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External Trade of the Kaliningrad Oblast

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*Artur Usanov*<sup>1</sup>

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## Executive Summary

- 1) Kaliningrad is a Russian exclave in the Baltic Sea region. Its geographic location has made it a special focus of the Russian economic policy. In order to offset economic disadvantages of its exclave location and boost economic growth, the Russian federal government established in Kaliningrad a special economic zone (SEZ) that provided substantial import tariff exemptions for local companies. The SEZ led to a rapid development of the import processing industry in the region and to a related boom in imports.
- 2) In 2002-2008 manufacturing output in Kaliningrad grew on average by 25% p.a. boosted by a skyrocketing growth in import-processing, e.g. production of TVs increased by a factor of 9 and production of cars – by a factor of 19. In 2007, almost 9 out every 10 TVs manufactured in Russia were assembled in Kaliningrad. The main sectors in Kaliningrad's import processing industry – food processing, auto manufacturing and consumer electronics – accounted for 80% of total sales in manufacturing in 2008.
- 3) Demand from the import processing sectors lead to a similar rise in imports: by 2007 Kaliningrad's share in Russia's imports reached almost 4% while its population was less than 0.7%. Kaliningrad had the largest in Russia imports per capita and per unit of GDP.
- 4) Output of the import processing industry is sent almost exclusively to the mainland Russia with the Central Federal District being a destination for more than 90% of Kaliningrad's shipments. Kaliningrad's outflows to Russia grew from USD 430 million in 2000 to USD 5,570 million in 2008. Two products – cars and TV sets – accounted for 76% of the total value of the outflows in 2008.
- 5) Inflows from Russia to Kaliningrad have been growing much more slowly and their commodity structure has not changed much in the last decade. More than half of the inflows were refined petroleum products and other fuels (coal). Food products were second largest category with almost 20% share.
- 6) Kaliningrad's exports have been generally stagnant. Although, since 2003 the rise in commodity prices helped to increase them in monetary terms, their share in Russia's exports has been declining since the middle of 1990s. Kaliningrad's main exports are predominantly raw materials and low value-added goods and

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they have not changed significantly over last 15 years. Companies – inheritors of the Soviet production assets still produce a bulk of exports.

- 7) Imports of machinery, appliances, vehicles and their parts by the import processing industry have been the main driving force propelling growth in Kaliningrad' imports in general. These imports grew from USD 0.8 billion in 2003 to USD 5.4 billion in 2008 (from 39% to 56% of all imports).
- 8) Kaliningrad imports goods with much higher value-added than it exports. It is illustrated by the fact that in 2008 the average value-to-weight ratio of its imports was more than twice as high as that of its exports – USD 1,738/tonne vs. USD 777/tonne.
- 9) Geographic patterns of Kaliningrad's imports changed substantially in the last few years. Until 2003 Kaliningrad's main trading partners were its neighbors – Germany, Poland and Lithuania. Since then their share in Kaliningrad's imports declined considerably. At the same time, imports from China, Korea and Brazil increased drastically, often from almost zero. China became the largest supplier to Kaliningrad in 2007. China and Korea supply mostly components for car and consumer electronics assembly, while Brazil became the main supplier of meat and other agricultural commodities.
- 10) Kaliningrad port also serves as a transit hub for cargo flows from/to Russia. The main commodities exported through the port are crude oil and refined petroleum products (more than half of the total by weight), coal, fertilizers, metals and scrap. Imports to the port were much smaller (approximately by a factor of 10), and they were dominated by agricultural commodities and food products.

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## 1 Introduction: General Trends in Kaliningrad's Trade

The Kaliningrad Oblast<sup>2</sup> is the westernmost part of the Russian Federation located on the Baltic Sea coast between Lithuania to the north and east and Poland to the south. Kaliningrad does not have land connection with the rest of Russia and, hence, is a Russian exclave or, to be more precise, a semi-exclave, because it has access to the sea. Since 2004, when both neighboring countries joined the European Union, Kaliningrad can be also considered as an enclave within the EU (because it is surrounded by the member states of the EU).

Since the break-up of the Soviet Union and the beginning of the market reforms in Russia in early 1990s foreign trade has played a very important role in the economic development of Kaliningrad. Rapid growth in foreign trade has made Kaliningrad one of the main trading centers of Russia. Currently, it imports more foreign goods per capita than any other Russian region.

Kaliningrad's geographical position – its location within the prosperous Baltic region with a relatively well developed port and border-crossing infrastructure – explains a part of the growth. This location gives Kaliningrad a natural bridgehead function for trade between Russia and the EU. However, more important was the federal policy that established in Kaliningrad a tax-free trade regime and actively encouraged (perhaps, even inadvertently sometime) large-scale imports of foreign goods to the region.

Kaliningrad was announced a free economic zone (FEZ) in 1990. The most important provision of the Kaliningrad FEZ was tariff-free imports and exports to/from Kaliningrad. This, together with the opening of Kaliningrad for visits by foreign nationals and the implementation of wide-scale market reforms in Russia, provided a major impetus for a rapid growth in exports and imports. Imports to the region were driven by the demand of Kaliningrad's consumers for foreign food products and other consumer goods. Tax-free import regime and expensive transit through Lithuania often made foreign goods cheaper than domestically produced. Thousands of newly created companies saw the opportunity to fill the demand and rushed to grab it. Imports of goods to Kaliningrad jumped from USD 53 million in 1992 to USD1,200 million in 1997 – an almost 23-fold increase in just 5 years! Most of the trade took place with neighboring countries: Germany, Poland and Lithuania (as it could be expected).

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<sup>2</sup> Kaliningrad Region and Kaliningrad Province are also sometimes used in English language publications to refer to this Russian region. I will use Kaliningrad and the Kaliningrad Oblast interchangeably in this report.

Kaliningrad’s exports initially also grew rapidly as enterprises for the first time got the freedom to sell their products to buyers anywhere in the world: they increased from USD 90 million in 1992 to USD 416 million in 1996. However, by the middle of that decade they reached their plateau where they would stay for many years. Kaliningrad’s exports were (and remained) dominated mainly by raw materials and semi-processed goods. Volatility in export volumes were driven primarily by changes in prices for various export commodities rather than other factors.

This period in Kaliningrad’s foreign trade came to the end with the Russia’s financial collapse in August of 1998. In 1999 the foreign trade turnover dropped by 29% compared with 1997. However, this also marked the beginning of the new stage in Kaliningrad’s foreign trade development (that seems to be ending with the current global economic and financial crisis).

The dominant feature of the new period was seemingly unstoppable growth in imports: they grew from USD 810 million in 1999 to USD 9,600 million in 2008 (see Figure 1.1). This growth was different from what happened in the first period: now it was not just the internal Kaliningrad market that was driving the growth but the whole Russian market. Kaliningrad became the main import-processing center for consumer goods in Russia.

Figure 1.1. Kaliningrad's Exports and Imports (in USD million)



Source: Kaliningradstat (1993-1996, 2008), Rosstat (1996-2007)

The first attempts to use Kaliningrad’s tax-free trade regime to produce final goods for the Russian market from imported raw materials or components were made in early

1990s. A few small private companies tried to produce foodstuff and beverages for the Russian market. These operations, however, were small-scale and inefficient and did not have a major influence on trade figures. The first harbinger of larger changes ahead was the opening in Kaliningrad an auto assembly plant in 1996 by Avtotor, headed by a former first vice-premier in the last Soviet government – Vladimir Scherbakov. That plant assembled cars from the kits supplied by a Korean automobile manufacturer, Kia Motors. The start of this project was not particularly successful: the Asian financial crisis in 1997 led to the Kia's bankruptcy. Then, the next year, it was Avtotor's turn to face angry creditors, as Russian financial crisis of 1998 led to a sharp devaluation of the rouble and a collapse in car sales. Nevertheless, other companies recognized the opportunity and started to set up production facilities in the region with the intention to exploit tariff-free import of foreign commodities to produce consumer goods for the Russian market.

The Federal Law on the Special Economic Zone (SEZ) in Kaliningrad that entered into force in 1996 was instrumental for this development. The law itself did not change much in the structure of the tax-free trade regime that had existed in Kaliningrad before. However, it created a relative legislative certainty<sup>3</sup> and increased attractiveness of Kaliningrad for potential investors: before the law was enacted the trade regime in Kaliningrad had been often changed (sometimes retroactively) and was even revoked completely by the federal authorities in 1995.

More specifically, the law's main provisions were the following:

- 1) Foreign goods could be imported to the SEZ tax-free (without import tariffs, VAT and excise tax).<sup>4</sup>
- 2) Goods manufactured in the SEZ from foreign components could be sold in the mainland Russia without paying import tariffs on foreign components and materials if these goods satisfied the rules of origin. The rules of origin contained the following criteria:
  - for consumer electronics and some other consumer goods: 15% of value add plus a change in the harmonized system<sup>5</sup> (HS) code's 5th digit;
  - for other goods: 30% of value add and a change in HS code's 4th digit.

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<sup>3</sup> This certainty was very relative. After the law came into force, almost every year there were attempts to abolish a tax-free trade regime in Kaliningrad mainly by the Ministry of Finance, which saw Kaliningrad's SEZ as a 'financial black hole', or a source of large losses in tax revenues for the federal budget. While the regime has stayed in place until the new SEZ law in 2006, some its provisions had been altered or cancelled.

<sup>4</sup> Excise tax exemption was later revoked.

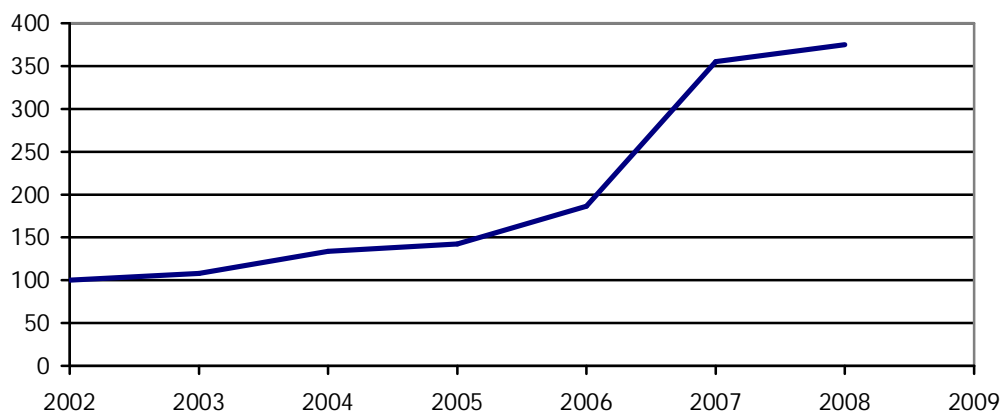
<sup>5</sup> Harmonized Commodity Description and Coding System of tariff nomenclature is an internationally standardized system of names and numbers for classifying traded products developed and maintained by the World Customs Organization (WCO)



The law also included some tax breaks and other incentives but these provisions did not conform to the Russian tax legislation and they were not operational *de facto*.

Soon the import-processing sector started to gather speed, and in few years it became the main part of Kaliningrad's manufacturing. Strong growth of the Russian economy since 1999 helped to fuel demand for consumer goods produced in the region. Since 2002, manufacturing production in Kaliningrad was growing at the annual compounded growth rate of 25% (see Figure 1.2). In two main import-processing subsectors growth was much more rapid: from 2001 to 2007 production of TVs increased by a factor of 37 and production of cars – by a factor of 22. Eventually, food industry, consumer electronics and car manufacturing came to dominate import-processing and manufacturing in general in Kaliningrad.

Figure 1.2. Growth of Kaliningrad's Manufacturing (2002 = 100)



Source: Kaliningradstat

The fact that these three manufacturing sectors have been dominant in Kaliningrad's import-processing is not by chance. Two main factors that have determined their attractiveness were the tariff policy of the Russian federal government and the strength of domestic competition.

In order to illustrate implications of the tariff policy on prices of final imported goods in Russia we consider how a wholesale price of an imported good in Russia is affected under three possible alternative scenarios:

- 1) Direct imports to Russia
- 2) Production from foreign components in a Russian region
- 3) Production from foreign components in the Kaliningrad SEZ

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To be more specific, we can think in terms of direct import of TVs and their production from the imported kits in Russia although the structure of cost escalation will be same for other goods. In order to make the comparison of the alternatives more transparent, we will have to make some major simplifying assumptions. First, we assume that the cost of TV production from components is the same in all three cases. Second, we neglect all transportation and other related costs. Third, we use average import tariff on components for TV assembly of 10% - this may differ for different components. We also assume that:

- Wholesale price for a TV set at the Russian border (before crossing it) is 100 units.
- Price of a kit (a set of components) for assembly is 80 units.
- Assembly costs (value add) for one TV set is 20 units (both in Kaliningrad and in other Russian regions)
- Import tariff for a TV set is 20% (Russian tariff policy typically applies higher tariff to final goods than to intermediate goods).
- Goods produced in the Kaliningrad SEZ meet rules of origin (15% value add in consumer electronics)

Figures 1.3- 1.5 show how the final wholesale price of a TV will differ in each of three alternatives under the above assumptions. In the case of direct imports, the final wholesale price of a TV set in Russia is equal to 141.6 units after applying import tariff (20%) and import VAT (18%) to “at the border” price of 100. Manufacturing in other Russian regions comes the second in terms of price – 127.4. In order to clear TV components, a manufacturer has to pay import tariff (10%) and VAT (18%) that amounts to the cleared price of components of 103.8 units. Assembly costs (20 units) and domestic VAT ( $20 * 18\% = 3.6$  units) makes the final prices of a TV set equal to 127.4. Finally, in the Kaliningrad SEZ, a manufacturer adds assembly costs (20 units) and domestic VAT (18%) to arrive at the final price of 118 units.

Figure 1.3. Cost Escalation - Direct Import

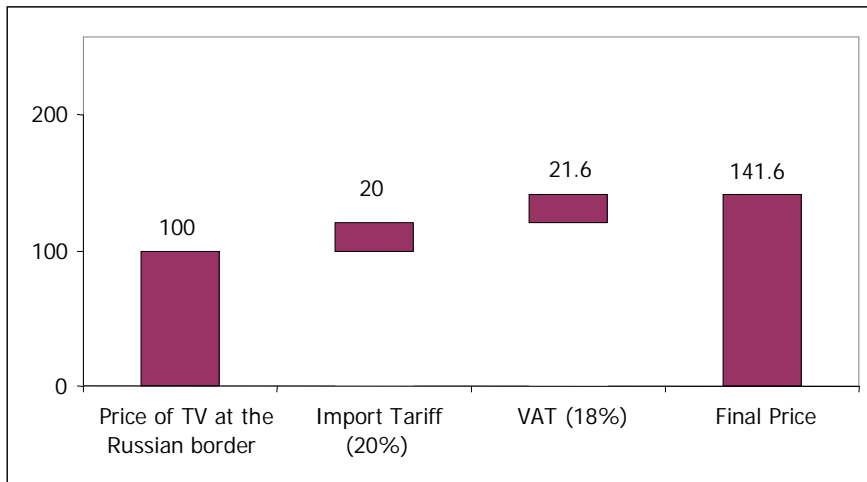


Figure 1.4. Cost Escalation - Manufacturing in Russia

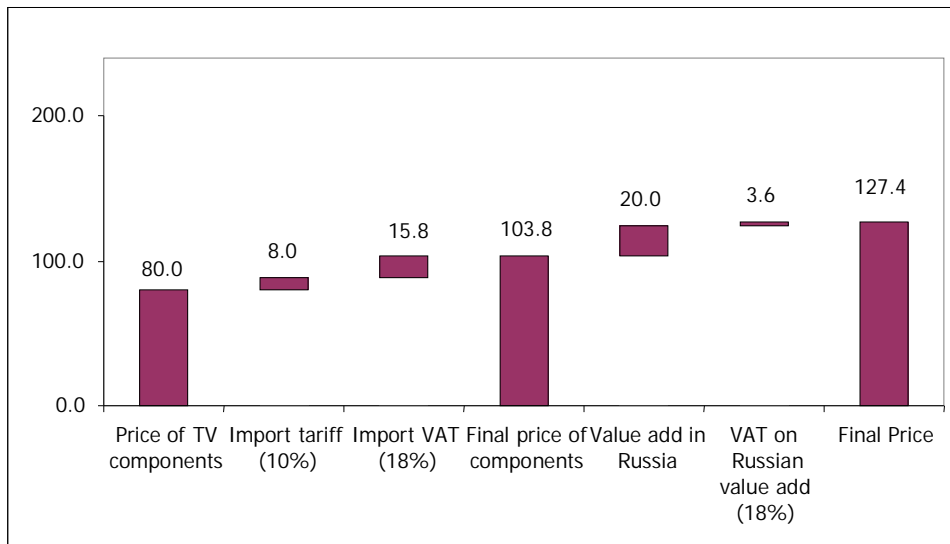
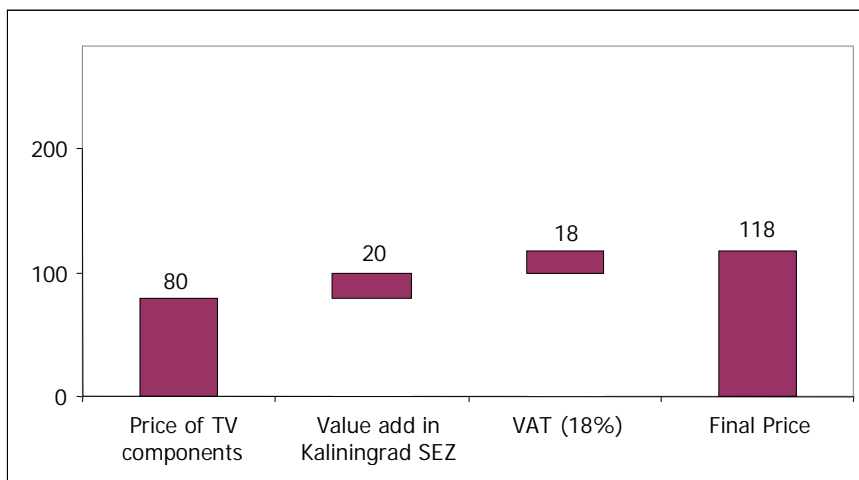


Figure 1.5. Cost Escalation - Manufacturing in Kaliningrad SEZ



Source: Author's calculations

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It can be seen that the advantage of having assembly operations in Kaliningrad rather than in other Russian regions consists of two main components – avoiding import tariff on components (in our example, it amounts to 8 units per TV)<sup>6</sup> and a slightly lower total VAT bill (18 vs. 19.4 units), which also arrives after the production is finished rather than before, as it happens in the case when production is based in other Russian regions<sup>7</sup>. Comparing manufacturing in Kaliningrad with the other alternative – direct imports – the main gain for Kaliningrad comes from the absence of customs tariff on the final good. There have existed tax schemes that allowed companies in the SEZ avoid paying VAT as well – they were mainly connected with companies that did not have to pay VAT (i.e. small enterprises and some other organizations, for example, those that employed disable workers). However, it seems that use of these schemes is less popular now.

On the other hand, there are obvious disadvantages of setting up a major production plant in Kaliningrad rather than in regions closer to Moscow, that are not reflected in this simplified example. Kaliningrad is relatively far from Moscow – approximately 1200 km away – while St. Petersburg, other Russian port on the Baltic Sea, is only 700 km. Shortest transportation route for final goods from Kaliningrad to the mainland Russia involves transit through territories of two states – Lithuania and Belarus – and Moscow has had uneven relationships with both. It makes transportation costs for Kaliningrad producers working for the Russian market high and very uncertain. Foreign transit is a major political risk for any would be manufacturing investor in Kaliningrad. Energy supplies in Kaliningrad are generally more expensive than in central regions of the Russian Federation. Perhaps, it should not be surprising that no major foreign investor either in consumer electronics or in car manufacturing decided to invest in Kaliningrad after all. While major German, Japanese and U.S. auto manufacturers, and Korean consumer electronics firms has looked at Kaliningrad before making substantial investments in manufacturing plants in Russia in recent years, they ruled it out as a place for investment for all the above reasons .

It was Russian companies that decided to organize production in Kaliningrad. Typically, they had experience in the wholesale trade and good relationships with foreign suppliers and Russian retailers. They understood the risks but because their

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<sup>6</sup> This explains why Kaliningrad's TV producers lobbied so hard this year for an increase in import tariffs for TV components.

<sup>7</sup> Producer in other Russian regions have to pay the most of VAT bill before production starts in order to clear components through the customs.

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investments were often quite small<sup>8</sup> they hoped to repay these investments back very quickly. Judging by rapidly increasing import-processing production in Kaliningrad many of these companies were quite successful and managed to repay their initial investments many times over.

Exponential growth of import-processing production that often had a very low value add (terms 'lap assembly' or 'screwdriver assembly' were often used to describe production processes in many of these companies and this was often not far from the truth) had forced the Russian federal authorities to consider a major revision of the SEZ law. The new law came into force in April 2006 and replaced the main tariff benefits of the old law with tax breaks for large investors<sup>9</sup>. However, it also introduced a transition period until 2016 that allowed companies to use both tax breaks of the new law and tariff benefits of the old SEZ law. It gave an additional boost to the import-processing sectors and related imports, at least for a time. However, the future of the import processing industry after 2016 is very much in doubt and the current economic crisis might speed up its downfall.

Against the backdrop of a very rapid growth in imports, Kaliningrad's exports remained relatively stagnant. The jump in exports in 2004-2007 was caused by rapidly rising prices for the main Kaliningrad's export commodity – oil and, even more importantly, by large transit volumes of oil and refined products through Kaliningrad. The changes in statistical accounting put an end to this short-term boom (transit flows are no longer included in Kaliningrad's exports) and exports dropped closer to their long-term average value in 2008.

Rapid growth of Kaliningrad's foreign trade, especially that of imports, in the last decade should be put into a perspective. Russia's foreign trade has been also booming in this period helped by high commodity prices, increasing productivity and high demand for foreign capital and consumer goods. If one looks at Kaliningrad's share in Russia's foreign trade (see Figure 1.6), a different story emerges. Kaliningrad's share of imports has been growing rapidly in 1995-1998 and then again in

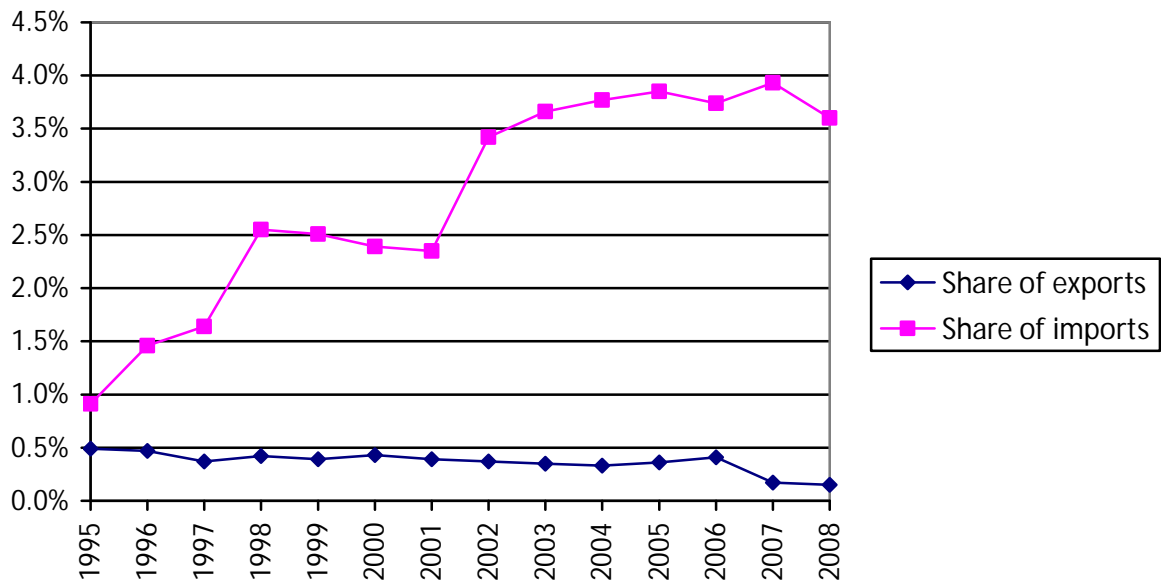
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<sup>8</sup> These companies minimized their investments by renting idle production facilities and buying used equipment.

<sup>9</sup> More detailed description of the main provisions of new SEZ law can be found elsewhere, see for example Usanov, 2008.

2001-2005.<sup>10</sup> After 2005 it was basically flat. Kaliningrad's share in exports has been slowly trending downward since 1995 and it was only 0.15% of all Russian exports in 2008. The disparities between Kaliningrad's exports and imports are obvious. Given that Kaliningrad's population is 0.66% of Russia's population it is also obvious that both exports and imports differ markedly from what could be expected based on the size of Kaliningrad's population alone. In the next section we will investigate this issue further.

Figure 1.6. Kaliningrad's Share in Russia's Foreign Trade



Sources: Author's calculations using Rosstat's trade data; Russia's trade data are based on the customs statistics, Kaliningrad's trade data for 2008 are from Kaliningradstat.

<sup>10</sup> These numbers and Figure 1.6 are based on customs statistics of Russia's exports and imports. If one would use the balance of payment data provided by the Central Bank of Russia, which also adds estimated grey imports and exports, the picture for Kaliningrad's share of imports would be a bit different but not radically so. However, Kaliningrad trade figures are also based on the customs statistics and hence it is more consistent to compare them with Russia's data from the same source.

## 2 Kaliningrad's Foreign Trade: Regional Comparisons

Two related facts about Kaliningrad's trade often attract substantial attention from analysts and policy makers: a large volume of imports and a huge foreign trade deficit. Based on these facts some observers make strong conclusions about the deficiency of Kaliningrad's model of economic development (Natalia Smorodinskaya is the most well known proponent of this school of thought, see for example, Smorodinskaya, 2005, Smorodinskaya, Zhukov, 2003).

How unique are Kaliningrad's foreign trade figures? In order to assess it we should look at the Russia's foreign trade data at the regional level and compare Kaliningrad with other regions.

The first feature that should be noted is that Russia's imports are very heavily concentrated in a few regions. For example, Moscow alone accounted for 42% of the total Russian imports in 2007, and together with the Moscow Oblast for almost half of the imports. The top five regions accounted for almost two thirds (65%) of all imports (see Table 2.1). Exports are somewhat less concentrated: Moscow accounts for 36% and the top five regions for 60%.

Table 2.1. Top Five Importing Regions in Russia, 2007

	Population as %age of the total Russia's population *	Regional GDP as %age of Russia's GDP	GDP per capita, ('000 RUR )	Exports, (mln USD)	Imports, (mln USD)	Share of the total Russia's imports	Imports per capita, USD	Imports/GDP
1 Moscow	7.4%	23.8%	642.9	127,372	84,319	42.2%	8,053	32.0%
2 St. Petersburg	3.2%	3.9%	242.8	17,799	19,979	10.0%	4,374	46.1%
3 Moscow Oblast	4.7%	4.6%	195.7	3,722	13,527	6.8%	2,027	26.5%
4 Kaliningrad Oblast	0.7%	0.5%	155.7	598**	7,858	3.9%	8,383	137.7%
5 Primorsky Krai	1.4%	0.9%	131.9	1,106	4,214	2.1%	2,111	40.9%
Russia			199.0	352,568	199,720		1,406	18.1%

\* - end of 2007

Sources: Rosstat (Annual Statistical bulletin -2008 and www.gks.ru)

The second feature of the regional distribution of foreign trade in Russia is that a large majority of the Russian regions have significant trade imbalances: in most regions exports significantly exceed imports (this is not surprising since Russian exports have also substantially exceeded imports in recent years), but there is a small group of regions where imports are notably larger than exports.

The main exporting regions in Russia are the regions that have substantial mineral resources, or large industrial plants that process them (refineries, steel plants, etc), e.g.

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the Tyumen Oblast, Tatarstan and Krasnoyarsk (their exports exceed imports often by an order of magnitude). The major importing regions are the ones that have sea ports and/or a border with other countries and provide an entry point for foreign goods. An exception to this rule is Moscow city and the Moscow Oblast, which are, accordingly, the largest and third largest importers among Russian regions. Their large volume of imports determined by the fact that they serve as a location for headquarters of most large corporations in Russia<sup>11</sup> (it also gives them such a large share in exports) and as the dominant distribution centers in Russia.

Kaliningrad in this classification is a typical importing region and its role in foreign trade is quite close to some other major importing regions in Russia, namely, St. Petersburg, Primorsky Krai and the Moscow Oblast. These regions provide an entry gate for foreign goods in Russia as they have major ports or/and serve as major distribution centers but lack sufficient mineral wealth to balance import flows with exports.<sup>12</sup> Until 2007, St. Petersburg had imports that were normally more than twice as high as its exports. Only after headquarters of some major state-owned corporations (first of all of Gazpromneft) moved to the city and brought a substantial increase in exports with them, St. Petersburg's trade became more balanced. On the other side of Russia, Primorsky Krai is an entry gate to the Asian export to Russian and a distribution center for imports for the Russian Far Eastern regions. It should not be surprising that it has had a large trade deficit.

What makes Kaliningrad an outlier, even among these importing regions, is relative indicators of its import activity. It is the fourth largest importer in the Russian Federation. However, Kaliningrad's imports per capita were the largest in Russia in 2007 (at USD 8,383) and exceeded even those of Moscow that is much wealthier – its per capita GDP was more than four times higher than in Kaliningrad. Ratio of imports to regional GDP in Kaliningrad was 138% – far exceeding that of any other region. Kaliningrad's negative trade balance was also substantially larger than its regional GDP – net imports to Kaliningrad (imports minus exports) exceeded its economic output (regional GDP) by 27%.

The reason for such large import flows to the region is rather straightforward. In addition to its role as an entry gate to the Russian market for foreign goods that some

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<sup>11</sup> Origin of exports and destination of imports in the Russian statistical accounting is based on the legal residence of the Russian company that is a party in foreign trade transactions.

<sup>12</sup> If city of Moscow were not a location for headquarters of many large oil and gas companies its imports would almost definitely higher than its exports.



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other Russian regions also play, Kaliningrad has also become a center for the import processing industries. Nowhere in Russia there is such a concentration of import processing manufacturing companies like the one that exists in Kaliningrad.<sup>13</sup> Demand from these companies in recent years has accounted for most of Kaliningrad's imports. This is why a relative scale of Kaliningrad's imports is so much larger than that of other Russian regions. At the same time, many import processing companies has low value added and their profits tend not to stay in Kaliningrad (official Kaliningradstat data show that most of these companies are hardly break-even). Hence, their impact on Kaliningrad's economic indicators such as fixed investment, government revenue, and some others is much less than might be suggested by the gross value of their outputs.

Another way to assess Kaliningrad's trade figures is to compare them with other countries, for example, with Kaliningrad's neighbors – three Baltic states. These are similar in size to Kaliningrad (Estonia is the smallest of three with the population of 1.3 million, and Lithuania is the largest with 3.4 million inhabitants), they are also a part of a bigger market – the EU and not that far from Kaliningrad in their economic development.

Kaliningrad's data for this comparison might be presented in two ways. One option is to use the data for Kaliningrad's trade with foreign countries only (as it is normally done) and not to include any trade with the rest of Russia. The other option is to add to Kaliningrad's foreign trade figures the value of its outflows/inflows to/from Russia. The main difference that addition of trade with Russia makes is a huge increase in Kaliningrad's exports. The value of exports jumps by almost a factor of 11 if one uses official (Rosstat) exports data and by a factor 5.5 in the case when official data are adjusted for non-reported oil trade. Table 2.2 shows both options for Kaliningrad but, in our view, the second option is more relevant here since we are comparing trade of the geographic entities with the rest of the world.

Kaliningrad's trade figures look quite similar to that of the Baltic countries if its trade with Russia is included. Similar to them it has negative trade balance. In per capita terms its exports and imports exceed those of Lithuania and Latvia but smaller than those in Estonia. In terms of economic openness (ratio of trade to GDP), Kaliningrad is the absolute leader – its exports and imports are larger than its GDP. Estonia is the closest to Kaliningrad in terms of economic openness. Like Kaliningrad, it has a lot of import-processing (sub-contracting) companies that exports their products to other EU

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<sup>13</sup> Development of auto clusters in St. Petersburg and Kaluga regions together with the expiration of tariff benefits in Kaliningrad might change the situation in the future.

countries. It makes Estonia somewhat similar to Kaliningrad although relative scale of the import-processing operations in Kaliningrad is larger and they oriented almost exclusively to the Russian market.

Table 2.2. Foreign Trade Indicators for the Baltic States and Kaliningrad, 2007

	Popu- lation, million	GDP per capita, (‘000 EUR)	Exports, (mln EUR)	Exports per capita, EUR	Imports, (mln EUR)	Imports per capita, EUR	Imports/ GDP
Estonia	1.3	11.9	8,028	6,180	11,278	8,670	73%
Latvia	2.3	8.7	5,727	2,490	10,986	4,780	55%
Lithuania	3.4	8.2	12,522	3,680	14,341	4,220	51%
Kaliningrad Oblast (ex- cluding trade with Russia)	0.9	4.4	872*	930	5,736	6,100	138%
Kaliningrad Oblast (in- cluding trade with Russia)	0.9	4.4	4,769	5,070	6,241**	6,240	150%

\* – Kaliningrad’s exports were adjusted for non-reported in the official statistics oil trade (see Figure 4.3).

\*\* – Inflows of goods to Kaliningrad from the rest of Russia for 2007 were estimated assuming that their ratio to outflows were the same as in 2008. The resulting error is very unlikely to exceed 5% since all inflows from Russia accounted for about 11% of Kaliningrad’s total imports (in 2008).

Source: Eurostat, BRE Reviews, Rosstat, author’s calculations

It should be noted that this comparison is somewhat flattering for Kaliningrad. The Baltic states do not have any tariff preferences within the EU. While they are members of the EU single market they still face language, cultural, regulatory and other barriers for their exports to other EU countries. Most of these barriers are missing in Russia. If one excludes trade with Russia from Kaliningrad’s trade figures then Kaliningrad’s exports look tiny compared with that of the Baltic countries but it does not change much on the import side of Kaliningrad’s trade balance.

That outflows to Russia account for such a large share of Kaliningrad’s exports is not surprising – it is much easier to sell goods in your own country rather than in foreign markets. However, a significant part of Kaliningrad’s exports to Russia is based on a shaky foundation (import tariff exemptions for Kaliningrad’s companies) and this foundation is heading to the disappearance in 2016. It is not clear what can replace it and how strongly it will affect Kaliningrad’s economy. What is clear, however, is that Kaliningrad needs to increase and diversify its exports if it wants to have internationally competitive economy.

### 3 Kaliningrad's Trade with Russia

Data on Kaliningrad's trade with Russia are relatively patchy. On the positive side, the customs authorities have collected detailed data on the shipments of Kaliningrad-produced goods (under the SEZ rules) to the rest of Russia since 2000. On the negative side, data on the trade flows in the opposite direction – from the mainland Russia to Kaliningrad – had been, for the most part, absent until 2008, when Kaliningradstat started to publish more or less systematic data.

The first attempt to create a comprehensive picture of Kaliningrad's trade with Russia was done by Lamande and Vinokurov (2003), who used customs data on physical volume of trade and data from Kaliningradstat on trade of large and medium-sized enterprises to reconstruct monetary value of Kaliningrad's trade inflows and outflows. We will use their data as the main basis for comparison.

Even these limited data reveal several striking facts about Kaliningrad's trade with the rest of Russia. First, growth in trade outflows from Kaliningrad to the rest of Russia has been very rapid. Since the year 2000 shipments of Kaliningrad-produced goods has been growing at 38% annual growth rate (compounded) and by 2008 they were 13 times higher than in 2000<sup>14</sup> (all measured in US dollars).

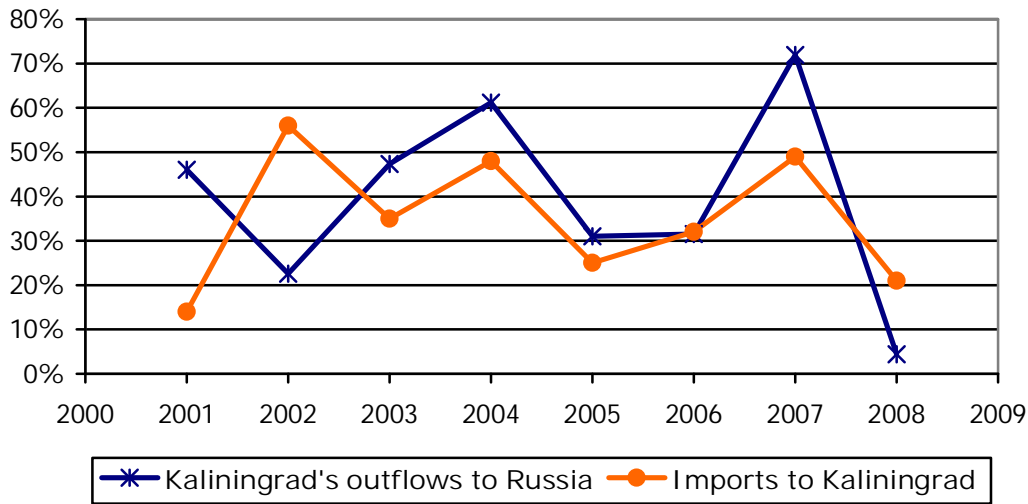
As the chart below illustrates, after 2003 growth rates in Kaliningrad's shipments to Russia and Kaliningrad's imports became closely correlated. Generally, imports have had lower growth rates that can be explained by the fact that a substantial part of imports goes to Kaliningrad's consumer market that was growing slower than the demand for imports from Kaliningrad's import processing industry.

Second, most of the growth comes from essentially two products: TV sets and cars. Their share in Kaliningrad's trade outflows has been constantly rising all recent years (see Figure 3.2). By 2008 cars and TV sets together accounted for a whopping 76% of the total value of shipments from Kaliningrad to the rest of Russia.

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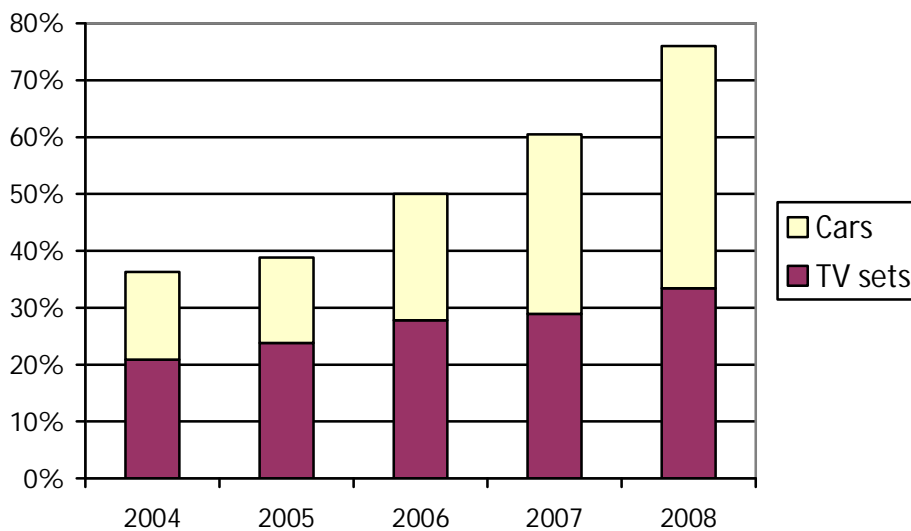
<sup>14</sup> From USD 424 million in 2000 to USD 5,573 million in 2008.

Figure 3.1. Growth Rate of Kaliningrad's Outflows to Russia and Kaliningrad's Imports



Source: Kaliningrad customs office (various years)

Figure 3.2. Share of Cars and TVs in the Value of Kaliningrad's Shipments to Russia.



Source: NWCO (various years)

Shipments of other goods from Kaliningrad to Russia have been also growing but much more slowly. However, even within this group a lot of the growth has been generated by new companies using the same business model that was employed by car and consumer electronics companies: production of goods from imported components/raw materials for the Russian markets that enjoy high tariff protection but have a weak

domestic competition so that advantages of the SEZ location can be maximized. Refrigerators, electrical water heaters and rugs (for auto industry) are all examples of goods whose production in Kaliningrad was established relatively recently and is based on this model. Shipments of goods produced by more established industries, like food processing, have been growing more slowly and in some cases, for example, by the pulp & paper industry, even declined in an absolute terms.

Table 3.1. Kaliningrad's Shipments to Russia, USD million

	2003	2004	2005	2006	2007	2008
Total Kaliningrad's outflows to the rest of Russia	1,118.0	1,802.0	2,361.0	3,105.0	5,338.0	5,572.8*
TVs	176.6	376.2	562.5	864.7	1,541.7	1,850.3
cars	128.6	277.5	354.4	688.1	1,688.9	2,360.3
All other goods	812.8	1,148.3	1,444.1	1,552.2	2,107.4	1,362.1

\* - Kaliningradstat reported all data for 2008 in roubles, which was recalculated using the average 2008 exchange rate of 24.874 RUR/USD.

Source: NWCO (for 2003-2007), Kaliningradstat (for 2008)

The second half of 2008 brought the economic crisis to Russia and Kaliningrad's trade almost immediately started to experience substantial problems. Kaliningrad's shipments to Russia for the whole year remained relatively flat but if one excludes cars and TV sets they fell substantially. They also fell in the last few months of the year.<sup>15</sup>

Commodity structure of Kaliningrad's trade with Russia has changed completely over the last 8-10 years but only on the outflow side. Comparing Kaliningrad's trade outflow to Russia in 2000 and 2008 (see table 3.2) one cannot miss the fact that if agricultural goods and food products (HS codes 01-24) accounted for 79% of the outflows in 2000, eight years later almost the same share was taken by appliances, transport vehicles and other machinery. More generally, according to Kaliningradstat's methodology, consumer goods accounted for 99.4% of all Kaliningrad's outflows to Russia! This complete transformation of Kaliningrad's outflows is, of course, a result of a rapid growth of the import processing industry.

On other hand, trade inflows from Russia to Kaliningrad have changed relatively little over this period either in terms of value or commodity structure. They grew by 53% over the last 8 years or by 5.4% per year (in the US dollars), which means that they actually decreased in constant prices (since the dollar inflation in Russia was substantially above this figure). Two main commodity groups continue to dominate

<sup>15</sup> Change in a source of data from the NWCO to Kaliningradstat and the methodology could also result in lower trade outflows since Kaliningradstat data are likely to be less comprehensive than the data collected by the customs authorities.

them: fuels (petrol, fuel oil, diesel, coal) and food products. Substantial decline in the share of wood, pulp and paper in this period reflects decline of Kaliningrad's pulp and paper industry, where majority of companies were closed down or in bankruptcy by 2008.

Table 3.2. Commodity Structure of Kaliningrad's Trade with Russia

HS Code	Description	2000		2008	
		Trade Outflows, %	Trade Inflows, %	Trade Outflows, %	Trade Inflows, %
01-24	Agricultural materials, food products, beverages, tobacco	78.9	19.0	14.1	19.3
25-27	Minerals (ores, oil, fuels)	3.1	39.5	0	51.5
28-40	Chemical products	0.3	15.4	0	5.9
41-43	Raw hides and skins, articles of leather	0.2	0	0	0
44-49	Wood, pulp, paper and paperboard	4.3	7.3	0.6	0.5
50-67	Textiles, apparel, footwear	n/a	n/a	2.2	0.2
72-83	Ferrous & non-ferrous metals, metallic products	0.3	5.2	0	2.8
84-90	Machinery, appliances, transport vehicles & parts	n/a	n/a	77.6	7.9
68-71, 91-97	Others	12.9	13.6	5.6	11.9
<b>Total, in USD million</b>		<b>432.2</b>	<b>468.9</b>	<b>5,572.8</b>	<b>715.4</b>

HS –Harmonized System

Sources: Lamande and Vinokurov (2003) for 2000, Kaliningradstat (2009) for 2008

Superficially, Kaliningrad in its trade relation to the Russian mainland looks like a trade partner that possesses comparative advantage in manufacturing: it supplies final consumer goods to other Russian regions and receives from them raw materials and intermediary goods, like fuels, chemicals, metals (Lamande and Vinokurov, 2003). However, it should be remembered that Kaliningrad's import processing sector, which is responsible for such a high share of manufacturing products in the outflows, owns its existence to the SEZ import tariff benefits. It has low added value and its future without tariff benefits is in doubt.

If commodity structure of Kaliningrad's trade with Russia seems concentrated then its geographical structure is even more concentrated, especially on the outflow side. In 2008, 94% of Kaliningrad's outflows went to the Central Federal District (FD) and Moscow alone took almost 70% of Kaliningrad's outflows (see Table 3.3). While general geographic patterns remained very similar to that of year 2000, the Central FD became even more dominant as a destination for Kaliningrad's goods.

This is again a consequence of a rapid growth in consumer electronics and car production in Kaliningrad. Basically 100% of Kaliningrad-produced TVs and cars went to the Central FD. Kaliningrad import processing companies are generally just contract manufacturers. Buyers of their goods are typically Russian offices of large foreign multinationals or Russian wholesalers or retailers with a distribution network across the whole Russia. These buyers most often located in Moscow. Kaliningrad import processing companies ship all their products to them and generally do not have to deal with building regional distribution networks or marketing.

Another consequence of this concentrated geographical structure of Kaliningrad's outflow is that the demand for cargo capacity of highly politicized ferry from Kaliningrad to St. Petersburg is quite small – the Northwestern FD takes only 3% of Kaliningrad's shipments to the rest of Russia.

Geographical distribution of trade inflows to Kaliningrad is more even and it has not changed much since 2000 (because the commodity structure of the inflows has also remained static). The main source of goods for Kaliningrad is Volga FD that accounts for 47% of all inflows. Such a high share of this district is due to its position as the main petroleum fuel supplier to Kaliningrad. Major refineries that are located there meet most of Kaliningrad's demand for refined petroleum products. Other fuel supplies to Kaliningrad are located in the Northwestern FD and Central FD. Trade shares of other districts might be mainly explained by their economic output and distance from Kaliningrad.

Table 3.3. Geographical Structure of Kaliningrad's Trade with Russia

Federal districts	2000		2008	
	Trade Outflows, %	Trade Inflows, %	Trade Outflows, %	Trade Inflows, %
Central	72.3	14.1	93.7	27.2
Including Moscow	n/a	n/a	69.7	11.3
Northwestern	11.7	21.2	3.0	15.3
Southern	2.2	10.5	0.7	3.0
Volga	5.5	43.5	1.1	47.4
Urals	3.6	5.2	0.4	1.9
Siberian	4.4	5.4	1.0	5.1
Far Eastern	0.3	0.1	0.1	0

Sources: Lamande and Vinokurov (2003) for 2000, Kaliningradstat (2009) for 2008

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## 4 Structure of Kaliningrad's Foreign Trade

### 4.1 Commodity Structure

#### *Exports*

Kaliningrad's foreign trade mirrors very closely Kaliningrad's trade with Russia but with the opposite sign. In the domestic trade, Kaliningrad's outflows to the rest Russia are significantly exceed inflows but in the international trade it is Kaliningrad's imports (inflows) that are many times larger than exports (outflows). Therefore, Kaliningrad has a large positive balance in its trade with the mainland Russia but even larger negative balance in the international trade. As we have seen, changes in Kaliningrad's imports are closely correlated with changes in Kaliningrad's outflows to Russia and the commodity structure of Kaliningrad's imports closely mirrors that of its outflows (see more below).

The structure of the Kaliningrad's exports also resembles that of inflows to Kaliningrad from Russia although they are not directly linked. Despite large economic changes that happened in the last decade, commodity structure of Kaliningrad's exports has remained quite static (especially adjusting for price changes of main export commodities). Both Kaliningrad's exports and inflows to Kaliningrad are dominated by fuels and other raw materials or intermediary goods. Kaliningrad exports are also very concentrated compared, for example, with the Baltic countries (Vinokurov, 2007). Essentially, main Kaliningrad's exports are the inheritance from the Soviet economic system and changes so far have been very slow.

Traditionally, the main export commodities in Kaliningrad have been:

- 1) crude oil and oil condensates
- 2) fish and fish products
- 3) alcoholic beverages (vodka)
- 4) wood pulp, paper and paperboard
- 5) ships and boats

In 1996-1998 these commodities accounted for approximately 56% of all Kaliningrad's exports and they still made more than half of the exports in 2008. They produced by companies that are either direct heirs of Soviet enterprises or use infrastructure and production assets created during the Soviet period.



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Kaliningrad may not be widely known as an oil province but crude oil has been the dominant export commodity in Kaliningrad for all post-Soviet years. The main local oil-producing company, Kaliningradmorneft, became a subsidiary of one the largest Russian oil producer Lukoil after the privatization in the middle of 1990s. In 2004 the company started oil production from the off-shore field Kravtsovskoe (D-6) on the Baltic Sea that helped it almost to double oil production in the region. This field accounted for approximately 58% of the total oil production in Kaliningrad in 2008. However, the field is quite small – its proved reserves at the end of 2008 stood at 33 million barrels of oil<sup>16</sup>, at its 2008 production rate it will last for approximately 5.1 years. It has already reached its peak production at 877,000 tonnes in 2007. Hence, oil production and exports from Kaliningrad are expected to be on a downward trend in the future.

Kaliningrad does not have an oil refinery and, hence, all oil produced there has to be shipped somewhere for refining. Fortunately, Kaliningrad is quite close to several refineries, including Gdansk (Poland), Mazeikiu (Lithuania) and Mozyr (Belarus). The nearest Russian refinery is in Kirishi, Leningrad Oblast but it requires transit of crude oil through two countries.

Until 2003, as can be seen on Figure 4.1, Kaliningrad's oil production and exports were almost identical and small discrepancies could be explained by timing issues and statistical errors. However, starting in 2004 oil exports became much larger than production, although production also grew strongly in 2004-2006. This due to the fact that in 2004-2007 a substantial part of the oil transit flows started to be reported as Kaliningrad's own exports. Oil transit became a significant business in Kaliningrad even earlier – since the beginning of this decade. Still these flows had not been reported as Kaliningrad's exports until 2004. In 2003-2007 in addition to oil, large volumes of refined oil products have been also included in Kaliningrad's exports.<sup>17</sup>

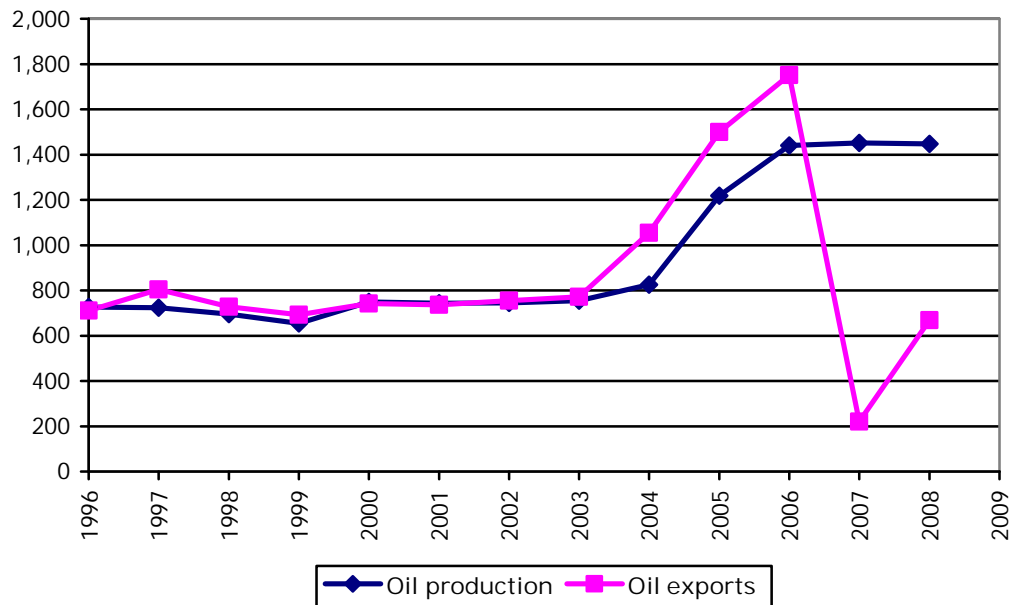
Since 2008, both Kaliningradstat and NWCO exclude non-Kaliningrad companies from their reports. Hence, the transit oil flows (and other transit operations) are no longer reflected in Kaliningrad's trade statistics.

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<sup>16</sup> Lukoil Fact Book 2009, available at [www.lukoil.com](http://www.lukoil.com)

<sup>17</sup> NWCO initially reported a large volume of oil and refined oil product exports from Kaliningrad for 2007. Later it revised its figures for petroleum exports dramatically by excluding exports by non-Kaliningrad companies. As a result, the total Kaliningrad exports dropped by almost 90%: from USD 5 billion to USD 598 million. Kaliningradstat, nevertheless, still reports 5.1 billion as Kaliningrad's export in 2007 (see Appendix 1)

Figure 4.1. Kaliningrad's Oil Production and Exports, '000s tonnes



*Oil exports figures for 2007 are estimated based on the value of oil exports as reported by NWCO and average non-CIS oil export prices from the Central Bank of Russia.*

Sources: Kaliningradstat (various years)

However, the change in the statistical methodology led to the opposite problem: Kaliningrad's oil exports (or outflows) now seems to be grossly underreported. Kaliningrad produced 1.4 million tonnes of oil in 2008 (according to Kaliningradstat). Oil exports from Kaliningrad were 668, 000 tonnes (most of it went to Belarus) or less than half of the total production. Kaliningradstat did not report any oil shipment from Kaliningrad to other Russian regions in 2008. Kaliningrad does not have a refinery. So, where did the rest of oil go?

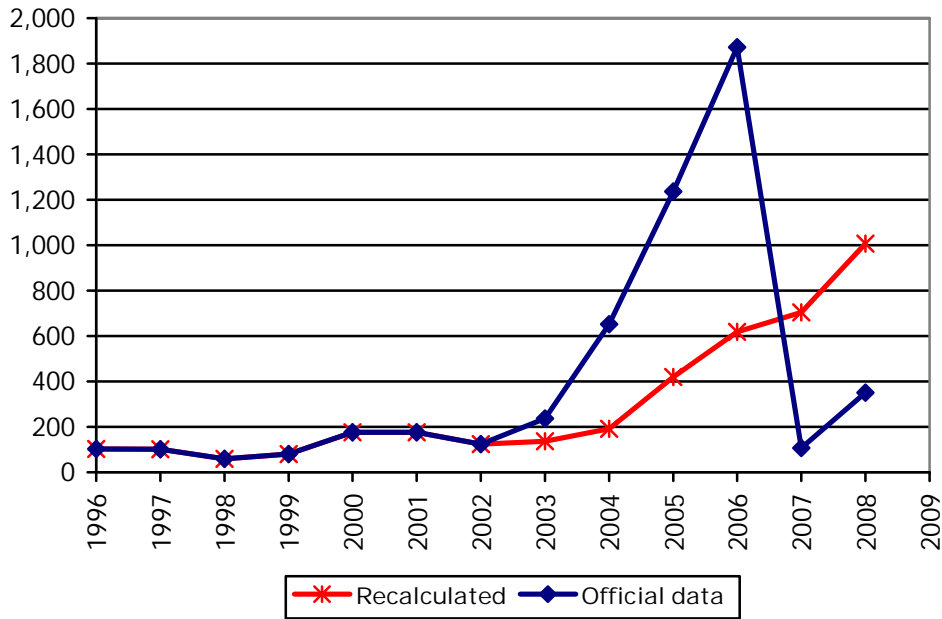
Most likely answer is that Kaliningrad subsidiary of Lukoil sold oil to a Lukoil trading company registered in another region, without oil physically leaving Kaliningrad. Then, the latter company exported the oil from Kaliningrad. Thus, the first part of this transaction has not been recorded as a trade with the rest of Russia because oil did not cross Kaliningrad's border. At the same time, its second part has not been counted as Kaliningrad's export because it was done by a non-Kaliningrad company. Of course, a more prosaic reason is simply an omission in statistical data but because the value of this oil is at least USD 300 million it seems unlikely.

Such big omissions in trade data in last few years requires might significantly distort analysis of Kaliningrad's trade. I recalculated the value of oil exports since 2003 based on the following assumptions:

- All oil produced in Kaliningrad is exported<sup>18</sup>
- Average price paid for this oil is equal the average price for the Russian non-CIS exports<sup>19</sup>

Recalculated data show that value of oil exports would grow substantially in 2007-2008 because of higher oil prices and would reach USD 1 billion in 2008 (see Figure 4.2).

Figure 4.2. Kaliningrad’s Mineral Exports, USD million



Source: Kaliningradstat, NWCO (various years)

The fishing industry has been one of the main industrial sectors in Kaliningrad’s economy during the Soviet period. The Soviet government created a large fishery cluster in the region with an extensive network of research, training, production, processing and service companies. The main research and training institution in the Soviet fishing industry, which is currently known as the Kaliningrad State Technical University, was relocated from Moscow to Kaliningrad in 1950s specifically with the aim to create a training center for the fishery complex. The industry had more international experience than any other sector in Kaliningrad’s economy during the Soviet period because it had to deal with international suppliers and buyers.

<sup>18</sup> A substantial part of Kaliningrad’s oil might have been sent to a Russian refinery but such shipments have not been reported by Kaliningradstat, at least for 2008.

<sup>19</sup> Kaliningrad’s oil is of better quality than the main Russian oil blend Urals and price paid for it is normally higher than the Urals price. On the other hand, almost half of oil went to Belarus in 2008 and price paid by Belarus was substantially lower than the average non-CIS export price for Russian oil.

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The fishing industry has struggled after the collapse of the Soviet Union as its Soviet business model based on the expeditionary fishing in remote areas of the world ocean (e.g. near coast of Africa and even the Latin America) became unprofitable with the removal of fuel and fish product subsidies. It was quickly privatized and reorganized from large integrated companies to much smaller private firms. Nevertheless, the industry has remained one of the main exporters in the region. A substantial part of export revenues of this sector has not been reported: many fishing ships sell their catch directly in international waters to ships from other countries to avoid taxation and reporting problems.

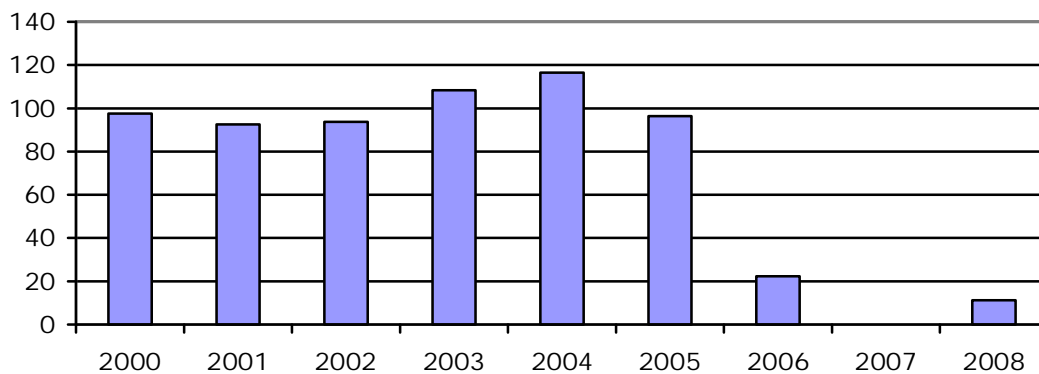
Another sector in the food industry that had export experience in the Soviet period was alcoholic beverage production: Kaliningrad vodka plant exported a significant part of its production (as a part of the famous “Pepsi for vodka” deal between the Soviet Union and PepsiCo). However, in 2000s disputes between a new private owner of the plant, SPI Group, and the Russian state over the rights for the most popular Russian vodka brand abroad, Stolichnaya, caused some problems in the expansion of exports.

The pulp and paper sector was one of the largest in Kaliningrad’s manufacturing and one of the main exporters in the Soviet period as well. Its main products have been cellulose and low-quality paper and paperboard. Its fortune followed closely the ebbs and flows of the pulp and paper market. Lack of good wood supply options nearby, outdated production equipment and polluting production processes have undermined competitiveness of this sector. The last few years have seen a slow dying of the sector in Kaliningrad. The best-known company, Cetruss, was bought by a British firm and transformed into an oil port terminal. Neman pulp and paper mill is in the process of bankruptcy. Another company in Sovetsk had a large fire and it seems has no intention of resuming production – its assets were put on sale.

The only sector in Kaliningrad’s machine building that proved to be more or less capable to compete on the international market was shipbuilding. Kaliningrad has one shipyard, Yantar, which had specialized in construction of medium-sized naval ships, and several smaller ship-repair facilities. After military order dried up, Yantar has tried to enter the civil shipbuilding market. Its first experience was not particularly successful – the shipyard often missed deadlines and went over budget that created serious financial problems for the company. Later Yantar has worked mainly as a subcontractor for German, Dutch and Norwegian shipyards carrying out a part of construction works. When the Russian government began to increase expenditures for its naval forces the company shifted its focus back to the military shipbuilding. In 2007

it also received a big order from the Indian navy for three frigates with the total value of USD 1.6 billions (through Rosoboronexport – a Russian state enterprise acting as an intermediary in export and import of military products). The last frigate under this order should be delivered in 2012. Ships and boats has accounted for the most of Kaliningrad’s exports under the harmonized system codes 84-90 that include machinery, transport vehicles, appliances, etc.

Figure 4.3. Exports of Cellulose, ‘000s tonnes



*Data for 2007 is not available*

Source: Kaliningradstat (various years)

All these export sectors are essentially inheritors of the Soviet industrial base. New exporting sectors have been slow to emerge but some private companies with a large export business did emerge especially in the last 5-7 years. I list some examples below.

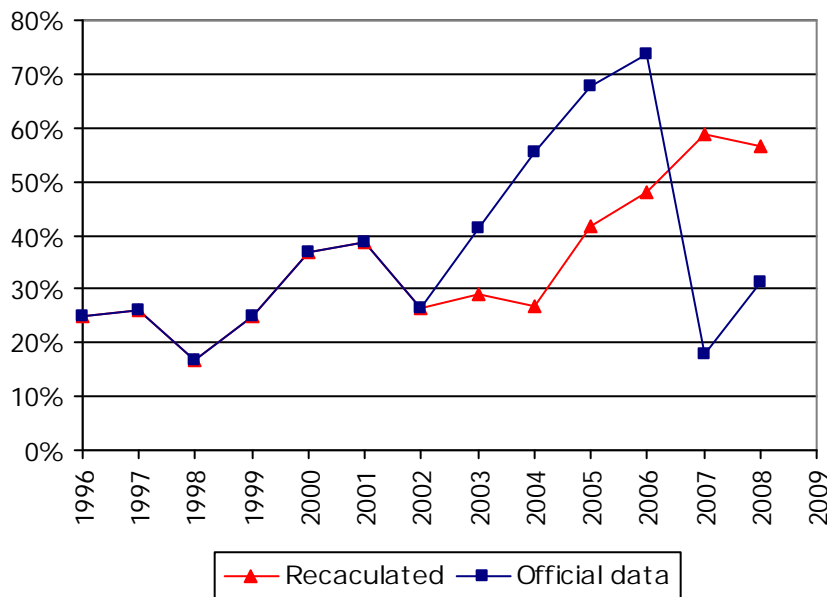
- Sodruzhestvo-Soy built a manufacturing plant and a sea terminal for exports of rapeseed and soybean oil and related products in 2007-2008 with the total investment of about USD 300 million.
- Lukoil invested in the metal construction plant that it used to build a drilling rig for the development of the Kravtsovskoe field. Later, it has produced metal structures for other Lukoil projects but also for outside customers, including foreign ones.
- Lesobalt built a modern sawmill that started operations in 2005. It produces profiled board, window scantlings, panels and sawn timber products mainly for exports.

Summing up, crude oil and oil condensates have been the most important element of the Kaliningrad’s exports in the post-Soviet period. The share of minerals<sup>20</sup> in the total

<sup>20</sup> Kaliningrad’s other mineral exports also include peat and coke but their share has almost never reached even 2% of the oil exports.

exports has been always above 20% with an exception of 1998 when oil prices reached their minimum. Rapidly rising oil prices, increased oil production and addition of transit flows of oil and refined products to Kaliningrad's exports has brought share of mineral exports to above 70% of all exports in 2006 according to the official trade statistics. Even without transit oil flows but using recalculated oil export data the share of oil exports were likely to be close to 60% of all Kaliningrad's exports in 2007-2008 (see Figure 4.4).

Figure 4.4. Share of Mineral Exports in Kaliningrad's Total Exports

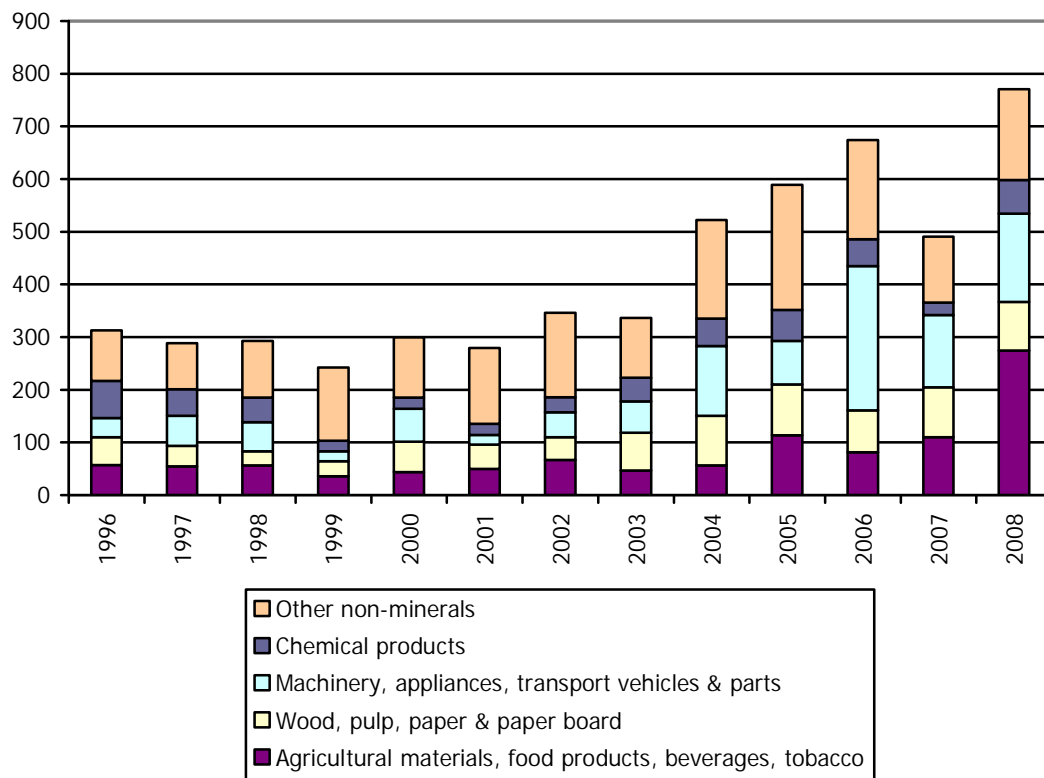


Source: Kaliningradstat, NWCO (various years), author's calculations

Kaliningrad's non-mineral exports have also grown fast since 2004.<sup>21</sup> The largest increases were recorded in agricultural and food products (soybean and rapeseed products, fish and meat products are largest components of these exports). Exports of ships and boats have been very volatile but also increased substantially since 2003. They constitute the largest part of machinery, appliances and transport vehicle exports.

<sup>21</sup> To what extent this growth might be explained by essentially transit flows is not clear but their share is considered high in chemical product exports. The main chemicals exported by Kaliningrad are fertilizers that undergo mainly packaging operations in Kaliningrad before exports.

Figure 4.5. Kaliningrad's Non-Mineral Exports, USD million



Source: Kaliningradstat, NWCO (various years)

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**Imports**

Imports to Kaliningrad can be conceptually divided into two groups with very little intersection between them: one is used for final consumption within Kaliningrad and the other serves as intermediary goods for the Kaliningrad's import processing industry.<sup>22</sup> Using publicly available data on Kaliningrad's imports (at the two-digit level of the harmonized system) it is practically impossible to distinguish between these two groups. However, a rough estimate can be made based on other economic indicators.

Kaliningrad's outflows to the rest Russia are a good proxy for the output of the import processing industry. These outflows were USD 5.6 billion in 2008. Assuming that added value in the industry was 20-30% we can estimate industry's demand for imports as USD 4.3-4.7 billion. Retail sales are closely related to final consumption of goods. Kaliningrad's retail sales in 2008 were RUR 74.3 billion or USD 3 billion. The share of imports in retail sales is difficult to estimate but even with unrealistic assumption that imports represents 100% of retail sales, the total imports to Kaliningrad should not exceed USD 7.3-7.7 billion based on these estimates. However, Kaliningradstat reported a substantially higher figure of USD 9.6 billion.

A similar discrepancy between recorded imports and their possible uses has been observed repeatedly in Kaliningrad in last few years. The most likely explanations include underreported outflows to Russia and underreported consumption within Kaliningrad. Again, it is almost impossible to estimate the extent of this underreporting in each of the cases.

It is, however, possible to state that imports for the import processing industry has been growing more rapidly in the last decade and, as a result, their share in the total imports has been growing. Figure 4.6 shows growth in the outflows from Kaliningrad to the rest of Russia, Kaliningrad's GDP and retail sales – all indicators are converted to the US dollars based on the market exchange rates. The first indicator indirectly measures the demand for intermediary foreign goods and the last two indicators can be used as a proxy to measure the demand for imports for final consumption. All indicators has grown very rapidly in this period but the outflows to Russia increased the most – at 38% compounded annual growth rate, suggesting a similarly rapid growth in imports of intermediary goods. It is also shows that growth in imports has, not surprisingly, been between growth in the outflows and retail sales /regional GDP.

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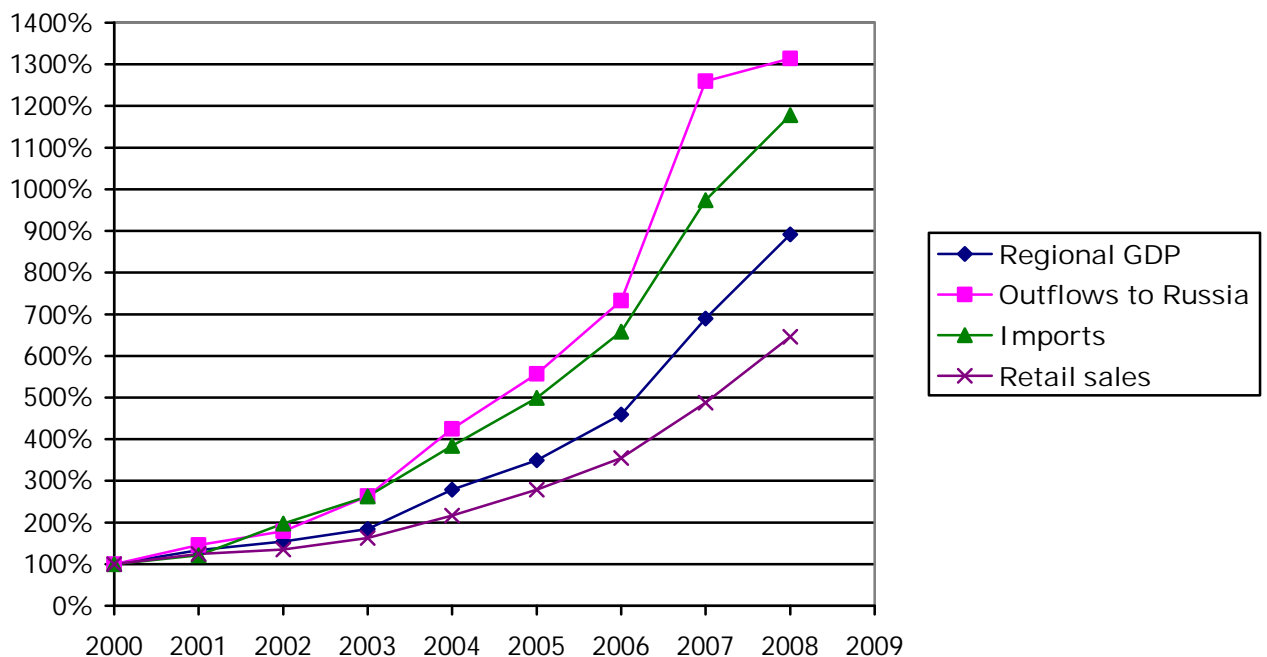
<sup>22</sup> The intersection between groups might happen, for example, when a TV set produced in Kaliningrad from an imported kit is purchased for final consumption in Kaliningrad as well. However, Kaliningrad market normally represents a very small proportion of all sales for most import processing companies.



The very rapid growth of the import processing industry has been reflected in the large changes in the commodity structure of Kaliningrad's imports. In 1990s the agricultural products and foodstuffs (HS codes 1-24) were typically the largest commodity group in Kaliningrad's imports. Their share reached almost 30% in some years. These products were used for consumption in Kaliningrad but also as inputs for food processing in Kaliningrad with the most of output shipped to Russia. Food processing firms were the first who used the SEZ tariff benefits to manufacture final goods for the Russian market from foreign inputs, and they essentially established the import processing sector in Kaliningrad.

However, the SEZ has been also used in less productive way. At one point, absence of the excise tax made Kaliningrad's SEZ a very attractive place for imports of goods that normally fall under this tax. For example, until 2000 Kaliningrad imported a lot of foreign petrol and other refined products because they were excise-free for Kaliningrad's companies unlike Russian-produced products. Imports of cigarettes to Kaliningrad for their subsequent illegal smuggling to Poland, Lithuania, Germany and other countries became a big business at the end of 1990s: in 1997-1998 the share of cigarettes in Kaliningrad's imports reached more than 9%!

Figure 4.6. Kaliningrad's GDP, Imports, Retail Sales and Outflows to Russia (in USD, year 2000 = 100)



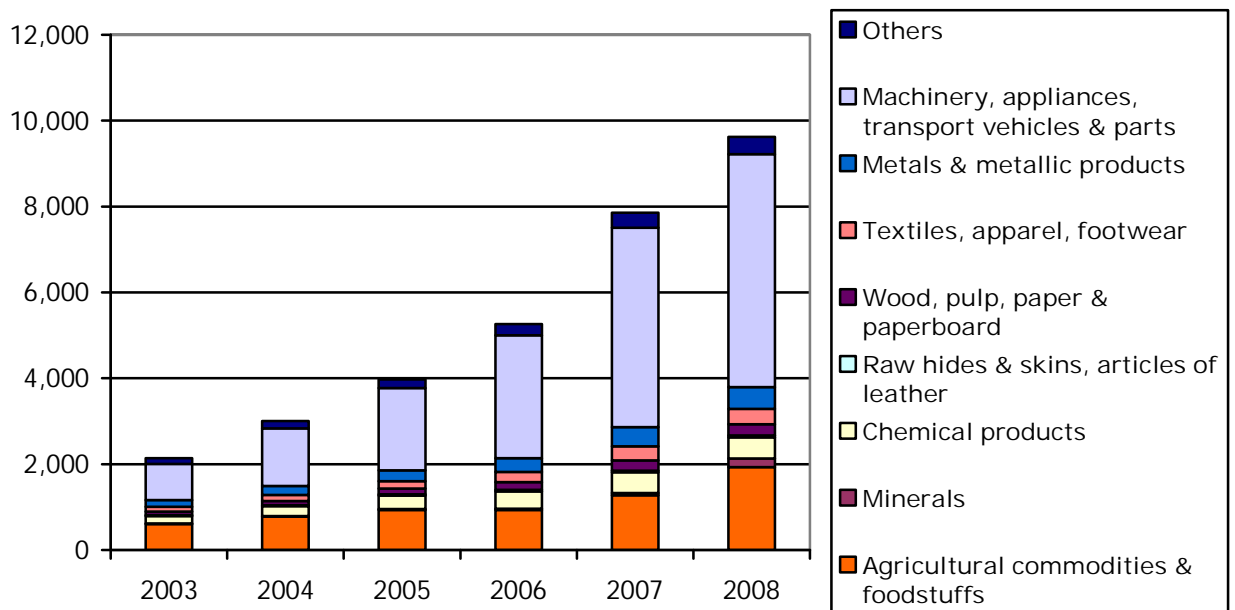
GDP for 2008 is an estimate

Sources: Rosstat (GDP), Kaliningradstat (imports), NWCO (outflows to Russia)

Inexorable rise of consumer electronics and car production in Kaliningrad since 2000 has changed the structure of the imports substantially. Demand for kits for assembly of cars, TVs and other consumer electronics goods has been growing very rapidly and, consequently, the share of goods under HS codes 84-90 that includes machinery, appliances, transport vehicles and parts has swelled. It increased from 39% in 2003 to 59% in 2007 (it then slipped a bit to 56% in 2008). To a large extent this growth was at the expense of food imports: the share of foodstuffs and agricultural products decreased from 28% to 16% over the same period. Shares of almost all other commodity groups also declined.

However, if measured in the US dollars, imports of all commodity groups still increased substantially. For example, the value of imported foodstuffs and agricultural commodities increased from USD 600 million in 2003 to USD 1,300 million in 2007 and to USD 1,900 million in 2008.

Figure 4.7. Kaliningrad’s Imports, USD million



Sources: NWCO (2003-2007), Kaliningradstat (2008)

The commodity structure of Kaliningrad’s exports and imports shows that it takes a position of a typical development country in its trade with foreign countries (mainly with European ones, see below). It exports predominantly raw materials and intermediary goods and imports more processed goods (see Lamande & Vinokurov, 2003). It is illustrated by the fact that in 2008 the average value-to-weight ratio of its imports was more than twice as high as that of exports – USD 1,738/tonne vs. USD 777/tonne.

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## 4.2 Geographical Structure

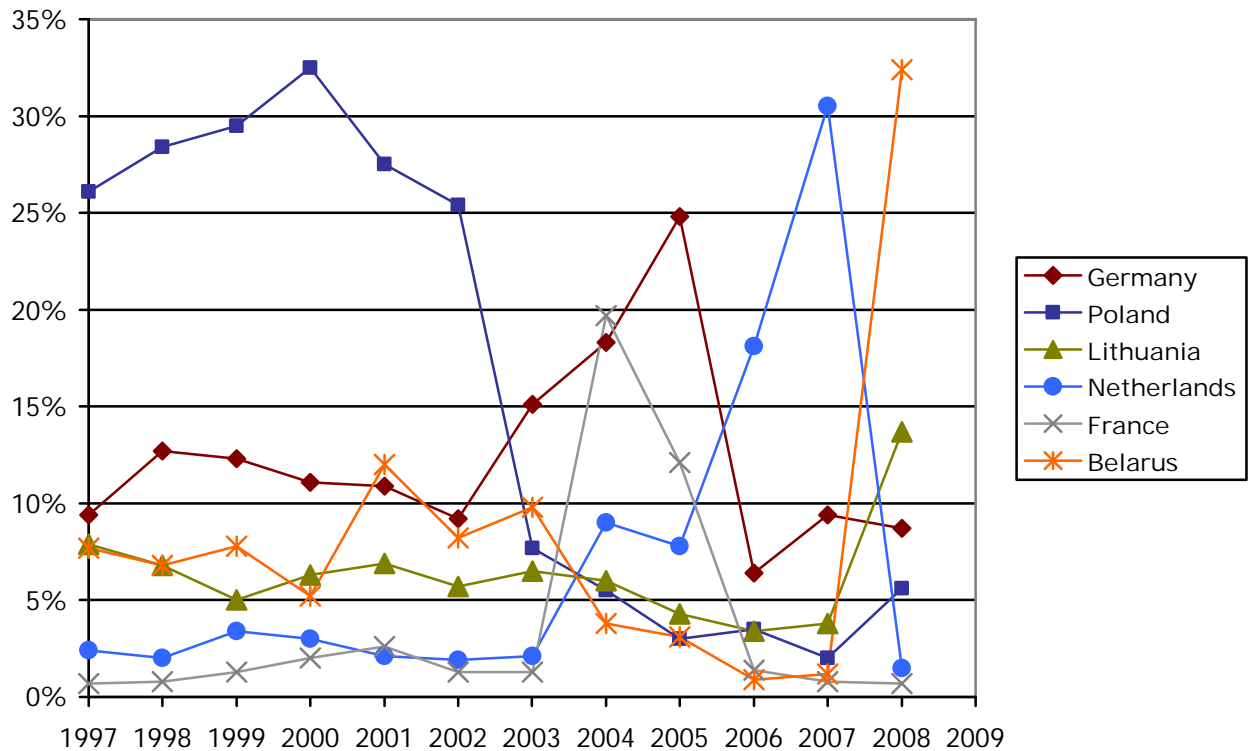
Until very recently, Kaliningrad's neighbors – Germany, Poland and Lithuania – were its main trading partners as well. This pattern of trade would match predictions of the gravity model of international trade, which maintains that the volume of trade is dependent on the economic sizes of two units and distance between them. However, in recent years the situation has changed substantially and is no longer true. The changes have taken place both on the export and imports sides of Kaliningrad's trade.

The geographical structure of Kaliningrad's exports until 2002 shows relatively stable shares of the main trading partners, mainly because the commodity structure of Kaliningrad's exports also remained stable. This started to change in 2002 with very large swings in shares of some countries (see Figure 4.8). All these large changes were primarily related to the shifting destinations for Kaliningrad's oil export shipments. For example, Poland was the main destination for Kaliningrad's oil until 2002, which made it the largest buyer of Kaliningrad's exports, taking more than a quarter of the total. Then, in 2003 Poland's share suddenly dropped to 7.7% because Lukoil stopped sending oil to the Gdansk refinery.<sup>23</sup> At the same time exports to Germany, France and the Netherlands started to grow rapidly because of increased shipments of oil from Kaliningrad to these countries. For example, France became the top destination for Kaliningrad's oil in 2004 and correspondingly largest export partner for Kaliningrad (with 20% share of the total) although its share in Kaliningrad's exports was rarely above 2% before that year. The Netherlands and Belarus became the largest export destinations for Kaliningrad's goods in 2007 and 2008, correspondingly, exactly for the same reason (see Figure 4.8).

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<sup>23</sup> The reason for this shift seems to be related to the fact that the Polish government decided to cancel the tender to privatize the Gdansk refinery, which Lukoil was very interested in buying, apparently in order to avoid its sale to Lukoil.

Figure 4.8. Shares of Some Countries in Kaliningrad's Exports



Sources: Kaliningradstat (various years)

These erratic changes were brought mainly by large transit flows of oil or petroleum products, which were added to the statistics of Kaliningrad foreign trade in 2003-2007. Hence, the geographical structure of Kaliningrad's exports in recent years should be interpreted with caution as the noise introduced by these transit petroleum flows obscures information about destination of its real exports. Some of the changes in oil shipment destination might also look as if they were motivated more by political reasons rather than purely commercial interests.

Excluding these fluctuations, Kaliningrad's exports generally go the countries that are geographically close to the oblast. Germany, Belarus, Lithuania and Poland have been the most important destinations for Kaliningrad's exports over time.

Imports show much less short-term variability in their geographical structure but there have been significant longer-term trends that substantially changed the overall geographic picture of Kaliningrad's imports in recent years. These trends can be briefly summarized as:

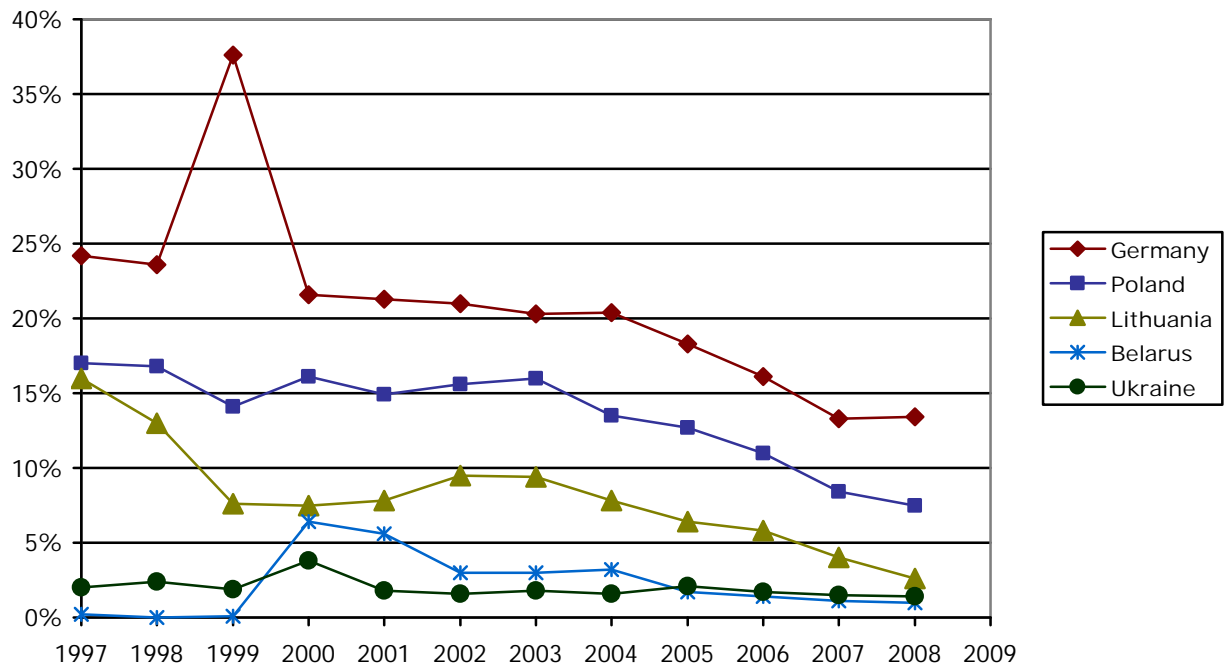
- 1) Relative decline of the traditional Kaliningrad's import partners – Germany, Poland, Lithuania, and the CIS;
- 2) Rise of Asia.

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Figure 4.9 shows that the relative decline of Germany, Poland and Lithuania in Kaliningrad's imports started in early 2000s as the import-processing boom began to gather speed in Kaliningrad. It cannot be said that these countries completely missed on this boom. Germany was and still is the largest supplier of goods to Kaliningrad in general, and of kits for car assembly in particular. Poland and Lithuania have also supplied many goods for import-processing companies in Kaliningrad including TV and refrigerator kits, plastic parts, furniture components, etc. But they generally could not compete with China and Korea as suppliers of electronic and car components.

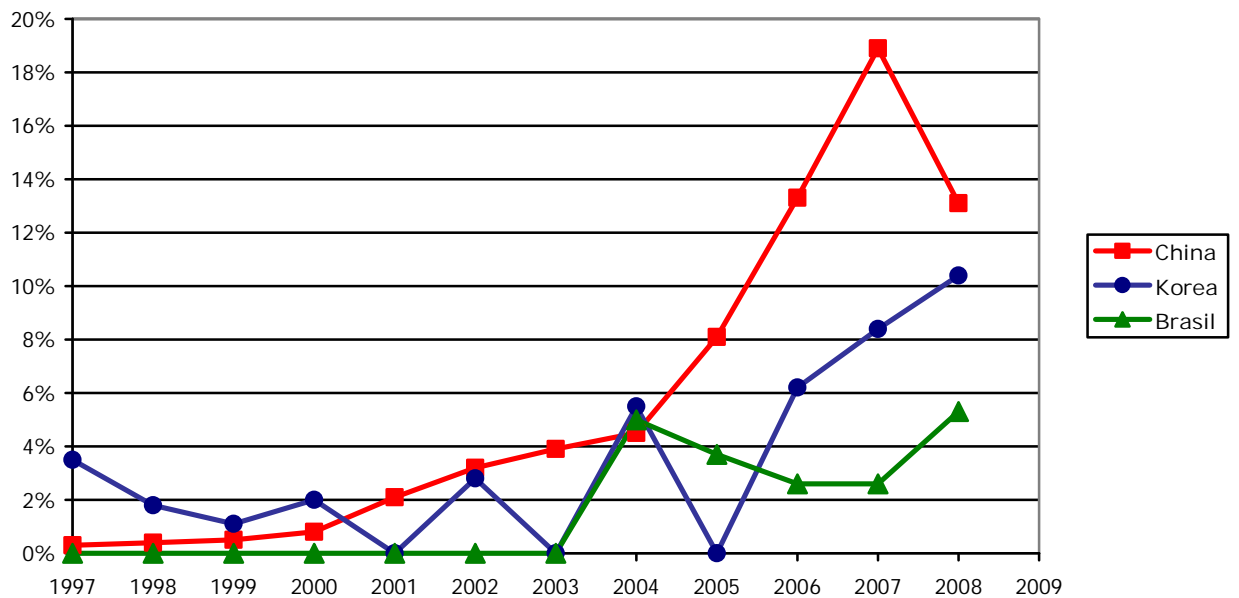
Share of the Chinese goods in Kaliningrad's imports jumped from less than 1% in 2000 to 19% in 2007 as demand for its cars and consumer electronics was getting stronger and stronger. In 2007 it became the largest supplier of goods to Kaliningrad. This very rapid growth of China pushed down the shares of other major suppliers to Kaliningrad. Korea's share of imports oscillated in 2000-2006 between 0% and 6% but was generally on the rapidly rising trend as well. Brazil became one of the largest suppliers of meat and other agricultural goods to Kaliningrad and made large investment in the food processing sector in Kaliningrad. The role of the CIS countries, mainly Belarus and Ukraine, briefly increased after the financial crisis of 1998 as the rouble devaluation made them more attractive suppliers since their currencies was also devalued but soon after their shares in Kaliningrad's imports declined to the pre-crisis level or even lower.

Figure 4.9. Share of Some Countries in Kaliningrad's Imports: Traditional Partners



Sources: Kaliningradstat (various years), author's calculations

Figure 4.10. Share of Some Countries in Kaliningrad's Imports: New Partners

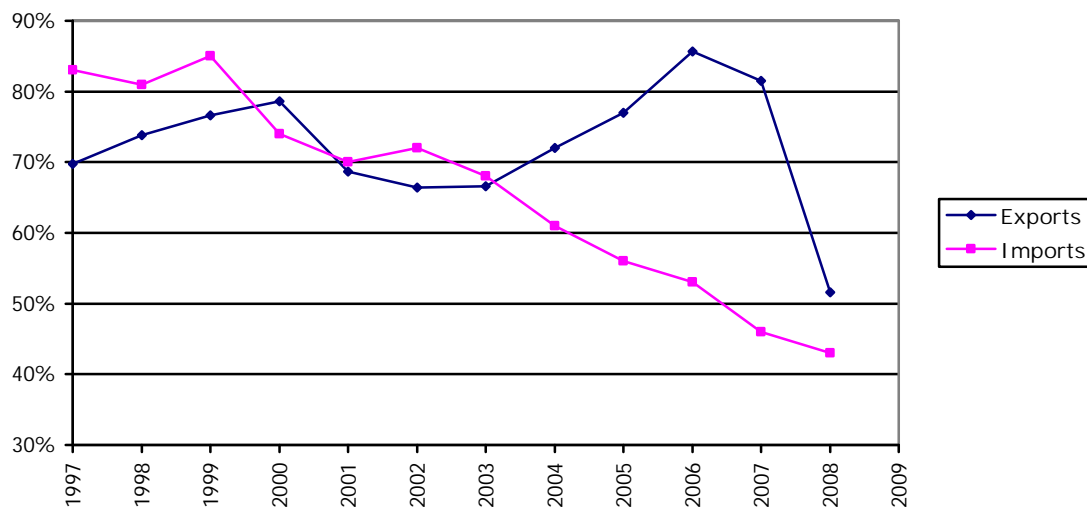


Sources: Kaliningradstat (various years), author's calculations

Looking at peculiarities of trade with individual countries might obscure some general secular trends. Kaliningrad's trade with its main trading partner, the EU-27, reveals more stable trends as fluctuations related to individual countries average out (see

Figure 4.11). One should not give much attention to the drop in the share of the EU-27 in Kaliningrad's export in 2008. As it was said earlier, this is a result of shipping one half of Kaliningrad's oil to Belarus and missing the other half. Excluding 2008, the share of the EU-27 in Kaliningrad's exports has varied within the range 65-85%. However, the EU share of imports has been in steady decline since 1999 offset by rapidly rising share of the Asian countries.

Figure 4.11. Share of the EU-27 in Kaliningrad's Trade



Sources: Kaliningradstat (various years), author's calculations

### 4.3 Main Trading Partners

This subsection describes in more detail the structure and development of Kaliningrad's trade with its main trading partners. The detailed data on Kaliningrad's trade with eight largest partners for 2008 are included in Appendix 2.

#### Germany

Germany has traditionally been the main trading partner of Kaliningrad and, in particular, the main supplier of foreign goods to Kaliningrad. In 2008, trade with Germany accounted for 13% of Kaliningrad's trade turnover.

Germany's exports to Kaliningrad have evolved along with the general changes in commodity structure of Kaliningrad's imports. In 1990s, agricultural goods and food products were the main commodity group in the German exports to Kaliningrad. As the car and other import processing sectors started to grow rapidly in Kaliningrad, Germany became a major supplier to these sectors as well. In 2008, machinery, appliances, vehicles and parts for them (HS codes 84 and 87) represented 58% of all German exports to Kaliningrad.

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Germany is also a very important market for Kaliningrad goods: excluding volatile petroleum exports, Germany's share in Kaliningrad's exports has fluctuated within 9-13% in the recent decade and it has always been one of the top three destinations for Kaliningrad's goods. However, Kaliningrad's exports to Germany have been quite limited commodity-wise. The main Kaliningrad export goods have been leather, textile and apparel articles – they accounted for one third and, in some years, even more<sup>24</sup> of all Kaliningrad's exports to Germany. Many Kaliningrad's apparel companies work as sub-contractors for German firms.

Other important export commodities were agricultural and food products and their exports to Germany have been growing quite rapidly recently. Popularity of biodiesel in Germany increased demand for rapeseed oil and some Kaliningrad agricultural producers turned to growing rapeseed specifically for exports to Germany. Sodruzhestvo-Soy recently built a processing plant and port terminal for exports of rapeseed oil and other related products.

Ships and their parts are the most important machinery exports from Kaliningrad to Germany. The value of these exports has been quite volatile because of the bulky nature of orders and a small size of the shipbuilding industry in Kaliningrad.

### **Poland**

Poland has the most diversified trade with Kaliningrad as Appendix 2 can attest. Traditionally, Poland was the second largest Kaliningrad's trade partner after Germany but in the last few years its share has fallen to 7% that made Poland the fourth largest trade partner for Kaliningrad in 2008.

Until 2002 crude oil was the most important Kaliningrad's export commodity that made Poland by far the largest destination for Kaliningrad's exports with more than 25% share (see Figure 4.1). It even helped Poland to overtake Germany to become the largest trade partner for Kaliningrad in 2000 and 2001. Since then relative importance of Poland in Kaliningrad's trade has slipped. First, petroleum exports from Kaliningrad to Poland decreased significantly. Second, Asian imports to Kaliningrad grew very rapidly and now significantly exceed those from Poland.

Currently, Kaliningrad's exports to Poland are relatively well diversified. They include agricultural commodities, chemicals, fertilizers, wood, machinery and appliances.

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<sup>24</sup> Again, excluding petroleum exports.



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Poland is also the main destination for Kaliningrad's amber although in absolute terms this trade has not been significant.<sup>25</sup>

Polish exports to Kaliningrad are even more diverse. In 2008, the most important group was parts for audio- and video equipment (HS code 85). However, its share in the Polish exports was smaller than for some other major suppliers to Kaliningrad – 19%. Poland is also a large supplier for Kaliningrad's consumer market and for other industries besides consumer electronics. Food products have been always an important part of the Polish exports to Kaliningrad. In 2008 they represented 11% of all exports. Among other important Polish exports were wood and furniture, plastics, ferrous metals and products from them.

### **Lithuania**

Kaliningrad's trade with Lithuania is quite similar to that with Poland. It is well diversified both on the export and import sides. Its share has been on a downward trend as well. Until 2006 Lithuania was usually the third largest trade partner for Kaliningrad but by 2008 it fell to the eighth place.

Lithuanian exports to Kaliningrad grew only modestly in 2004-2007 (from USD 244 million to 317 million) and they declined substantially in 2008 (to USD 257 million). Foodstuffs, plastics, ferrous metals and products from them were the main commodities exported from Lithuania to Kaliningrad.

Although Lithuania was instrumental in the emergence of Kaliningrad's consumer electronics sector (the first TVs assembled in Kaliningrad were mainly produced using Lithuania components), it has gained much less than other countries from the import-processing boom in Kaliningrad. Snaige, a Lithuania producer of refrigerators, built a plant in Kaliningrad for assembling refrigerators for the Russian market but this project was not very successful. The company decided to close it down permanently in August 2009 as the economic crisis reduced demand for appliances in Russia. In 2008 goods supplied to the consumer electronics and car sectors in Kaliningrad represented a relatively minor share of all Lithuanian exports to Kaliningrad (7% for commodities under HS codes 84, 85, 87, 90).

Lithuania became the second largest destination for Kaliningrad's exports, after Belarus, in 2008. Kaliningrad's exports to Lithuania did not include crude oil or

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<sup>25</sup> Until a few years ago a lot of amber from Kaliningrad had been smuggled to Poland and Lithuania illegally and as such had not been reflected in official trade data.

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petroleum products but they were boosted by re-export of a large number of trucks after their temporary import to Kaliningrad.

### **China**

Meteoritic rise of China as one the leading suppliers of goods to Kaliningrad (see Figure 4.10) owes almost 100% to the development of car and consumer electronics manufacturing in Kaliningrad. Its exports to Kaliningrad jumped from USD 4 million in 1999 to USD 1,500 million in 2007 making China by far the largest supplier to Kaliningrad in that year and almost equal to Germany in total trade with Kaliningrad.

In 2008, the Chinese exports to Kaliningrad decreased by 14%. The main reason for this decline was due to the fact that under pressure from the federal government Avtotor was forced to cancel its contract with Chinese car company, Chery, under which it assembled Chery's cars in its plant in Kaliningrad. Chery's cars accounted for 38% of Avtotor's total production in 2007.<sup>26</sup> Avtotor also cancelled its plan to build a new plant where it intended to produce about 250,000 Chinese cars per year, of which a significant part was expected to be exported to the EU. As a result, vehicles and their parts (HS code 87) accounted for only 3.7% of the total Chinese exports to Kaliningrad in 2008. The largest items in Chinese exports were audio- and video components (HS code 85) and optical equipment (HS code 90) which accounted for 51% and 22% accordingly of total exports.

At the same time, Kaliningrad's exports to China were practically negligible – only USD 2.3 million in 2008, most of them came from the supply of cellulose. Despite booming trade in the opposite direction, Kaliningrad's exports to China have not been growing – they fluctuated near zero but they were still lower in 2008 than, for example, in 1997.

### **Korea**

Kaliningrad's trade with Korea has been very similar to the trade with China but more erratic. In recent years, it, with a mystical repetition, jumped between almost zero in odd years (2001, 2003, 2005) to quite substantial volumes in even years (see Figure 4.10). However, since 2006 it seems to overcome this fluctuating nature and has been growing very rapidly. These jumps in Korean supplies to Kaliningrad can be explained by expiration and subsequent renewal of annual contracts between Korean companies and Avtotor and TV producers in Kaliningrad. But why they all happened at the same time is not very clear.

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<sup>26</sup> In 2007 Avtotor produced 106,000 cars and became the largest producer of foreign cars in Russia.

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Cars and their parts (HS code 87) were the main commodity group in Korean exports to Kaliningrad in 2008 – 51% of the total. In addition, Korea was a large supplier of optical equipment (23% of the total Korean exports to Kaliningrad), machinery and appliances (11%), and audio- and video equipment (9%). Kaliningrad's exports to Korea are practically non-existent, in 2008 it was a destination for just USD 0.3 million of goods from Kaliningrad.

**Belarus**

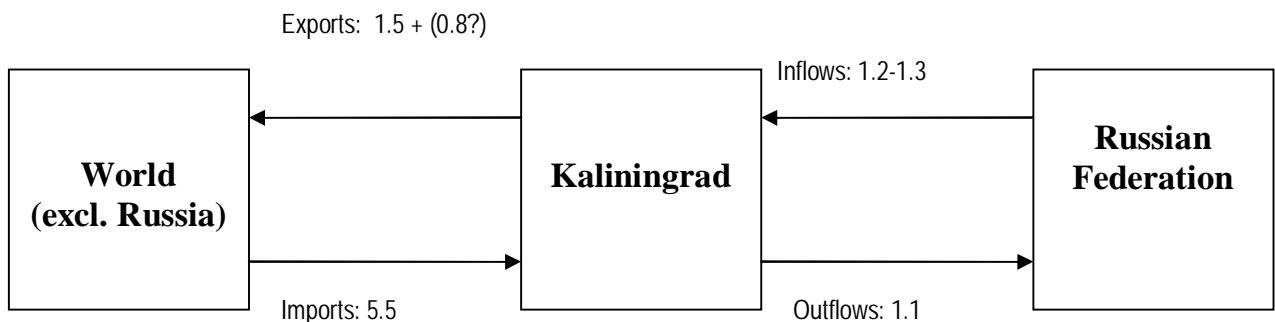
Belarus' role in Kaliningrad's trade is somewhat between European countries and the mainland Russia. Belarus has been a major destination for Kaliningrad's exports. It is the only major Kaliningrad's trading partner with whom Kaliningrad had a positive trade balance in 2008. The main Kaliningrad's exports to Belarus were food products, especially fish, and output of the pulp and paper industry. In 2008 Belarus also became the largest destination for Kaliningrad's petroleum exports. It propelled Belarus to the seventh position among Kaliningrad's trade partners. Belarus exports to Kaliningrad were mainly represented by food products, wood and construction materials.

## 5 Physical Logistics of Kaliningrad's Trade

In this section we will consider physical movement of goods to/from Kaliningrad. Kaliningrad is a transit center for foreign trade and transit flows substantially exceed Kaliningrad's own trade. Unfortunately, transportation statistics does not distinguish between transit goods and Kaliningrad's own goods. There are no data (or least they are not publicly available) that would show the breakdown of trade with a particular country by the mode of transportation used. In addition, transportation statistics from Kaliningradstat is not complete and often does not look plausible. These data limitations do not permit building a comprehensive picture of Kaliningrad's trade movements. However, it is possible to get an overall view of physical movement of goods to/from Kaliningrad based on existing data and anecdotal evidence.

Physical cargo flows connected with Kaliningrad's trade based on official Kaliningradstat data are shown in Figure 5.1. It should be noted that these flows miss approximately 0.8 million tonnes of Kaliningrad-produced crude oil that should be added either to exports or to outflows to Russia (or to both of them in some proportion).

Figure 5.1. Physical Flows of Kaliningrad's Trade in 2008, million tonnes



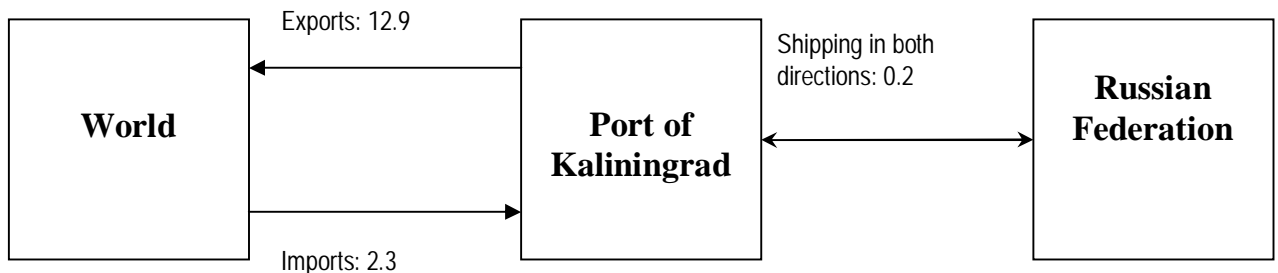
Sources: imports and exports data – Kaliningradstat (2009), authors estimates for inflows and outflows based on data reported by Kaliningradstat (2009)

Imports to Kaliningrad are significantly larger in terms of weight than outflows to Russia with which they closely connected. It is related to the fact that Kaliningrad's outflows to Russia have a much larger value-to-weight ratio than the imports: approximately USD 5,000/tonne vs. USD 1,800/tonne. Cars and consumer electronics have particularly high value to weight ratio – above USD 10,000/tonne – and because their share in Kaliningrad's outflows has been growing it tends to increase the ratio for the outflows in general.

Land transportation from Kaliningrad to the Central Federal District (the main destination for outflows) is quite expensive because of relatively large distances and transit through other countries, and this also tends to encourage production in Kaliningrad high-value products (with high value-to-weight ratio) for the Russian market.

However, a look at cargo flows through the Port of Kaliningrad<sup>27</sup> (see Figure 5.2) shows that while imports through the port account for approximately 40% of the total Kaliningrad's imports (in terms of weight), exports through the port (12.9 million tonnes) are significantly bigger than Kaliningrad's own exports (approximately 1.5 million tonnes).

Figure 5.2. Cargo Flows through the Port of Kaliningrad in 2008, million tonnes



Source: Kaliningrad Maritime Port Administration <http://www.mapkld.ru/>

Table 5.1 illustrates that the main commodities exported through the Port of Kaliningrad are crude oil and petroleum products (more than half of the total), coal, metals and fertilizers. With an exception of crude oil, Kaliningrad is not a significant supplier of any them and almost all of them represent transit flows from other regions of Russia. Column 4 in this table shows approximate transit flows of goods through the Port of Kaliningrad (in tonnes). At least 90% of these flows delivered to Kaliningrad by rail.

<sup>27</sup> Under the Port of Kaliningrad I understand all port terminals that exist in the Kaliningrad Oblast and fall under the responsibility of the Kaliningrad Maritime Port Administration. The Administration publishes quite reliable aggregate statistics on physical cargo flows through the Port of Kaliningrad.

Table 5.1. Structure of Exports, million tonnes

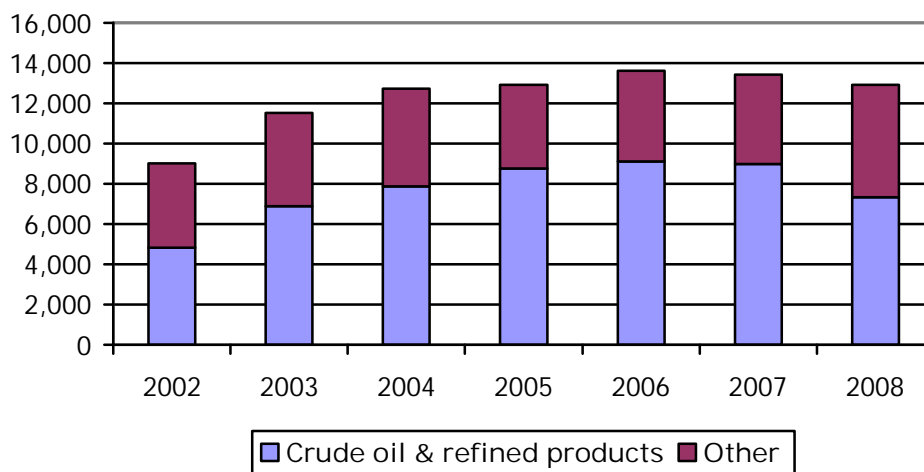
<i>Items</i>	<i>Exports through the Port</i>	<i>Kaliningrad's own exports</i>	<i>Difference: (2) – (3)</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>
Crude oil	987	117*	870
Refined oil products	6,330	0	6,330
Coal and coke	1,540	0	1,540
Metals and scrap	1,583	144	1,439
Fertilizers	492	45	447
Others	2,002	1,138	1,416
<b>Total</b>	<b>12,934</b>	<b>1,443</b>	<b>11,490</b>

\* - this figure excludes oil exported to Belarus (552,000 tonnes). The Belarus' oil export was added to the row "Others" because it was transported by train and could not affect shipments from the port

Sources: Kaliningradstat for Kaliningrad's exports, Kaliningrad Maritime Port Administration for port statistics

Large shipments of crude oil and refined oil products through Kaliningrad sea port terminals represent a relatively new phenomenon. They started to grow rapidly after 1998 when new oil terminals were constructed by Lukoil and some other operators. In 2005-2007, oil and oil products accounted for 67-68% of oil exports via the port in terms of weight before sliding to 57% in 2008. Interestingly, until 2005 crude oil made about half of the petroleum cargo but in 2008 it accounted for only 13%. The main reason for this change seems to be a change in tariff policy of the Russian Railways that discriminate crude oil in favor of refined products. Currently, most of crude oil exported from the port represents Kaliningrad-produced oil. As can be seen from Table 5.1 the difference for crude oil is 870 thousand tonnes which is quite close to the missing oil in trade statistics (approximately 780 thousand tonnes).

Figure 5.3. Exports of Goods through the Port of Kaliningrad, '000s tonnes

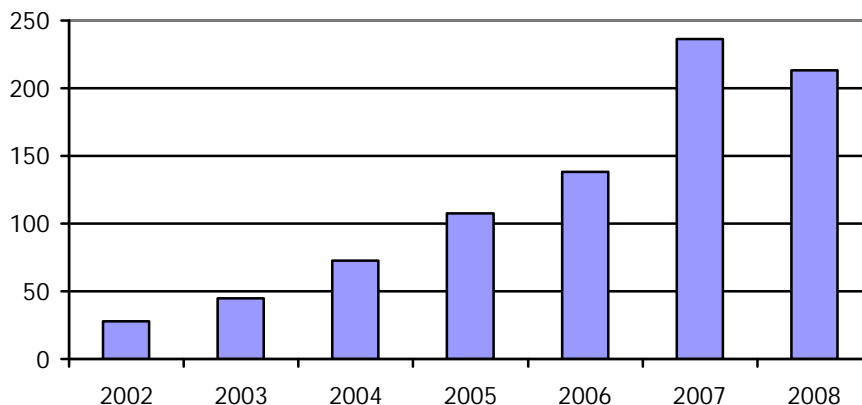


Source: Kaliningrad Maritime Port Administration

Imports to the port have been traditionally dominated by agricultural commodities and foodstuffs including grain, sugar, meat, fish and fruits. While no exact data exist it seems that a significant part of them is consumed in the region, with the rest shipped to the mainland Russia directly or after processing by food manufacturers.

In recent years there was significant increase in container traffic through the Port of Kaliningrad, especially in 2007 when it grew by 77% (see Figure 5.4) as a new container terminal with capacity of 200,000 TEU (twenty-foot equivalent units) started its operations.

Figure 5.4. Container Traffic in the Port of Kaliningrad, '000s TEU



Source: Kaliningrad Maritime Port Administration

The container traffic, first of all, serves the needs of consumer electronics and car companies that received most of their assembly kits in containers. However, as this industry found itself in the crisis at the end of 2008 it affected the container traffic too – it declined by 10% in 2008.

Logistics of goods to and from Kaliningrad by land is a murky area because comparable statistical data are in a large deficit. For example, Kaliningradstat reports that the railway cargo traffic in Kaliningrad fluctuated between 2.0-2.2 million tonnes in 2003-2008. At the same time, Kaliningrad Railways, a subsidiary of the Russian Railways, reported its traffic as 18.5 million tonnes. It is also impossible to separate Kaliningrad's trade-related traffic from the transit.

What is clear, however, that most of trade between Kaliningrad and the rest of Russia is handled by rail transport, at least, in terms of weight. Because rail transport is generally cheaper than road transport it is preferred mode of transportation for bulky, low value-to-weight ratio goods. These include petroleum products, coal, metals, fertilizers that represent most of Kaliningrad's inflows from Russia by weight.

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On the outflow side the situation is different. Because the main goods shipped to Russia from Kaliningrad are high value goods (cars and consumer electronics), transportation cost for them is lower as a percentage of the final price. In this situation speed and flexibility that truck transportation can provide often offset its higher costs so import-processing companies often opt for trucks to ship their good to the Central Federal District – the dominant destination for Kaliningrad’s outflows.



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## Conclusion

The Special Economic Zone in Kaliningrad, which provided substantial import tariff exemptions for local companies, was instrumental for a rapid development of the import-processing industry in the region. The demand from this industry led to a surge in Kaliningrad's imports. Kaliningrad became the region with the largest per capita imports in Russia.

The Russian market proved to be ready to absorb industry's products such as TVs, vacuum cleaners, cars, food products, etc in ever increasing quantities – shipments of goods from Kaliningrad to the rest of Russian have been growing at 38% p.a. in 2000 - 2008 (measured in US dollars). However, the success of the import processing industry has been built on a shaky foundation laid by the SEZ law. The economic rationale for its existence in Kaliningrad is not obvious. No multinational firm has made any substantial investment in two main sectors of the industry – auto manufacturing and consumer electronics.

Meanwhile, Kaliningrad failed to develop a competitive export sector. The share of Kaliningrad's export in total Russia's exports has been declining since the 1990s. Most of Kaliningrad's exports are raw materials and low value-added goods produced by the companies – inheritors of the Soviet production assets.

It became obvious by the early 2000s that this model of economic development based on import duty exemptions does not present the best long-term solution either for Kaliningrad or for Russia as a whole. The federal government decided to replace the existing SEZ regime and introduced the new SEZ law that came into force in April 2006. The new law established a transition period that keeps tariff benefits basically intact until 2016 and provided tax breaks for new investment. The expiration of the import tariff benefits will undermine the existing foundation of the import processing industry. In addition, the current economic crisis has already dealt a huge blow to the industry – it is likely that many companies in the industry are going to disappear.

It is not clear what can replace it and how strongly it will affect Kaliningrad's economy. What is clear, however, is that Kaliningrad should increase and diversify its exports if it wants to have an internationally competitive economy. Kaliningrad needs new investments, especially export-oriented FDI, to develop its exports beyond the existing base. The new SEZ law is a step in a right direction – FDI inflows increased substantially in 2007-2008, after the law was passed. Improving infrastructure and the rule of law, simplifying administrative barriers and making it easier to cross borders for

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people and goods would help a lot in increasing attractiveness of Kaliningrad for new investment.

Nevertheless, the Russian market will remain the main outlet for Kaliningrad's goods in the medium-term future even if the current import-processing industry shrinks in size significantly. Companies in the industry should plan ahead for 2016 by raising the efficiency of their operations, forging closer ties with multinationals and investing in better equipment. They should also work together to encourage development of a qualified work force and a supplier base.

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## Appendix 1. Kaliningrad's Foreign Trade Statistical Data

Statistical data on foreign trade are often tricky. For example, companies have an incentive to underreport the value of imported goods in order to decrease the amount of customs tariff and VAT they have to pay on these goods. Hence, Rosstat's data show that Russian imports from many countries are often significantly less than the corresponding value of exports from these countries to Russia as reported by their statistical offices.

Kaliningrad is not a country but a region of the Russian Federation. It adds additional problems to comprehensiveness and comparability of its external trade data. The first problem is concerned with Kaliningrad's trade with the rest of Russia – until recently there were very little in terms of data available to researchers and even now trade in services remains almost completely unknown.

The second problem is related to the attribution of Russia's foreign trade to the regional level. It is normally done by one of two approaches. The first method looks which customs office processed a customs cargo declaration and attributes the corresponding transaction to the region where the customs office is located. The second approach uses the legal residence of the company submitting a declaration to determine the origin or destination of a particular foreign trade transaction. It can be argued what approach is better but the second approach is generally a preferred method to deal with the problem. Still, it has its own problems that can be illustrated by the fact that a substantial part of the Russian oil and natural gas exports comes from Moscow not because it is a major oil producing province but because a lot of oil and gas companies have their headquarters in the city.

Statistical data on Kaliningrad's external trade are provided by three sources: the customs authorities, i.e. the North-West Customs Office (NWCO), the Kaliningrad Office of the Federal Statistical Service (Kaliningradstat), and the Russian Federal Statistical Service (Rosstat). The NWCO's statistical data is collected by processing customs cargo declarations. Until 2008 NWCO provided data based on all declarations it processed. Therefore, its exports and imports data included transactions by companies from other Russian regions that submitted customs declarations in the Kaliningrad Oblast (and had physical goods moved through Kaliningrad).

Kaliningradstat in its publications adjust NWCO data by adding 1) trade flows with Belarus; 2) purchase and sale of bunker fuel; 3) sale of fish outside customs border of Russia; and 4) some other minor foreign trade flows. It also provides data on trade in

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services. However, it did not amend the NWCO data to correct for foreign trade transactions made by companies from other regions. Hence, until 2008 its data included a substantial amount of transit oil and refined products exports (see Table A2)

In its analysis NWCO provided regional distribution of companies exporting or importing their goods through Kaliningrad. In the import operations the role of non-Kaliningrad companies has been relatively small and normally makes about 1-4% in terms of the total import value. The maximum was reached in 2004 when non-Kaliningrad companies contributed 8.5% of the total Kaliningrad's imports as reported by NWCO (see Table A1). In the export transactions the role of non-Kaliningrad companies has been much more substantial. Starting from 2004 they contributed more than half of all exports and in 2007, Kaliningrad companies accounted for only 12% of 'Kaliningrad' exports. The reason for this was major transit flows of oil and refined oil products going through Kaliningrad shipped by Lukoil and some other Russian oil majors.

Kaliningrad companies may also export and import their goods through customs offices in other regions of Russia. However, these operations seem to be very small. For example, for 2008 NWCO reported that foreign trade transactions by Kaliningrad's companies processed through non-Kaliningrad customs offices accounted for 1.07% of Kaliningrad's exports and 0.2% of Kaliningrad's imports.

Rosstat adjusts its data for these operations (so it includes only export and import operations of Kaliningrad's companies) and exclude trade with Belarus. Unfortunately, Rosstat provides only aggregate data on foreign trade at the regional level. In order to analyze commodity and geographic structure of Kaliningrad's foreign trade one has to use Kaliningradstat data that, as we already mentioned, does not distinguish between Kaliningrad and non-Kaliningrad companies.

Starting with data for 2008, both Kaliningradstat and NWCO exclude non-Kaliningrad companies from their reports. Hence, the transit oil flows (and other transit operations) is no longer reflected in Kaliningrad's trade statistics. This change in reporting often creates confusion and makes consistent analysis of foreign trade problematic.

Table A1. Kaliningrad's Foreign Trade Data from Different Sources

	2004	2005	2006	2007	2008
<b>Exports of goods</b>					
Kaliningradstat	1,174.8	1,825.6	2,545.7	5,119.5	1,121.5
Customs office	1,107.1	1,703.2	2,479.9	5,017.9	698.6
Customs office - Kaliningrad companies only	557.4	n/a	1,260.1	597.8	698.6
Rosstat	598.1	859.6	1,248.7	597.7	n/a
<b>Imports of goods</b>					
Kaliningradstat	3,132.8	4,077.1	5,372.7	7,952.2	9,620.0
Customs office	3,171.7	3,974.5	5,263.0	7,820.5	9,425.2
Customs office - Kaliningrad companies only	2,864.4	n/a	5,123.7	7,858.7	9,425.2
Rosstat	2,845.3	3,796.6	5,158.3	7,857.8	n/a
Source:	Rosstat, NWCO, Kaliningradstat (various years)				

Table A2. Reconciliation of Foreign Trade Data Provided by the Customs Authorities and Kaliningradstat for 2008 (USD million)

	Exports	Imports
Customs data (NWCO)	698.6	9,425.2
Sales of fish outside customs border of the Russian Federation	37.8	-
Bunker fuel	21.3	99.2
Trade with Belarus	363.7	95.6
Total trade in goods	1,121.4	9,620.0
Trade in services	201.6	264.4
Total	1,323.0	9,884.5
Source:	Kaliningradstat (2009)	

## Appendix 2. Commodity Structure of Kaliningrad's Trade with Main Partners in 2008

HS Code	Country, item	Exports, '000 USD	Imports, '000 USD
<b>1. Germany</b>			
02	Meat, edible offal		104,065
03	Fish, crustaceans	6,011	
10	Cereals	1,404	
12	Oil seeds, misc grains, fruits	7,666	
15	Animal or vegetable fats, oils, waxes	11,741	
23	Residues, wastes	7,222	24,573
31	Fertilizers	3,576	
39	Plastics		32,107
42	Articles of leather	15,048	15,072
44	Wood	8,041	7,201
48	Paper & paperboard		13,420
62	Articles of apparel		13,165
63	Other textile articles	13,459	20,775
72	Ferrous metals	6,136	6,750
73	Products from ferrous metals	2,861	38,105
84	Machinery/appliances	4,006	200,439
87	Vehicles and parts		557,820
89	Boats, ships	1,202	
90	Optical equipment		25,156
94	Furniture, bedding, lighting		33,789
	Others	6,602	219,599
	<b>Total</b>	<b>94,975</b>	<b>1,312,036</b>
<b>2. China</b>			
28	Inorganic chemicals	194	
39	Plastics	202	35,815
47	Pulp of wood	1,695	
48	Paper & paperboard		13,613
61	Articles of apparel knit		14,445
62	Articles of apparel		18,099
64	Footwear		16,626
72	Ferrous metals	136	19,735
84	Machinery/appliances	24	66,181
85	Electrical equipment, audio- and video equipment		665,055
87	Vehicles and parts		47,385
90	Optical equipment		284,759
94	Furniture, bedding, lighting	9	15,213
	Other	17	99,671
	<b>Total</b>	<b>2,277</b>	<b>1,296,597</b>
<b>3. Korea</b>			
39	Plastics		11,628
56	Wadding, felt, etc	185	

HS Code	Country, item	Exports, '000 USD	Imports, '000 USD
73	Products from ferrous metals	39	
84	Machinery/appliances		116,091
85	Electrical equipment, audio- and video equipment		96,155
87	Vehicles and parts		525,807
90	Optical equipment	36	241,634
94	Furniture, bedding, lighting		22,147
	Other	17	17,211
	<b>Total</b>	<b>277</b>	<b>1,030,673</b>
<b>4. Poland</b>			
02	Meat, edible offal		15,970
04	Dairy products		4,851
07	Edible vegetables, roots & tubers		17,725
15	Animal or vegetable fats, oils, waxes	7,056	
17	Sugars and confectionary		6,494
20	Preparations of vegetables, fruit		25,705
21	Misc edible preparations		5,071
22	Beverages, spirits and vinegar		3,222
25	Salt, sulfur, earth & stone, lime	1,178	25,496
27	Mineral fuels, oil	3,341	3,107
31	Fertilizers	8,239	
32	Tanning & dye extracts, dye, paint		25,622
33	Essential oils, perfumery, cosmetics		4,620
34	Soap, lubricants		11,116
38	Misc chemical products	8,269	1,420
39	Plastics	804	66,360
40	Rubber and articles thereof		2,948
44	Wood	7,521	62,588
48	Paper & paperboard	386	21,892
56	Wadding, felt, etc		3,682
61	Articles of apparel knit		5,911
62	Articles of apparel		3,617
63	Other textile articles	758	2,656
64	Footwear		3,898
68	Articles of stone, plaster, cement		16,562
69	Ceramic products		18,854
70	Glass & glassware		15,242
72	Ferrous metals		18,071
73	Products from ferrous metals	1,912	47,854
76	Aluminum	762	12,210
78	Lead	1,414	
83	Misc articles of base metal		12,681
84	Machinery/appliances	11,158	27,461
85	Electrical equipment, audio- and video equipment	641	141,820
87	Vehicles and parts	176	13,932
89	Boats, ships	5,515	5,630
90	Optical equipment		3,001
94	Furniture, bedding, lighting	1,695	50,142
	Other	2,455	33,685



HS Code	Country, item	Exports, '000 USD	Imports, '000 USD
<b>Total</b>		<b>63,280</b>	<b>741,116</b>
<b>5. USA</b>			
02	Meat, edible offal		91,458
03	Fish, crustaceans		11,973
04	Dairy products		3,285
20	Preparations of vegetables, fruit	76	250
22	Beverages, spirits and vinegar	186	296
23	Food industry residues & waste		33,462
33	Essential oils, perfumery, cosmetics		3,875
44	Wood	298	323
63	Other textile articles		8,320
73	Products from ferrous metals	50	3,318
84	Machinery/appliances	1,547	80,239
85	Electrical equipment, audio- and video equipment	39	13,855
87	Vehicles and parts	90	298,318
90	Optical equipment	35	3,943
94	Furniture, bedding, lighting	55	6,086
	Other	208	26,116
<b>Total</b>		<b>2,584</b>	<b>585,116</b>
<b>6. Brazil</b>			
02	Meat, edible offal		187,734
12	Oil seeds, misc grains, fruits		237,889
	Others	29	98,350
<b>Total</b>		<b>29</b>	<b>523,973</b>
<b>7. Belarus</b>			
03	Fish, crustaceans	512	
04	Dairy products		19,726
11	Products of the milling industry		1,898
15	Animal or vegetable fats, oils, waxes	19,323	
16	Preparations of meat or fish	27,034	
22	Beverages, spirits and vinegar	3,112	
25	Salt, sulfur, earth & stone, lime		4,906
27	Mineral fuels, oil	286,153	
31	Fertilizers		2,751
32	Tanning & dye extracts, dye, paint	3,087	
34	Soap, lubricants		
38	Misc chemical products	2,509	
44	Wood	415	11,317
48	Paper & paperboard	14,230	4,392
68	Articles of stone, plaster, cement		19,901
69	Ceramic products		2,367
70	Glass & glassware		1,514
72	Ferrous metals		1,024

HS Code	Country, item	Exports, '000 USD	Imports, '000 USD
73	Products from ferrous metals	2,187	1,309
84	Machinery/appliances	2,672	1,533
85	Electrical equipment, audio- and video equipment		2,047
87	Vehicles and parts		5,753
94	Furniture, bedding, lighting		7,616
	Other	2,418	7,503
	<b>Total</b>	<b>363,652</b>	<b>95,557</b>
<b>8. Lithuania</b>			
01	Live animals		9,735
03	Fish, crustaceans		18,071
04	Dairy products		11,030
12	Oil seeds, misc grains, fruits	7,995	
15	Animal or vegetable fats, oils, waxes	11,799	7,907
25	Salt, sulfur, earth & stone, lime	22,250	15,428
28	Inorganic chemicals	22,000	
31	Fertilizers	6,538	
39	Plastics	10,579	40,318
44	Wood	14,494	4,469
47	Pulp of wood	2,722	1,285
48	Paper & paperboard		20,001
62	Articles of apparel	2,903	
72	Ferrous metals		16,683
73	Products from ferrous metals	1,200	18,506
84	Machinery/appliances	10,354	7,992
85	Electrical equipment, audio- and video equipment		7,523
87	Vehicles and parts	21,771	2,361
90	Optical equipment	6,984	
94	Furniture, bedding, lighting		4,363
	Other	11,717	70,142
	<b>Total</b>	<b>153,306</b>	<b>255,814</b>

Source: NWCO(2009)

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