions despite gradually better language skills (Voitchovsky 2014; Sporton 2013). Thus Galgoczi and Leschke (2014) concluded that post-2004 or post-2007 migrants migrate mainly driven by absolute wage differentials and do behave as typical wage-earners (are focused on accumulation of savings or remittances). Moreover, large scale skill mismatches are one of the main factors responsible for limited contribution of recent migration from the region to better human capital allocation on the EU level.

The above comments signify that the outflow of well-educated workers from Poland has to a large extent the characteristics of a ‘brain waste’ which undermines the theoretical argument for migration based on its power to increase human-capital formation. It should be acknowledged, however, that over-education is a common phenomenon and its intensity is on increase in recent years. OECD (2007) noted that over-education rate among immigrants was on average much higher than in case of native workers (1-4 times higher). Based on recent study utilizing WageIndicator data (2005-2010) Tijdens and van Klaveren (2011) demonstrated that share of over-qualified immigrants is higher than respective number for native population in most of the EU15 and EU12 countries. In all cases, however, this is a feature of both immigrants as well as domestic workers.

In the context of potential brain gain it is important to notice that there is a discussion in migration literature how (broadly) the human capital is constituted and understood. Going beyond the traditional approach focused on formal qualifications and skills some authors proposed to assess not only technical or routine skills but also social skills (including communication and interaction). The notion of total human capital is thus essential to understand possible welfare gains even for those migrant workers who are overeducated for jobs performed abroad or are seasonal/circular migrants (Li et al. 1996; Reich 1992; Williams et al. 2004). Along these lines Williams and Balaz (2005) explored post-migration experience of three selected groups of Slovak migrants to the UK: professionals and managers (skilled workers per se), students (potential skilled workers) and au pairs (skilled workers occupying unskilled jobs). While assessing impacts of migration experience on long-term professional careers they consider both changes in labor market position as well as changes in broadly defined ‘social skills’ or ‘competencies’ (following Evans 2002). With regard to the first issue around a half of persons under study reported an improvement in job position (which is to some extent bias due to a students’ presence in the sample). Some of interviewees, particularly top level specialists managed to acquire specific skills important later in the process of promotion. Interestingly enough majority of persons reviewed did not ascribe positive changes in their professional careers to specific and professional skills transfer. Instead, other competencies as language competencies (and other communication skills), improved self-confidence, new approach to work have been ranked much higher. Similarly, qualitative study on returned Slovak doctors pointed to the fact that while for some doctors the acquisition of specialized medical knowledge was the main return from migration, for the others social skills or social competencies were of crucial importance (Williams and Balaz 2008).
2.2. Money and other transfers – remittances and social remittances

Among critical factors which shape the potential of migration to have a developmental impacts on the home economy via remittances are issues covered in other sections of this chapter, such as: the level of economic integration of emigrants, brain waste, or return migration. The effects of these factors on the level of remittances is ambiguous, though. In general, the higher the level of economic integration abroad, the greater the potential to save and remit. The scale of remittances also highly depends on who and how will be able to take advantage of the back home. There seems to be consensus that more liberal migration regimes which allow to pursue circular or temporary migration projects are associated with more remittances being sent back home (Dustmann and Mestres 2010). The ability of the migrant to benefit from his savings upon return on the one hand, and the willingness to increase his or her savings by lowering the standard of living abroad for a relatively short period, on the other, are the mechanisms responsible for this effect. Interestingly, what follows is that in terms of remittances the relationship between their size and immigrant integration abroad has an inverse-U pattern. At low levels of integration immigrants may not be able to save enough to remit. At high levels of integration migrants may wish to settle at the destination and rather invest in the host country than send money back home.

Importantly for this analysis, Poland has encountered a somewhat natural experiment in terms of its connectedness to foreign labor markets in 2004. The country’s EU accession granted Polish workers unprecedented access to employment opportunities abroad. This was clearly visible in the level of remittances circa 2004 (Figure 10).

![Figure 10. Level of remittances received – total (left panel) and as % of GDP (right panel), Poland vs. other benchmark countries, 1994-2015 (millions USD)](source: World Bank staff calculation based on data from IMF Balance of Payments Statistics database and data releases from central banks, national statistical agencies, and World Bank country desks (2016).

It seems that while for Poland remittances spiked exactly upon EU accession in 2004, remittances to Romania have been on the rise already prior to its EU membership in 2007. This does reflect Romania’s emigration pattern, though, the rise of which after 2007 was a continuation of previous tendencies. Importantly, data presented above shows unequivocally that scale of remittances in case of both countries is comparable – particularly in relative terms – to the flow of money to Mexico as traditional receiver of money transmitted by migrants.

The scale of remittances does not tell the actual story of the developmental potential of a diaspora, though. What is maybe even more critical are the ways in which this money is used by recipient
households and the ways it is spent in the local economy. Existing literature suggests that remittances can create both virtuous as well as vicious circles in terms of creating conditions for socio-economic development (Sharma 2009). The former mechanism involves recipient households investing in productive ventures such as health, education, or even family businesses. The latter mechanism may induce members of the recipient household to decrease labor market supply and create an everlasting dependency on the migrant (Fajnzybler, Lopez 2008).

A study of remittances sent home by Polish migrants working in major receiving EU Member States (Chmielewska 2015) shows that the major expense covered by money sent from abroad is everyday consumption (indicated by 60% of respondents). House renovation is the second most popular reason to remit with nearly 20% of respondents indicating it as a cost to be covered with money sent from abroad. Savings follow with also nearly 20% of indications. Paying debts was indicated by around 15% of respondents, investing in a child’s education by just over 10%. Covering health expenses or purchasing a house was the response of just under 10% of respondents (Chmielewska 2015). Importantly, just as indicated in the previous section, the number of people who declared they sent money for everyday consumption differs between migrants residing in various receiving countries what to a large extent reflects diverse structural characteristics of those populations. E.g. the Polish diaspora in Ireland is relatively young (mainly post-accession migrants) hence they may not have the need to provide financial support for their children (either because they do not yet have them or because they are relatively small); in contrast, Germany is one of the traditional Polish destination countries with relatively older migrants who are more likely to lack resources for providing their children with wider educational opportunities.

In a 2012 report, CASE assessed the net effect of remittances on the Polish economy as “significant and positive […], and that the impact can be expected to increase with the expected rise in labor mobility in Europe over the next few years” (Barbone et al. 2012). The study estimates that remittances have fueled the increase in households’ annual average disposable income by 0.2 pp (2.7% in the no-remittances scenario vs. 2.9% actually, 1995-2011), consumption growth by 0.1 pp (4.1% vs. 4.2%), and GDP dynamics (annual increase from 4.3% to 4.4%). The study also suggests positive effects on poverty alleviation (drop in poverty rate from 19% in a no-remittance scenario to 17.1% with remittances) and possibly also on decreasing regional income disparities (drop in Gini coefficient from 0.35 to 0.34).

In a way this approach is close to recent propositions to consider not only easily measurable effects of migration as remittances or labor market impacts but also to address socio-cultural impacts of migration According to de Haas (2009) migration means not only flows of people but also flows of ideas, norms etc. Thus it may impact socio-economic structures in sending communities (social, class and ethnic hierarchies), traditional care arrangements, family structure, gender relations or particular modes of behaviour (culture of migration, entrepreneurship) – effects commonly labelled as social remittances (Levitt and Lamba-Nieves 2011). In the case of Poland the former have been recognized as innovative practices in the sphere of own business management, local activism, or general social interactions (see also Grabowska et al. 2016; Karolak 2016). Changing gender roles have also been recognized as a form of social change at least partly affected by social remittances (White 2010). Political remittances are visible in the form of votes of the diaspora in national elections. In the Polish case these have a miniscule effect on the final result of elections, yet their symbolic importance in non-
negligible and it is thorough addressing the diaspora that politicians want to gain the votes of a much larger population, namely the migrants’ families left behind (Lesinska 2014).

This way of reasoning is also clearly present in recent studies on circular or return migration to Poland. Grabowska and Jaźwińska (2015) referred to various sources to show that recent Polish migrants rarely can improve their human and cultural capital while being abroad (which partially is attributable to relatively high level of human capital before departure). They strongly support hypothesis expressed by Williams and Balaz (2005; 2008) that return migrants only occasionally are able to transfer back home specific occupational skills. Instead, what really matters were social competencies or soft skills, with language skills as a the most important benefit, higher self-confidence or higher ability to apply already possessed skills. Apparently, during stays abroad migrants gather various forms of capital, including knowledge, skills and competencies. The extent to which those resources can have impact on their lives depends strongly on structural conditions at origin (similarly to remittances). Łukaszewska-Bezulska (2015) claimed that international migration affects the amount and quality of social capital its relation to functioning upon return was far from being equivocal (close links to other migrants but also looser links to local origin communities). The social performance of return migrants was highly conditional on the level of inter-personal trust and on general level migration seemed to lead to erosion of already low level of social capital.

In terms of economic behavior upon return, Polish data shows that the share of entrepreneurs among return migrants is slightly higher than in the general population (9.5% vs. 7.1% - Grabowska and Jaźwińska 2015). Nonetheless there are controversies whether business set up by return migrants to Poland should be treated as driven by necessity (Dziekońska 2015) or rather opportunity (Grotte 2012). Outcomes of studies quoted are hardly conclusive as they are based on small samples. It is clear however that particularly in less developed regions entrepreneurship results predominantly from the lack of job opportunities (or from mismatch between aspirations and set of opportunities). Evidence shows that while setting their business return migrants rely first of all on the financial capital and not on experience or skills gathered abroad (with an exception of companies cooperating with foreign counterparts) (Dziekońska 2015; Grabowska et al. 2016).

In a recent study Grabowska et al. (2016) addressed a question whether individual migrants (and return migrants) can operate as agents of change and how they incorporate various forms of social remittances in their local spaces upon return. Based on extensive field work in three Polish communities they managed to show among others that: 1) migrants have potential to act as agents of change but it strongly depends on given opportunity structures (as well as on social recognition and network of contacts); 2) on a local level migration is often perceived as a modernizing tool but in practice many adverse effects are stressed (see also below); 3) as a consequence, general attitudes towards ideas or norms brought from abroad are ambivalent and strongly linked to general position of a given person. The last effect is usually strengthen by common resistance to social remittances or resistance to social change in general. Nonetheless, authors emphasized that in all three communities surveyed it was possible to find potential agents of change (interestingly not only entrepreneurs) and their followers.

Just like financial remittances may both induce or reduce economic productivity, social and political remittances may also bring about productivity-enhancing or productivity-reducing change. In social terms experiences gained abroad may e.g. encourage involvement in discriminatory or even xenophobic attitudes towards others (Grabowska et al. 2016). The diaspora’s political preferences may follow such social attitudes or be based on assessments of the home country’s socio-economic situation prior to migration, rather than on the status quo in both cases hindering potential political
change. Along these lines, Kaczmarczyk (2011) showed that simple assessments of life attitudes and behaviors of return migrants can be seriously biased if not controlled for selectivity of migration.

Last but not least, Polish experience shows that changes generated by social remittances (values, norms, competencies brought from abroad) are rarely massive or spectacular. Instead, they comprise “rather small changes and seemingly insignificant interventions” (Grabowska et al. 2016: 200). Thus, even if social remittances are theoretically appealing phenomenon, it is extremely difficult to support it in an unambiguous way. One of the reasons could be that in the case of Poland we are considering very recent social processes and potential effects might be visible in the long-term only.

2.3. Return migration

It has been observed for all migrants, regardless of country of origin or destination, that the propensity of return is the highest in the first year following emigration and systematically decreases afterwards, especially after 5 years of stay abroad (OECD 2008). Five years is apparently long enough to (re)establish economic activities, social contacts and family life in the new circumstances. Voluntary migrants who were not successful in social and/or economic integration usually return earlier, after few years of stay abroad. As for now, 9 and 12 years after subsequent, ‘eastern’ EU enlargements in 2004 and 2007 it is clear that no mass return migration has been recorded so far in such countries as Hungary, Latvia, Poland and Romania (Eurofound 2012; Hazans 2015; MacDonald 2010), and post-accession migrants settle down abroad, invite existing or establish new families abroad. Return migration to the above-listed countries has been the most intensive in the case of Poland, but even there the proportion of returnees among all post-accession migrants did not exceed 8% according to the European Social Survey data for 2006 (Martin, Radu 2009). In other study the European Social Survey data for 2010 indicated that the proportion of returnees ranged from 3% in Slovenia to more than 10% in Estonia and Poland, while the Eurobarometer dataset for the same year showed the proportion ranging from 6% in the Czech Republic to 18% in Lithuania (Zaiceva, Zimmermann 2012).

In 2011 the population census provided in-depth information about Polish emigrants, including the year of departure (CSO 2013). The census proved that the post-accession emigration is to large extent of settlement character and involves entire families; three Polish emigrants in four stayed abroad for at least 1 year and according to the UN recommendations can be treated as long-term migrants (UN 1998). Moreover, 54% of long-term emigrants have been abroad for more than 5 years (which makes almost 850 thousand), therein 18% for more than 10 years (CSO 2013). Massive return flow of those persons is highly unlikely to take place, at least before 2040 when they start to reach retirement age and might be willing to come back to the country of origin.

Survey studies conducted in three regions of Poland (Dolny Śląsk, Małopolska, Śląsk) show that returns take place usually during the first or two years following the departure, and the main reason for return is accomplishment of previously assumed aim, such as earning previously defined amount of money, gaining international work experience, finishing education or work practice (Bieńkowska et al. 2010a, b; Szymańska et al. 2011). In the case of these returnees, migration was supposed to be short-term and temporary only. Financial crisis of 2008 might have accelerated returns to Poland and Romania, but only accelerated, as some returns were already planned before (Koehler et al., 2010; Eurofound, 2012). In other new EU member states the effect of financial crisis was either negligible as in Hungary, or contrary as in Latvia, that is, it increased the propensity to emigrate and decreased the propensity to return (Ibidem).

Thus, return migration, when it takes place, had been anticipated and planned already before emigration. But as survey studies prove, return migrants consider also undertaking another
international migration in the near future (Zaiceva, Zimmermann 2012). For some returnees questioned in the above-mentioned studies in three regions of Poland, the plans concerning another emigration were very precise (Bieńkowska et al. 2010a, b; Szymańska et al. 2011). As Zaiceva and Zimmermann (2012) conclude, under the free mobility conditions in the enlarged European Union the return migration is more and more being replaced by brain circulation, that is, increased mobility of repeating character.

Studies concerning labor market status of returnees in the countries of origin give mixed evidence. On the one hand, in three Baltic States return migrants turn out to be positively selected with regard to education level and occupation as compared to emigrants and those Baltic nationals who have never undertaken labor migration (Hazans, Philips 2011). At the same time, Baltic returnees have higher inactivity and unemployment rates as they – possibly – spend more time searching for a job or plan to work abroad again. In the Czech Republic, Hungary and Slovak Republic returnees were better educated than emigrants, and more frequently they were males, single, without children (Zaiceva, Zimmermann 2012). On the other hand, studies for Poland proved that returnees were negatively selected with regard to the level of education (they have more often primary and vocational level of education), more frequently they originated in rural areas in Poland, were older and returned mostly from Germany (Anacka, Fihel 2012a, b).

![Figure 11. Unemployment rate (left) and inactivity rate (right) for Polish non-migrants and returnees who stayed abroad on a short-term (less than 1 year) and long-term (more than 1 year), in %](image_url)

Source: Anacka and Fihel 2013.

Polish returnees had higher risk of being unemployed or lower risk of being economically inactive in Poland, especially if their stay abroad lasted less than 1 year (Figure 3.14). There are several possible explanations of this rule; the stay abroad may lead to the depreciation of migrants’ human and social capital necessary for finding a job, or skills acquired abroad are not fully transferable to the countries of origin; second, migrants might be negatively selected with regard to their original situation at the Polish (regional) labor market and migration might be simply an outcome of skill mismatch between the labor demand and migrants’ skill and other characteristics relevant for employment; third, Polish employers may be reluctant in hiring mobile (in all terms) persons, very flexible to move and undertake better-paid jobs abroad; last, but not least, return migrants may be more prone to becoming self-employed, as shown in the above-mentioned survey studies for Poland (Bieńkowska et al. 2010a, b; Szymańska et al. 2011) and for two other countries, namely Albania (Piracha, Vadean 2010) and Senegal (Mezger Kveder, Flahaux 2013). Kaczmarsczyk et al. (2016) conclude on the Polish return migration, it should be perceived as a burden for the labor market because it contributes to the
unemployment in the country of origin. However, this area of research is still underexplored and need additional studies with the use of coherent, comparative in international dimension data.

2.4. Demographic impacts

Main aim of this subsection is to assess possible long-term demographic consequence of outward migration. Analysis presented will be based predominantly on the Polish case due to two reasons. First, in case of Poland migration data are detailed enough to provide relatively complex statistical analyses. Second, as we assess long-term demographic consequences of migration we have to focus on a country with migration flows (both in absolute and in relative terms) massive enough to have an impact on the general demographic structure (and this is the case of Poland, Romania and the Baltic states).

The Polish accession into EU increased the intensity of international mobility of Polish nationals. As opposed to the pre-accession period, when due to institutional constraints in the main receiving countries possibilities of settlement were considerably limited, in the post-accession period large emigration wave was observed in Poland and other selected new EU member states, notably Baltic countries and Romania. As for Poland, in the period 2004–2013 more than 275 thousand persons emigrated on a permanent basis, that is, deregistered from the place of permanent place of stay in Poland (CSO 2014), but the true scale of outflow can be assessed by adding the number of so-called ‘temporary’ migrants (using the terminology of the Central Statistical Office of Poland), that is, those who have never deregistered from the place of permanent place of stay in Poland. As already mentioned the stock of ‘temporary’ migrants, as estimated by the Central Statistical Office, increased from 1 million at the end of 2003 to around 2.3 million at the end of 2014 (CSO 2015), but the real number of persons involved in international migration must have been higher than a simple difference between those two figures. In another reliable source of information, the 2011 population census, the number of persons staying abroad for at least 3 months was as high as 2.02 million, therein those staying abroad for at least 1 year 1.56 million (CSO 2013), which means that the post-accession outflow is to a growing extent of long-term character. The number of 1.56 million constitutes 4.1% of the whole population of Poland in 2011, but in some regions the population losses due to the post-accession outflow exceeded 8% (opolskie voivodship), 7% (podlaskie) or 6% (podkarpackie, warmińsko-mazurskie).

What is important for demographic processes, the post-accession outmigration has been highly selective with regard to socio-demographic characteristics. The whole emigration amounted to 4% of population of Poland, but it attracted mostly young persons, aged 25-29 (11% of men and 13% of women), 30-34 (11% of men and women) and 35-39 (8% of men and women). Studies concerning previous years, for instance till 2006 (cf. Fihel, Okólski 2009), proved that persons aged 20-24 and 25-29 were the most prone to leave Poland. By 2011 – the time of population census – these migrants reached older age groups: 25-29 and 30-34. Also, the population census revealed that 226 thousand persons aged below 15 emigrated from Poland but more detailed information on this group were not published. This, however, indicates that post-accession emigration involved also the whole families, constituted mostly by persons in their 20ies and 30ies, and their descendants. Consequently, the age structure of Polish population when allowing for long-term (i.e. staying abroad 12 months and more) post-accession migrants changed visibly. In absolute terms the population losses were observed mostly in the age groups 25-29, 30-34 and 35-39.
Population losses were more pronounced in the regional dimension. Assuming that in each region of Poland the age structure of temporary long-term migrants was the same as the age structure of permanent emigrants in 2011, the population losses in some demographic groups and in selected regions exceeded 10 or even 20% of population. In particular, this concerns people in their 30’s originating in less-developed regions of Poland (opolskie, podlaskie, pomorskie, podkarpackie voivodship).

As an indirect demographic consequence of massive outmigration, especially outmigration of young persons, the natality (number of births) in Poland might have been higher after 2004. If temporary female emigrants remained in Poland and had the same fertility rates as other Polish female residents, the number of births taking place in Poland could have been in 2011 by 32.9 thousand higher (by 8.5%). Assuming that the outmigration was a gradual process distributed evenly in time, the estimates for the whole period 2004-2011 reach 180 thousand births of children of Polish female nationals abroad. This result seems to be realistic given the fact that each year approximately 7 thousand births given by Polish female nationals are registered in Germany, app. 4 thousand – in Ireland, whereas in the United Kingdom – 118 thousand in the period 2005-2012. Altogether, approximately 200 thousand births to Polish mothers were registered in Germany (2004-2012), Ireland (2009-2012) and the UK (2005-2012) and these are only three destinations for Polish emigrants. Interestingly, similar results were obtained for Romania where relatively large emigration was also registered in the aftermath of its accession to the European Union in 2007. The National Institute of Statistics of Romania reports all births to Romanian nationals, regardless of the fact whether they reside in Romania or abroad. It is estimated that the number of births is overestimated by 10% and consequently, the real Total Fertility Rate for Romania might be lower by 10% (1.33 instead of 1.48).

Such discrepancies in real number of population and of births entail considerable differences in demographic prospects for countries that registered large post-accession outflows. The official forecasts for Poland prepared by the United Nations, Eurostat or the Polish Central Statistical Office (CSO 2014, EC 2013, UN 2015) are based on the official number of population and do not allow for ‘temporary’, unregistered outflow that dominated the whole post-accession emigration. When we modify the official Eurostat forecast for Poland, Europop 2013 (EC 2008, Eurostat 2014), allowing for unregistered emigration, the size of Polish population will decrease in 2060 by 2,322 thousand persons, that is by 7% of the Europop result. The group of children and teenagers (below age of 15) will be by 7.6% smaller, of persons aged 15-64 by 8.6% smaller, whereas of old persons aged 65 and more by ‘only’ 4.9% smaller. The old age dependency ratio will increase from 60.89 to 62.80%. This means that the recent emigration will have long term demographic consequences consisting of: (1) drop in the size of population of Poland, (2) change in the age structure (especially loss of cohorts born at the turn of the 1970s and the 1980s, and their descendants), (3) acceleration of the process of population ageing.

If we allow for possible returns in Eurostat’s forecast, it will turn out that returns of 50% of emigrants (and their descendants) will counteract the depopulation of Poland, but the process of population ageing can be alleviated to limited extent only. Today’s temporary migrants are mostly persons born at the turn of the 1970ies and 1980ies and in 2060 they will be aged 70 and more. Possible returns of these persons and their descendants will augment the number of old persons in the first place, whereas the number of other age groups will increase too, but to a lesser degree. Thus, as outmigration of young people contributes to population ageing, future returns of the same persons may contribute to this process as well.

Nevertheless, in the future the main population loss due to outmigration will concern the group of economically active people (15-64), regardless of return migration taking place or not. In our
modification not allowing for possible returns, the number of persons at economically active age will
decrease by almost 10 percentage points. This will entail important consequences for the Polish labor
market and economy, and will create the need for a proactive labor market policy, consisting of
promoting labor efficiency increase, economic activity ratio increase and / or labor immigration.

**Concluding remarks**

The main aim of the paper was to apply a backward looking perspective and to assess the
developmental impacts of recent, i.e. post-enlargement, migration from Poland and other Central and
Eastern European countries. This exercise allows to draw a few general and specific
lessons/conclusions.

Granting freedom of movement usually increase the scale of overall mobility but not necessarily result
in massive settlement migration. In Central and Eastern Europe, including Poland, mobility strategies
commonly comprise short-term or circular movements. Moreover, post-2004 mobility of Poles shows
that under free mobility regime migration is to a large extent demand-driven. Migrants’ behavior
during the crisis can be interpreted in terms of a buffer mechanism on the Common European Labor
Market.

Short-term labor market impacts of recent migration from Poland have been moderate. This is mostly
due to the general situation on the Polish labor market (an oversupply of labor prior to the EU
enlargement). As a consequence massive post-accession migration should be assessed rather in terms
of “brain overflow” than “brain drain”. Long-term effects are strongly conditional on demographic
impacts of migration and structural changes in terms of spatial allocation of labor (domestically).

Migration from Poland is highly selective with respect to the skill level. Notwithstanding, impacts of
migration on the human capital formation are difficult to estimate. Due to common oversupply of labor
the drain effect is limited to selected sectors only (with health services as a prominent example). Brain
effect is questionable due to over-education and skill mismatches observed in case of Polish migrants
staying abroad. Despite the relatively high level of human capital involved, recent mobility of Poles rarely contributes to an improvement in occupational position of mobile persons. On the contrary,
over-education and skill mismatches predominate and that questions the possibility of a brain effect.
Unfavorable position of a large part of Polish workers abroad can be only partially explained in terms
of low quality of education or low transferability of skills possessed. Instead, it is rather a function of
demand for foreign labor manifested in the main receiving countries.

The magnitude of return migration to Poland is much lower than expected. On the contrary a clear
tendency towards more long-term migration and an orientation towards settlement is noted in the
most important destination countries. Return migrants to Poland are only occasionally able to transfer
back home specific occupation skills. Instead they are gathering various forms of social competencies,
including soft skills and language skills that can be used upon return (social remittances). Even if the
magnitude of social remittances is limited, return migrants can operate as agents of change but their
effectiveness strongly depends on structural conditions at origin.

Last but not least, post-accession migration will substantially (and negatively) contribute to future
demographic changes. Long-term demographic consequences of migration from Poland include: drop
in the size of the total population, change in the age structure and acceleration of the process of
population ageing. Interestingly, the last process can be even more strengthen by possible return
migration.
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