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Formation of Trade Specialization of Kaliningrad Oblast

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Kaliningrad region is currently at the centre of discussions between the European Union (EU) and the Russian Federation. Although small in terms of geography (15.100 Km²) and population (943,2000 in 2001), Kaliningrad gains on importance due to EU enlargement process and Russian strong political will to avoid separatism. Since break-up of the Soviet Union Kaliningrad Oblast is an exclave of Russia. With the next round of enlargement likely to include both Lithuania and Poland, Kaliningrad is set to become a geographical enclave within the EU.

Oblast has a limited domestic market size, which is not enough to reach economies of scale for a wide range of goods. It has also a resource base not insufficient to ensure the base for production. That creates significant asymmetries between patterns of domestic production and consumption¹. Trade inflows and outflows tend to play a specific role in such a small economy. Additional and very important factor is Kaliningrad exclave position in relation to all other Russian regions. This leads to a special meaning of trade in overall development of Kaliningrad's regional economy.

The region stays immediately before two complex challenges – enlargement of the EU and Russia's entry into the WTO. Setting right policies for the region to have the capacity to face this double challenge demands for correct and full assessment of the regional economy. The objective of the paper is to give a more accurate economic image of the Russian enclave in terms of its trade both with foreign countries and with mainland Russia. We begin with reassessment of Kaliningrad interregional trade that is trade with the Russian mainland from which the region is separated. Then, after short characteristics of foreign trade flows we go on discussing Kalinigrad's intermediary position in Russian-European trade. Next part contains calculation of regional trade openness and intra-industry trade values. We complete the paper with conclusion and some final remarks on perspectives of Kaliningrad trade and economy.

2. Interregional Trade: close ties and strongly positive dynamics

Whereas it is more or less possible to get a picture of foreign trade by looking at data provided both by Customs and by Goskomstat (the latter takes the Customs data and on this basis builds its own figures after several corrections), it is hard to

¹ Armstrong, Read (1998).

obtain solid and trustworthy data for interregional trade. The data from Goskomstat is definitely insufficient because it is collected on the basis of statistical forms collected from large and medium enterprises (LMEs) only. It allows to see dynamics of trade flows but does not give a hint for their real volumes.

Let us discuss *methodological elements* of our research.

UPMF has organized the measurement of the trade Kaliningrad flows with mainland Russia². The picture of trade realized by the enterprises of Kaliningrad region with Russian mainland can be reconstructed with considerable difficulties. Statistical information on trade flows available from both Customs authorities and Committee for Statistics is fragmented. It either embraces just some of inflow-outflows or provides with figures in terms that are not suitable for direct use, i.e. not in price terms.

The data sets combined by the Committee for Statistics are based on the information obtained from large and medium enterprises (LME). At the same time, only a smaller part of inflows and outflows goes through LMEs. A larger part of trade is done through individual enterprises (“chastnye predpriyatia” - ChP). This practice is particularly developed in some sectors, i.e. in food sector. This may be seen rather clearly when one looks at the share of LMEs in regional export. While the overall volumes of export (without services) amounted to \$519.0 million (according to Goskomstat’s methodology; Custom’s methodology gives the figure of \$452.5 million in the year 2000), only \$237.5 million of goods have gone through the large and medium companies of the region. We see that the share of LMEs in «white» export, 45.8%. Moreover, it is reasonable to suppose that the share of LMEs would be higher in foreign trade than in interregional trade. The reasons are administrative and other barriers (i.e. required qualifications, level of minimal investments, higher transparency level and so forth)

Despite the fact that goods must cross foreign customs territories, Customs authorities do not give data in price terms. That happens because of the existence of simplified declaration order for goods that are destined to return to the Russian customs territory. Thus, we were in need to capture the large volumes of trade going through smaller companies on the base of available information in order to reach a more realistic picture to the best of our knowledge. Since comparable data is available both for overall quantities of goods traded with Russian regions and for trade done by LMEs only, it becomes possible to use a method of calculation based on the assumption that the proportions of trade in quantity terms and in price terms are the same. Indeed, the structure of trade in goods with the mainland Russia should be approximately the same for large and medium enterprises as well as for small companies. A noticeable except is to be mentioned for crude oil and other raw materials, which are gained and exported by large enterprises). The fact that LMEs usually operate through many small entities support our assumption (e.g., the company MDM that possesses one of the largest chains of supermarkets and grocery stores in the region realizes its trade through 20some “individual” enterprises). However, the results of calculations should be interpreted as estimates due to the underlying assumption. We also point that the final figures do not include electricity supplies from mainland Russia as well as trade in services. On the basis of the wholesale quantities, we can estimate the quantities for large and medium enterprises (LMEs).

² Vinokurov (2002).

Since the data for physical volumes of trade inflows and outflows is provided by the Customs Office for the trade with Russia and Byelorussia, the first operation was to clear off the data in order to obtain exclusive numbers for trade flows with Russian Federation. Secondly, non-metrical measurements were recalculated into metrical tons. For the sectors where such an operation was hardly possible for technical reasons, we referred to the assessment of specialists working in the concerned industries. The third preliminary operation was to recalculate gross weight into net weight which again was done using expert estimates. Then, the volumes for each specific industry were summed up, so as to have the data for wholesale volumes of each industry according to nomenclature TN VED. Then, we calculate sectoral coefficients. This turned out to be possible for food products and raw materials for their production (01-24 TN VED), production of fuel and energy industry (27 TN VED), production of petrochemical industry (28-35, 37-40 TN VED), raw leather and furs (41-43 TN VED), wood and its products (44,47,48 TN VED), ferrous and non-ferrous metals and their products (72-81 TN VED). The figures for such sectors as clothes and footwear (61-64 TN VED) and machine-building production (84-90 TN VED) could not be obtained due to practical impossibility to calculate a real weight of production.

The results of calculation could serve as estimates, since they are based on many approximations. Moreover, due to peculiarities of practical usage of our methodology, the received data are minimum estimates of interregional trade flows. In other words these figures are probably underestimated due to the fact that only material goods are counted and also that many activities remain unrecorded because of the type of traders (individual entrepreneurs) trying to avoid taxations and also because of the simplified declaration on the movement of goods. Considering the limiting factors, we assessed that the structure of production of large firms is the same than SME, as mentioned above. Inflows of energy (the oblast produces only 10% of needed energy) also count amongst the limits of our analysis. Services are also excluded from the calculation (i.e. transport, port activities), there are not reported in the turnover of Kaliningrad to mainland Russia. Tourism is also a matter of concern, the region having welcomed almost 40 thousand westerners and 168 thousand Russian tourists in 2001.

Table 1. Kaliningrad Regional Trade with Mainland Russia (2000)

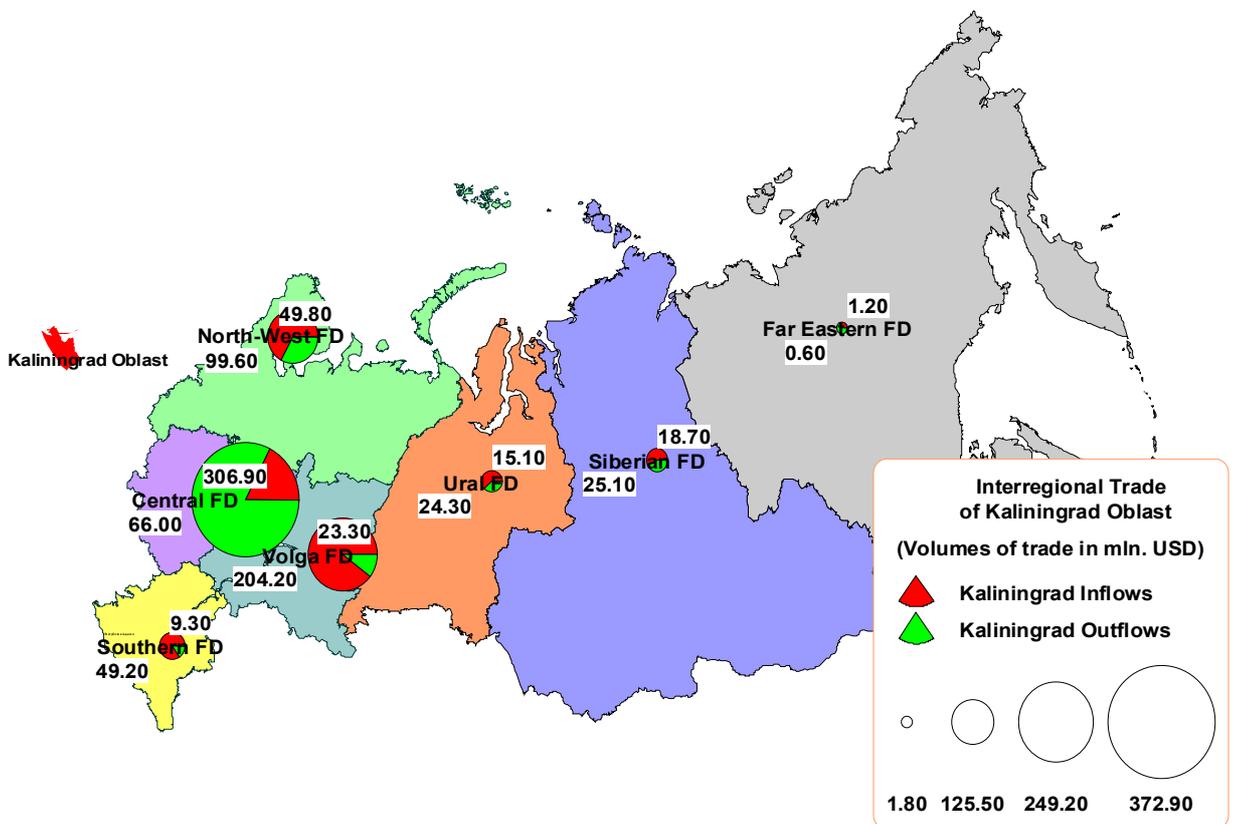
TN VED	Official figures For LMEs		New calculation	
	Trade inflows \$million	Trade outflows \$million	Trade inflows \$million	Trade outflows \$million
01 – 24 Food products and raw materials	25.1	46.7	89.1	340.8
27 Fuel and energy industry	66.1	4.7	185.2	13.2
28-35,37-40 Petrochemical industry	24.6	1.3	72	1.5
41-43 Raw leather and furs	0.0	0.0	0.1	1
44,47, 48 Wood and products	2.1	4.9	34.4	18.6
72-81 Ferrous and non-ferrous metals and products	4.5	0.0	24.3	1.5
Other sectors	4.4	7.8	63.8	55.6
Whole:	126.8	65.4	468.9	432.2

Sources: Kaliningrad Oblkomstat; Vinokurov (2002).

Food products dominate the structure of regional outflows to the Russian territory. More than 77% of them are directed at Central Federal District. As for inflows, \$185,2 millions worth of fuel was bought in Russia to satisfy the needs of Kaliningrad enterprises and private consumers due to the absence of processing plants for fuels in the region. Concerning production of petrochemical industry, up to 53% of total inflows (from Russia plus abroad) in the sector come from the Russian territory. The trade in the sector grows speedily. In wood industry, the trade with Russian mainland is characterized by exceeding inflows.

These figures prove that the region is both in inflows and in outflows strongly economically connected to mainland Russia. It amounts to \$901,1 million at least, making up 40,2% of the overall trade (\$2241,7 million). The data from the Customs Office support the results of our calculations. The Customs provide the figures for goods registered according to regime "IM 40 O EZ" under which the vast majority of goods produced in Special Economic Zone is shipped to other Russian regions. For the year 2000 \$424 million worth of goods were shipped with this certificate. It is worth mentioning that this figure grew up to \$618,7 million in the year 2001 which indicates clearly that the trade with mainland Russia has continued to grow rapidly. It represents the growth of 43,1%. The products shipped to mainland Russia under "IM 40 SEZ" were frozen fish (69,7 mln.\$), meat products (73,5 mln.\$), and automobiles (101,1 mln. \$). This remarkable growth makes the outflows to Russia overcome regional exports in about 1,5 times in 2001.

Map 1. Kaliningrad Trade with Russian regions, 2000.



Source: Vinokurov (2002).

Note: (a) Calculations for this map are based on the data for 8 main sectors, which comprise 98% of total trade with mainland Russia.

(b) FDs are Russian Federal Districts.

As we see, Kaliningrad conducts more than 90% of its combined interregional trade within the European part of the country. 41,7% fall on the Central FD, predominantly Moscow and surrounding regions. Central FD is a main destination of the goods produced in Kaliningrad. This may be explained by relative geographical proximity as well as predominant role of food outflows for which Moscow and nearby regions serve as major markets. Yet the other part of the explanation could be the specific economic role of Russian Capital which acts as all-Russian trade and financial redistribution center. On the side of deliveries to Kaliningrad, on the contrary, Central Russian regions take just third place after Volga and North-West FDs. This is best explained by pointing at the structure of Kaliningrad inflows, which is mainly made up of fuels and raw materials, and by showing the main geographical locations of these deliveries. The most considerable amounts of fuels and petrochemicals are delivered to Kaliningrad from Perm Oblast (Volga FC) as well as from other sub-regions of Volga Federal District. Komi, Arkhangelsk, and Karelia are the main sources of wood and related products as well as for sources for fuels, too.

2. Kaliningrad foreign trade: raw materials exports and rising imports

Table 2. Export and import in 1999-2001

TN VED Codes	Sectors	Export, mln.\$				Import, mln.\$			
		1999	2000	2001	2001 in % to 1999	1999	2000	2001	2001 in % to 1999
01 – 24	Food products	30,5	36,1	46,9	153,6	265,5	356,3	348,3	131,2
27	Fuel industry	91,7	159,1	133	145	22,6	12,7	5,9	26,1
28-35, 37-40	Petrochemical industry	26,8	33,7	44,4	165,8	47,5	64	77,7	163,6
41-43	Raw leather and furs	3,7	5,2	7,3	191,1	5,7	6,3	7,5	131,6
44,47, 48	Wood and its products, incl. printing production	28,4	59	56,8	200	27,4	33,1	42,9	156,6
61-64	Clothes and footwear	20,3	19,7	21,2	104,4	16,5	20,3	26,6	161,2
72-81	Metallurgy	31	35,8	21,3	68,7	24,3	40,5	49,4	203,3
84-90	Machine building	47,2	86,8	58,7	124,4	359,8	270,6	343,6	95,5
	Other goods	7,9	17,2	13,6	172	105,9	83,4	108,7	102,6
	OVERALL:	287,7	452,2	403,1	140,2	875,2	888	1 010,5	115,5

Note: The data comes from the Customs authorities and is done according to its methodology. Therefore, it does not comprise trade in services, trade with Belorussia, overseas sold fish, shuttle trade and some other groups.

Source: (1) North-West Customs Office. Obshaya charakteristika vneshney ekonomicheskoy deyatel'nosti Kaliningradskoy oblasti v 4 kvartale 2000 goda i za god v celom. (Overall characteristics of external economic activities of Kaliningrad Oblast in 4th quarter of 2000 and for the whole year 2000.) Customs Bulletin 2000/4. (2) North-West Customs Office. Obshaya charakteristika vneshney ekonomicheskoy deyatel'nosti Kaliningradskoy oblasti v 4 kvartale 2001 goda i za god v celom.

(Overall characteristics of external economic activities of Kaliningrad Oblast in 4th quarter of 2001 and for the whole year 2001) Customs Bulletin 2001/4.

As one can see, raw materials and products with low value-added - oil drilled in the region, wood, pulp, frozen fish – dominate exports. On the side of imports which are higher than exports and also are rising we see food products and machine-building production with large numbers. It is important to mention that large part of inflows in these two leading sectors is destined to be processed and be sold on Russian markets (beef, pork, chicken meat and fish – into wide variety of processed food products including canned ones; manufactures components – for assembly of automobiles and household electronics). Imports heavily overvalue exports. A part of imports are transit goods or goods that are fictitiously processed under SEZ regime in order to avoid import tariffs. Observations show that this phenomenon diminishes year by year as soon as customs office gains on effectiveness and Kaliningrad processing economy grows. Even those companies that used to use Kaliningrad for factual smuggling of goods begin to set up processing facilities in the region (for example, cigarettes).

3. Intermediate position of Kaliningrad in Russian-European Trade

Table 3. Comparative Dynamics of Kaliningrad Foreign and Interregional Trade

Year	Export		Import		Outflow		Inflow	
	\$ million	2000=100	\$ million	2000=100	\$ million	2000=100	\$ million	2000=100
1996	415.8	91.8	1001.6	112.8		110.3		67.5
1997	389.8	86.1	1209.3	136.2		72.9		47.8
1998	351.3	77.6	1148.9	129.4		59.1		22.7
1999	287.7	63.5	875.2	98.6		72.1		50.7
2000	452.9	100.0	887.9	100.0	432.2	100.0	468.9	100.0
2001	403.1	89.0	1010.5	113.8	618.7 (min)			

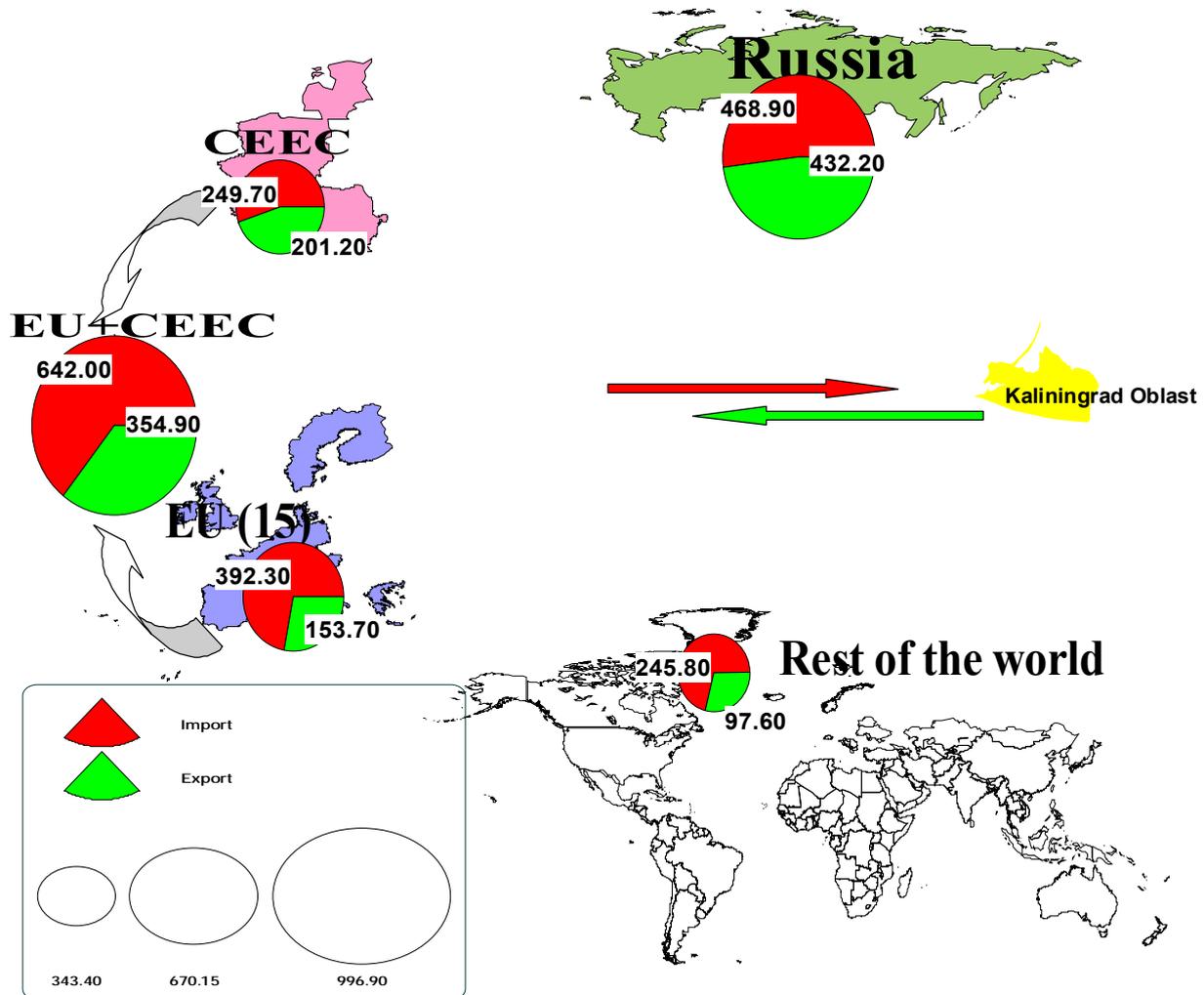
Source: North-West Customs Authorities & authors calculations.

Note: let us repeat that the figures for interregional trade do not comprise trade in services and energy supplies. Figures for exports and imports are from GTK which also implies a series of limitation (shuttle trade, trade with Belorussia, overseas sold fish, fuel bunkering excluded).

Russian regions constituted in 2000 a market for Kaliningrad goods equal in its importance to foreign ones. It is noticeable that the trade with “big” Russia is well balanced while foreign trade is characterized by largely exceeding imports. The region is economically strongly connected to mainland Russia as we demonstrated above. There exists a very positive trend in the regional trade with mainland Russia. The volumes of trade have rapidly and constantly risen since the crisis of the year 1998. This trend of 1999 and 2000 continued unchanged in the year 2001. Moreover, the trade flows with mainland Russia grew faster than foreign trade not only over the last year but also over the last three years since the financial crisis of 1998. The devaluation of 1998 explains part of this evolution, with stagnation of imported goods, becoming less competitive, whereas the strong increase in outflows to Russia mainland reflects domestic market share gains. Strong increase of inflows is explained both by volume effect (regional market share gains by firms from Russia

mainland) and by price effect for raw materials. Among the main factors, one would note the specific regulations and the existence of the Special economic zone³.

Map 2. Total trade of Kaliningrad Oblast, 2000, in mln.\$



In general, Kaliningrad region takes an **intermediate position in Russian-European Trade**. With 40% of total trade done with the Russian mainland, 20-25% with the EU15 states and about 20% with CEES (practically all of it with its immediate neighbours, Poland and Lithuania) Kaliningrad concentrates on trade with Russian regions and with wider Europe. The region has come to take a certain and relatively well-defined position which accounted for a certain trade specialization. The position of the Oblast is an intermediate one⁴. It exports predominantly raw materials and

³ The main elements and privileges attaching to the SEZ status are those of a custom zone. They include: (1) all goods imported into the Region are exempt from import duties - although some goods are restricted by quotas; (2) goods deemed to be of local manufacture (where the added value content within the Region is at least 30% or 15% in the case of electronics) and exported to the Russian Federation countries or external countries will be exempt from customs duties. It should be noted that under the heading of "Customs Duties" are included the following taxes: Duty, Excise, VAT.

⁴ Samson, 2000.

goods with low value-added and imports more processed goods. By means of this Kaliningrad takes a position of a typical developing country in relation to more developed European economies. On the other side, the region gets its supplies of raw materials from Russian regions (from fuel, petrochemicals, and energy to wood and metals) and sells processed goods of its food, furniture, cellulose and paper industries as well as assembly enterprises. This let us come to conclusion that in relation to the Russian mainland the region plays the role of a trade partner possessing comparative advantage in industrial production.

Of course, the whole economy cannot fit into one tight scheme. There are some details that are more unusual. For example, the quickly developing food processing industry operates on the imported raw meat being brought from adjoining Poland and Lithuania.

4. High Trade Openness and High Intra-Industry Trade Values

Let us calculate Intra-Industry Trade Indexes for several sectors of economy using the formula

$$IIT_x = 1 - |X_x - M_x| / (X_x + M_x),$$

where X_x is combined outflow and export of x industry, M_x is combined inflow and import of x industry; the vertical bars in the numerator denote absolute value.

Table 2. Intra-Industry Trade

Industries	IIT Index
Food products and raw materials	IIT_{food}=0,917
Fuel and energy industry	IIT_{fuel}=0,931
Petrochemical industry	IIT_{petrochem}=0,411
Raw leather and furs	IIT_{leatherandfurs}=0,984
Wood and related products	IIT_{wood}=0,930
Ferrous and non-ferrous metals and products	IIT_{metals}=0,735

In all cases except petrochemical sector we come to very high IIT values. Why? The explanation might be as following:

- Due to very small size of Kaliningrad economy.
- Due to wide definitions of industries. In fact, the IIT measuring is very sensitive to the definitions of an industry. The wider the definition is, the higher the indexes tend to be. This is exactly the case here, especially for Fuels sector. Both inflows consisting of fuels (gasoline, diesel fuel, fuel oils) and exports of raw oil gained on the territory of Kaliningrad Oblast fall within the same category.
- Due to intermediary role of Kaliningrad economy in Russian-European trade and small value-added. Kaliningrad takes an intermediary role in both directions. Within the largest Food processing sector the region, for instance, imports raw meat, processes it, and sells in mainland Russia. Within Wood sector Kaliningrad enterprises export goods with little value-added based on raw materials brought from Russia. Raw materials and processed goods are taken into account within the same industry, so it leads to high values of IIT indexes.

	GRP, mln.\$	Total Trade, mln.\$	Trade Openness
Current Prices	837,6	2241,7 mln. USD	267%*
PPP	6025,0*	2241,7	37,2%*

*Trade openness=Total trade/GRP

**Source for the figure for GRP 2000 according to PPP: calculations of the author based on *Samson, Lamande, Elisseeva, Burova, Fedorov (2002)*.

New calculations for trade flows with Russia let us re-access the figures for Kaliningrad Region's trade openness. It amounts to 267% if we take official figures for gross regional product which is 24575 mln. RUR. Trade flows with mainland Russia add significantly to the regional trade openness making the Oblast the third most open region of Russian Federation. It is worth mentioning that Ingushetia Republic as well as Khalmykia gained this degree of openness having no considerable production basis and serving as fiscal paradise.

5. Conclusion

Analysis of Kaliningrad's trade flows leads to the following conclusions:

- Kaliningrad Oblast concentrates on trade with Russian regions and with the European States.
- In this trade Kaliningrad takes an intermediary position trading with Europe as a less developed partner and with Russian mainland as a more developed partner.
- Trade with Russia plays a significant role in the trade balance of Kaliningrad Oblast making up more than 40% of overall trade flows. Russia is a major supplier of fuels and petrochemical production as well as raw materials in other sectors. At the same time mainland Russia serves as the major market for goods produced and processed in Kaliningrad Region. While raw oil and other raw materials practically make up the structure of Kaliningrad exports, processed goods dominate the structure of its outflows. Up to 78% of them are food products.
- Interregional trade flows, especially outflows to Russian regions, tend to grow substantially over the last three years after the year 1998. Such a rise within three years in the row let speak about a firm trend of positive development in trade with Russian regions. Foreign trade shows increases, too, though not as fast as interregional one. While imports sharply exceed inflows, exports and outflows are of comparable volumes. At the same time, trade outflows to mainland Russia tend to grow faster than trade exports and in 2001 heavily overvalued them.
- The growth of trade is to large extent connected to the existence of the Special Economic Zone and development of import substitution industries oriented at Russian markets.
- Although it is justified to characterize Kaliningrad as a "periphery" in political sense, it may not be justified to talk about the Oblast as a periphery in trade terms taking into consideration its high degree of trade openness to both the EU and mainland Russia.

Remarkably strong growth of the regional economy reflected in its trade flows with mainland Russia makes us hope for further economic upward trend. It lets us

speak about formation of certain production and trade specialization of the region. However, it also makes us doubt the sustainability of such a model of regional economic development in the long run. The Kaliningrad economy every year becomes more and more dependent of outflows to Russian market. These outflows, in turn, depend on further use of SEZ regulations the way they are used at the present time. As a matter of fact, one cannot say that the future of SEZ is certain. It is possible that this regime to be changed this or that way within the next years. This may happen due to Russia's WTO entry or due to further federal attempts to unify Russian economic space. Any changes that put under question the possibilities of tax-free deliveries of goods to "big Russia" would seriously endanger import-substitution industries of Kaliningrad Region which lately became prevalent in overall regional economic structure.

The state and dynamics of trade with mainland Russia is of special importance in connection with integration processes which would influence development of Kaliningrad Region's economy. Two of them are most important: the enlargement of the EU and Russia's entry in the WTO. All the dominant theories of trade and industry location – from neoclassical model to new economic geography – predict that integration will trigger specialization. Both processes as well as such ideas as the one of a Common European Economic Area (Samson, 2002) may influence Kaliningrad economy and its trade patterns significantly. In the report on the EU and Kaliningrad the European Commission draws attention to some aspects of the EU enlargement for the Oblast stating that it will have specific consequences for Kaliningrad in the movement of goods among other issues (Commission, 2001). These consequences may be positive as well as negative. Knowledge and analysis of trade flows with Russian mainland is necessary to avoid feasible dangers and risks for Kaliningrad regional economy and to use possible advantages.

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