The Opening of Central and Eastern European Countries to Free Trade: A Critical Assessment

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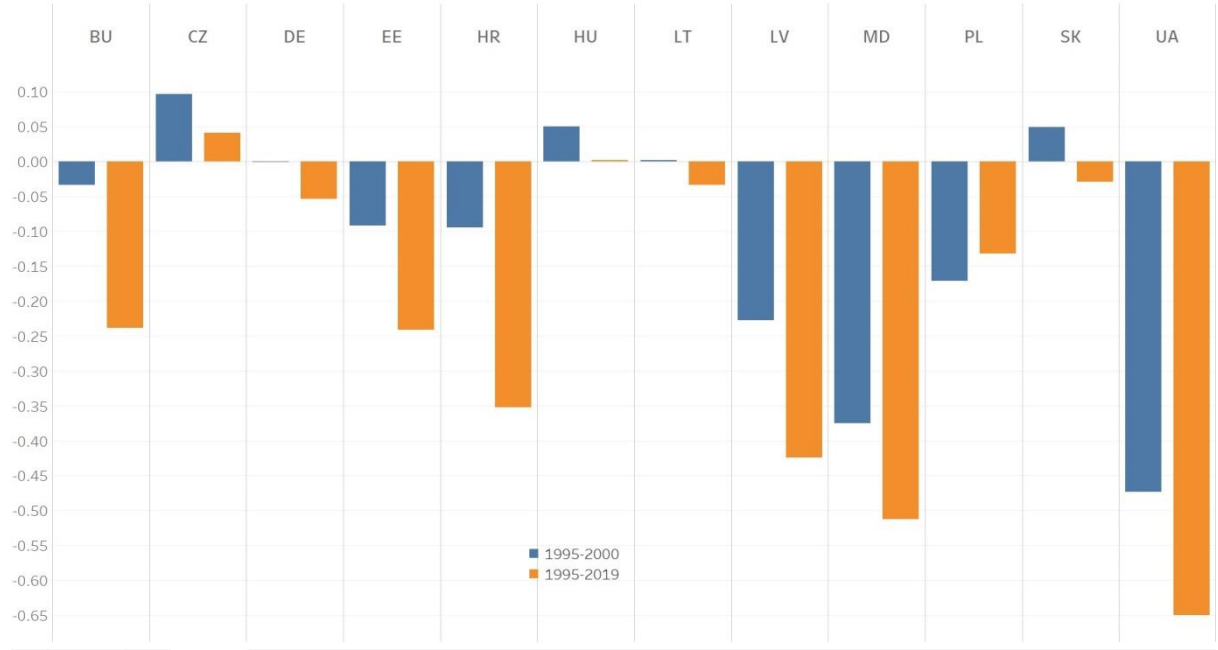
Additional materials

Country ISO (Alpha-2) codes:

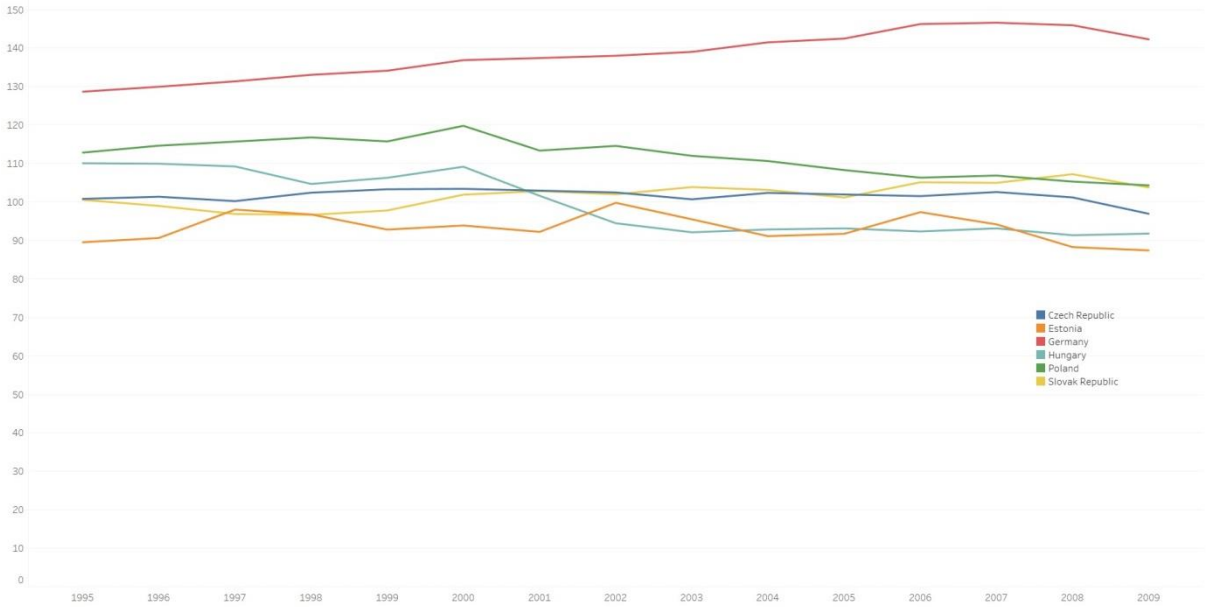
AM	Armenia
AT	Austria
AZ	Azerbaijan
BE	Belgium
BU	Belarus
CA	Canada
CZ	Czechia
DE	Germany
DK	Denmark
EE	Estonia
ES	Spain
FI	Finland
FR	France
GE	Georgia
GR	Greece
HR	Croatia
HU	Hungary
IE	Ireland
IT	Italy
KG	Kyrgyzstan
KZ	Kazakhstan
LT	Lithuania
LU	Luxemburg
LV	Latvia
MD	Moldova
NL	Netherladns
PL	Poland
PT	Portugal
RU	Russia
SE	Sweden
SK	Slovakia
TJ	Tajikistan
TM	Turkmenistan
UA	Ukraine
UK	United Kingdom
US	United States of America
UZ	Uzbekistan

Additional visualisation to **Table 1**. Percentage change in manufacturing value-added as a percentage of GDP.



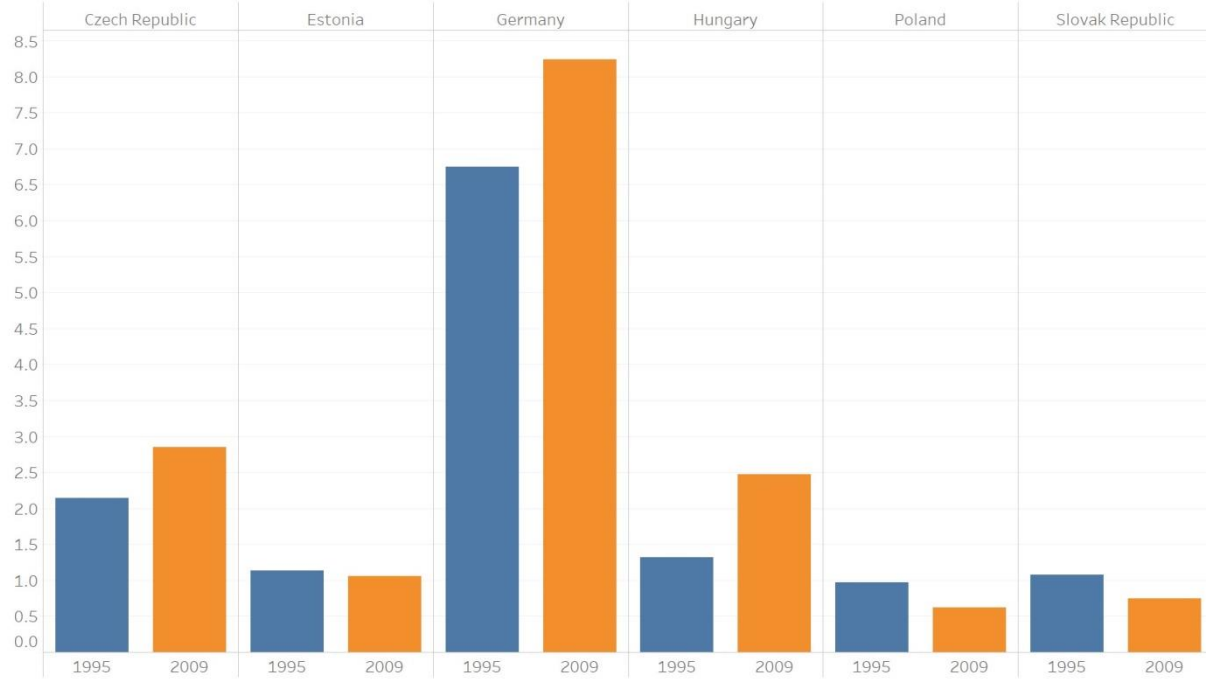
Source: World Bank national accounts data, and OECD National Accounts data files. (Bulgaria –lack of data).

Additional visualization to Table 2. Labour compensation per employee in manufacturing relative to the total economy (1995-2009)



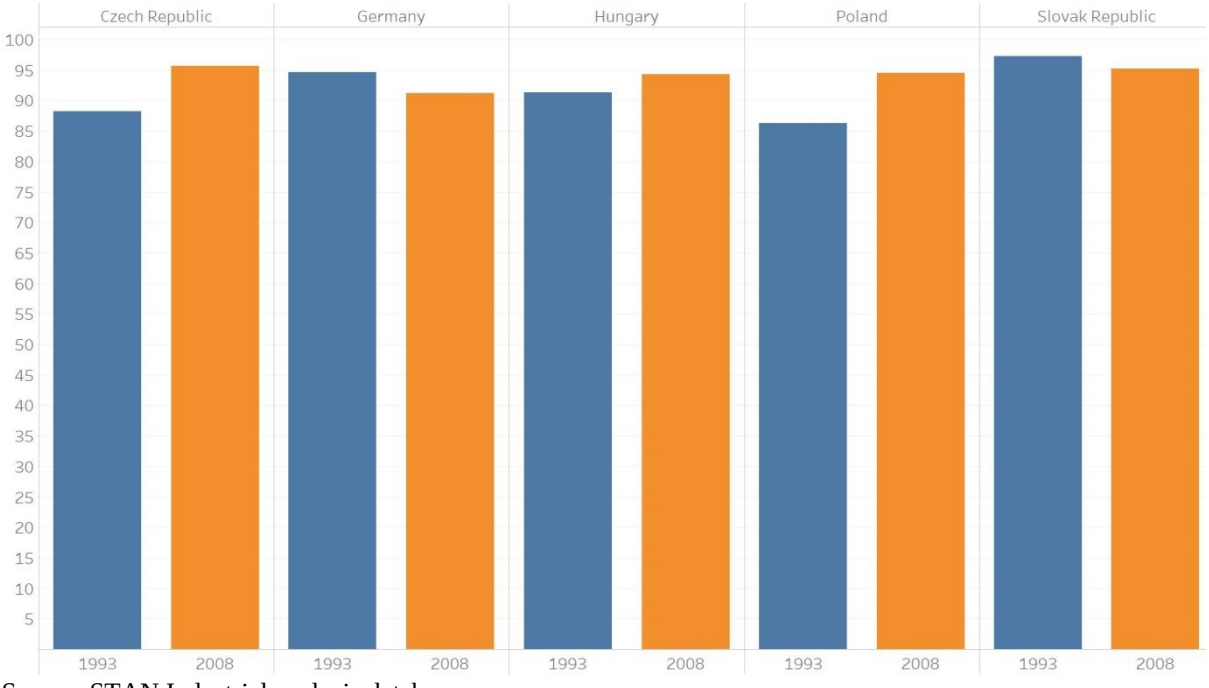
Source: STAN Industrial analyse database.

Additional visualisation to **Table 3**. R&D intensity using value-added for the manufacturing sector



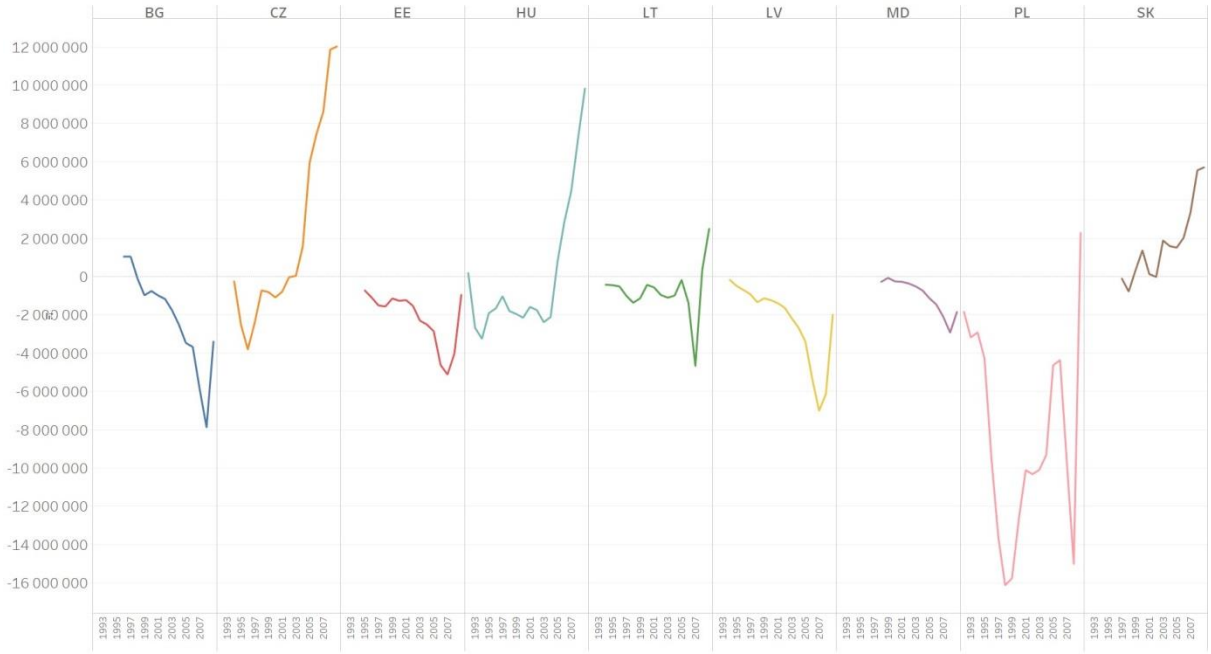
Source: STAN Industrial analysis database.

Additional visualisation to **Table 3**. Manufacturing export in a total of goods export (%)



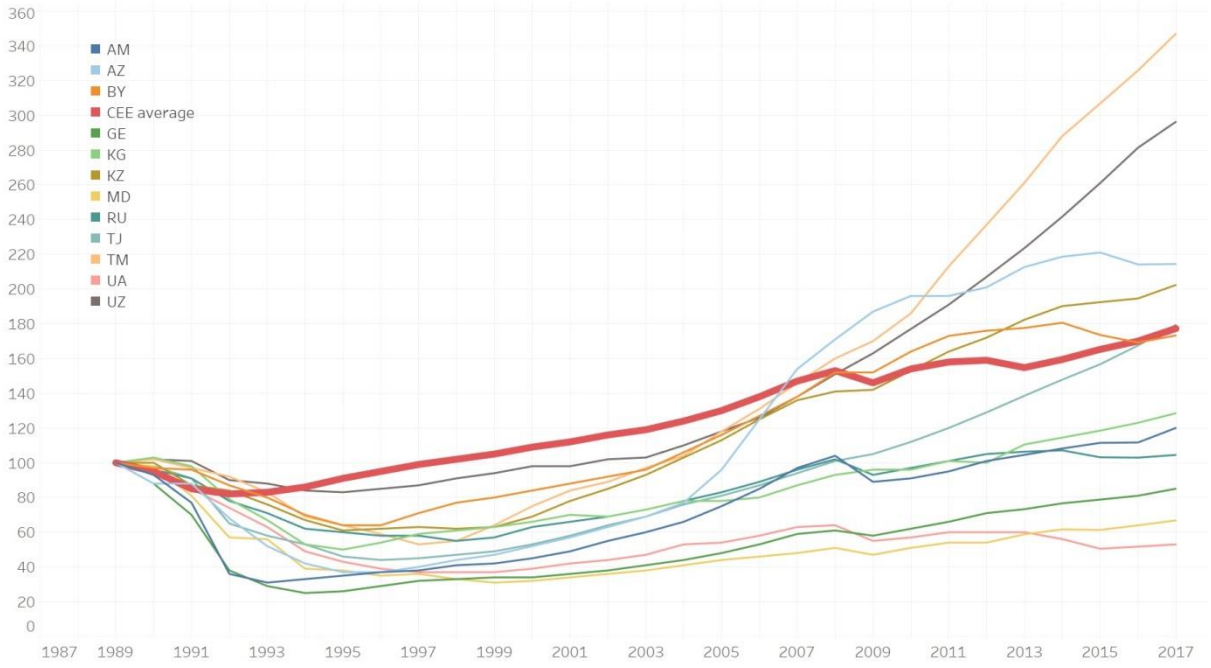
Source: STAN Industrial analysis database.

Figure 1 (in color). The trade balance in manufacturing (years 1992-2009)



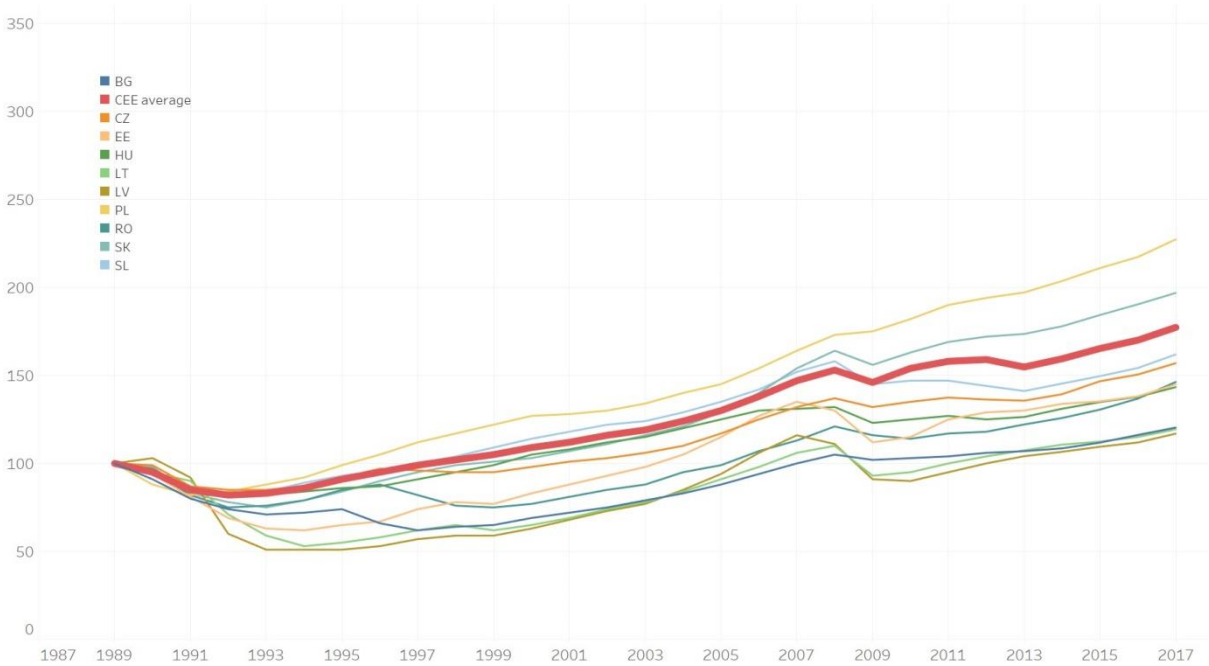
Source: STAN Industrial analyse database.

Figure 2 (in colour). GDP growth in the Former Soviet Union (1987 – 2017)



Source: Popov, V. (2019) (Popov, 2019).

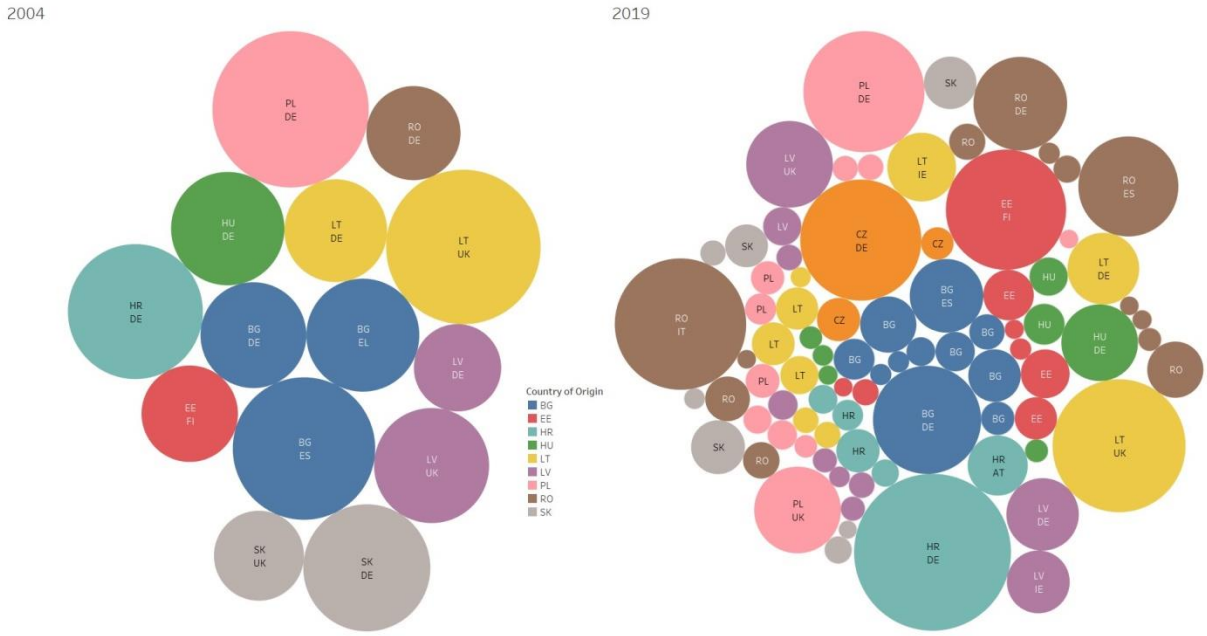
Figure 3 (in colour). GDP growth in the Central and Eastern European countries belonging to the EU (1987 – 2017)



Source: Popov, V. (2019) (Popov, 2019).

Additional visualisation to **Table 5**. The percentage of the CEE population living in a given foreign country in 2004

Distribution of the CEE population living in the "old" European Union countries.

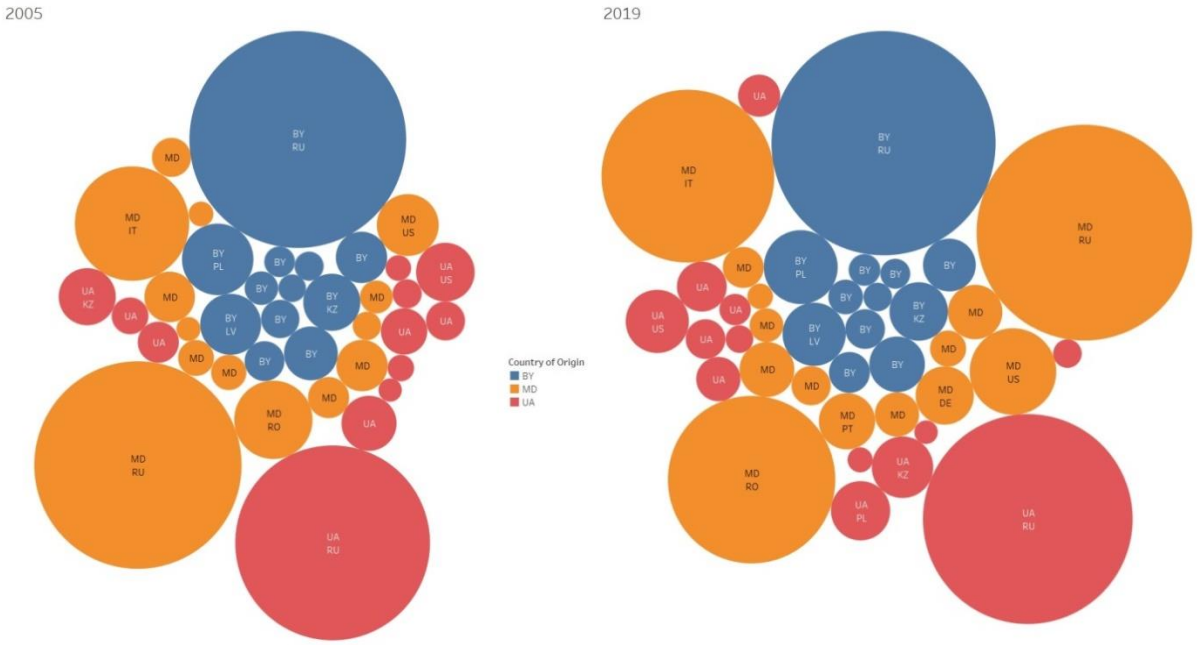


Bubble size – the percentage of the CEE population living in a given foreign country in a given year. Source: Authors' study based on data taken from the United Nations Population Division.

Bubble charts presented above show differences in the distribution of CEE migrants in mid-2004 and mid-2019 (note that the bubbles' size cannot be directly compared). Comparison of those two visualisations indicates that in 2004 migrations were relatively marginal phenomena. CEE residents usually migrated to 1-2 selected countries (mostly Germany and United Kingdom), while their presence in the remaining EU15 countries was negligible. Note that this chart presents the degree of intensification of migration processes and not the size of the population in emigration. To be clear, the bubble PL-DE on the left-hand side refers to 0.33% of the Polish population, while, the same bubble PL-DE on the right-hand side refers to 4.70% of the same population.

Additional visualisation to **Table 8**. The percentage of BY, UA and MD population living abroad in 2005.

Distribution of BY, UA and MD population living in abroad.



Source: Authors' study based on data taken from the United Nations Population Division.

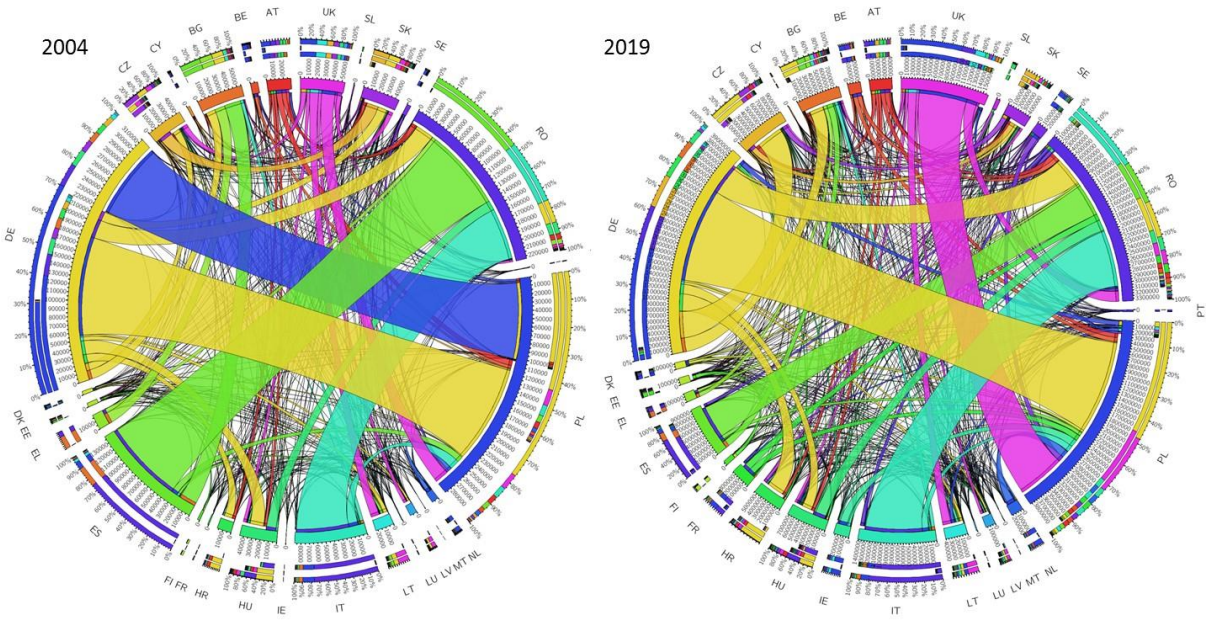
Above presented bubble charts show differences in the distribution of Belarusian, Ukrainian and Moldovan migrants in mid-2005 and mid-2019. Comparison of those two visualisations indicates that migration patterns in 2005 and 2019 were very similar. A clear difference can be seen in Romania's increased popularity among Moldovan emigrants (an increase from 1.13% to 5%). In other cases, the difference was not greater than 0.5 percentage point. As before, the bubble's size refers to the analysed year and should not be directly compared with the adjacent image.

Appendix

Figure 1 shows circular graphs explaining population movement among CEE and EU15 countries (flows among the "old" EU countries are omitted). The ribbon size expresses the number of migrants from one country to another (the thicknesses of the ribbons should not be directly compared between the two years of analysis). These visualisations confirm and sum up what was mentioned in the main text. The year 2004 registered a big stock (yellow ribbon) of Polish people living in Germany (almost 100,000). What may be surprising is nearly the same thick ribbon (navy) running from Germany to Poland. This situation is explained in the Polish census of 2002, in which approximately 100,000 people declared themselves to be part of the German minority. For historical and geographical reasons, the place of residence of this minority is in the areas that were located on the Polish-German border (most of them in Upper Silesia). As already mentioned, the stock of Romanian migrants (aquamarine ribbon) in Italy (around 60,000) and (green ribbon) Spain (more than 100,000) is also noticeable. In other cases, the connections create a network of contacts that is difficult to detect. However, in 2004, apart from Germany's already explained situation, no clear reverse migration flow from the old EU15 to CEE was observed.

This tendency continued in 2019; in principle, there is no EU15 country from which a significant amount of migration to the CEE countries would be noticeable. Even the DE-PL flow visible in 2004 is almost unremarkable. This is due to the fact that the size of the German minority in Poland has practically remained the same over the last fifteen years, while the number of Poles in Germany is over 18 times higher than in 2004. As a result, this time, the big yellow ribbon from PL to DE represents the migration stock of 1.7 million inhabitants. The second-largest ribbon (aquamarine ribbon) describes the stock of almost 1.1 million Romanians, and the purple ribbon the stock of nearly 950,000 Poles in the UK. There is also a noticeable multitude of other yellow bands indicating migration to Germany, and even purple bands showing the migration to the UK.

Figure 1. Migration flows among CEE and EU15 countries in 2004 and 2019.

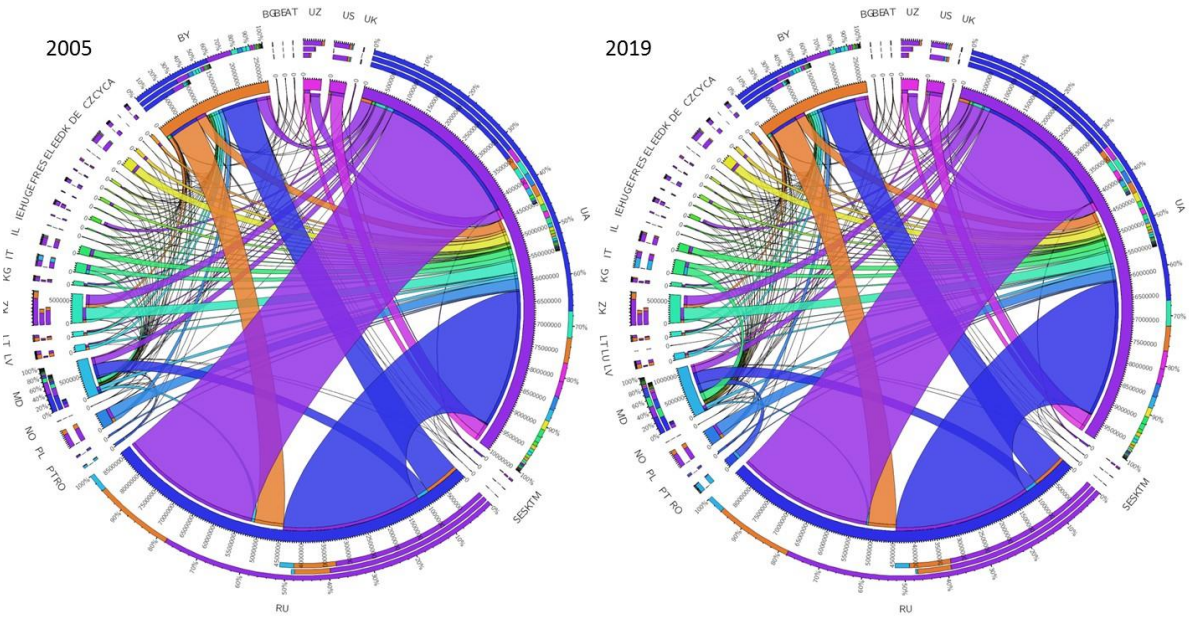


Source: Authors' study based on data taken from the United Nations Population Division.

The next chart (Figure 2) shows circular graphs explaining population movement to and from Belarus, Ukraine, and Moldova. The ribbon size expresses the number of migrants from one country to another (as in the case of Figure 1, the thicknesses of the ribbons should not be directly compared between the two years of analysis). There are no apparent differences over the analysed period. Neither the directions of emigration nor the stock of migrants has changed significantly.

Four connections are noticeable. The violet ribbon showing the number of Ukrainians living in Russia (almost 3.3 mln both in 2005 and 2019), the navy ribbon referring to the number of Russians in Ukraine (around 3.4 mln both in 2005 and 2019). And also the flow of Belarusians to Russia (orange ribbon – approximately 850,000 inhabitants) and Russians to Belarus (thinner navy blue ribbon – around 690,000 in 2005 and 660,000 in 2019).

Figure 2. Migration flows to and from Ukraine, Belarus, and Moldova in 2004 and 2019.



Source: Authors' study based on data from the United Nations Population Division.