

## The embargo accounts for about half of the decline in Russian imports from the European Union

Between 2013 and 2016, Russian imports by volume shrank by 32.5% according to the national accounts. Part of the reason for this decline is the Russian economic crisis: it was caused by the fall in oil prices in 2015, and has resulted in a severe recession and a fall in domestic demand. It is also the result of the sharp depreciation of the rouble which raised the price of imports, making them less attractive for Russian consumers. In addition, the embargo on food products from the European Union (EU), the United States and Australia from Q3 2014 onwards has also affected imports, and led in return to economic sanctions by the EU, especially on arms, energy and the financial sector. As a result of these different factors, the decline in Russian imports has affected all of its partners and all types of imported product, although to varying degrees.

### Russian imports from the countries under embargo fell by almost half, ten points more than for other partners

All sectors combined, and according to data from UNCTAD (see Sources), Russian imports of goods from China declined by 23.7% in value between 2013 and 2016, from Brazil by 22.0% and from the rest of South America by 25.6% (Graph 1). The drop in imports was significantly greater for countries targeted by Russian sanctions: over the same period, the EU lost 47.9% of its exports to Russia, Australia lost 41.9% and the United States 39.5%.

Russian imports of beverages and food products, which were targeted by the embargo, have been particularly badly hit, at -45.9% for all partners, which represents a cumulated fall of \$17.1 billion over the period. However, they fell more than twice as fast for the countries under embargo than for the rest of the exporting countries: the United States (-\$1.0 billion) and Australia (-\$360 million) saw their food exports to Russia drop by over 80% and the EU by 65% (or -\$8.7 billion), against -31.7% on average for the other countries (-\$7.1 billion).

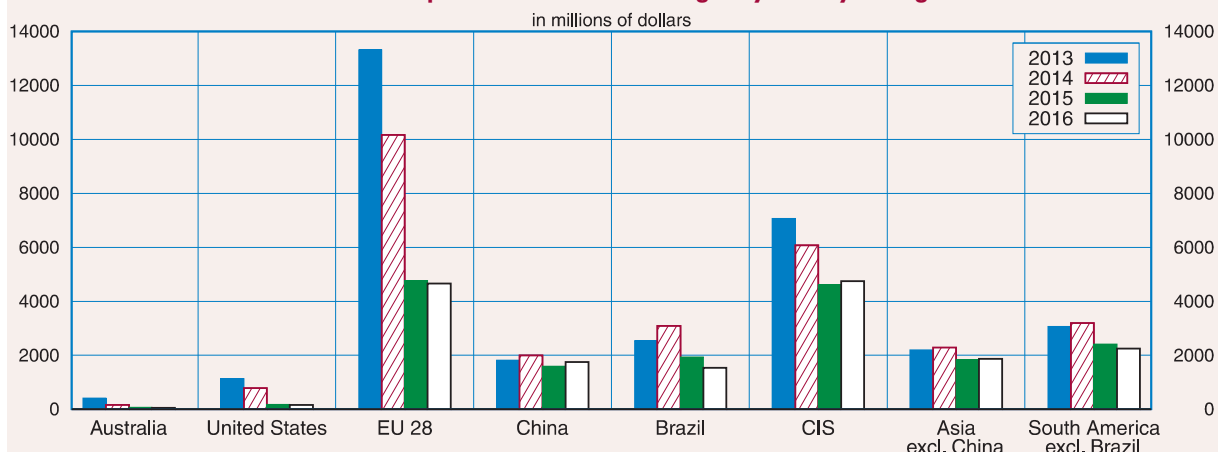
Among Europe's leading suppliers of agrifood to Russia, Germany is the foremost European exporter of

food products and beverages to this country, and has seen its exports fall by more than half. Food exports from the Netherlands, the second exporter, and France, fifth, declined by more than 60% between 2013 and 2016. Finally, Russian food imports from Poland, the country's third largest supplier, and Lithuania, fourth, decreased by more than three quarters.

### The decline in imports from the EU has affected all products

The decrease in Russian imports has also affected products not placed under embargo. Imports of European transport equipment shrank by 51.8% between 2013 and 2016 and other manufactured goods by 44.9%. On average, this is a sharper downturn than for imports from other Russian partners, (-39.1% for transport equipment and -40.5% for other manufactured goods), suggesting that purchases from Europe have been particularly neglected (Graph 2). Thus the decline in Russian imports from the EU was 11 points higher than the total decline in imports: the greatest difference did indeed concern the food sector (-30 points), but also transport products (-13 points) and, to a lesser extent, other manufactured products (-4 points).

1 - Russian imports of food and beverages by country of origin



Source: CNUCED

## International developments

To account for this decline, the factors mentioned in the introduction were probably at work: the fall in domestic demand generated by the Russian economic crisis of 2015, decline in price-competitiveness of European products on the Russian market due to the depreciation of the rouble against the euro, but also to the cooling of political relations between Russia and the EU.

### An econometric model is used to identify the respective influences of the embargo and purely economic factors

To go further and in particular to identify specific contributions of the exchange rate against the euro, Russian imports by volume from the European Union can be modelled using an error correction model. The estimate is carried out in a single step and the response forces are significant within the meaning of Ericsson and MacKinnon (2002) (see *Method*).

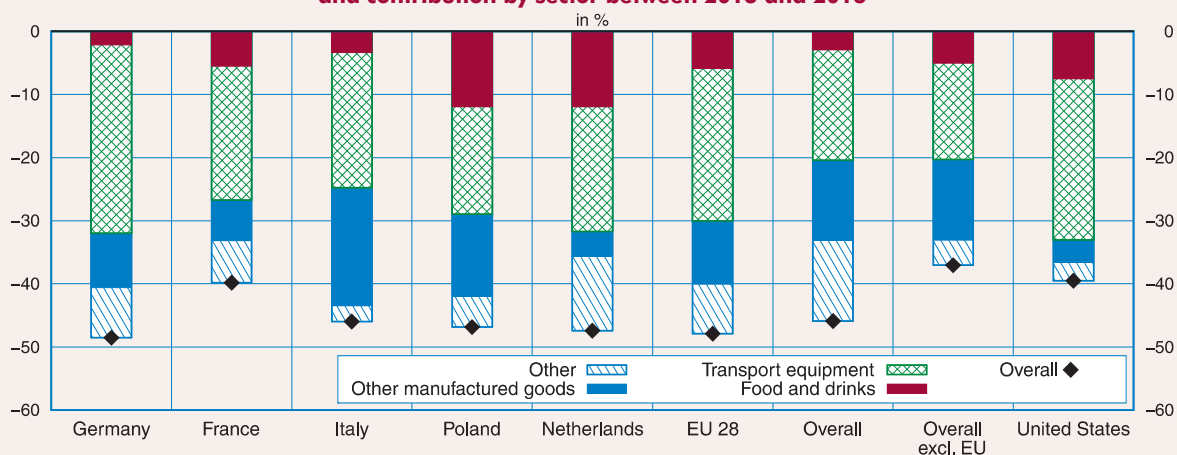
Using econometrics, a cyclical factor was revealed (elasticity of GDP close to 1 in the long term but greater in the short term), a contribution from relative import prices to capture the price-competitiveness effect, and

a binary variable starting from 2014 to capture the decline linked specifically with the embargo and the cooling of relations between the EU and Russia (*Graph 3*).

### The Russian embargo appears to have restricted European Union exports to Russia by €10 billion annually compared with 2013

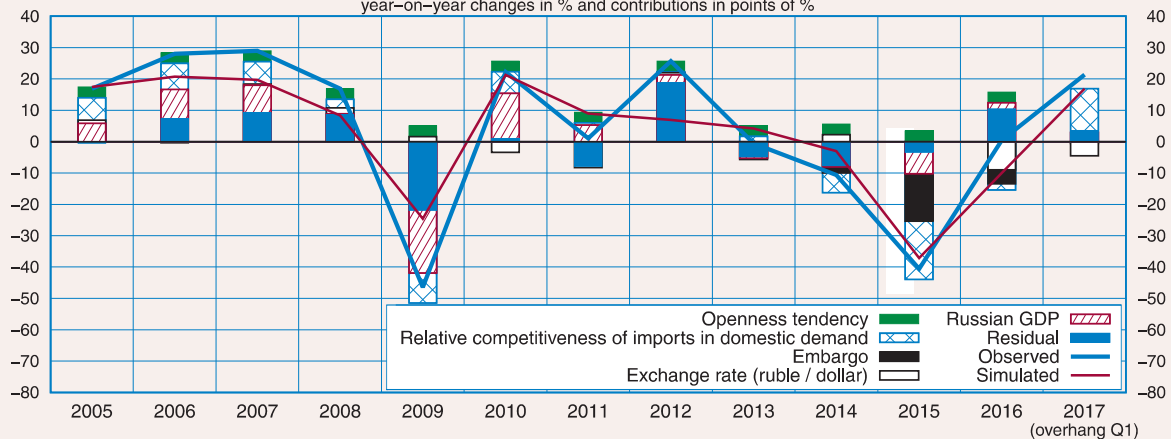
According to this model, in 2014, the introduction of the embargo appears to have accounted for the removal of 1.9 points from Russian imports from the EU, of a total decline of 9.9%. Then in 2015, Russian sanctions appear to have contributed around 13.9 points of the 33.4% drop in imports, or twice as much as the decrease in domestic demand generated by the Russian crisis, and one and a half times more than the increase in the price-competitiveness of domestic products compared with imports. Finally, in 2016, the effect of the embargo appears to have eased: -4.4 percentage points, while imports stabilised (+0.3%). In 2017, the embargo seems to have still had a slight effect on the annual growth overhang for imports.

2 - Change in Russian imports from European Union countries and contribution by sector between 2013 and 2016



Source: CNUCED

3 - Equation of Russian imports from the European Union  
year-on-year changes in % and contributions in points of %



Sources: IMF, Rosstat, INSEE calculations

All in all, at the start of 2017, Russian imports from the EU declined in volume by 39.9% compared with 2013, of which 19 points are probably linked with the embargo, or the equivalent of €10 billion over a full year. This means that about half of the collapse of European sales to Russia between 2013 and the beginning of 2017 was due to cyclical causes (income

slashed by the collapse in oil prices, the rouble and national activity) but that the other half was probably linked with geopolitical causes. In the case of France, geopolitical factors appear to have led to an average loss of about €1.5 billion per year of exports to Russia between 2013 and the beginning of 2017. ■

### Method

To identify the contributions of the Russian embargo, the fall in domestic demand generated by the Russian crisis of 2015, and the gain in competitiveness of domestic production over imports, an error correction model was estimated. The embargo was modelled using a dummy variable with a value of 1 in Q3 2014. As it was not possible to construct a weighted global demand that takes into account the composition of the demand, this was measured from the Russian GDP. The relative competitiveness of imports was measured using the ratio of the import deflator to consumer prices.

The equations obtained were as follows (Student statistics are given in brackets below the relevant coefficients):

$$\begin{aligned} \Delta\_Importations\_UE28_t = & -0,259 - 0,357 \times Importations\_UE28_{t-1} + 0,357 \times PIB_{t-1} - 0,043 \times Rouble\_Dol_{t-1} \\ & (-2,4) \quad (-5,3) \quad (5,3) \quad (-1,5) \\ & - 0,080 \times Embargo_{t-1} - 1,808 \times Compétitivité_{t-1} + 0,003 \times Trend + 2,820 \times \Delta\_PIB_t + 0,269 \times \Delta\_Rouble\_Dol_t \\ & (-1,7) \quad (-5,5) \quad (2,1) \quad (4,9) \quad (2,1) \\ & - 4,215 \times \Delta\_Compétitivité_t \\ & (-6,2) \end{aligned}$$

$$R^2 = 0.62$$

Estimation period : Q1 1995 - Q3 2016

where:

- *Importations\_UE28* are Russian imports from the European Union by volume;
- *PIB* is Russian GDP by volume;
- *Rouble\_Dol* is the exchange rate between the rouble and the dollar;
- *Embargo* is a dummy variable with a value of 1 in Q3 2014;
- *Competitiveness* is the import deflator divided by the consumer price index.

Imports, GDP and the exchange rate are expressed in logarithms and the coefficients can be interpreted approximately as elasticities.

The operator  $\Delta$  shows that the associated variable appears with quarterly variations.

### Sources

Import statistics by country and by product were obtained using data from the United Nations Conference on Trade and Development (UNCTAD). They are expressed in current dollars and are produced from customs data from each country.

The import data used in the econometric models derive from the International Monetary Fund (IMF) which estimates them by value. They are converted into data by volume using the deflator produced by Rosstat, assuming that the deflator is the same for all countries of origin, excluding exchange rates.