Institute for Economic Research and Policy Consulting
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Technical Note Series [TN/03/2014]

Ukrainian exports to Russia: Sector and regional exposure

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Berlin/Kyiv, May 2014

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Ukrainian exports to Russia: Sector and regional exposure

Executive Summary

The Russian Federation accounted for 23.8% of Ukrainian merchandise exports in 2013. Consequently, risks for trade disruptions with Russia are of great concern for the Ukrainian authorities and companies. In this context it is important to quantify the overall exposure of Ukraine to the Russian market, as well as the exposure at sector and regional level.

Ukrainian exports to Russia amount to 8.3% of GDP ("overall exposure"). While this is certainly a high figure, it should be also seen in a regional context. The figure is much lower than in Lithuania (13.4%) and comparable to the overall exposure to Russia of the other two Baltic countries (Estonia 7.4%, Latvia 7.3%). Thus, the overall exposure is high but not huge.

The sector exposure to Russia is quite uneven. The sector "manufacture of machinery and equipment" features by far the highest exposure, with 22% of its output being shipped to Russia. Prominent goods belonging to this sector are railways wagons and locomotives as well as turbo-jets, turbo-propellers and gas turbine engines. Clearly, restrictions to enter the Russian market would lead to significant problems in this sector. "Metallurgy and metal processing" ranks fourth in terms of exposure to Russia, with a high, but manageable exposure of 14%. "Food processing" is on the 11th rank, with an exposure to the Russian market of only 3%. This sector seems not be very vulnerable to possible trade shocks from Russia.

The exposure at a regional level is much more evenly distributed. The list is headed by Lugansk and Zaporizhzhia Oblasts, each of them featuring an exposure of 10% to the Russian market, i.e. 10% of their output is sold to Russia. The exposure of Donetsk is lower than commonly thought: Only 6% of output is sold to Russia, bringing the oblast to the 7th rank, just behind Poltava. The same applies to Kharkiv, which is ranked 9th with an exposure of 4%, the same as Zakarpattia in the West of the country. In general, Eastern oblasts feature a higher exposure to the Russian market, but the difference between Eastern and Western oblasts is not as high as suggested by commentators and the press.

In view of the significant sector and regional exposure to the Russian market, the Ukrainian authorities should continue their efforts to normalise trade relations with Russia. At the same time, contingency planning should be developed at government and company level in order to re-orientate exports from Russia to other destinations.

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1. Introduction

The Russian Federation is an important export destination for Ukrainian companies. However, there is a significant risk for trade disruptions in the near future, which could have a negative impact on Ukrainian exports to Russia. Against the background, it is important to quantify the exposure of different sectors and regions of the Ukrainian economy to the Russian market.

In this technical note we provide in section 2 an overview of Ukrainian exports to Russia. In section 3, we define and quantify the exposure of different sectors of the economy on the Russian market and draw the relevant conclusions. In section 4, the same exercise is conducted for the different regions of the Ukrainian economy.

2. Exports to Russia: Overview

The Russian Federation is one of the largest export partners of Ukraine. In 2010-2012, Russia was the number one export destination of Ukraine. In 2013, Russia moved to place two (behind the EU), accounting to 23.8% of Ukraine's total merchandize exports.

Ukraine's exposure to disruptions in exports to Russia measured by merchandise exports as percentage of GDP[1] was 8.3% in 2013 (Table 1). This level of exposure is compatible to the exposure of Estonia (7.4%) and Latvia (7.3%), and much lower than the exposure of Lithuania (13.4%). It seems that the former Soviet Union republics are much more exposed to the Russian market than other EU countries. The average exposure of the EU is only 0.8%.

Table 1

EU's and Ukraine's exposure to the Russian market

	Merchandise exports to Russia, % of GDP
European Union	**0.8**
Austria	*1.2*
Estonia	*7.4*
Finland	*2.6*
France	*0.3*
Germany	*1.2*
Italy	*0.6*
Latvia	*7.3*
Lithuania	*13.4*
Poland	*1.9*
Spain	*0.3*
Sweden	*0.5*
Ukraine	**8.3**

Source: MOODY'S (2014)[2]

[1] Ukraine's exposure to disruptions in exports to Russia measured by merchandise exports as percentage of *total output* was approximately 3.5% in 2013

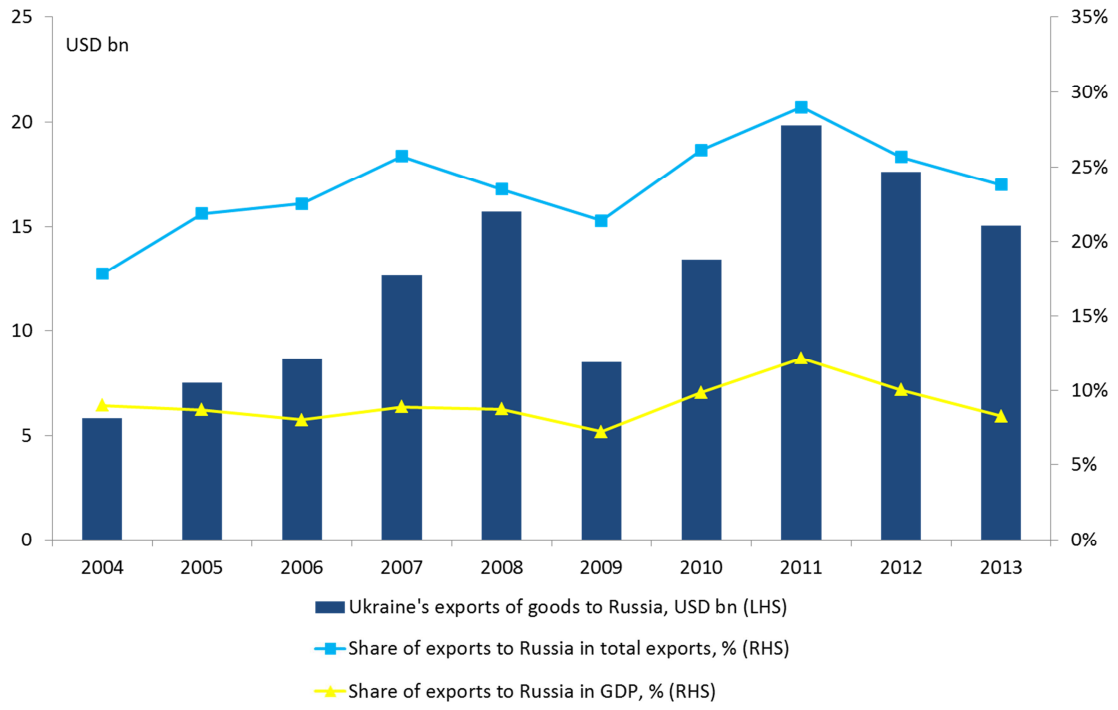
[2] MOODY'S (2014) Special Comment: Russia and the EU: EU economies would be resilient to a Russian recession. May 9, 2014

Conclusion 1: The overall exposure of Ukraine to the Russian market amounts to 8.3% of GDP. While this figure is high, a comparison with the Baltic States shows that the figure is not huge.

Merchandize exports to Russia increased by 159% in nominal terms in 2004-2013, growing faster than total exports. Since 2004, the upward path of exports to Russia has been broken twice: in 2009 amid the global financial crisis and then in 2012-2013 (Figure 1). The latter reduction in exports is explained by several factors originating in Russia, including reduced investment demand and increased trade protectionism, especially in respect to goods from Ukraine.

Figure 1

Ukraine's merchandize exports to Russia in 2004-2013

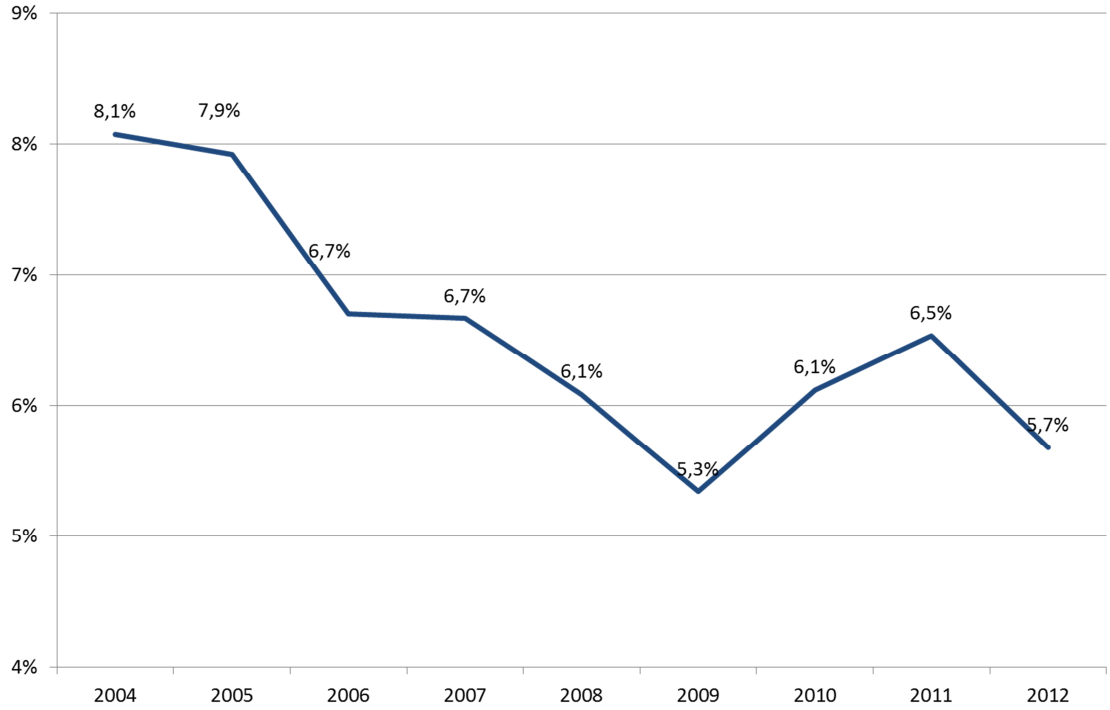


Source: State Statistics Service of Ukraine, UN Comtrade

Whereas Russia has steadily been a large export partner for Ukraine, the opposite statement is not right. Ukraine has been gradually decreasing its positions on the Russian market. The share of shipments from Ukraine reduced from 8.1% in 2004 to 5.7% in 2012 (Figure 2). China and the EU are nowadays the main exporters to the Russian market.

Figure 2

The share of Ukraine in Russia's imports of goods in 2004-2012



Source: UN Comtrade

Conclusion 2: Russia is a very important export destination for Ukraine, accounting for about one quarter of Ukraine's merchandize exports. However, from a Russian perspective, imports from Ukraine have been steadily losing importance at the expense of imports from the EU and China.

3 Sector exposure to the Russian market

The sector structure of Ukraine's exports to Russia is very concentrated. As shown in Table 2 (Column I), three sectors – manufacture of machinery and equipment (36%), metallurgy and metal processing (26%), and food processing (12%) – account to 74% of total exports to Russia.

However, the relative importance of the sector in total exports to Russia (Column I) is not necessarily a good indicator of the sector's exposure to the Russian market. When it comes to the exposure of individual sectors, the decisive question is:

What percentage of the sector's output is exported to Russia?

In the following, we refer to this percentage number as the *sector's exposure to the Russian market*.

Conclusion 3: An analysis on the exposure of different sectors of the Ukrainian economy on Russia should be based on an appropriate variable. In our view, the relevant variable is the percentage of the sector's output that is exported to Russia, which we define as the "sector's exposure to the Russian market".

In Table 2 we provide the relevant information about different sectors and calculate the "sector's exposure to Russia" (Column V) by multiplying "exports to Russia as % of sector exports" (Column II) by "sector exports as % of sector output" (Column IV). In Column VI, we rank different sectors by their exposure to the Russian market.

Table 2

Sector exposure to the Russian market

	I	II	III	IV	V	VI
	Sector exports to RU as % of total exports to RU (2013)	**Exports to RU as % of sector exports (2013)**	**Sector output as % of total output (2011)**	**Sector exports as % of sector output (2011)**	**Sector exposure to RU market, % (II x IV)**	**Rank by sector exposure**
Manufacture of machinery and equipment	36%	52%	7%	43%	22%	1
Manufacture of coke products	1%	86%	1%	19%	16%	2
Wood working, pulp and paper industry, publishing	6%	54%	2%	28%	15%	3
Metallurgy and metal processing	26%	22%	9%	62%	14%	4
Manufacture of chemicals, rubber and plastic products	7%	24%	4%	37%	9%	5
Production of non-energy materials	3%	11%	2%	46%	5%	6
Other production	2%	19%	1%	23%	5%	7
Manufacture of other non-metallic mineral products	2%	51%	2%	9%	4%	8
Textile and leather	1%	17%	2%	25%	4%	9
Fishery	0%	53%	0%	7%	4%	10
Food-processing	12%	21%	12%	15%	3%	11
Petroleum refinement	1%	4%	3%	27%	1%	12
Mining of coal and peat	0%	7%	2%	10%	1%	13
Agriculture, hunting	1%	2%	9%	15%	0%	14
Forestry	0%	0%	0%	39%	0%	15
Hydrocarbons extraction	0%	0%	1%	3%	0%	16

Sources: authors' estimates based on UN ComTrade and Ukrstat data

"Manufacture of machinery and equipment" is not only the largest exporter to Russia (Column I); it also features the highest exposure to the Russian market. Exports are very important for the sector, accounting to 43% of output (Column IV). On top, Russia is a crucial export destination with a share of 52% in the sector's exports (Column II). As a result, the sector has an exposure of 22% to the Russian market (Column V), which makes it very vulnerable to trade disruptions.

"Manufacture of coke products" is No. 2 in the ranking, with an exposure of 16% to the Russian market. This sector is actually not that heavily engaged in exports, with exports accounting to only 19% of the sector's output. However, a large share of its exports (86%) goes to Russia, thus explaining the high exposure.

"Metallurgy and metal processing", the second largest exporter to Russia, ranks fourth with an exposure of 14%. The sector is very export-oriented, with exports accounting to 62% of the sector's output. However, Russia takes only 22% of the sector's exports, a fact that reduces the level of exposure.

"Food processing" is the third largest exporter to Russia. However, it would be wrong to conclude on a high exposure to the Russian market. The sector is not very export-oriented, with only 15% of output shipped abroad. On top, Russia's important as an export destination is limited, amounting to 21%. As a result, the exposure of the sector on Russia only amounts to 3%. Trade disruptions would thus not have a strong impact on the sector.

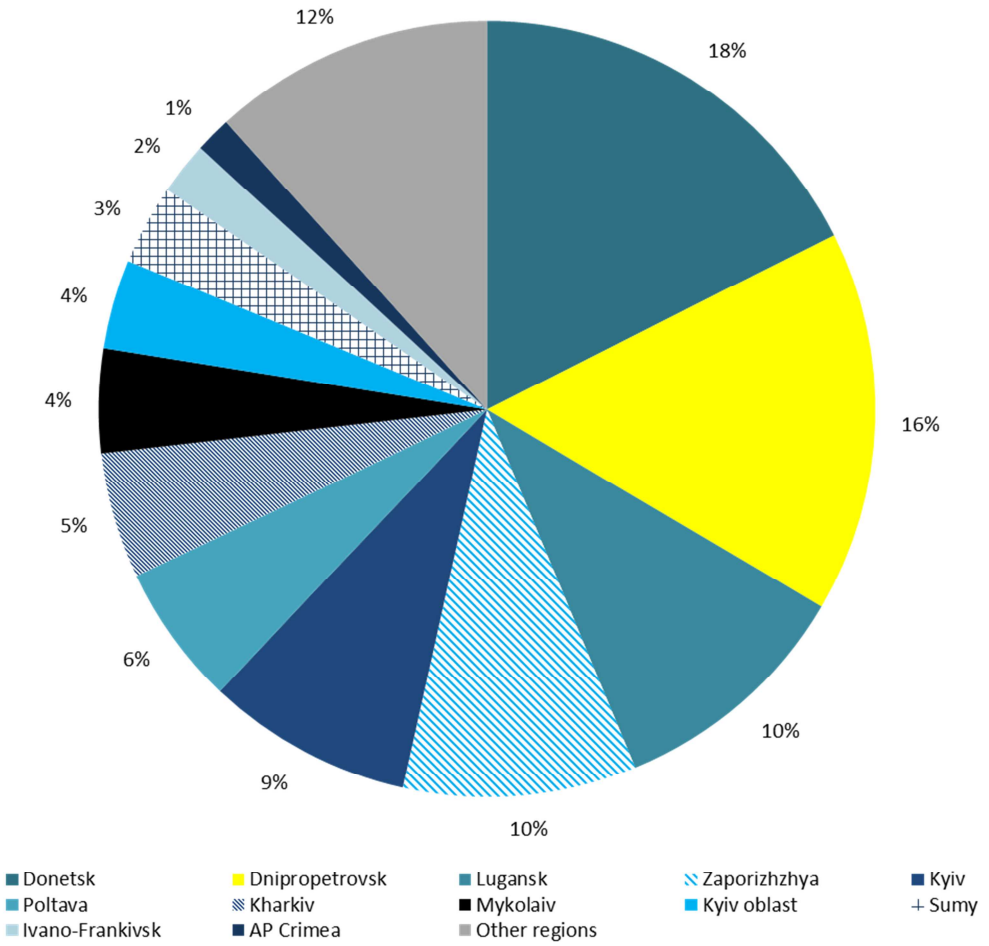
Conclusion 4: The degree of sector exposure to the Russian markets varies strongly between sectors. "Manufacture of machinery and equipment" features the highest exposure of all sectors, amounting to 22%. Consequently, trade disruptions with Russia would have a severe impact on the sector. However, the impact of trade disruptions on the sector "food processing" would be much smaller, given its relatively low exposure of only 3%.

4 Regional exposure to the Russian market

Ukraine's regional structure of merchandize exports to Russia is also concentrated, with five regions accounting for almost two thirds of exports. As shown on Figure 3, the largest regional partners of Russia are four regions of Eastern Ukraine – Donetsk 18%, Luganks 16%, Dnipropetrovsk 10%, and Zaporizhzhya 10% – and Kyiv city 9%.

Figure 3

Ukraine's exports to Russia by regions in 2012, % of total



Source: own calculations based on State Statistics Service of Ukraine

However, as in the case of sectors, the regions that have the largest shares in exports to Russia are not necessarily the most exposed to disruptions in exports. The decisive question is:

What percentage of the regional output is exported to Russia?

In the following, we refer to this percentage number as the *regional exposure to the Russian market*.

In Table 3 we provide the relevant information about different regions and calculate the "regional exposure to Russia" (Column V) by multiplying "exports to Russia as % of regional exports" (Column II) by "regional exports as % of regional output" (Column IV). In Column VI, we rank different regions by their exposure to the Russian market.

As shown in Table 3, the regional exposure to the Russian market is much more evenly distributed than the sector's exposure. Two regions – Lugansk and Zaporizhzhia Oblasts – have the highest level of the regional exposure shipping about 10% of their output to Russia. Each of these two regions sells abroad about a quarter of its output, out of which 43% goes to Russia.

Mykolaiv Oblast is No. 3 in the ranking with exposure at 9%. The exposure is almost equally attributed to two factors – general orientation on external markets and shipments to Russia. The region exports 28% of its output with one third exported to Russia. High exposure of Sumy (No. 4) is explained by the highest share of exports to Russia among the Ukrainian regions, somewhat compensated by strong orientation of the regional production on domestic market.

Table 3

Regional exposure to the Russian market

	I	II	III	IV	V	VI
	Regional structure of exports to RU, % (2012)	**Exports to RU in regional exports, % (2012)**	**Regional structure of total output, % (2012)**	**Regional exports as % of regional output (2012)**	**Regional exposure to RU market, % (II x IV)**	**Rank by regional exposure**
Lugansk	10%	43%	4%	23%	10%	1
Zaporizhzhia	10%	43%	4%	23%	10%	2
Mykolaiv	4%	32%	2%	28%	9%	3
Sumy	3%	53%	2%	16%	8%	4
Dnipripetrovsk	16%	28%	11%	23%	6%	5
Poltava	6%	30%	4%	20%	6%	6
Donetsk	18%	22%	13%	25%	6%	7
Ivano-Frankivsk	2%	47%	2%	9%	4%	8
Kharkiv	5%	46%	6%	9%	4%	9
Zakarpattia	1%	14%	1%	25%	4%	10
Kyiv obl.	4%	33%	5%	10%	3%	11
Zhytomyr	1%	35%	2%	8%	3%	12
Volyn	1%	23%	1%	11%	3%	13
Khmelnytsky	1%	40%	2%	6%	3%	14
Crimea	1%	29%	3%	8%	2%	15
Chernigiv	1%	26%	2%	8%	2%	16
Kyiv city	9%	12%	17%	17%	2%	17
Rivne	1%	25%	1%	8%	2%	18
Cherkasy	1%	20%	2%	10%	2%	19
Kirovograd	1%	18%	1%	10%	2%	20
Sevastopol	0%	25%	1%	6%	2%	21
Kherson	0%	25%	1%	6%	2%	22
Vinnytsia	1%	22%	2%	7%	2%	23
Odesa	1%	13%	4%	10%	1%	24
Lviv	1%	13%	4%	8%	1%	25
Ternopil	0%	22%	1%	5%	1%	26
Chernivtsy	0%	25%	1%	4%	1%	27

Source: authors' calculation based on State Statistics Service of Ukraine

The exposure of Donetsk Oblast is lower than commonly thought. Only 6% of output is sold to Russia, bringing the oblast to the 7th rank, just behind Poltava. It is explained by considerable diversification of Donetsk exports, with the share of exports to Russia accounting for only 22% of total in 2012.

Kharkiv Oblast also has a relatively low regional exposure to the Russian market. It is ranked 9th with an exposure of 4%, the same as Zakarpattia in the West of the country. The reason for Kharkiv lower exposure is not export diversification as in Donetsk, but

quite low orientation on external markets, with only 9% of regional output shipped abroad.

In general, Eastern oblasts feature a higher exposure to the Russian market, but the difference between Eastern and Western oblasts is not as high as suggested by different commentators.

Conclusion 5: Break-downs in exports could be the most painful for four regions: Lugansk, Zaporizhzhya, Mykolaiv and Sumy. However, the exposure of some sectors to disruptions in exports to Russia is estimated to be much higher than the regional exposure.

Annex

Product structure of Ukraine's exports to Russia in 2013

Sector	Product headings		Exports to Russia		
			USD m	% in total product exports to world	% in total sector exports to RU
Manufacture of machinery and equipment	8606	Railway and tramway goods vans and wagons	932.22	70.0	17.7
	8411	Turbo-jets, turbo-propellers/other gas turbine engines	648.03	61.2	12.3
	8602	Rail locomotives, diesel, steam, locomotive tenders	468.50	99.2	8.9
	8607	Parts of railway, tramway locomotives, rolling-stock	320.23	62.3	6.1
	8504	Electric transformers, static converters and rectifiers	281.08	68.8	5.3
Total manufacture of machinery and equipment			***5267.11***	***52.0***	***100.0***
Manufacture of coke products	2844	Radioactive elements, isotopes, compounds and mixtures	220.70	100.0	100.0
Total manufacture of coke products			***220.76***	***85.7***	***100.0***
Wood working, pulp and paper industry, publishing	4814	Wallpaper and similar wall coverings etc of paper	260.46	72.4	27.8
	4811	Paper, board, etc coated, impregnated, coloured, nes	205.48	90.5	22.0
	4819	Paper, board containers, packing items, box files, etc	98.56	65.2	10.5
	4818	Household, sanitary, hospital paper articles, clothing	87.89	59.5	9.4
	4805	Uncoated paper and paperboard nes	64.15	64.7	6.9
Total wood working, pulp and paper industry, publishing			***935.70***	***54.0***	***100.0***

Sector	Product headings		Exports to Russia		
			USD m	% in total product exports to world	% in total sector exports to RU
Metallurgy and metal processing	2818	Aluminium oxide, hydroxide and artificial corundum	578.97	99.3	14.8
	7214	Iron/steel bar, only forged hot-rolled drawn, extruded	568.66	37.4	14.6
	7216	Angles, shapes and sections of iron or non-alloy steel	550.24	69.1	14.1
	7208	Hot-rolled products, iron/steel, width>600mm, not clad	376.41	13.6	9.6
	7304	Tube or hollow profile, seamless iron/steel not cast	316.88	38.4	8.1
Total metallurgy and metal processing			***3907.18***	***21.8***	***100.0***
Manufacture of chemicals, rubber and plastic products	3920	Plastic plate, sheet, film not cellular, reinforced	129.59	84.3	12.2
	3206	Colouring matter nes, inorganic luminophores	65.23	22.1	6.2
	2708	Pitch and pitch coke, from coal, mineral tars	64.74	62.1	6.1
	3923	Containers, bobbins and packages, of plastics	61.16	59.6	5.8
	2836	Carbonates	52.88	67.0	5.0
Total manufacture of chemicals, rubber and plastic products			***1058.86***	***23.7***	***100.0***
Food-processing	0406	Cheese and curd	314.16	86.7	18.1
	1806	Chocolate and other foods containing cocoa	306.60	58.2	17.7
	1905	Baked bread, pastry, wafers, rice paper, biscuits, etc	119.23	37.4	6.9
	2208	Liqueur, spirits and undenatured ethyl alcohol <80%	91.80	59.6	5.3

Sector	Product headings		Exports to Russia		
			USD m	% in total product exports to world	% in total sector exports to RU
	2009	Fruit and vegetable juices, not fermented or spirited	72.69	30.3	4.2
Total food-processing			***1736.84***	***21.4***	***100.0***
Agriculture	1201	Soya beans	78.72	10.6	45.5
	0702	Tomatoes, fresh or chilled	23.02	84.8	13.3
	1005	Maize (corn)	17.73	0.5	10.3
	0707	Cucumbers and gherkins, fresh or chilled	10.90	98.3	6.3
	1206	Sunflower seeds	7.76	15.8	4.5
Total agriculture			***172.86***	***2.0***	***100.0***

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