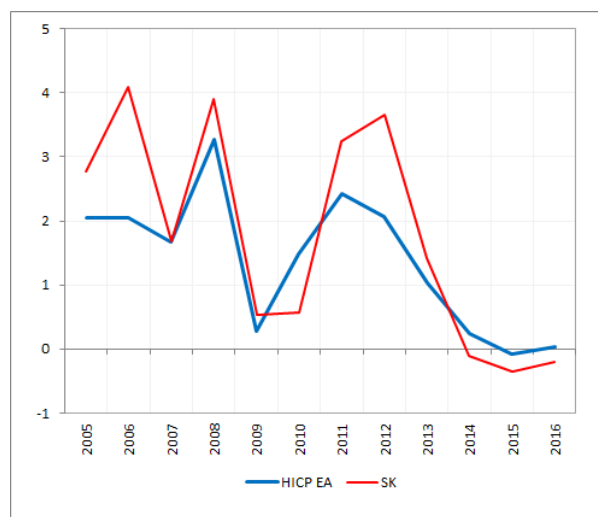




Slovakia

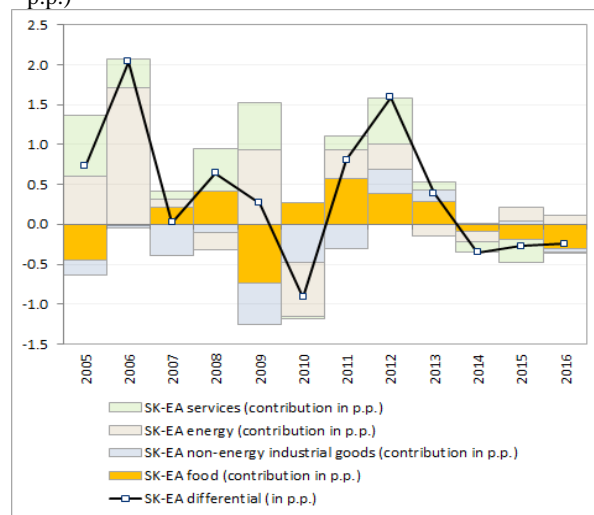
1.) Recent inflation divergence in CEE – focus on food prices and services

Chart 1: Inflation in SK and EA (at constant tax; %)



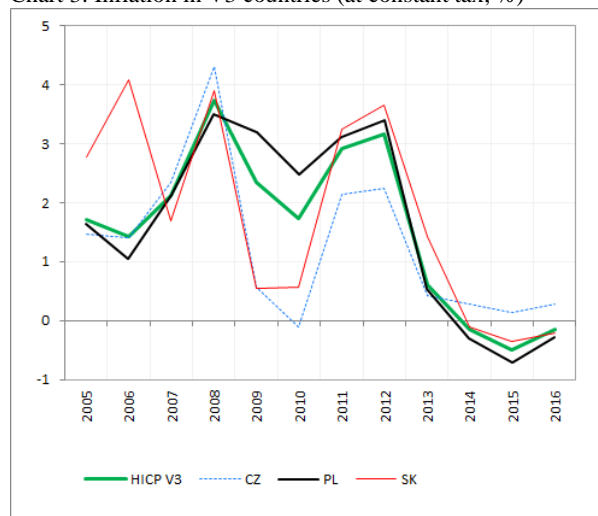
Source: Eurostat.

Chart 2: Inflation differential SK and EA (at constant tax; in p.p.)



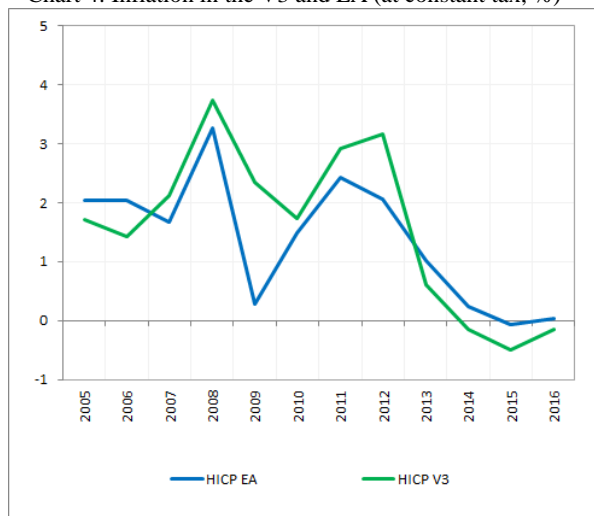
Inflation in Slovakia (SK) was surprisingly lower than euro area (EA) inflation during the 2014–2016 period, with the gap at one point reaching even -1%. The main contributor to the price divergence has been the more benign development of food prices and services. This exercise aims to look at the issue in greater detail, including taking into account developments in neighbouring Poland and the Czech Republic (denoted as V3 countries). Chart 4 shows the recent price divergence in the region.

Chart 3: Inflation in V3 countries (at constant tax; %)



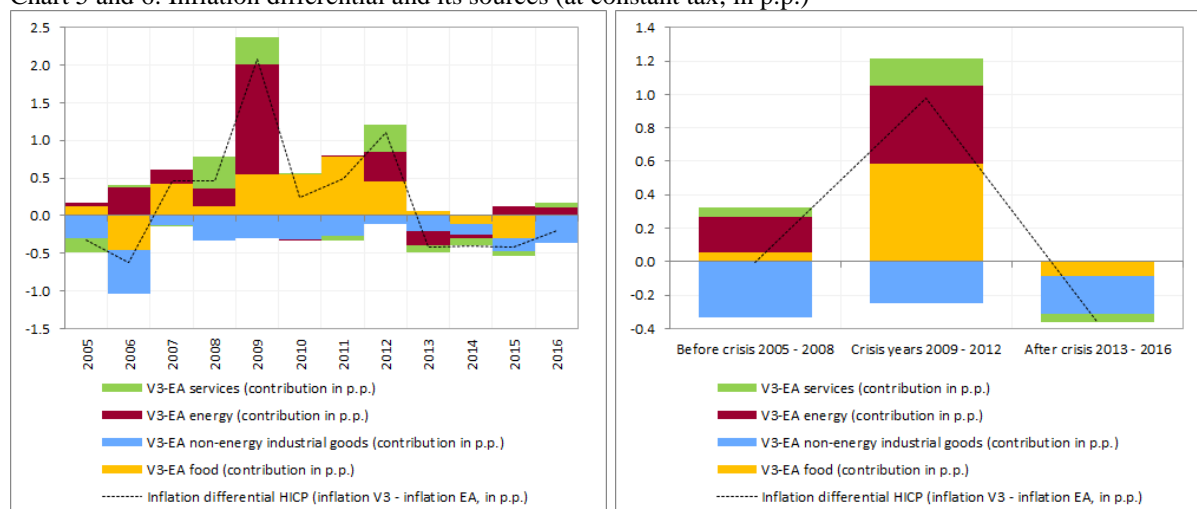
Source: Eurostat

Chart 4: Inflation in the V3 and EA (at constant tax; %)



Food and services prices, in addition to energy prices¹, stopped contributing to price convergence.

Chart 5 and 6: Inflation differential and its sources (at constant tax; in p.p.)



Source: Eurostat.

Food prices

Due to lower wages, the share of the remaining cost factors (including commodity prices) is by definition higher in V3 countries compared to EA average.

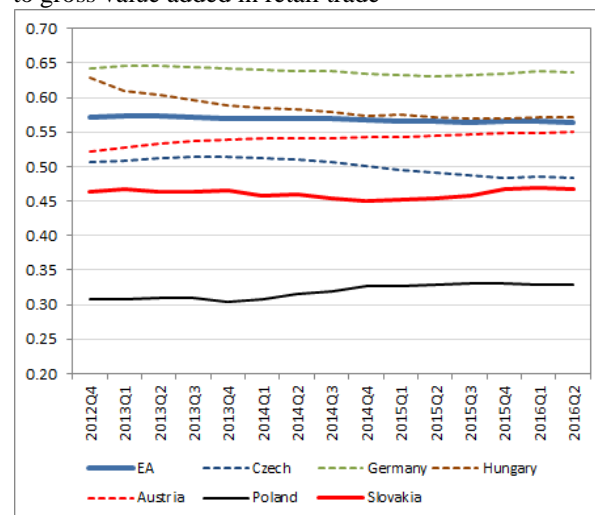
The greater volatility of food prices in V3 countries may stem from lower wages² and also consumers' lower focus on food quality. When agricultural prices were increasing between 2010 and 2012, food prices tended to rise faster in V3 countries. In recent years, as agricultural prices have been falling, decreasing food prices have exerted downward pressure on CEE inflation.

Chart 7: Rate of change in food commodity and food consumer prices (at constant tax; in %)



Source: Eurostat, NBS calculations

Chart 8: Ratio of employee compensation to gross value added in retail trade

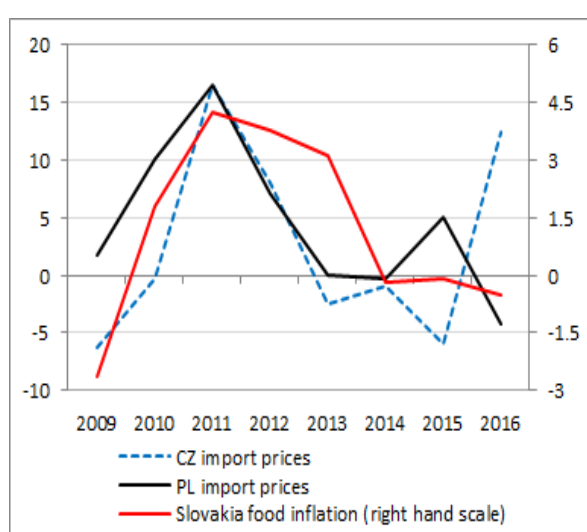


¹ Energy prices may already have largely converged. They still have a greater weight in the consumption basket (EA at 9.7% vs 14% in V3) so they cause greater volatility in the inflation during big price swings.

² As agricultural prices fluctuate much more than wages.

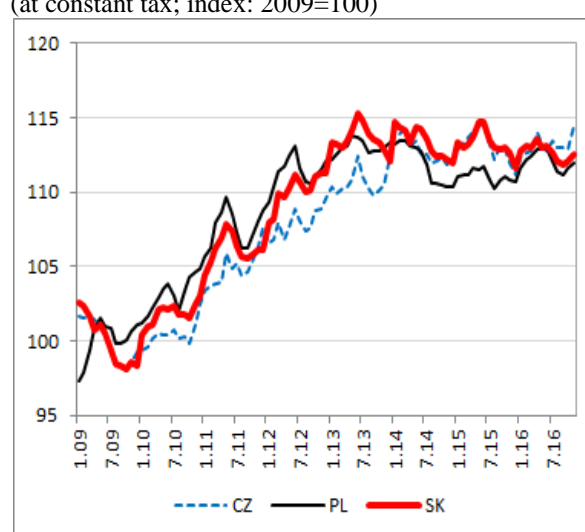
Food prices in Poland, the Czech Republic and Germany have an important impact on consumer prices in Slovakia, with over half of Slovakia's food imports coming from these countries. **The structure of food imports is proving responsive to price developments**, particularly in the Czech Republic and Poland. Until 2013 Slovak food prices moved in line with those in Poland. In that year, food imports from the Czech Republic became cheaper – due to weakening of the Czech currency – and in 2014 their share of Slovakia's total food imports rose by 3 percentage points, from 20% to 23%. In 2016 cheaper Polish food imports started to have a greater impact on Slovak food prices. Such food price flexibility may also indicate more price elastic demand behaviour of households, and possibly also their lower focus on food quality.

Chart 9: Prices of food imports to SK (yoy in %)



Source: NBS calculations

Chart 10: Food price trends in V3 countries (at constant tax; index: 2009=100)



Services

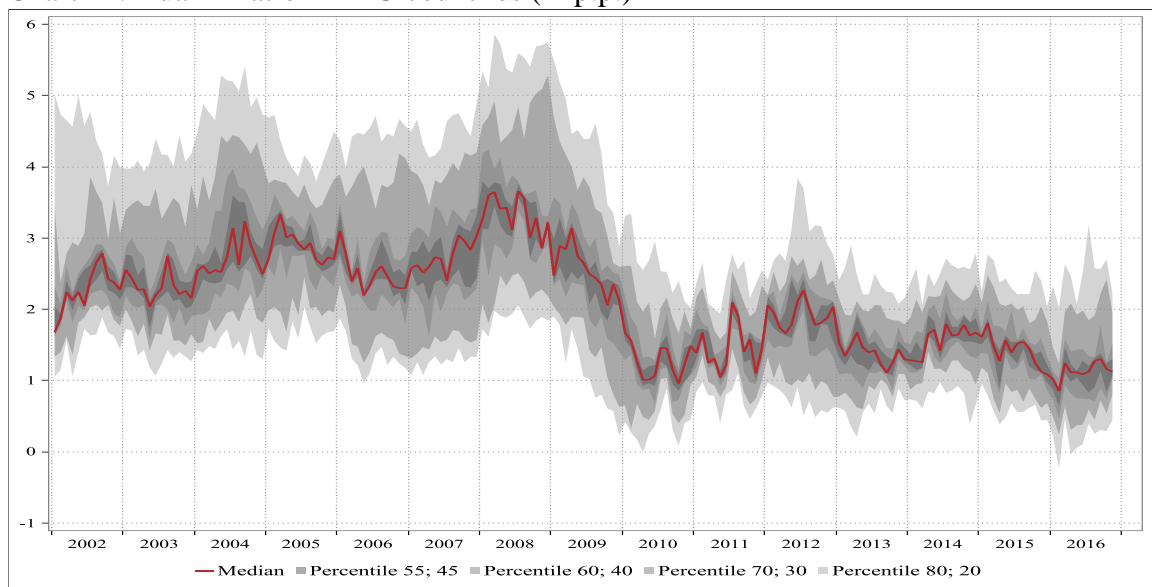
As it was noted before, the ratio of wages to gross value added in Slovakia is lower than the EA average also in the services sector. Low commodity prices in recent years may have been an additional reason for the very limited cost pressures on services inflation.

But **services inflation has been rather absent in other countries**, too, resulting in the drop in dual inflation (the difference between services inflation and goods inflation).

The post-crisis low inflation environment has been accompanied by a relatively significant slowdown in dual inflation (measured by the HICP inflation differential in services and non-energy industrial goods)³. The average dual inflation gap across all EU countries declined from **3.0%** in 2002-2008 to **1.6%** in 2012-2016. It may therefore be asked whether there is a structural break across the economies that could be causing a slowdown in inflation via the smaller gap between price growth in the non-tradable and tradable sectors.

³ The gap is usually positive as higher services inflation is based on the assumption that wage growth (labour market flexibility) is the same throughout the economy while the tradable sector (ie, manufacturing) has higher productivity growth (and thus weaker price pressures).

Chart 11: Dual inflation in EU countries (in p.p.)



Source: Macrobond

What could be behind this structural break? Two reasons present themselves:

1. a decline in the productivity differentials between the tradable and non-tradable sectors;
2. insufficient labour market flexibility – differences in wage developments between the tradable and non-tradable sectors

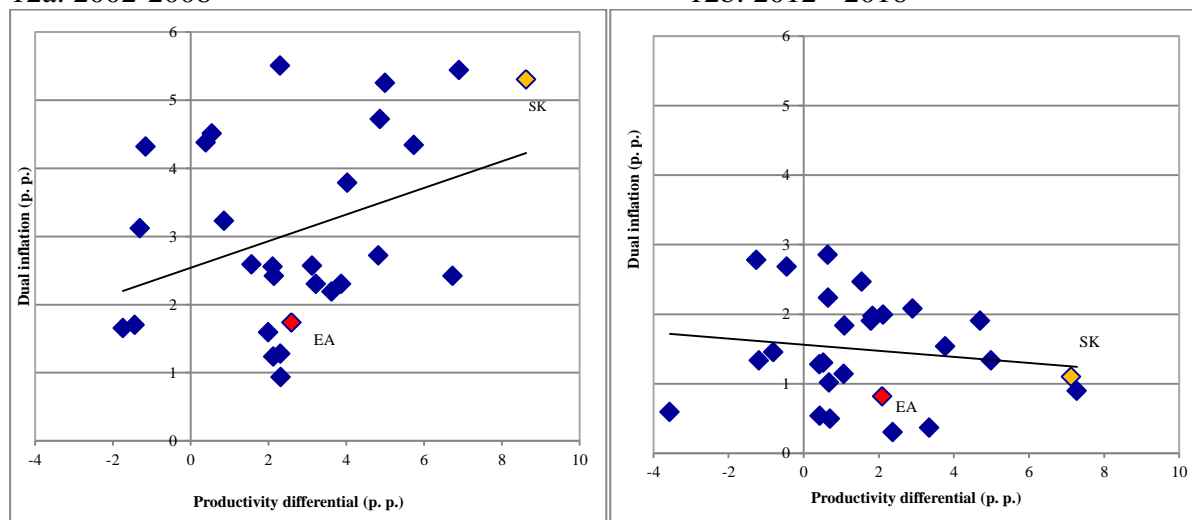
Only a marginal part of the decline in dual inflation can be attributed to the lower productivity differential. The average productivity differential across all EU countries declined from **2.7%** in 2002-2008 to **2.2%** in 2012-2016. This drop would indicate a mere 0.1% decline in dual inflation in the EU on average⁴. On the other hand, there is a change in the relationship between the productivity differential and dual inflation, as the relatively clear positive relationship of the pre-crisis period has broken in the post-crisis period.

⁴ Based on a simple regression estimated on a pre-crisis period.

Chart 12: Productivity differential and dual inflation in EU countries

12a: 2002-2008

12b: 2012 - 2016

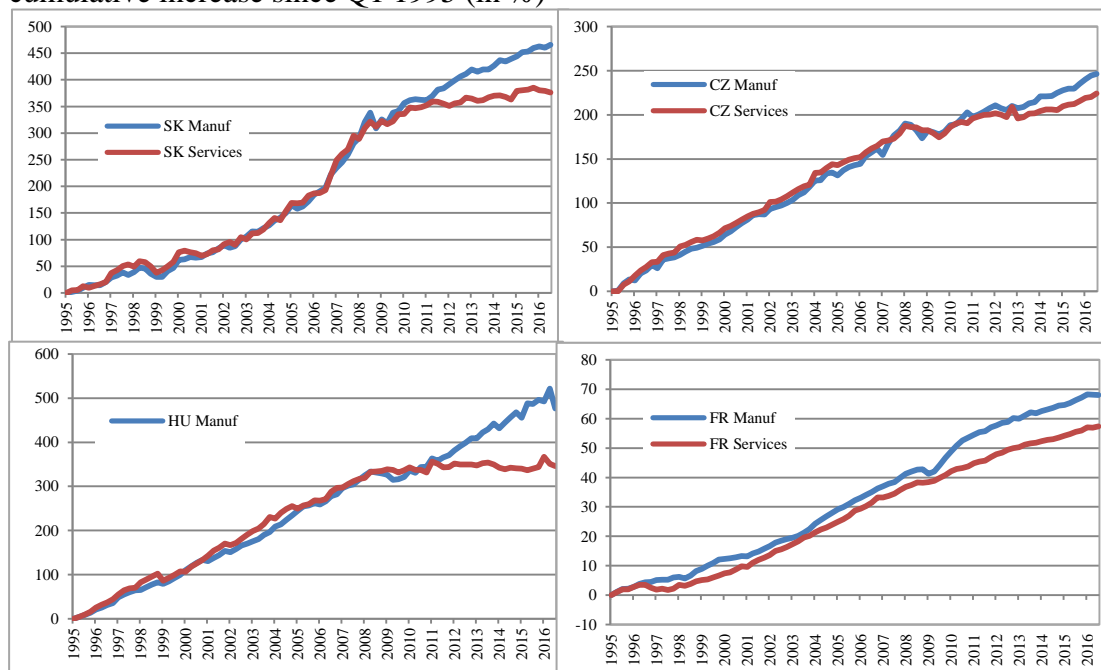


Sources: Macrobond, NBS calculations

Sources: Macrobond, NBS calculations

Looking at wage developments in the pre-crisis period, we can see a common trend in both sectors. In the post-crisis period, however, compensation growth in these two sectors diverges in a number of countries across the EU. A clear trend of wage growth in services lagging behind wage growth in the tradable sector can be observed in smaller new Member States as well as in some large core EU countries (this is shown in Chart 13 for four selected countries, and a similar trend could be observed in more EU countries). **The increasing gap between wage developments in the tradable and non-tradable sectors could be the cause of the significant decline in dual inflation.** The difference may not be related to labour market flexibility, given that the wage gap increased even in countries that consistently reported "zero" gaps before the crisis.

Chart 13: Compensation per employee in manufacturing and services in selected countries – cumulative increase since Q1 1995 (in %)



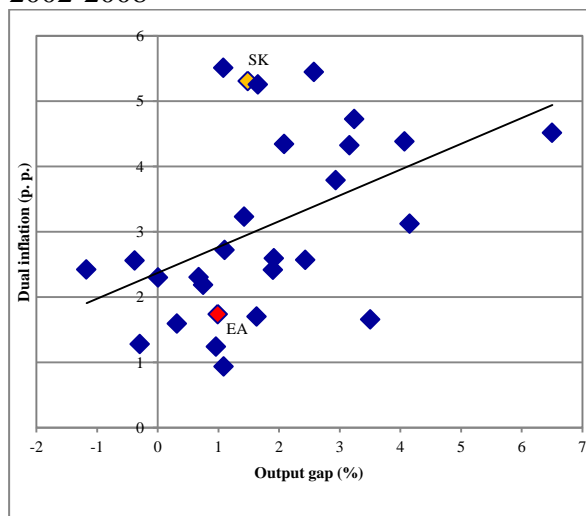
Sources: Macrobond, NBS calculations

One cause of the slower wage growth may be differences in the cyclical position of the economy, and the possibly higher sensitivity of the non-tradable sector to the cyclical position. A possible explanation is that **a negative demand shock would have a more pronounced adverse impact on services**⁵, reducing negotiated wage growth and thus lowering dual inflation. Indeed, the negative output gap in the period 2012-2016 has likely contributed to generally lower dual inflation, though the pre-crisis relationship between the output gap and dual inflation would still suggest somewhat higher dual inflation in most countries. In the case of euro area, for example, the average negative output gap of -2% in 2012-2016 would indicate dual inflation of around 1.5%, while the actual figure was a mere 0.8%⁶.

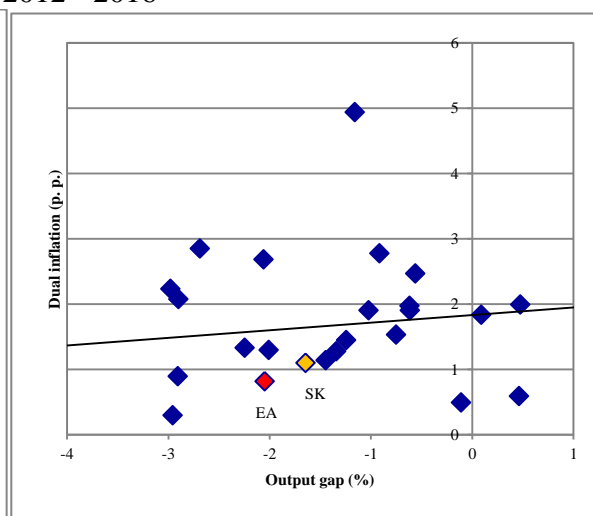
⁵ As tradables are exported and services may have a higher "luxury item" component.

⁶ Average 2012-2016.

Chart 14: Output gap and dual inflation in EU countries
2002-2008 2012 - 2016



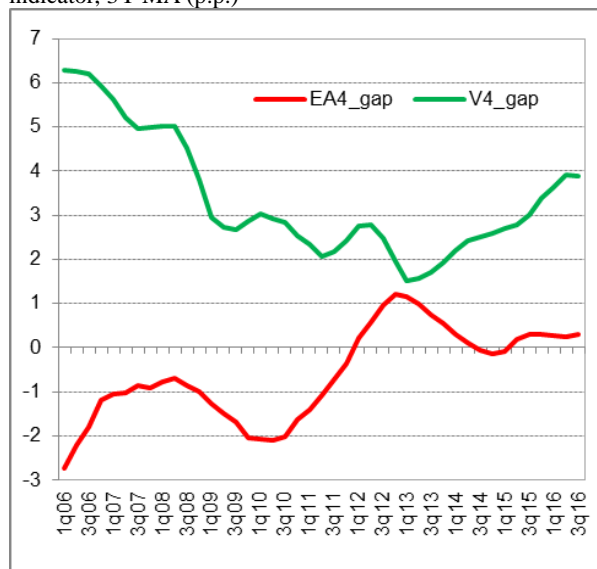
Sources: Macrobond, NBS calculations (output gaps from EC)



Sources: Macrobond, NBS calculations (output gaps from EC)

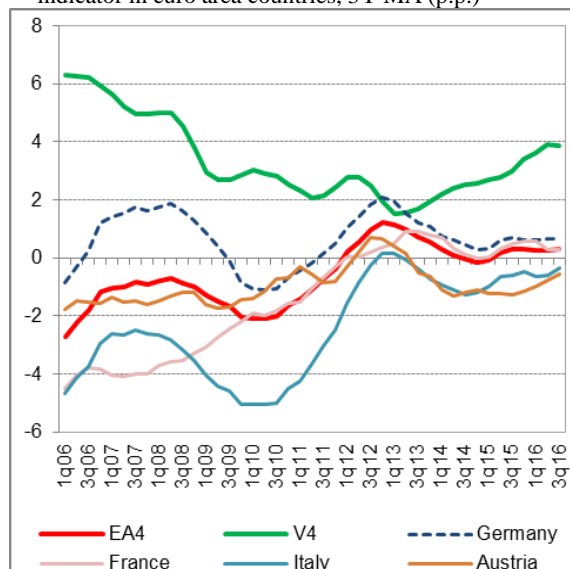
2.) Is silent outsourcing of production to the V4 continuing despite the weak investment environment?

Chart 1 – Gap between export and foreign demand indicator, 3Y MA (p.p.)



Note: EA4 - Germany, France, Italy, Austria
V4 - Czech Republic, Slovakia, Hungary, Poland

Chart 2 - Gap between export and foreign demand indicator in euro area countries, 3Y MA (p.p.)



In the pre-crisis period, the CEE region was attracting large visible FDI projects that boosted its production capacities. Since the Great Recession, global trade, FDI and investment demand have been much weaker. There are signs, however, that the outsourcing (in this case a more “silent” one) of production to V4 countries is probably continuing.

A large share of exports from V4 countries (Czech Republic, Slovakia, Hungary, Poland) passes through global value chains (GVCs). **The process of global production fragmentation within GVCs has stalled since 2011. Nevertheless, the involvement of V4 countries in the pan-European value chains is expanding, partly at the expense of the euro area countries.** This “silent outsourcing” of production could partly explain why V4 countries continue to gain market shares in global trade. Owing to depreciation of their currencies in the post-crisis period and subdued wage developments, the real exchange rate of these countries' currencies (adjusted for the productivity differential) tends to be a weaker side⁷.

Among euro area countries, Germany is the V4 countries' most important trading partner in global value chains, followed by France, Italy and Austria (the EA4).

⁷ Adjusted for the productivity differential. Growth of the wages differential on average has not kept up with the productivity differential leading to real exchange rate undervaluation.

Chart 3 – Gains of V4 at the expense of the EA4
(3yMA, V4_gap minus EA4_gap in p.p.)

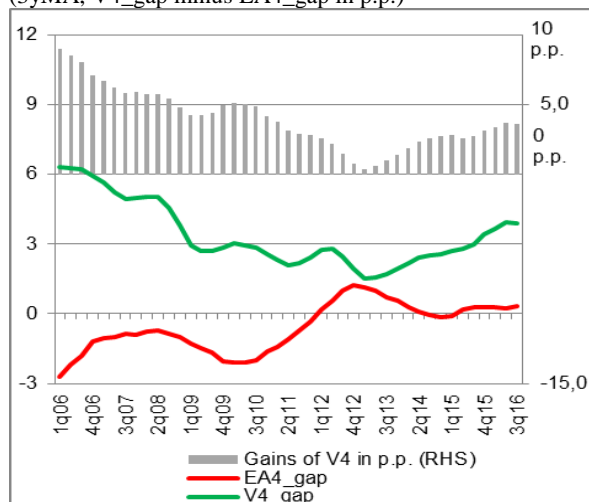
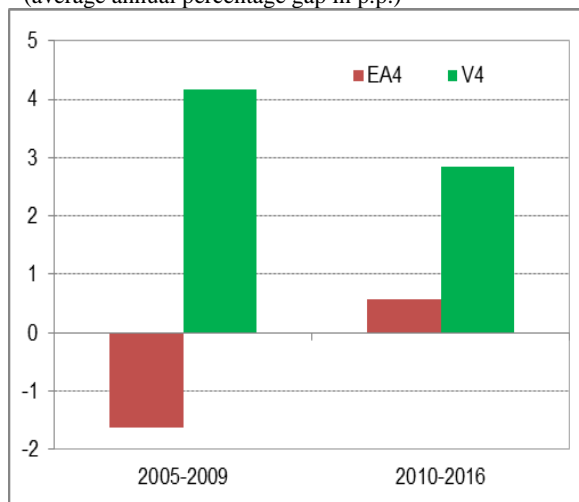


Chart 4 – Comparison of the gaps in two periods
(average annual percentage gap in p.p.)



Note: Gap is defined as the difference between export growth and foreign demand (ie, a change in the market share)