DRAFT: PRELIMINARY VERSION.

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Estimation of the Russia's trade policy options with the help of the Computable General Equilibrium Model.[1]

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Abstract: The computable general equilibrium model was used in assessing different Russia's trade policy options. The base experiment lying in the core of our investigation is simulation of the EU eastward enlargement. According to our calculations Russia does not loose in the resulting equilibrium. This is not a zero-sum process from a point of view of Russia's social welfare. The other experiments are: simulation of Russia's WTO accession and creation of the Common European Economic Space. Change in the tariffs associated with the possible WTO accession is so small relative to the existing level of tariffs, that it does not give a significant change in the Russian economic environment. Significant changes are associated with the creation of the CEES as a free trade area between Russia and the enlarged Europe. If an FTA agreement will cover all goods and services, this will give a negative effect on the Russian economy.

Keywords: CGE models, enlargement of the European Union, Russia's WTO accession, Free Trade Area.

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1. Introduction.

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"The world has changed."

J.R.R. Tolkien *"The Lord of the Rings"*

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We are living in a changing world. This is true in all spheres of our life and economic activity. This is especially true in international affairs. The economic surroundings of Russia changes and there is a desperate need for a clever and balanced government policy in order to realize all possible gains of different processes that Russia is subject to.

One of the means of understanding possible gains and loses of a complex processes is a numerical simulation of economic reality which is the scope of this work. We use the CGE methodology to analyze effects of three different processes: EU enlargement, Russia's WTO accession and the creation of the Common European Economic Space.

The process of the eastward enlargement of the European Union is close to its final phase. But there is no clear cost/benefit analysis of this process for Russia. In this paper we concentrate on the analysis of changes in trade flows between Russia, EU, the new member-states, and the rest of the world.

The second very important political question that we deal with is the effects of Russia's accession to the WTO. The accession process started in 1994, when Russia announced its intention to be a member of the GATT. Nowadays the negotiating process is suffering form the EU's position on the Russian energy sector. These tensions leads a quite slow negotiating process, which imply that if Russian accession will come to reality it can be only in the world of a new, enlarged Europe. In terms of our research this fact means that we should use the base scenario of the EU enlargement as a benchmark equilibrium in accessing effects of Russia's WTO accession.

The third subject of our research is creation of the Common European Economic Space (CEES) between EU and Russia. This political initiative was first announced a few years ago on a high-level meeting of Russian and European politicians. There was no clear economic framework underlining this ambitious project since that. We model CEES as a free trade area between Russia and the enlarged Europe.

We choose computable general equilibrium analysis for addressing these problems for a number of reasons: first of all – this analysis is a standard tool of evaluation of complex policies in the field of the international trade. The other reason is that the CGE models enable us to give the quantitative estimates of potential gains and losses within each economy of the model.

2. Model and functional forms.

In this section the model, functional form and main variables are described. The model is a comparative static CGE model that incorporates 4 regions and 15 sectors.

Regions:

- Russia

- The European Union

- Central and Eastern European Countries (CEECs)

- Rest of the World

Sectors:

Electricity and heat	Food-processing Industry
Oil and Gas	Other industries
Other Fuels	Agriculture, services and forestry
Ferrous metallurgy	Construction
Nonferrous metallurgy	Transport & Communication
Chemical industry and oil refinery	Other services
Machinery and equipment	Finance, banking and insurance
Light industry	

A comparative static (CS) model compares the economy at two distinct points in time, without modeling any explicit time periods or time path. Typically, the two states compared are the state of the economy with a given policy change and the state of the economy without the policy change. Consequently, this method of analysis does not provide any details of the adjustment path of the economy between the two points in time.

All markets in this model are perfectly competitive. The economies of all the regions are modeled as large economies. That is, changes in relative prices within the region can effect and do effect relative prices on the same goods produced in the other regions.

Since this is a multiregional model aimed at the quantitative evaluation of trade policies, Armington assumption is applied in the modeling. This means that similar goods produced in different regions are considered as different goods. In consumer's preferences these goods are aggregated into a composite commodity by means of corresponding elasticities of substitution (Armington elasticities). These elasticities were taken at the level equal to 0.9, nonetheless, a sensitivity analysis with respect to these elasticities was made and it showed that the results did not change much as Armington elasticities varied.

In each region the model introduce a representative consumer and production capacities belongs to this representative consumer. There is a government that collects tariffs and taxes and transfer all the revenues to the consumer. Government's revenues are tariff revenue from foreign trade, and tax revenue collected from domestic producers.

Producers.

On the production side, we use a constant elasticity of transformation production function:

$$Y_j = \left[\sum_{i=1}^{15} \beta_{ij} S_{ij}^{\sigma_j^P} \right]^{\frac{1}{\sigma_j^P}} \tag{1}$$

where indices i and j represent products and regions respectively.

Y_j is an overall production in region i (GDP).

S_{ij} – production of good i in region j.

β_{ij} - share parameters that are calibrated in the model, $\sum_{i=1}^{15} \beta_{ij} = 1$

σ_j^p is the region j elasticity of transformation.

Consumers.

Consumers are presented by a 2 level nested CES function. The structure of consumer's demand, for example, in Russia can be represented by the following figure.

Figure 1: Consumer's demand.
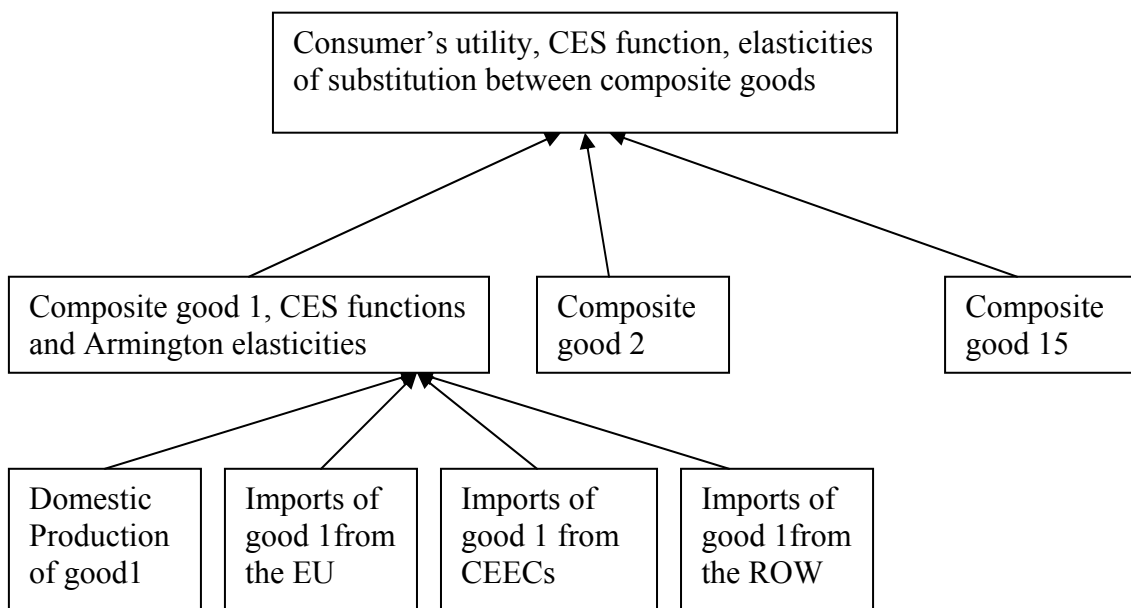
More specifically, consumer's utility is represented by the following functions.

$$U_j = \left[\sum_{i=1}^{15} \gamma_{ij} C_{ij}^{\frac{1}{\sigma_{ij}^P}} \right]^{\sigma_{ij}^P} \qquad (j = 1.....4) \qquad (2)$$

where

U_j - utility in region j,

γ_{ij} - the share parameter, I and j are still products and regions respectively.

C_{ij} - is the composite of type i in region j

σ_{ij}^p - is the elasticity of substitution among composites in region j.

Each composite, C_{ij}, is, in turn, given by a CES function

$$C_{ij} = \left[\sum_{k=1}^{4} \gamma_{ijk} (C_{ij}^k)^{\frac{1}{\sigma_{ij}^L}} \right]^{\sigma_{ij}^L} \qquad \begin{array}{l} (i = 1....15) \\ (j = 1.....4) \end{array} \qquad (3)$$

where

C_{ij} is the composite of type i consumed in region j,

γ_{ijk} are the share parameters for function (i, j) across the k sources of supply

$(\sum_{k=1}^{4} \gamma_{ijk} = 1)$,

C_{ij}^k is the consumption of good of type i in region j supplied by region k

σ_{ij}^L - lower level substitution elasticities for the function (i, j).

3. Base Scenario: EU enlargement.

This section analyses the effects of the enlargement of the European Union. The accession of new members, especially Baltic countries, is going to have the noticeable consequences for Russian economy. The main issues of the European Union (EU) enlargement, which can affect the Russian economy, are the trade diversion and trade creation, which will follow the accession of the new members. Abolishment of trade barriers between the EU and the Central and Eastern European Countries (CEECs) can lead to more efficient production within the Union and, therefore, with respect to Russia it may cause a trade diversion. The number of antidumping cases against the CEECs is going to fall dramatically and as a result that will promote the trade creation between the EU and the CEECs. Since those changes in the patterns of trade of the EU and the CEECs will influence the Russian foreign trade, the problem of estimation of the effects of the European Union enlargement on the Russian economy represents an important and relevant question.

This paper is one of the first attempts to apply CGE modeling to the problem of estimation of the impact that the EU enlargement will have on Russian economy. Nevertheless, some other papers have already investigated possible outcomes of the EU enlargement with the help of an applied general equilibrium analysis.

For instance, Lejour [7] basing on GTAP model[5] tried to evaluate the enlargement. Two distinguishing features of this paper are that, first, it focused mostly on the effects on the Candidates and existing members of the European Union, and the other is that the model employed did not incorporate Russia as a separate region. Russia was included into the region that consists of the countries-members of the Former Soviet Union. So the results of this model with respect to Russia should be interpreted carefully. But what is important for our research is that both models GTAP and ours included the candidates and members of the European Union, therefore, our results could be somehow compared to the results of GTAP model according to figures obtained for the candidates and EU. Lejour argues that the volume of GDP in the candidates countries increases by 2.5% and our research shows 1.82% increase, what if we take into account the differences in the data (this version of GTAP utilized data for

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[5] The GTAP model is a multiregional, multisector, computable general equilibrium model, with perfect competition and constant returns to scale. Bilateral trade is handled via the Armington assumption. The model also gives a wide range of closure options, including a selection of partial equilibrium closures, which facilitate comparison of results to studies based on partial equilibrium assumptions.

1997 year, whereas, our model used 2000 as the base year) are mostly the same figures. As far as the terms of trade are concerned, the results differ, namely, Lejour suggests 0.3% deterioration in terms of trade for the candidates, while our results stand for 0.15% improvement. For the existing members of the European Union, the results are mainly the same.

Another two papers based on GTAP model examined the enlargement, but, in case of these two papers, the main focus was made on the outcomes for Russia. The first one by Pekka Sulamaa [10] from the Research Institute of Finnish Economy, and the second [9] – by Ivan Samson and Xavier Greffe [9]. But, although, these papers focused on Russia, the model that was used did not distinguish Russia from other countries of the Former Soviet Union (FSU). With respect to FSU these works suggest 0.09% deterioration in terms of trade while our model stands for 0.087% improvement. On the other hand, the main distinction between our research and those papers is the fact that we have managed to build a model that includes Russia as a separate region and to get results on possible outcomes of the enlargement not for the FSU (Former Soviet Union), but for Russia itself.

Two of the most important industries for Russia from the point of view of exports revenues are Oil and Gas, Nonferrous Metallurgy. Our research suggests a drop in Russian exports in these industries by approximately 0.09% and 0.04% correspondingly, what in nominal values account for almost 64 mln. euro.

Diversification of Russian production is a significant result of the EU enlargement. It was shown that production increases in such sectors as Ferrous metallurgy, Food-processing Industry, Agriculture, services in Agriculture and Forestry, and Construction. On the other hand, the level of production falls in Oil and Gas, Nonferrous metallurgy, Chemical industry and oil refinery, Electricity and heat.

3.1 Macroeconomic effects.

Chart[3.1]: *Changes in GDPs by regions.*
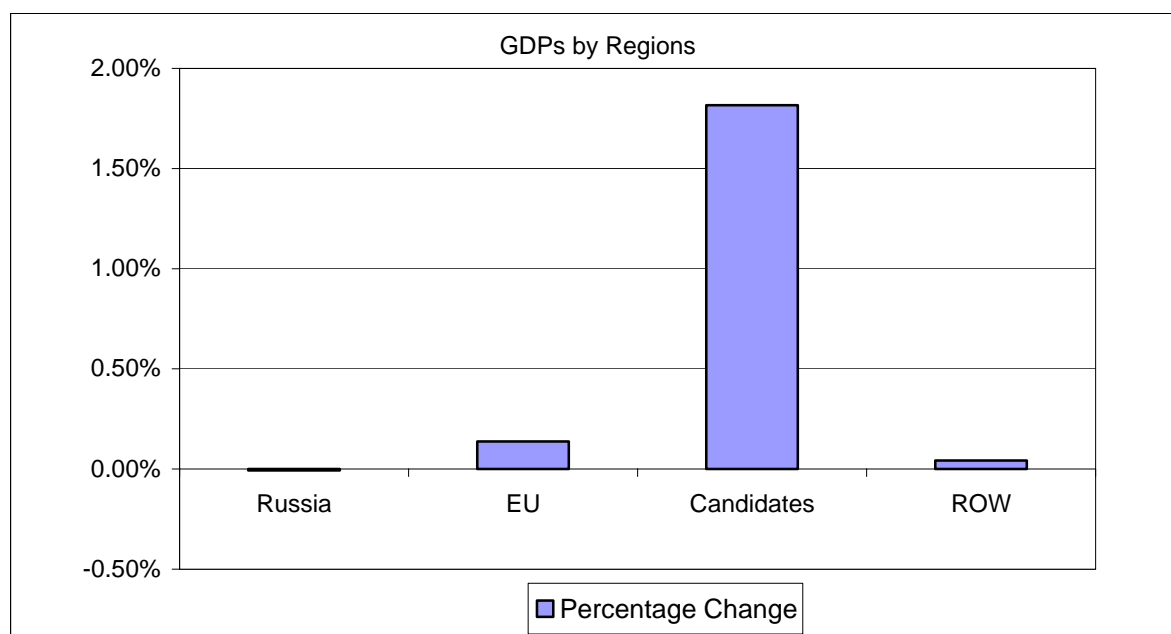
The first remarkable result of the enlargement is that changes in GDPs are small in all the regions except the Candidates. With respect to Russia this is a 0.01% fall that lays within the bounds of the measurement error in the initial data, therefore, it is approximately zero.

The sizable change in the Candidates GDP can be expected and explained by the fact that the European Union is the main trade partner of the countries-candidates, accounted for approximately 60% of an overall exports, therefore, the abolishment of trade barriers enhanced trade between these regions and, besides, improved trade patterns in terms of more efficient reallocation of the production in order to meet demands of the trade partner, decreasing distortions that were due to previous non-zero tariffs.

Table [3.1]: Terms of trade by regions.

		Benchmark	Enlargement	Percentage Change
	price of export	1.177	1.175	-0.17%
RUS	price of import	1.172	1.169	-0.26%
	Terms of Trade	**1.004**	**1.005**	**0.09%**
	price of export	1.189	1.185	-0.34%
EU	price of import	1.170	1.167	-0.26%
	Terms of Trade	**1.016**	**1.015**	**-0.08%**
	price of export	1.167	1.138	-2.49%
CEECs	price of import	1.178	1.147	-2.63%
	Terms of Trade	**0.991**	**0.992**	**0.15%**
	price of export	1.173	1.172	-0.09%
ROW	price of import	1.192	1.191	-0.08%
	Terms of Trade	**0.984**	**0.984**	**0.00%**

Russia experiences slight gains in terms of trade, that is Russian exports become more expensive when it is compared to Russian imports. The picture for the Union is symmetric, terms of trade worsen for the members of the European Union. As regards candidates, both their exports and imports become cheaper and this fact could be explained by relatively high initial barriers between them and existing members of the Union, while tariffs that the European Union imposes on imports from candidates are rather low, and, since, these changes in prices are not so sizable for the Union. Nonetheless, the candidates face gains in terms of trade.

3.2 Effects on Russian production.

The most remarkable result of the model is that after the enlargement diversification of Russian production is going to increase. Production in the largest Russian sector –Oil and Gas that does not include oil refinery in our model, but includes oil products is going to decrease. On the other hand, Russian production in such industries as food-processing, agriculture, services in agriculture and forestry rises. These are the direct effects that show diversification of Russian production.

Chart[3.2]: Changes in Russian production by sectors:
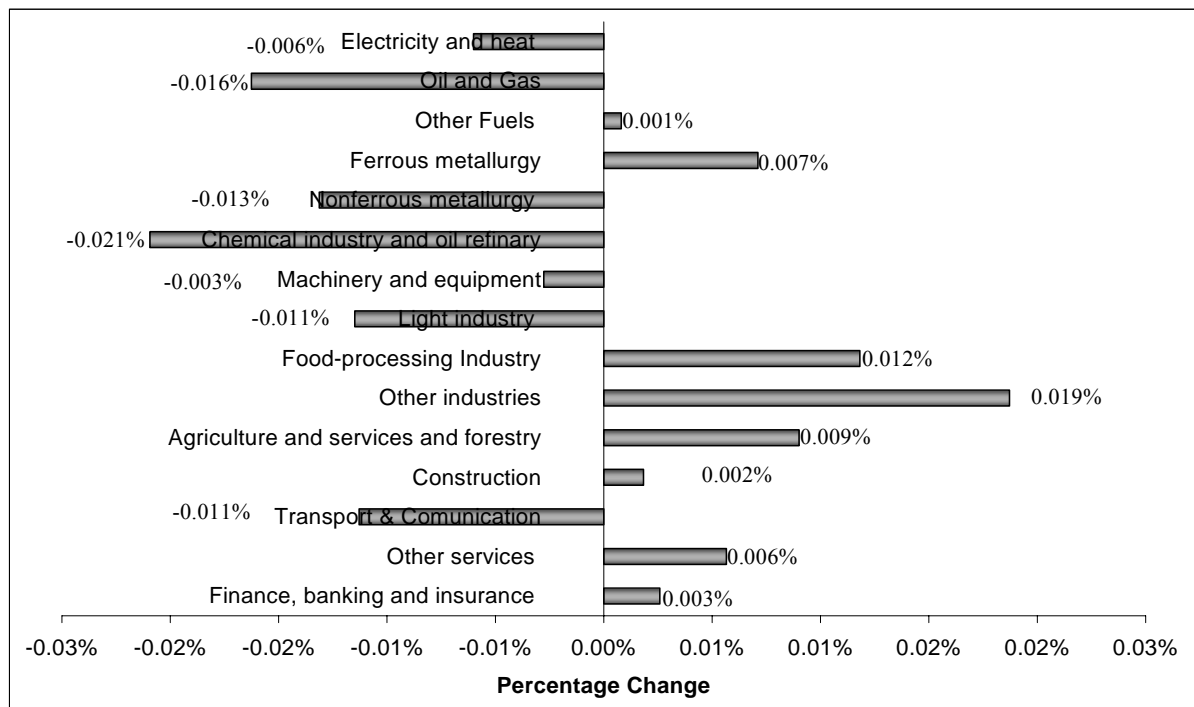
To see the reasons of such changes a more detailed and deep investigation of trade patterns is needed. We will focus on one sector, for example, Nonferrous metallurgy to see the origins of these changes.

The model uses data in nominal values, namely, millions of Euro. Therefore, in the benchmark equilibrium relative prices (with respect to the price on the first good, in our case – electricity) are all equal to one. In the new equilibrium changes in the relative producer prices show how this or that region face new conditions and how terms of trade change. If the price for a certain good in one region becomes lower that that of in the other, then we can expect that this region will export and probably produce more of this good, and the other regions will consume more of the good produced in this favorable region (this kind of reasoning is true if other prices are hold equal, otherwise there may exist some sector where terms of trade are even better for this favorable region, and this region can switch to the second product instead of the first). Regarding Nonferrous metallurgy, the prices are as follows:

	Benchmark Equilibrium	New Equilibrium	Change
RUSSIA	1	0.999921	-0.0079%
EU	1	0.998735	-0.1265%
CEECs	1	0.985903	-1.4097%
ROW	1	0.999528	-0.0472%

The price for products of Nonferrous metallurgy is going to be the lowest in countries-candidates and the highest in Russia. Hence, Russia will import more products of this sector from abroad and produce less domestically. Figures on production, imports and exports, presented in chart 3.2 and table 3.2 show that Russian production of Nonferrous metallurgy lowers together with its exports, while Russian imports of Nonferrous metallurgy increase. Candidates trade changes in the opposite direction, see table 3.2. Candidates production of Nonferrous Metallurgy increases, exports from CEECs increase, while imports fall.

The size of the production of Ferrous metallurgy is going to fall after the enlargement, while production of Nonferrous metallurgy , Oil and Gas decreases. These results coincide with the possible effects of the enlargement, suggested in literature. Namely, in paper by Vincent Aussilloux and Michael Pajot [] the authors argue that Russia and the former USSR countries USSR account for 6.01% of the CEECs competition on the EU markets. It is claimed in the paper that the advantages of CEECs due to the accession will allow them to capture market shares from neighboring, non-EU countries. In such sectors as energy, ores & unprocessed minerals, iron and steel, and nonferrous metals CEECs face about 18% of

competition from the former USSR countries. In these industries Russia can expect the highest losses in balance of trade.

Different sectors of services change in the opposite direction. This is explained mostly by different imports tariffs that the European union and countries candidates impose on services in these sectors. More closely, differences in tariffs rates on transport and communication, retail trade and catering between candidates an the European union are much huger then differences in tariffs rates between these regions in finance banking and insurance, and other services. Therefore, after the accession, when these differences are removed Russia loses in sectors where the union and candidates experience gain in terms of trade (see table C5, appendix C for relative producer prices).

3.3 Effects on Russian international trade by sectors.

After the enlargement EU's and candidates producers face more efficient trade between them and switch to higher levels of production of the goods which are more demanded by the trade partner, as a result of such changes producer prices on goods produced within the union will be lower then the prices on the same goods produced in Russia. Therefore, Russian domestic production has to compete under higher pressure from these regions, which in turn leads to higher levels of Russian imports and lower levels of Russian exports.

The results of the modeling suggest that on the trade side Russia mainly suffers. The sum of all Russian exports fall by 0.03% from 276499 mln euro in the benchmark equilibrium to 276414 mln euro in the new equilibrium.

This result follows from the drop in the exports of oil, gas and oil products, which are also incorporated into sector Oil and Gas. Russian exports is mostly concentrated in such industries as Oil and Gas, nonferrous metallurgy (see table 3.2), therefore, even a slight drop in these sectors result in the huge loss in nominal values.

Exports of the products of electricity and heat also fall by almost 0.7 percents. Nevertheless, Russian exports of electricity and heat account for only 0.6% of the overall Russian exports, therefore, this change is to some extent negligible. Since electricity is characterized by relatively high costs of transportation of electricity (huge loses of power while transmitting by wires) it could by exported to only close neighbors, and, hence, exports and imports of electricity are small.

The sum of all Russian imports rise by 0.2% from 234304 mln euro in the benchmark equilibrium to 234807 mln euro.

Russian imports increase in all the sectors of the economy and this fact go strictly in line with the theory of international trade. As result of the abolishment of the trade barriers between countries candidates and the European Union relative consumer price of the goods produced in the union and candidates become lower then that of the good produced domestically in Russia, therefore, it becomes more profitable to import product from abroad, that is, in our model, to import from candidates and the union. The amount of imported good increase up to the point when profitability of importation and domestic production of these goods are equated (the markets are perfectly competitive in the model).

Table [3.2]: Changes in Russian trade flows.

	Imported from EU	Exported to EU	Imported from Candidates	Exported to Candidates	Imported from ROW	Exported to ROW	**Aggregated Import**	**Aggregated Export**
Electricity and heat	0.12%	-0.13%	1.48%	-1.11%	0.04%	-0.04%	0.25%	-0.69%
Oil and Gas	0.13%	-0.12%	1.38%	-1.05%	0.05%	-0.03%	0.36%	-0.09%
Other Fuels	0.12%	-0.13%	1.40%	0.29%	0.05%	-0.05%	0.14%	-0.04%
Ferrous metallurgy	0.12%	-0.15%	1.41%	2.99%	0.05%	-0.05%	0.18%	0.01%
Nonferrous metallurgy	0.12%	-0.13%	1.17%	1.02%	0.05%	-0.03%	0.13%	-0.04%
Chemical industry and oil refinary	0.14%	-0.12%	1.41%	-0.49%	0.06%	-0.02%	0.24%	-0.10%
Machinery and equipment	0.13%	-0.14%	1.17%	0.99%	0.06%	-0.04%	0.31%	-0.05%
Light industry	0.08%	-0.13%	0.22%	-1.85%	0.06%	-0.03%	0.09%	-0.14%
Food-processing Industry	0.10%	-0.15%	1.80%	6.89%	0.05%	-0.06%	0.19%	0.33%
Other industries	0.12%	-0.16%	1.38%	1.55%	0.05%	-0.06%	0.28%	0.10%
Agriculture, services in agriculture and forestry	0.10%	-0.15%	1.41%	4.20%	0.04%	-0.05%	0.15%	0.12%
Construction	0.10%	-0.14%	1.19%	-0.85%	0.04%	-0.05%	0.17%	-0.12%
Transport & Comunication	0.11%	-0.13%	1.04%	-1.87%	0.04%	-0.03%	0.17%	-0.16%
Other services	0.10%	-0.14%	1.17%	3.59%	0.03%	-0.05%	0.18%	0.09%
Finance, banking and insurance	0.10%	-0.14%	1.14%	-1.33%	0.04%	-0.05%	0.18%	-0.15%

In the services sectors, we observe a slight diversification of exports. However, in terms of the overall exports the value of these sectors shrinks. The main reason is that after the enlargement Russian services exports face higher competition from the services produced in the European Union and countries candidates, therefore, in aggregated figures exports of services fall. But with respect to intersectional changes among services, we see, exports of agriculture, services in agriculture and forestry together with other services is going to rise,

while exports of all the other services is going to fall. A remarkable feature of all these sectors is a low level of exports, therefore, all these changes result mostly from changes in domestic production and relative profitability of these sectors compared to manufacturing and power sectors.

3.4   Changes in revenues from international trade.

In this section we examine the outcomes of the enlargement on revenues from international trade for Russia, the European Union, and candidates-countries. The revenues were splitted into two groups, first, producer revenues received from exports, that is, producer price of good multiplied by the value of exports of this good, and the change in this measure can tell us how the changes in trade flows affected domestic producers. Second, tariff revenues that go to the budget from the goods produced in other regions and imported into the country. The sum of these measures will reflect the fact how changes in trade patterns effected actual revenues. For example, an abolishment of trade barriers will both increase trade flows and in this way increase producer revenues received from exports, but, on the other hand, will lower tariff revenues up to zero. The fact what of the effects dominates will evaluate the policy.

Table [3.3] reveals that the enlargement actually increases Russian revenues that come from international trade. It appears that candidates are the countries that positively affect Russian profits from international trade, while other regions almost do not influence this tendency.

Table [3.3]: Revenues from international trade for Russia.

	EU			CEEC			ROW			Total Trade		
	Benchmark	Enlargement	Change	Benchmark	Enlargement	Change	Benchmark	Enlargement	Change	Benchmark	Enlargement	Change
Producer revenue received from exports	107326	107321	**0.00%**	13727	14079	**2.57%**	155446	155459	**0.01%**	276499	276859	**0.13%**
Tariff revenue received from imports	7766	7773	**0.10%**	3492	3529	**1.06%**	14957	14965	**0.06%**	26214	26267	**0.20%**
Producer revenue + Tariff revenue	115091	115094	**0.00%**	17218	17608	**2.26%**	170403	170425	**0.01%**	302713	303126	**0.14%**

Both a rise in exports to the countries candidates and a rise in imports from them result in higher producer revenues and tariff revenues from international trade. Changes in producer revenue and tariff revenue account for 2.57% and 1.06% respectively. But, since, trade with candidates does not account for a huge share in the overall Russian international trade, this

results in only 0.13% rise in the producer revenues from the whole Russian international trade, and in 0.20% increase in tariff revenues.

If we consider the candidates, and as table [3.4] profs, we can see that the abolishment of trade barriers negatively affected revenues from international trade. Namely, with respect to trade with the European Union (main trade partner), an increase in producer revenues did not overcome the decline in trade revenues. A huge increase in producer revenues (2.9%) was lower than the initial level of tariffs revenues. Even trade with Russia became less profitable from the point of view of government's budget. The reason for such changes lies in the fact that after the enlargement countries-candidates will have to put their tariffs on goods imported from third countries at the levels of tariffs that the union imposes on goods imported from the same countries. Therefore, changes in tariffs resulted in 54% fall in tariffs revenues collected from goods imported from Russia, not overwhelming a 1.13% rise in producer prices. The same result holds for trade with the "Rest of the World". Finally, the aggregated figure for the changes in the overall revenues of the candidates from international trade is a - 0.65%.

Table [3.4]: Revenues from international trade for Candidates.

	EU			CEEC			ROW			Total Trade		
	Benchmark	Enlargement	Change	Benchmark	Enlargement	Change	Benchmark	Enlargement	Change	Benchmark	Enlargement	Change
Producer revenue received from exports	107326	107321	0.00%	13727	14079	2.57%	155446	155459	0.01%	276499	276859	0.13%
Tariff revenue received from imports	7766	7773	0.10%	3492	3529	1.06%	14957	14965	0.06%	26214	26267	0.20%
Producer revenue + Tariff revenue	115091	115094	0.00%	17218	17608	2.26%	170403	170425	0.01%	302713	303126	0.14%

As regards the European Union, although, the sizes of the effects are the same, the rise in producer revenue dominates, the reasons for the changes are different. In this case, decrease in tariff revenues received from trade with Russia and the "Rest of the World" was the outcomes of a little fall in the intensity of trade with these countries. The countries that previously imported goods to the European Union partially switched from importing from existing members to the candidates. But these results are small and can be treated as measurement errors. What is important is that the fall in tariff revenues that go from the candidates was lower then the rise in producer revenues.

Table [3.5]: Revenues from international trade for the EU.

	RUS			CEEC			ROW			Total Trade		
	Benchmark	Enlargement	Change	Benchmark	Enlargement	Change	Benchmark	Enlargement	Change	Benchmark	Enlargement	Change
Producer revenue received from exports	67090	67160	**0.10%**	119485	121829	**1.96%**	885491	886603	**0.13%**	1072067	1075592	**0.33%**
Tariff revenue received from imports	3150	3146	**-0.14%**	1667	0		30068	30040	**-0.09%**	34885	33186	**-4.87%**
Producer revenue + Tariff revenue	70240	70306	**0.09%**	121152	121829	**0.56%**	915559	916643	**0.12%**	1106951	1108778	**0.17%**

It could be explained by the structure of demand in the Union and candidates investigated thoroughly by Vincent Aussilloux and Michael Pajot [2]. They argue that there is relatively poor fit between CEECs exports and EU demand. The strong points of the CEECs are the sectors in which the EU imports relatively little. Which can lead to particularly low potential changes in the levels of trade. Namely, candidates have high potential in such sectors as Iron Steel industry, construction materials, furniture, transportation equipment, but in these sectors the EU is strong itself and the share of the imports in any of these sectors in the total EU imports does not exceed 1.6%. On the other hand, in such sectors as electricity, agricultural production, clothing, energy, electrical equipment, where the EU exhibits strong demand for imports are not the sectors in which the CEECs have major potential. Therefore, it can be claimed that candidate's production does not meet the demands of the existing members of the union.

4 Second scenario: WTO accession.

In this section we analyze the effects of Russia's WTO accession on Russian economy by means of our GCE model. First, we describe the possible outcomes for Russian economy and provide results of similar works on the subject and compare them with ours. Second, in subsection 4.1 we analyze effects on GDP, and terms of trade for each region. In subsection 4.2 sectoral effects on Russian production are given. Then we examine effects on Russian international trade, and in subsection 4.4 we look at the changes in revenues from international trade.

The world trade Organization came into being in 1995 to promote efficient and fair trade among its members. Although it is rather young organization, its successor was General Agreement on Tariffs and Trade (GATT) established in 1947, soon after the Second World War. The main goals of GATT were to promote and secure trade liberalization. Cuts in tariffs helped to obtain high levels of economic growth, playing the role of an instrument of economic and trade reforms. But GATT could not deal efficiently with changes in the world trade patterns that led to the increasing number of bilateral trade agreements undermining GATT's credibility. So the last trade negotiation round of GATT – Uruguay round, held from 1986 to 1994 led to the WTO's creation. The issues that are brought to a closer by WTO are administering trade agreements, providing an arena for trade negotiations, reviewing national trade policies.

According to the information provided by WTO[6], the structure of WTO is as follows. The WTO has nearly 150 members, accounting for over 97% of world trade. Around 30 others are negotiating membership. All the members make decisions, typically by consensus. A majority vote is also possible but it is argued that it has never been used in the WTO, and was extremely rare under the WTO's predecessor, GATT. The WTO's agreements are to be ratified in all members' parliaments. The WTO's top level decision-making body is the Ministerial Conference which meets at least once every two years. Below it is the General Council which meets several times a year. The General Council also meets as the Trade Policy Review Body and the Dispute Settlement Body. At the next level, the Goods Council, Services Council and Intellectual Property (TRIPS) Council report to the General Council. A number of specialized committees deal with the individual agreements and other areas such as membership applications and regional trade agreements.

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[6] Official WTO site – www.WTO.org

According to the report of the director-general of the WTO presented in 2002 [1], elimination of barriers to merchandize trade in both industrialized and developing countries could result in welfare gains ranging from 250 billions $US up to 620 billions $US annually.

Russia has applied for membership in the WTO in 1993, soon after a working party was formed to explore possible Russia's accession. Negotiations have been held up to nowadays and a final agreement has not been reached yet. Therefore quantitative evaluation of the possible outcomes for Russia of the accession could be useful. There are a number of works that already tried to answer this question but a few of them used CGE approach. The most interesting of such works is the paper by Jasper Jensen, Thomas Rutherford and David Tarr [6].

Jensen and co-authors suggest 6.7% gain for Russia in terms of consumption in the medium run and 54% in the long run when the impact of capital stock is taken into account. The model that was presented in this paper utilized increasing returns to scale functions to represent production in some sectors, and constant returns to scale in the others. While our model, in contrast to Jensen's assumes perfect competition in all the sectors, and this is obviously a strong simplification. Nonetheless, this paper also provides results under the assumption of perfect competition in all the sectors, that is, when productivity impacts are not taken into account in the model. And this setting of the model is quite close to ours, therefore the results could be compared. Namely, Jensen suggests 0.3% welfare gain as a percentage of GDP, while our model provides 0.13% loss. So the differences in the results are not large and they can be explained by the fact that Jensen and co-authors modeled Russia as a small open economy, while in our model all the regions were modeled as large open economies.

Another important research was done under supervision of academician Nikipelov [14]. This work uses Input-Output analysis for estimating effects of the Russia's WTO accession. The results presented in this research imply that even on the case of a 50% tariff cut reduction in Russian production will be only 1%, which, to some extant, goes in line with the findings of our research.

Let us now discuss the results of our research on Russia's WTO accession.

4.1 Macroeconomic effects.

The results obtained show that Russia loses both in terms of GDP, but the size of these loses are quite small. Regarding other regions, they experience small decrease in GDPs. Fall in GDP in all regions is due to fall in revenues from international trade. We suggest 1.16% fall in revenues for the existing members of the European Union and 1.03% for countries-candidates, and since, we modeled all the regions as large economies, this result goes in line with the theory of optimal tariff.

Chart[4.1]: *Changes in GDPs by regions.*
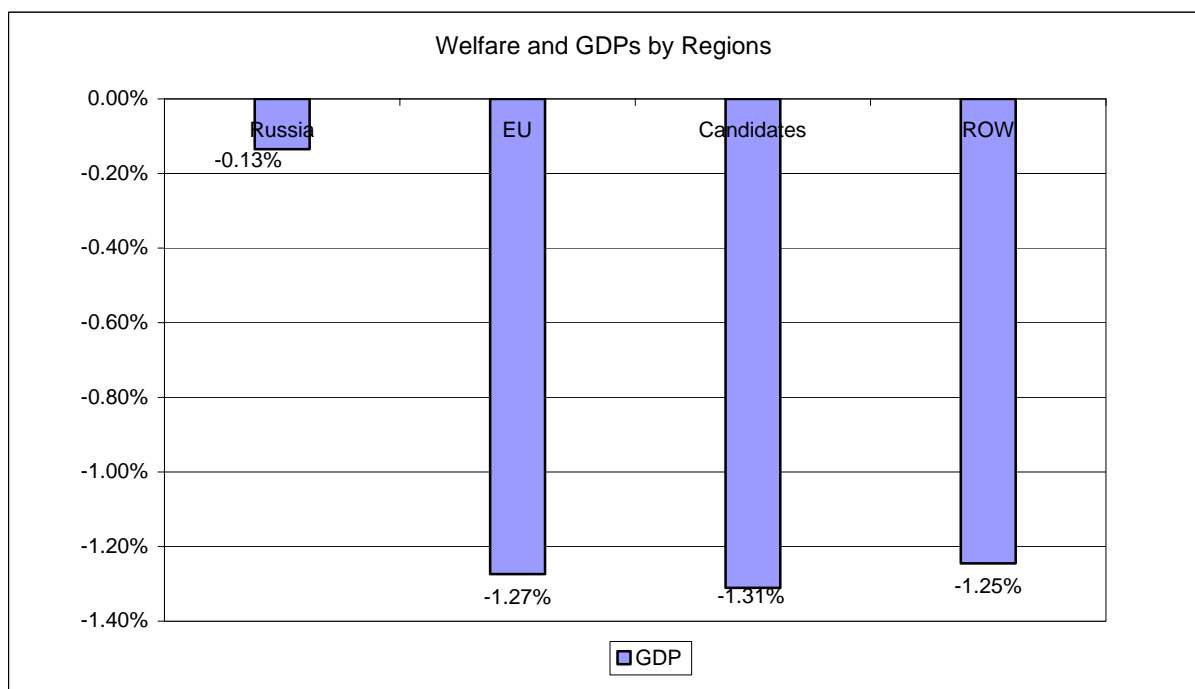
Russia experiences gains in terms of trade that go both from fall in the price of imports and rise in the price of exports. But the sources of these changes are different. Prices of imports goes down simply because the tariffs are set at the binding levels. The reasons for the price of exports to go up is more complicated, namely, relative producer prices go up in all the regions except Russia. This happens because Russian producers are now confronted with higher competition and therefore relative producer prices of Russian production become lower than that of in the other regions.

Table [4.1]: Terms of trade by regions.

		Enlargement	WTO accession	Percentage Change
RUS	price of export	1.175	1.178	0.25%
	price of import	1.169	1.165	-0.32%
	Terms of Trade	**1.005**	**1.011**	**0.57%**
EU	price of export	1.185	1.199	1.19%
	price of import	1.166	1.180	1.17%
	Terms of Trade	**1.015**	**1.016**	**0.02%**
CEECs	price of export	1.138	1.149	0.98%
	price of import	1.147	1.161	1.19%
	Terms of Trade	**0.992**	**0.990**	**-0.21%**
ROW	price of export	1.172	1.184	1.06%
	price of import	1.191	1.204	1.14%
	Terms of Trade	**0.984**	**0.983**	**-0.07%**

Terms of trade in other regions do not change so much. The only sizable change is the drop an terms of trade in candidates countries by 0.2%. The magnitudes of changes in the other regions are much smaller because the share of exports to Russia in their total exports is relatively small and therefore the cut in Russian tariffs did not effected their terms of trade much.

4.2 Effects on Russian production.

To understand sectoral effects of the WTO accession, we refer to two shocks in each sector. First, an industry where tariff is lowered confronts higher competition on the domestic market since relative consumer prices of the imported goods fall compared to consumer prices of goods produced within Russia. This, in turn, leads to the shifts in consumer demands from domestic goods to the imported, thus, resulting in higher import intensity. On the other hand, the drop in demand for domestic goods leads to lower relative producer prices within Russia forcing exports intensity to go up, and as table [D.5] appendix D shows, producer prices increase in Russia much lower then that of in the other regions, thus, relative producer prices in Russia fall compared to producer prices in the other regions. Therefore we can expect both a rise in imports and a rise in exports, but what happens in our model is that in almost all the sectors the second effect, namely, the fall in relative producer prices overweighs the first effect, the diminution of the consumer prices on foreign good. These effects are higher in the industries and lower in the services sectors, where expected falls in tariffs are higher. So these effects result in the fact that the first and the second effects appear to be almost equal in

almost all services sectors, and in the finance, banking, and insurance, where we expect the highest decrease in tariffs, import intensity even increases, and table [4.2] reveals this.

In addition to these two effects on the demand side, the diminution of the tariffs leads to the supply effects that result in changes in production.

Chart[4.2]: Changes in Russian production by sectors:
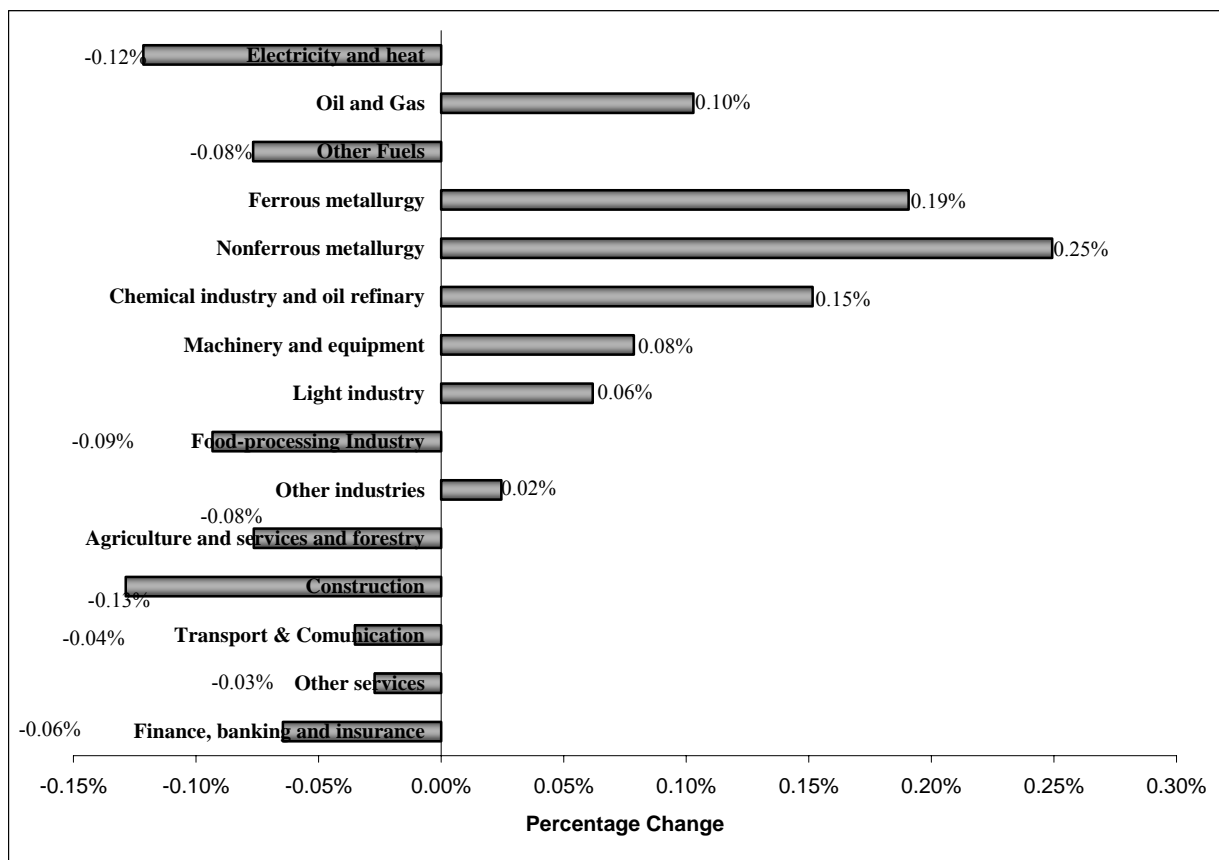
Changes in production are the results of more efficient reallocation of resources due to lower tariff rates. The diminution of tariffs reduces distortions that necessarily appear if the tariffs are not equal zero, and this is done by more efficient international trade. Regions switch they production from to the sectors where they have had comparative advantage to the sectors where they now have comparative advantage.

Production in such sector as oil and gas, ferrous metallurgy, nonferrous metallurgy, chemical industry and refinery, machinery and equipment, light industry increases by rather small amount. The highest change is achieved in nonferrous metallurgy, namely, production in nonferrous metallurgy rises by 0.25%. All the services sectors experience decrease in their production. GDP in Russia falls only by 0.13%.

4.3 Effects on Russian international trade by sectors

In this section we analyze sectoral effects on trade flows between Russia and the other regions. In aggregate figures Russian imports rise by 0.1%, while total exports do up by 0.9%. Although aggregated numbers are quite predictable what is interesting in the results is the changes in trade flows by sectors.

It appears that a slight rise in imports is mostly due to rather sizable increase in imports in such sectors as finance, banking , and insurance, and all other services. This fact is explained by high tariffs rates in these sectors and, consequently, highest decreases in tariffs after the WTO accession. In the other sectors the drop in tariffs was overweighed by higher relative producer prices, when they are compared to other regions, and therefore resulted in a slight decreases in imports of the goods and services produced in these sectors.

But the important fact is a rather high decrease in imports in oil and gas (which did not include oil refinery in our model), and Chemical industry where Russia imports are low and rather small drop in such industries as Light industry where Russian imports are quite sizable. And this is one of the reasons why total imports are positive while in almost all the sectors imports decreased.

Table [4.2]: Changes in Russian trade flows.

	Imported from EU	Exported to EU	Imported from Candidates	Exported to Candidates	Imported from ROW	Exported to ROW	**Aggregated Import**	**Aggregated Export**
Electricity and heat	-1.11%	1.16%	-1.13%	1.20%	-1.09%	1.13%	-1.11%	1.17%
Oil and Gas	-1.15%	0.93%	-1.15%	0.97%	-1.14%	0.91%	-1.15%	0.92%
Other Fuels	-1.12%	1.10%	-1.15%	1.15%	-1.10%	1.09%	-1.11%	1.09%
Ferrous metallurgy	-1.06%	0.85%	-1.08%	0.88%	-1.04%	0.82%	-1.05%	0.83%
Nonferrous metallurgy	-1.11%	0.79%	-1.15%	0.82%	-1.12%	0.76%	-1.12%	0.77%
Chemical industry and oil refinary	-0.05%	0.89%	-0.07%	0.92%	-0.02%	0.86%	-0.04%	0.88%
Machinery and equipment	-0.02%	0.96%	-0.05%	0.99%	0.00%	0.93%	-0.01%	0.95%
Light industry	-0.18%	0.98%	-0.19%	1.01%	-0.17%	0.95%	-0.17%	0.97%
Food-processing Industry	-0.85%	1.13%	-0.88%	1.17%	-0.82%	1.11%	-0.83%	1.12%
Other industries	0.23%	1.01%	0.20%	1.05%	0.25%	0.99%	0.24%	1.01%
Agriculture, services in agriculture and forestry	-1.02%	1.12%	-1.05%	1.15%	-1.00%	1.09%	-1.01%	1.10%
Construction	-0.93%	1.17%	-0.95%	1.20%	-0.91%	1.14%	-0.92%	1.16%
Transport & Comunication	-0.95%	1.07%	-0.97%	1.11%	-0.94%	1.05%	-0.95%	1.06%
Other services	10.70%	1.07%	10.67%	1.10%	10.72%	1.04%	10.71%	1.05%
Finance, banking and insurance	13.40%	1.10%	13.34%	1.14%	13.42%	1.08%	13.41%	1.09%

Total exports rise by 0.9% from 276414 mln euro in the benchmark equilibrium (after the enlargement of the EU) to 278968 mln euro after the WTO accession. Exports increase in all the sectors. The differences between producer prices in Russia and other regions diminishe thus making Russian products more competitive on foreign markets. The most influential effect is the increase of exports in the Oil and Gas sector, which in nominal values reaches 460 mln euro.

4.4 Changes in revenues from international trade

In this subsection we explore the changes in revenues from international trade for all the regions of the model.

Producer revenues received from imports in Russia go down by 0.34% and this happens due to the changes in relative consumer prices, namely, although, Russian exports increased by approximately 1%, the price of it decreased and this effected appeared to be higher than the rise in imports, thus, resulting in the fall of producer revenues from exports.

Tariff revenues also go down but in much higher proportion. To explain this changes we refer to two different effects. First, diminutions in tariff rates, that, if we look at primary affects, negatively effected tariff revenues. Second, a fall in the imports intensity after the accession, which was discussed in details in the previous subsection.

Table [4.3]: Revenues from international trade for Russia.

	EU			CEEC			ROW			Total Trade		
	Enlarge ment	WTO accessio	Change	Enlarge ment	WTO accessio	Change	Enlarge ment	WTO accessio	Change	Enlargeme nt	WTO accession	Change
Producer revenue received from exports	107321	106968	**-0.33%**	14079	14038	**-0.30%**	155459	154908	**-0.35%**	276859	275914	**-0.34%**
Tariff revenue received from imports	7773	6410	**-17.54%**	3529	2900	**-17.80%**	14965	12340	**-17.54%**	26267	21650	**-17.58%**
Producer revenue + Tariff revenue	115094	113378	**-1.49%**	17608	16938	**-3.80%**	170425	167248	**-1.86%**	303126	297564	**-1.83%**

As regards changes in revenues for the candidates and existing members of the European Union, tables [4.4] and [4.5] show that both these regions experience rather sizeable losses in the revenues of the producers that go from exports. These are the effects of changes in relative producer prices.

Table [4.4]: Revenues from international trade for Candidates.

	RUS			EU			ROW			Total Trade		
	Enlarge ment	WTO accessio	**Change**	Enlarge ment	WTO accessio	**Change**	Enlarge ment	WTO accessio	**Change**	Enlargeme nt	WTO accession	**Change**
Producer revenue received from exports	31842	31815	**-0.09%**	102411	101085	**-1.30%**	22301	22013	**-1.29%**	156554	154912	**-1.05%**
Tariff revenue received from imports	357	361	**1.04%**	0	0		1349	1350	**0.06%**	1707	1711	**0.26%**
Producer revenue + Tariff revenue	32199	32175	**-0.07%**	102411	101085	**-1.30%**	23651	23363	**-1.22%**	158261	156623	**-1.03%**

Besides changes in producer revenues, these regions are going to receive higher revenues from the imports' flows that go from Russia. Namely, tariffs revenues received from Russian imports by the candidates increases from 357 mln euro in the benchmark equilibrium to 361 mln euro after the accession. Therefore this effect results in 1.04% change in tariffs revenues from Russian imports and in 0.26% change in the total tariffs revenues.

Since we modeled the accession as Russia's accession to WTO after ending of the processes of the EU enlargement, proposed outcomes for the EU revenues are quite the same as for the candidates. Producer revenues fall due to changes in relative producer prices and rise in tariff revenues as the intensity of imports that go from Russia rises.

Table [4.5]: Revenues from international trade for the EU.

	RUS			CEEC			ROW			Total Trade		
	Enlarge ment	WTO accessio	**Change**	Enlarge ment	WTO accessio	**Change**	Enlarge ment	WTO accessio	**Change**	Enlargeme nt	WTO accession	**Change**
Producer revenue received from exports	67160	67107	**-0.08%**	121829	120286	**-1.27%**	886603	875351	**-1.27%**	1075592	1062744	**-1.19%**
Tariff revenue received from imports	3146	3177	**0.98%**	0	0		30040	30048	**0.03%**	33186	33225	**0.12%**
Producer revenue + Tariff revenue	70306	70283	**-0.03%**	121829	120286	**-1.27%**	916643	905399	**-1.23%**	1108778	1095969	**-1.16%**

5 Third scenario: Free Trade Area between Russia and the enlarged European Union.

The principle point of a free trade area (FTA) is to promote and secure trade liberalization. Although the question of creation of a free trade area between Russia the European Union is widely discussed, just a few empirical works have been devoted to this subject. Besides, although general equilibrium approach could be the most appropriate tool for quantitative evaluation of possible outcome for Russian economy of free trade area with the European Union, this are only two research known to the authors that tries to apply CGE modeling to this problem. The first is the paper by Ivan Samson and Xavier Greffe[9] that employed GTAP model. But an important drawback of this model which was already mentioned is that this model does not include Russia as a separate region, but incorporates it in the region "countries of the Former Soviet Union". Therefore the results of this paper should be interpreted carefully. The second is the work by Paul Brenton and John Whalley [3] on the economic impact of a free trade agreement between Russia and the EU. It suggests that a free trade agreement has a positive impact on Russian economy and generates significant changes in the volumes of Russian imports and exports.

Several works were done to evaluate possible outcomes of creation of free trade areas in other countries. For example, Chatti [4] employs a CGE model with possibility of oligopolistic markets' structures for evaluation of free trade area between Tunis and the European Union. As the European Union is the main Tunisian trade partner and shares of Tunisian trade that related to the Union approach 71.8% in imports and 73.8% in exports, establishing of free trade area between the Union and Tunis results in great changes in Tunisian trade patterns. According to scenario that used CRS market structures (as in our model), total imports increase by 18.9% and total exports increase by 25.9%, leading to 6.5% increase in Welfare. With noncompetitive market structures these changes reach even higher values.

Harrison and co-authors [5] by means of a CGE model investigate how free trade areas between MARCOSUR (custom union among Brazil, Argentina, Uruguay, and Paraguay) and NAFTA could affect Brazilian foreign trade and Brazilian economy as a whole. It also analyses possible creation of a free trade area between MARCOSUR and EU. The model that was used included 22 sectors and it distinguished between 20 income groups of Brazilian citizens. It is shown that both trade agreements are profitable for Brazil.

there is no agreement yet on the question whether creation of a free trade area improves or worsen welfare of the members of this new FTA. Theory distinguishes between different possible welfare effects of creation of a free trade area. Since FTA gives preferential treatment to member countries, it diverts trade from non-member, least-cost suppliers. Trade diversion can dominate trade creation, so the FTA will reduce welfare in member countries.

Another important point that actually takes place in case of our analysis is that the liberalizing country loses because it foregoes tariff revenue from the new union member but does not gain in terms of lower domestic price on imports. And even higher intensity of trade with the other members of this trade union does not overwhelm the loses in tariff revenues.

Robinson [8] examines possible effects of diminution of tariffs as a result of regional trade agreements on welfare of members of these agreements. He shows both empirical evidence and theoretical base for the fact that both outcomes are possible he argues that trade creation exceeds trade diversion in almost all regional trade agreements. He also provides a detailed and full literature review on the subject of possible effects of trade agreements.

Our results suggest a slight improvement of Russian terms of trade, a drop in Russian GDP by 0.25% and rather sizable losses for candidates-countries and the European Union, which were caused by decreases in tariffs revenue from foreign trade. What is important here is that we modeled free trade area with the enlarged European Union, that is, the benchmark equilibrium in this scenario was the equilibrium that had been projected by our model as a result of the European Union enlargement.

The structure of the section is as follows. First, we examine macro variables such as GDP and terms of trade. In subsection 5.2 we focus on the changes in Russian production by sectors. Subsection 5.3 tries to show the effects of creation of the free trade area on Russian trade flows, and finally, we look at changes in revenues from foreign trade.

5.1 Macroeconomic effects.

The most interesting result is that under strong assumptions utilized in our model a free trade area between Russia and the enlarged European Union is not an optimal form of economic integration for all the countries of the proposed free trade area. The regions that will lose most in its GDP will be the candidates and existing members of the European Union. The reason for such drop in GDP is the changes in relative producer prices (see table [E.5] appendix E). After the creation of the free trade area the candidates will lose all possible advantages that they could have obtained after their joining to the European Union. For example, relative producer price on products of nonferrous metallurgy produced in the candidates increased by 3.39% from 0.98 to 1.019 compared to 1.4% fall from 1 to 0.98 happened due to the enlargement of the European Union.

In contrast to the changes that happen with candidates' GDP, the reasons for the outcomes for Russia are not relative producer prices but changes tariff revenues. These revenues are going to fall by 44% causing 3.5% decrease in the total revenues from foreign trade for Russia.

Chart[5.1]: *Changes in GDPs by regions.*
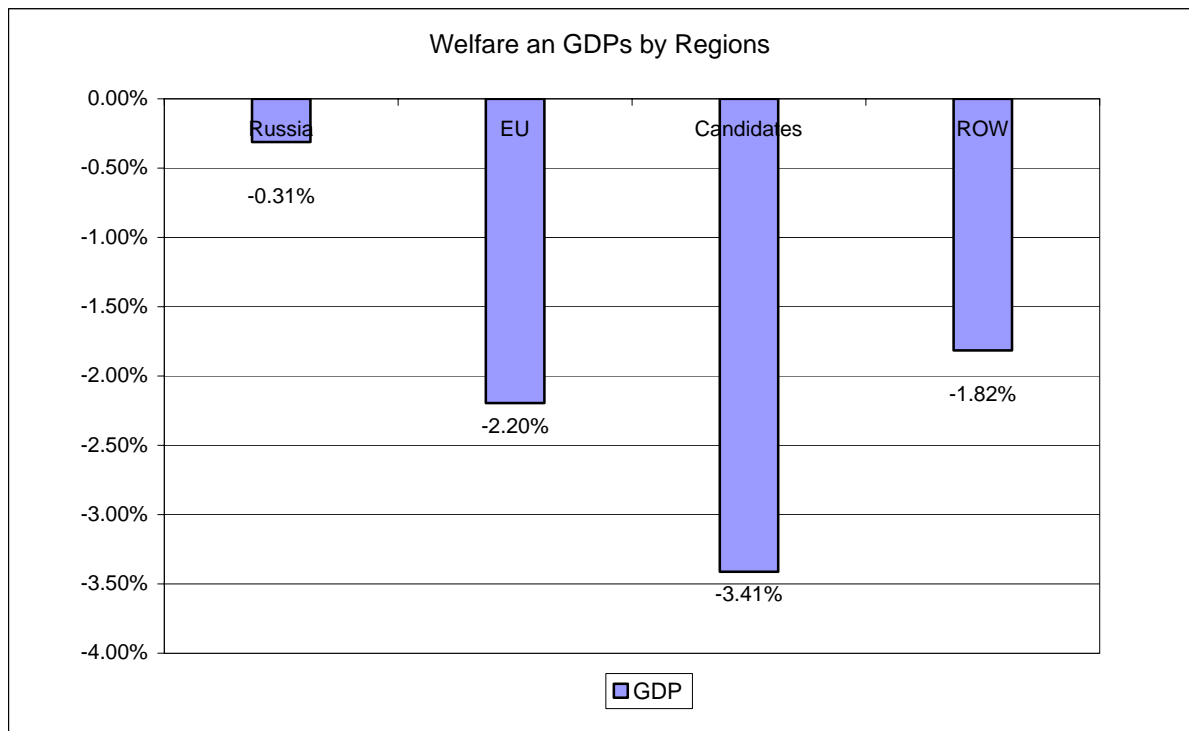
The model also suggests rather sizable impact on Russian terms of trade. Terms of trade are going to increase by approximately 1.26%, mostly due to fall in the price of Russian imports. Such drop happened only in Russia since all the other regions of the new free trade area already had tariffs rate that were much lower then that of Russia. And a rise in producer prices overweighed the downward shock that tariff reduction had on prices on imports.

Table [5.1]: Terms of trade by regions.

		Enlargement	Custom Union	Percentage Change
RUS	price of export	1.175	1.168	-0.59%
	price of import	1.169	1.148	-1.82%
	Terms of Trade	**1.005**	**1.018**	**1.26%**
EU	price of export	1.185	1.205	1.68%
	price of import	1.166	1.185	1.62%
	Terms of Trade	**1.015**	**1.016**	**0.06%**
CEECs	price of export	1.138	1.156	1.59%
	price of import	1.147	1.168	1.85%
	Terms of Trade	**0.992**	**0.989**	**-0.25%**
ROW	price of export	1.172	1.193	1.86%
	price of import	1.191	1.215	2.06%
	Terms of Trade	**0.984**	**0.982**	**-0.20%**

5.2 Effects on Russian production.

The results of the scenario that described creation of free trade area between Russia and the enlarged European Union suggest a slight diversification of Russian production. Production increases in such industries as ferrous metallurgy, nonferrous metallurgy, chemical industry and oil refinery, machinery and equipment, Light industry, and oil and gas products. Light Industry is the industry that will experience the highest increase in domestic production. This is accompanied by a huge rise both in exports that go from Russia and in Russian imports. The reason for such changes in this particular industry is a tremendous fall in prices both on imports and exports just because trade barriers were the highest namely in this industry. Production in almost all services sectors is going to decrease since in this sectors Russia has tariffs rate much higher than that of in the candidates countries and the European Union. Therefore after the creation of a free trade area these sectors are confronted by much higher competition from the services produced abroad and this results in higher intensity of imports in such services sectors as finance, banking, and insurance, agriculture, services in agriculture and forestry.

Chart[5.2]: Changes in Russian production by sectors:
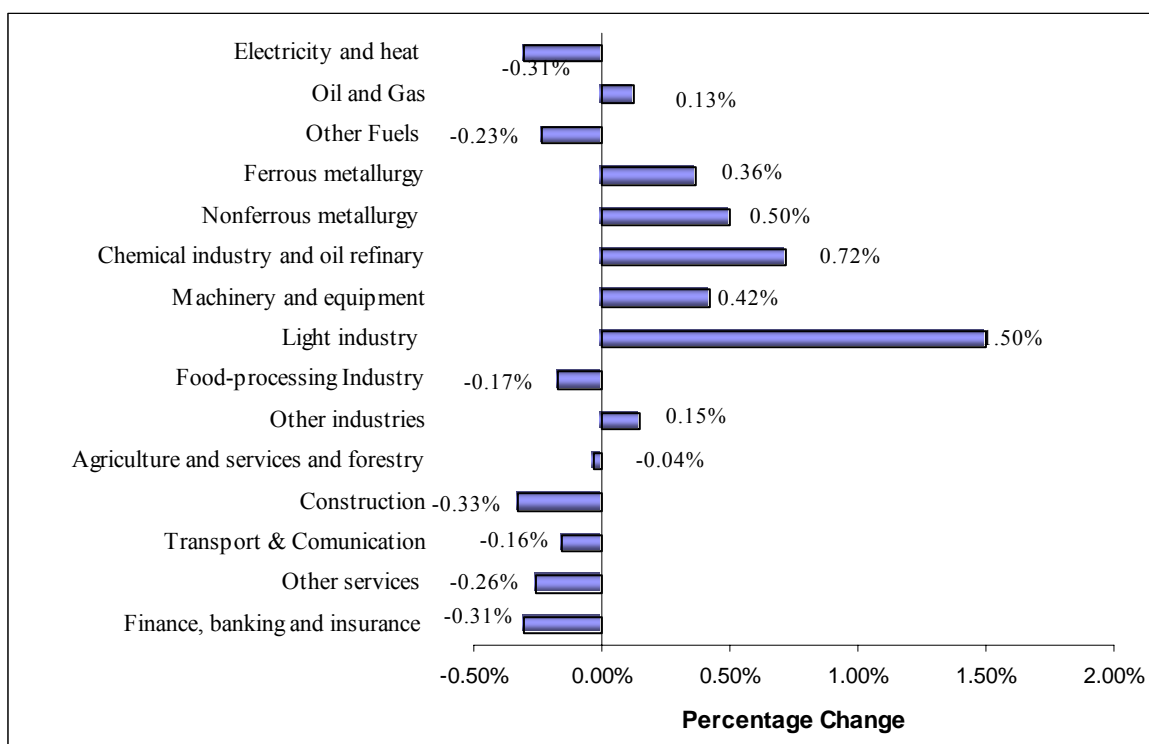
The arguments for the explanation of this redistribution of production among sectors are mostly the same as we already used. To see the reasons for these changes we should look at two different effects. First, since after the creation of the free trade area tariffs on goods imported from the countries of the enlarged European Union are abolished in all the sectors, and since these countries account for a large share of our foreign trade, we can expect that in all the sector good produced domestically will face much higher competition from the goods imported from abroad. And this leads to the shifts in consumer demands from domestic goods to the imported, thus, resulting in higher import intensity. Another effect is the diminution of the relative producer prices within the region. Although from the first glance table [E.5] appendix E can mislead to a wrong conclusion that prices went up, if these prices are compared to the prices in the other regions, it can be seen that the gap between producer prices on the same goods produced in different regions decreased and as Russia previously had had higher producer prices that lead to more effective production in Russia in terms of relative producer prices.

5.3 Effects on Russian international trade by sectors

In this subsection we describe possible changes in Russian trade flow after creation of free trade area with the enlarged European Union. Total Russian exports are going to increase by

2.59% and total Russian imports will rise by 1.37%. these numbers are quite predictable since as trade barriers are abolished the intensity of trade from should go up. But the interesting fact is that the picture of these changes in not homogeneous, namely, while imports increase in all the sectors, exports goes up in one sectors and goes down in the others.

The heterogeneity of the effects on exports is the outcome of the heterogeneity in tariff structure with respect to sectors applied nowadays both by Russia and by the Enlarged European Union. The abolishment of these trade barriers is going to remove distortions that almost necessarily appear with the tariffs rate when they are not equal to zero.

The fall in exports in such sectors as other fuels, ferrous metallurgy, construction, transport and communication happened namely due to the relatively low tariffs rates in these regions. We realize that in the services sectors an important role play nontariffs barriers that are not incorporated into the model, and therefore our results are to some extant biased towards lower intensities of import in these sectors. But the nominal values of changes in these regions are still rather low, they account for only 55 mln euro.

Table [5.2]: Changes in Russian trade flows.

	Imported from EU	Exported to EU	Imported from Candidates	Exported to Candidates	Imported from ROW	Exported to ROW	**Aggregated Import**	**Aggregated Export**
Electricity and heat	1.49%	2.18%	0.51%	3.38%	-1.86%	1.80%	0.34%	2.76%
Oil and Gas	1.43%	2.29%	0.48%	3.50%	-1.91%	1.36%	0.33%	1.64%
Other Fuels	1.46%	2.08%	0.55%	3.31%	-1.88%	1.73%	-0.58%	1.75%
Ferrous metallurgy	3.87%	2.54%	2.89%	3.75%	-1.92%	1.12%	-0.14%	1.63%
Nonferrous metallurgy	4.35%	2.61%	3.50%	3.82%	-1.99%	0.99%	1.84%	1.57%
Chemical industry and oil refinary	4.58%	5.20%	3.51%	6.44%	-1.95%	0.77%	1.09%	3.30%
Machinery and equipment	6.29%	4.75%	5.08%	5.99%	-2.03%	1.06%	0.36%	3.51%
Light industry	7.61%	8.90%	6.92%	10.18%	-0.33%	-0.01%	4.13%	6.26%
Food-processing Industry	6.28%	10.71%	4.98%	12.01%	-2.21%	1.67%	0.16%	5.05%
Other industries	6.69%	3.57%	5.58%	4.79%	-1.94%	1.34%	1.28%	3.11%
Agriculture, services in agriculture and forestry	5.98%	10.35%	4.93%	11.66%	-1.96%	1.53%	2.42%	5.47%
Construction	-1.82%	2.20%	-2.59%	3.41%	-1.58%	1.83%	-1.70%	2.05%
Transport & Comunication	-1.86%	2.02%	-2.53%	3.23%	-1.63%	1.65%	-1.81%	1.87%
Other services	9.59%	4.06%	8.75%	5.29%	-1.51%	1.75%	3.48%	2.83%
Finance, banking and insurance	12.31%	2.18%	11.44%	3.38%	-1.51%	1.81%	4.72%	2.03%

5.4 Changes in revenues from international trade

In this subsection we examine the effects of the creation of a free trade area on revenues from international trade for Russia, countries candidates, existing members of the European Union. As it could be predicted in all these regions tariffs revenues from imports go down because of the abolishment of trade barriers. On the other hand effects on producer revenues are not so obvious. And as the model predicts the effects on producer revenues differ from region to region reflecting trade creation and trade diversion.

Table [5.3] shows that Russia experience trade creation with the regions of the free trade area- countries candidates and the European Union, and trade diversion with respect to the "rest of the world".

Table [5.3]: Revenues from international trade for Russia.

	EU			CEEC			ROW			TotalTrade		
	Enlargement	Custom Union	**Change**	Enlargement	Custom Union	**Change**	Enlargement	Custom Union	**Change**	Enlargement	Custom Union	**Change**
Producer revenue received from exports	107321	109143	**1.70%**	14079	14282	**1.44%**	155459	154267	**-0.77%**	276859	277693	**0.30%**
Tariff revenue received from imports	7773	0		3529	0		14965	14715	**-1.68%**	26267	14715	**-43.98%**
Producer revenue + Tariff revenue	115094	109143	**-5.17%**	17608	14282	**-18.89%**	170425	168982	**-0.85%**	303126	292408	**-3.54%**

Producer revenues that go from the candidates and European Union go up and producer revenue of the trade with the "rest of the world" goes down by 0.77%. The change in the total producer revenue from exports reaches 0.30%. Tariff revenue decreases and the total effect on revenues from foreign trade is negative and rather sizable – up to 3.54% decrease.

The pattern of changes in revenues from foreign trade for the candidates and the European Union is not quite the same. And the most important difference is a huge decrease in producer revenue from exports that go from the candidates to the European Union and vice versa. This is the outcome of trade diversion that takes place between the candidates the European union as the result of the creation of free trade area.

The reasons for this trade diversion are simple and lies on the surface. Namely, tariffs rates both in the candidates countries and the European Union have been already low before the creation of the free trade area, while tariffs that Russia impose on the goods imported from the candidates and the European Union have been quite high before this free trade area, therefore after the abolishment of these tariffs Russian products become more competitive on

the markets of these regions and both the European Union and the candidates switch from imports from each other to the imports from Russia. Tables [5.4] and [5.5] support these arguments.

Table [5.4]: Revenues from international trade for Candidates.

	RUS			EU			ROW			TotalTrade		
	Enlargement	Custom Union	**Change**	Enlargement	Custom Union	**Change**	Enlargement	Custom Union	**Change**	Enlargement	Custom Union	**Change**
Producer revenue received from exports	31842	33137	**4.07%**	102411	98732	**-3.59%**	22301	21507	**-3.56%**	156554	153376	**-2.03%**
Tariff revenue received from imports	484	0		633	640		2043	2075	**1.53%**	3160	2715	**-0.14%**
Producer revenue + Tariff revenue	32326	33137	**2.51%**	103044	99372	**-3.56%**	24345	23582	**-3.13%**	159715	156091	**-2.27%**

Table [5.5]: Revenues from international trade for the EU.

	RUS			CEEC			ROW			TotalTrade		
	Enlargement	Custom Union	**Change**	Enlargement	Custom Union	**Change**	Enlargement	Custom Union	**Change**	Enlargement	Custom Union	**Change**
Producer revenue received from exports	67160	70488	**4.96%**	121829	118695	**-2.57%**	886603	865574	**-2.37%**	1075592	1054757	**-1.94%**
Tariff revenue received from imports	5212	0		0	0		48657	48827	**0.35%**	53868	48827	**-9.36%**
Producer revenue + Tariff revenue	72372	70488	**-2.60%**	121829	118695	**-2.57%**	935260	914401	**-2.23%**	1129460	1103584	**-2.29%**

6 Conclusions.

This research focuses on the estimation of the effects from various changes in the Russian international trade. These changes are caused both by policy decisions and evolution of the international environment that takes place nowadays.

We first deal with the enlargement of the European Union. There are different views of this process in the Russian society. They range from the most pessimistic: "The EU enlargement will worsen the economic situation in Russia, since it will have a significant negative effect on the Russian trade with EU", to the most optimistic one: "Russia will significantly benefit, since the trade with the enlarged Europe will boost." We do support neither of these opinions. The results of our analysis suggest that the status quo in terms of trade with EU and the new member-states will remain; only some small changes can be anticipated. Since the structure of Russian imports to the EU is dominated by raw materials, there is a little overlap in the European markets where Russia and the new member states operate. This implies that in the short run the status quo will persist. But in terms of long-term structural effects for Russian economy this can be a negative factor, since there will be very little if any space in new European markets for Russian manufacturing goods with high proportion of value-added.
In order to benefit from the process of EU enlargement Russia has to work hard. It is subject of a further research to identify the fields, where Russia can gain after the EU enlargement.

Second experiment simulates Russia's accession to the WTO. It is essential to take into account the timing of this process. Russia's accession will definitely happen after the EU enlargement. Thus we simulate WTO accession on the basis of the first counterfactual experiment – the EU enlargement. Our results show a small decrease in the Russian GDP due to WTO accession. This fact indicates that simple settings of the model (perfect competition, no factor markets, no savings/investment decisions) did not allow us to find any gains from accession. This may suggest that all possible gains lie beyond the scope of our analysis – in the long-term effects of the WTO accession on the market structure of Russian industries, on the functioning of the financial markets, etc. Since any negotiating agreement reflects a compromise, we think that Russian negotiating team must focus on the rules of market access rather on the binding levels for Russian tariffs. We plan further investigations of this issue, taking into account measures of non-tariff barriers and Russian market structure.

In the third exercise we simulate the creation of the Common European Economic Space between Russian and European Union. This quite vogue political initiative is modeled as a Free Trade Area between Russia and the enlarged European Union. We did not find any sizable economic gains that can sustain this political initiative and can help in its realization. There is an obvious political will for a closer economic integration between Russia and EU but the framework of the integration process should be studied in great detail, as soon as these details will be subject to a public debate.

As an overall result of our analysis we can conclude that Russia can prevail in its status quo. At the same time Russia can gain from the changing world thought a clever balanced international and home politics.

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Appendix A: Main figures of merchandise trade between Russia, the European Union and the candidates.

Exports.

Chart [A.1]: *Russian exports to EU(mln euro) and their share in the total Russian exports (1999 year).*
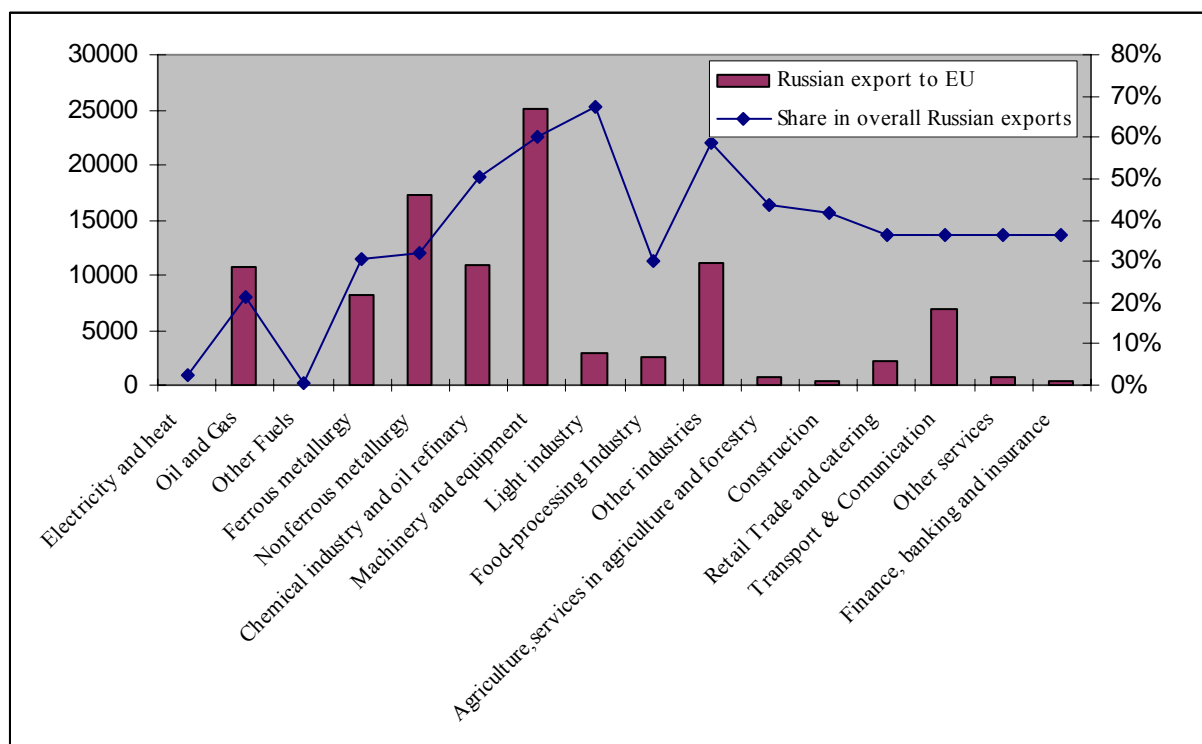
     Except for such sectors as Electricity and Gas, Light Industry, Food-processing industry and services where Russia is not a sizable exporter, in all the others – the share of exports to the European union accounts for from 20 up to 70 percent of the overall Russian exports. Hence, the European Union is one of the biggest Russian trade partner.

     Russian exports to countries-candidates are lower then that of to EU in times. In almost all sectors the share of the exports to CEECs is not higher then 10 percent. Although even ten percent is a huge number for such sector as Oil and Gas. Another noticeable characteristic of trade between Russia and CEECs is that in contrast with the trade patterns between Russia and EU, Russian exports of services are rather high.

Chart [A.2]*: Russian exports to CEECs(mln euro) and their share in the total Russian exports (1999 year).*
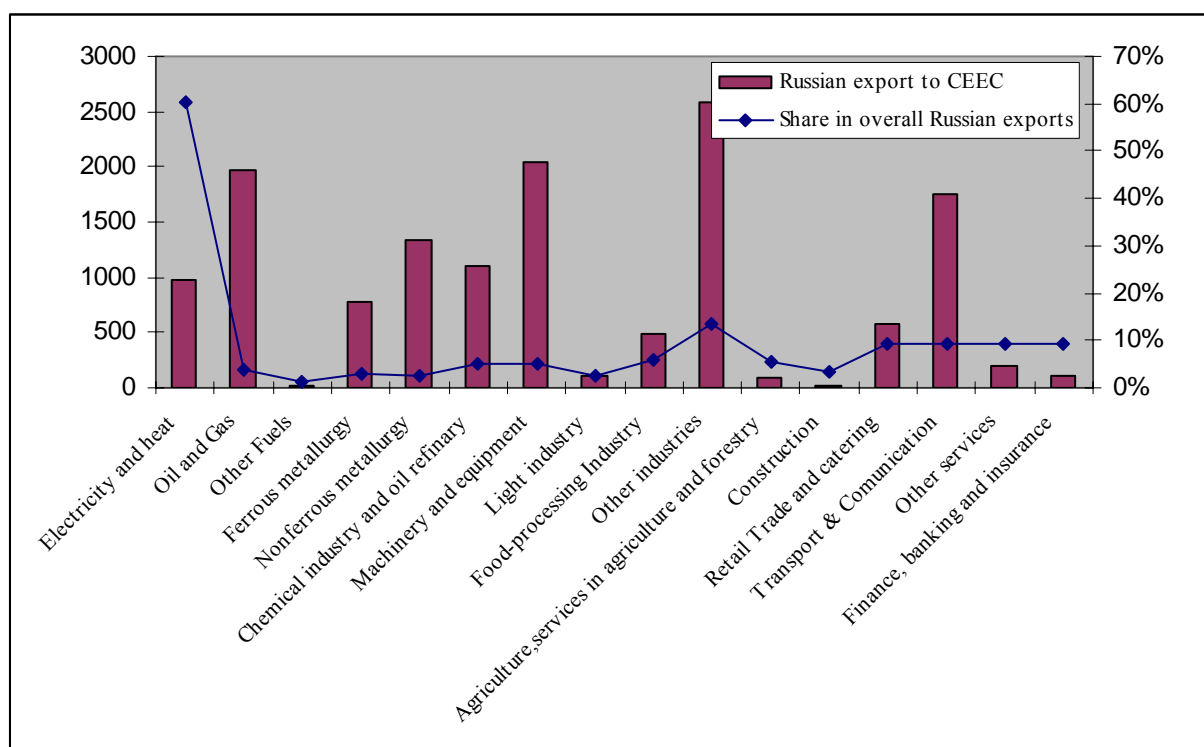
Imports.

Russian imports from countries-candidates and the EU have a specific structure, namely, it is concentrated in four industries – Light Industry, Machinery and Equipment, Food-processing industry, and Chemical industry and oil refinery (data on trade in services from CEECs and the EU was not obtained for all the lines of 8-digit classification, therefore, imports of services in our data are skewed towards zero, but this fact do not influence our results much as we explore the effects of the enlargement with respect to Russia).

Imports in Light industry rea to a certain extant characterized by huge amounts of clothing imports, Machinery and equipment in CEECs case– cars from *The Czech Republic (Shkoda),* food –processing industry – a variety of food products that are very competitive on domestic Russian market.

Chart [A.3]: *Russian imporst from EU(mln euro) and their share in the total Russian imports(1999 year).*
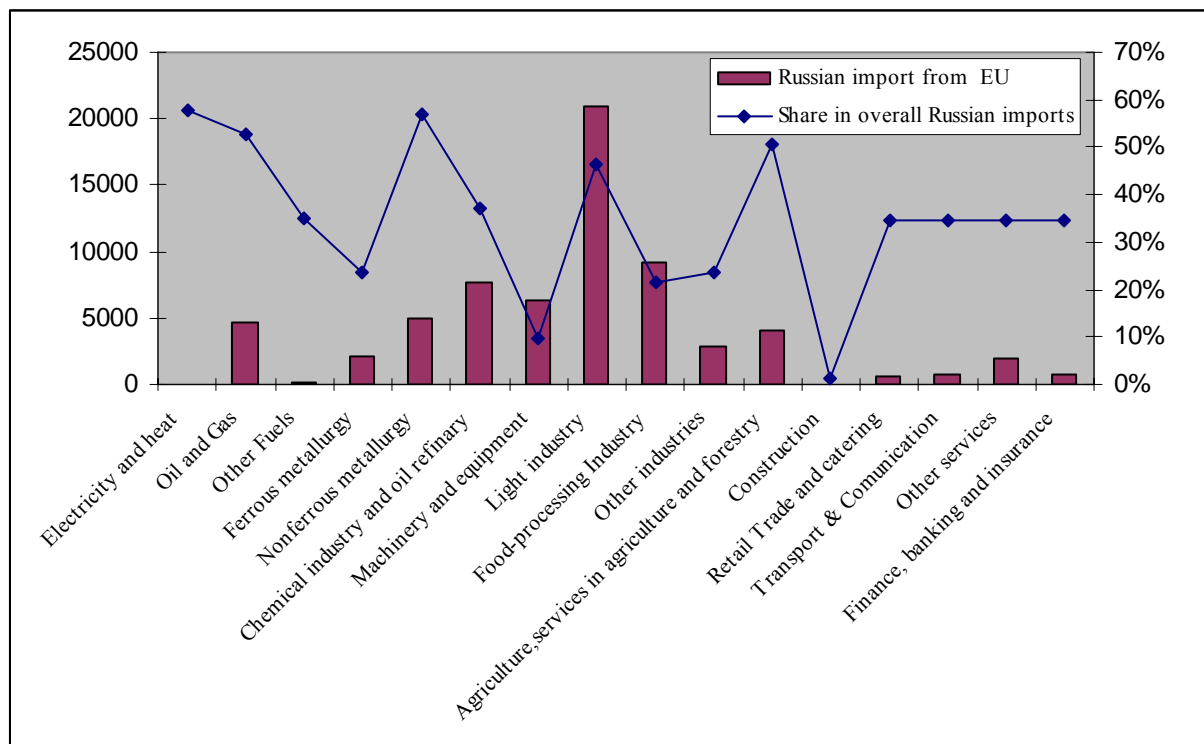
Chart [A.4]: *Russian imports from CEECs(mln euro) and their share in the total Russian imports (1999 year).*
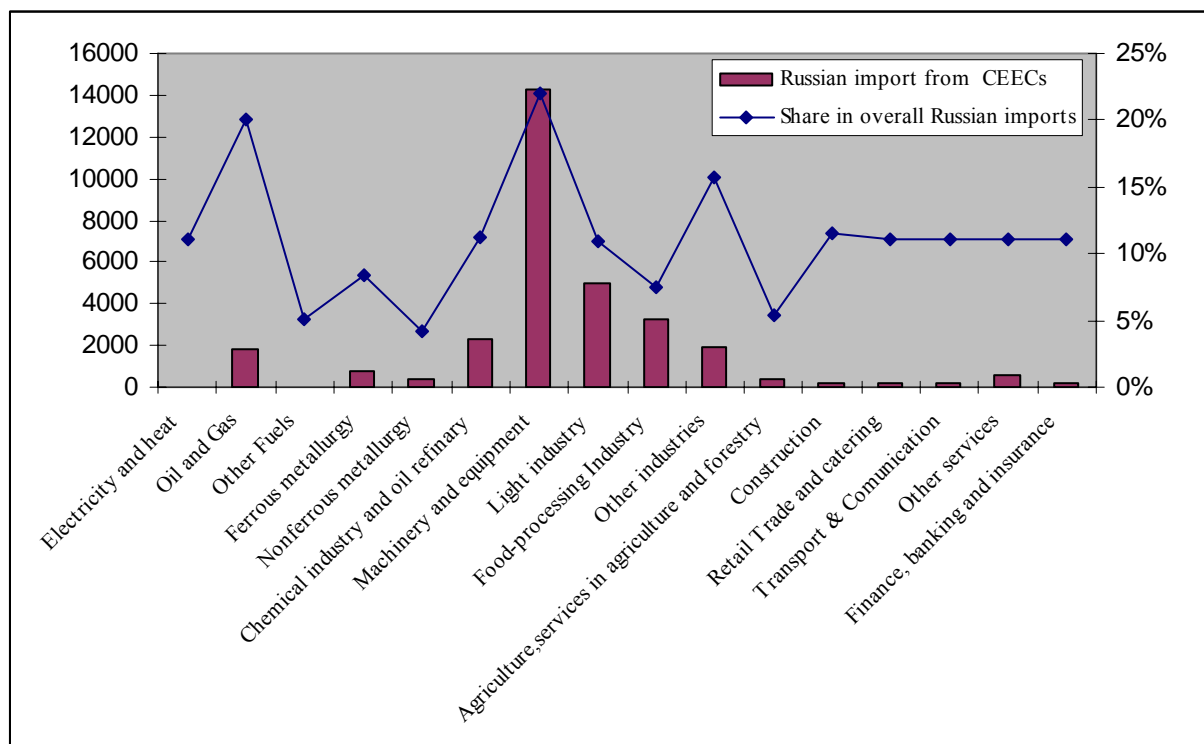
Appendix B: Description of the Data.

Classification mapping system.

The challenging point in the collection of the data was the problems with the mapping system between Russian classification of the data on production and trade in goods and services and that of in the EU and the candidates countries. Basing on 5-digit Russian production classification system OKONH we choose 15 sectors that included 10 industries, and 5 sectors presented by agriculture and services. Then, using mapping system between OKDP and OKONH provided by GOSKOMSTAT [11] we selected 4-digit positions in ISIC (International Standard Industrial Classification of all Economic Activities) that corresponded to these sectors. Finally, corresponding positions of ISIC were mapped to NACE (classification system of the EU). As the result we obtained the mapping system between OKONH and NACE, which is presented in table [B.2]. Since the candidates use the same system as the European Union, this mapping system was also used for the data on the candidates.

Production in Russia.

The basing source of data on the Russian production was the official data provided by GOSKOMSTAT, Russian statistical year-book [12]. The data there is presented in rubbles, therefore it was transferred to USD$ through PPP (5.41 rubles for 1$) and then to EURO through the exchange rate (0.94 EURO/1$).

It is well known that the data on production in power industries, which account for almost all Russian exports, is skewed toward zero since Russian exporters have incentives for diminution of the exports and do have enough power to implement their policies . Therefore we had to subtract the share of the production that is exported and price it by means of exports prices. The rest of the production was taken just as it was presented in the official data.

Production in the European Union.

The data on production in the EU was mostly taken from "European business 2002" (EUROSTAT). Nonetheless, not all the data was presented for the basing year of our model, therefore we had to take the table "Production in constant prices (1995-2000)" (EUROSTAT) and "Development of output prices in the EU (1995-2000)" (EUROSTAT) in order to account for the changes in prices and volumes. For some sectors, the data was available only in metric

systems, and it was transferred to mln. EURO by means of prices given in database COMEXT (EUROSTAT, 2002).

Production in the candidates.

The database "Business in candidate countries: facts and figures (1995-1999)" (European Commission, 2002) provided us the data for the candidates. As in the case with the European Union, production in this database was given for the year 1998, therefore it was corrected for the rise in prices and changes in volumes using "Industrial production volumes by activities (1999-2001)" (CONSTAT), and "Manufacturing volume indices by selected branches(1999-2001)" (CONSTAT).

Note that the data in the database "Business in candidate countries: facts and figures (1995-1999)" (European Commission, 2002) was presented in EURO and transferred into EURO through exchange rates from the domestic currencies of the candidates. And in order to be consistent we transferred this data back into domestic currencies and then into EURO through PPPs, PPPs for these countries was taken from EUROSTAT, "Statistics in focus: economy and finance. Prices and purchasing power parities", European communities, 2002 and provided in table[B.1]. Data on Malta was not presented in this database, it was taken from http://www.nso.gov.mt/.

Production in agriculture was estimated with the help of "Preliminary economic accounts for agriculture in 12 candidate countries (1998-1999)" (EUROSTAT).

Production in the "Rest of the World".

Production in the "rest of the world" was estimated as a residual of subtracting production of the European Union, the candidates, and Russia from the total world's production. The data on the total world's production was provided by "World development report" (The World Bank, 2003). The overall production in all the sectors in the world was splitted into 15 sectors using shares of these sectors in the total world's production.

Trade Data.

For Russia we used an official custom database and the figures on Russian exports presented in the database COMEXT for the European Union as values imported from Russia. A classification system of Russian trade statistics TNVED was mapped to OKONH and then into the 15 sectors. For trade by the European Union COMEXT database was used and for

trade by the candidates - UNCTAD-TRAINS. Trade by the "Rest of the World" was taken as a residual.

Russian tariffs.

Database "Consultant+" was taken as a main database for Russian tariffs calculation. 4-digit tariffs were weighted by the values of imports in order to get division into 15 sectors. Estimations of tariffs in the services sectors was provided in the work by Zemnitsky [13].

Tariffs of the European Union.

As an approximation of the EU tariffs the binding levels of the Uruguay Round of WTO tariffs were taken. And then they were aggregated into the 15 sectors by weighting with the imports of the European Union.

Tariffs in the candidates.

Database TRAINS was used in calculation of tariffs rates fro the candidates. Preferences in trade used by the candidates were also taken into account. Then this 6-digit system was aggregated into our 15 sectors also by weighting with the intensity of import.

Tariffs in the "Rest of the World".

Tariffs for the rest of the world were calculated as weighed average of the tariffs of all the other regions, where weights depended of the intensity of imports of this or that region.

Tables.

Table [B.1]: PPP for countries-candidates.

Country-Candidate	PPP
Cyprus (CY)	0,464054
Czech Republic	15,2133
Estonia (EE)	7,01593
Hungary (HU)	114,716
Latvia (LV)	0,262703
Lithuania (LT)	1,59778
Poland (PL)	2,01804
Slovakia (SK)	16,2184
Slovenia (SI)	133,567

Table [B.2]: Mapping system between OKONH and NACE.

	OKONH	NACE
Electricity and heat	-11100	(40.1), (40.3)
Oil and Gas	(11220),(11230)	(11.1 /0.5/), (23.2), (11.1 /0.5/), (11.2)
Other Fuels	-11300	(10.1), (10.2), (10.3)
Ferrous metallurgy	-12100	(13.1), (40.2), (23.1), (26.26), (27), (37.1)
Nonferrous metallurgy	-12200	(13.2), (14.5), (27.4), (37.1)
Chemical industry and oil refinary	-13000	(14.3), (19.3 /0.5/), (22.3), (24.1), (24.2), (24.3), (24.6), (24.7), (25)
Machinery and equipment	-14000	(22.3), (26.2), (27.5), (28), (29), (30), (31), (32), (34), (35), (33 /исключая 33.1/), (50.2 /0.5/)
Light industry	-17000	(17), (18), (19.1), (19.2), (19.3 /0.5/), (52.7)
Food-processing Industry	(18000), (19200)	(14.4), (5), (15), (16), (24.5)
Other industries	(19700), (19100), (19310), (19320), (19330), (19400), (19800), (19900), (16100)	(20.5), (24.4), (33.1), (15.7), (22.2), (14.1), (14.2), (14.5), (26.1), (26.2 /исключая 26.26/), (26.3), (26.4), (26.5), (26.6), (26.7), (26.8)
Agriculture, services in agriculture and forestry	(20000), (40000), (15000), (30000)	(1), (5), (20), (2), (21), (22.2), (36)
Construction	-60000	(11.2), (45)
Transport & Comunication	-50000	(50.2 /0.5/),(60), (61), (62), (63), (64), (71.1), (71.2)
Other services	(90000 /исключая 96000/),(80000),(70000)	(41), (5), (22.14), (55.1), (55.2), (71), (72), (73), (75), (80), (85), (90), (91), (92), (93), (95), (22.1), (37.2), (70), (74), (50 /исключая 50.2 (0.5)/), (51), (52), (55.3), (55.4), (55.5)
Finance, banking and insurance	-96000	(65), (66), (67)

Table [B.3]: Russian Tariffs

	Imported from the EU	Imported from CEEC	Imported from the ROW
Electricity and heat	5	5	5
Oil and Gas	5	5	5
Other Fuels	5	5	5
Ferrous metallurgy	8.41	8.41	8.41
Nonferrous metallurgy	8.67	8.67	8.67
Chemical industry and oil refinary	8.82	8.82	8.82
Machinery and equipment	10.78	10.78	10.78
Light industry	15.19	15.19	15.19
Food-processing Industry	9.79	9.79	9.79
Other industries	11.74	11.74	11.74
Agriculture, services in agriculture and forestry	10.7	10.7	10.7
Construction	0	0	0
Transport & Comunication	0	0	0
Other services	20	20	20
Finance, banking and insurance	25	25	25

Table [B.4]:Tariffs in the EU.

	Imported from Russia	Imported from CEEC	Imported from the ROW
Electricity and heat	0	0	0
Oil and Gas	0.61	0.31	0.61
Other Fuels	0	0	0
Ferrous metallurgy	1.14	0.57	1.14
Nonferrous metallurgy	1.37	0.69	1.37
Chemical industry and oil refinary	4.47	2.24	4.47
Machinery and equipment	3.64	1.82	3.64
Light industry	9.5	4.75	9.5
Food-processing Industry	9.48	4.74	9.48
Other industries	2.03	1.02	2.03
Agriculture, services in agriculture and forestry	9.26	4.63	9.26
Construction	0	0	0
Transport & Comunication	0	0	0
Other services	2.11	1.06	2.11
Finance, banking and insurance	0	0	0

Table [B.5]:Tariffs in the candidates.

	Imported from the EU	Imported from CEEC	Imported from the ROW
Electricity and heat	5	5	5
Oil and Gas	5	5	5
Other Fuels	5	5	5
Ferrous metallurgy	8.41	8.41	8.41
Nonferrous metallurgy	8.67	8.67	8.67
Chemical industry and oil refinary	8.82	8.82	8.82
Machinery and equipment	10.78	10.78	10.78
Light industry	15.19	15.19	15.19
Food-processing Industry	9.79	9.79	9.79
Other industries	11.74	11.74	11.74
Agriculture, services in agriculture and forestry	10.7	10.7	10.7
Construction	0	0	0
Transport & Comunication	0	0	0
Other services	20	20	20
Finance, banking and insurance	25	25	25

Table [B.6]: Tariffs in the ROW.

	Imported from Russia	Imported from the EU	Imported from CEEC
Electricity and heat	5	5	5
Oil and Gas	5	5	5
Other Fuels	5	5	5
Ferrous metallurgy	9.42	9.42	9.42
Nonferrous metallurgy	8.24	8.24	8.24
Chemical industry and oil refinary	9.4	9.4	9.4
Machinery and equipment	11.71	11.71	11.71
Light industry	17.61	17.61	17.61
Food-processing Industry	11.16	11.16	11.16
Other industries	12.78	12.78	12.78
Agriculture, services in agriculture and forestry	12.09	12.09	12.09
Construction	0	0	0
Transport & Comunication	0	0	0
Other services	0	0	0
Finance, banking and insurance	0	0	0

Table [B.7]: WTO tariffs.

	Tariff rate
Electricity and heat	5
Oil and Gas	5
Other Fuels	5
Ferrous metallurgy	8.22
Nonferrous metallurgy	8.56
Chemical industry and oil refinary	7.28
Machinery and equipment	9.19
Light industry	13.76
Food-processing Industry	9.22
Other industries	9.78
Agriculture, services in agriculture and forestry	10.48
Construction	0
Transport & Comunication	0
Other services	0
Finance, banking and insurance	0

Table[B.8]: Production by regions.

	RUS	EU	CEEC	ROW
Electricity and heat	66420.2	251124	50167.48	1151036.7
Oil and Gas	133188.49	249171.5	23570.15	1235768.17
Other Fuels	9328	13598.85	7818.93	78262.03
Ferrous metallurgy	51811.87	232835.45	50183.86	1061617.62
Nonferrous metallurgy	90553.47	64192.35	6371.27	372361.75
Chemical industry and oil refinery	49266.32	426937	57504.04	714481.49
Machinery and equipment	129532.75	1642861.33	155659.67	1034826.82
Light industry	15914.91	137774.8	22201.13	1081742.19
Food-processing Industry	131851.69	627522.7	137054.14	2091683.26
Other industries	79947.39	323965.34	51173.19	2567117.55
Agriculture and services and forestry	154445.26	583629.33	92956.46	1451547.34
Construction	117860.5	590910.97	87935.71	1462679.56
Transport & Communication	124200.41	1141157.48	82433.88	2493969.75
Other services	242926.46	7545301.44	696990.47	1.77E+07
Finance, banking and insurance	121091.51	1056642.88	29819.23	2097934.02

Appendix C: EU enlargement.

Table [C.1]: Consumption in Russia of goods either produced domestically (column RUS) or imported from other regions (columns EU, CEECs, ROW correspondingly) and consumer prices.

		RUS			imported from EU			imported from CEEC			imported from ROW		
		Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change
Electricity and heat	Trade Volume	64808	64815	0.0109%	54.69	54.754	0.1170%	10.53	10.686	1.4815%	29.29	29.303	0.0444%
	Consumer Prices	0.9972	0.9972	0.0000%	1.0471	1.0456	-0.1421%	1.0471	1.0269	-1.9296%	1.0471	1.0466	-0.0427%
Oil and Gas	Trade Volume	82728	82751	0.0277%	4662.4	4668.2	0.1253%	1774.5	1799	1.3810%	2416.4	2417.6	0.0533%
	Consumer Prices	1.1189	1.1188	-0.0114%	1.1748	1.1732	-0.1414%	1.1748	1.1539	-1.7870%	1.1748	1.1743	-0.0455%
Other Fuels	Trade Volume	8381	8381.5	0.0056%	173.51	173.71	0.1176%	25.37	25.724	1.3953%	294.83	294.96	0.0451%
	Consumer Prices	1.015	1.0151	0.0076%	1.0658	1.0642	-0.1419%	1.0658	1.0464	-1.8138%	1.0658	1.0653	-0.0453%
Ferrous metallurgy	Trade Volume	24972	24974	0.0074%	2161	2163.6	0.1221%	755.91	766.58	1.4121%	6175.7	6178.7	0.0498%
	Consumer Prices	1.0222	1.0223	0.0146%	1.1082	1.1066	-0.1382%	1.1082	1.0879	-1.8282%	1.1082	1.1077	-0.0420%
Nonferrous metallurgy	Trade Volume	36097	36104	0.0207%	4980.2	4985.9	0.1164%	361.7	365.92	1.1653%	3419.9	3421.7	0.0524%
	Consumer Prices	1.0117	1.0116	-0.0079%	1.0994	1.098	-0.1264%	1.0994	1.0839	-1.4097%	1.0994	1.0989	-0.0472%
Chemical industry and oil refinary	Trade Volume	27813	27823	0.0363%	7661.3	7671.8	0.1371%	2307.5	2340.1	1.4131%	10688	10695	0.0609%
	Consumer Prices	1.0522	1.052	-0.0166%	1.145	1.1434	-0.1414%	1.145	1.1256	-1.6978%	1.145	1.1445	-0.0472%
Machinery and equipment	Trade Volume	87544	87561	0.0192%	6382.9	6390.9	0.1254%	14313	14479	1.1652%	44468	44496	0.0630%
	Consumer Prices	1.0562	1.0562	0.0036%	1.1701	1.1686	-0.1246%	1.1701	1.1541	-1.3646%	1.1701	1.1695	-0.0493%
Light industry	Trade Volume	11491	11495	0.0384%	20949	20966	0.0824%	4940.4	4951.2	0.2193%	19475	19487	0.0628%
	Consumer Prices	1.0515	1.0514	-0.0061%	1.2112	1.2102	-0.0811%	1.2112	1.2074	-0.3134%	1.2112	1.2106	-0.0477%
Food-processing Industry	Trade Volume	123684	123672	-0.0093%	9150.8	9160	0.0998%	3212.3	3270.2	1.8020%	30298	30312	0.0468%
	Consumer Prices	1.1311	1.1313	0.0198%	1.2418	1.2406	-0.0962%	1.2418	1.2186	-1.8724%	1.2418	1.2413	-0.0399%
Other industries	Trade Volume	60841	60837	-0.0067%	2844.3	2847.7	0.1182%	1902.9	1929.3	1.3848%	7357.5	7361.1	0.0489%
	Consumer Prices	1.0422	1.0425	0.0274%	1.1646	1.163	-0.1306%	1.1646	1.1446	-1.7094%	1.1646	1.1641	-0.0430%
Agriculture and services and forestry	Trade Volume	139357	139352	-0.0031%	4007.2	4011.2	0.1000%	422.86	428.82	1.4097%	3504.3	3505.8	0.0442%
	Consumer Prices	1.0169	1.0171	0.0167%	1.1257	1.1244	-0.1120%	1.1257	1.1063	-1.7219%	1.1257	1.1252	-0.0424%
Construction	Trade Volume	115878	115883	0.0040%	18.45	18.468	0.0976%	167.72	169.72	1.1943%	1273	1273.4	0.0354%
	Consumer Prices	1.0372	1.0373	0.0087%	1.0372	1.0357	-0.1426%	1.0372	1.0173	-1.9219%	1.0372	1.0368	-0.0429%
Transport & Comunication	Trade Volume	104102	104121	0.0176%	731.12	731.89	0.1055%	233.47	235.89	1.0378%	1144.1	1144.6	0.0428%
	Consumer Prices	1.0138	1.0137	-0.0058%	1.0138	1.0123	-0.1520%	1.0138	0.9967	-1.6828%	1.0138	1.0133	-0.0477%
Other services	Trade Volume	234296	234301	0.0024%	2564.4	2566.8	0.0958%	818.91	828.52	1.1729%	4012.9	4014.3	0.0350%
	Consumer Prices	0.75	0.7501	0.0129%	0.9	0.8987	-0.1424%	0.9	0.8828	-1.9080%	0.9	0.8996	-0.0413%
Finance, banking and insurance	Trade Volume	119849	119854	0.0041%	748.99	749.71	0.0960%	239.18	241.92	1.1435%	1172.1	1172.5	0.0358%
	Consumer Prices	1.0002	1.0003	0.0096%	1.2503	1.2485	-0.1433%	1.2503	1.227	-1.8613%	1.2503	1.2497	-0.0432%

Table[C.2]: consumption in EU of goods either produced domestically (column EU) or imported from other regions (columns RUS, CEECs, ROW correspondingly) and consumer prices.

		imported from RUS			EU			imported from CEEC			imported from ROW		
		Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change
Electricity and heat	Trade Volume	40.04	39.987	-0.1324%	248905	248892	-0.0053%	150.67	153.13	1.6334%	556.54	556.01	-0.0949%
	Consumer Prices	1.05	1.05	0.0000%	1.05	1.0485	-0.1421%	1.05	1.0297	-1.9296%	1.05	1.0496	-0.0428%
Oil and Gas	Trade Volume	10753	10739	-0.1230%	228681	228668	-0.0060%	942	958.8	1.7839%	56381	56329	-0.0924%
	Consumer Prices	1.0765	1.0764	-0.0114%	1.07	1.0685	-0.1414%	1.0733	1.0509	-2.0905%	1.0765	1.076	-0.0454%
Other Fuels	Trade Volume	3.18	3.176	-0.1258%	13332	13331	-0.0056%	802.37	814.61	1.5256%	4463.2	4459.1	-0.0925%
	Consumer Prices	1.15	1.1501	0.0076%	1.15	1.1484	-0.1418%	1.15	1.1291	-1.8138%	1.15	1.1495	-0.0453%
Ferrous metallurgy	Trade Volume	8240.1	8228.1	-0.1463%	208434	208416	-0.0089%	3266.4	3333.6	2.0598%	15850	15835	-0.0955%
	Consumer Prices	1.1631	1.1633	0.0146%	1.15	1.1484	-0.1382%	1.1566	1.129	-2.3847%	1.1631	1.1626	-0.0420%
Nonferrous metallurgy	Trade Volume	17364	17342	-0.1261%	34001	33995	-0.0194%	2065.5	2102.2	1.7789%	39112	39077	-0.0908%
	Consumer Prices	1.1658	1.1657	-0.0079%	1.15	1.1485	-0.1264%	1.1579	1.1338	-2.0853%	1.1658	1.1652	-0.0472%
Chemical industry and oil refinary	Trade Volume	10860	10847	-0.1183%	353149	353128	-0.0059%	5002.9	5176	3.4601%	49225	49181	-0.0908%
	Consumer Prices	1.2014	1.2012	-0.0166%	1.15	1.1484	-0.1414%	1.1758	1.1305	-3.8516%	1.2014	1.2008	-0.0471%
Machinery and equipment	Trade Volume	25178	25144	-0.1365%	1E+06	1E+06	-0.0210%	35647	36632	2.7641%	311399	311123	-0.0888%
	Consumer Prices	1.1919	1.1919	0.0036%	1.15	1.1486	-0.1247%	1.1709	1.1343	-3.1278%	1.1919	1.1913	-0.0493%
Light industry	Trade Volume	2991.1	2987.3	-0.1277%	72970	72926	-0.0603%	7988.9	8342	4.4206%	63437	63380	-0.0903%
	Consumer Prices	1.2593	1.2592	-0.0061%	1.15	1.1491	-0.0810%	1.2046	1.1464	-4.8338%	1.2593	1.2586	-0.0477%
Food-processing Industry	Trade Volume	2467.2	2463.5	-0.1510%	580571	580300	-0.0467%	1428.9	1513.3	5.9034%	29126	29098	-0.0974%
	Consumer Prices	1.1495	1.1498	0.0198%	1.05	1.049	-0.0962%	1.0998	1.0303	-6.3131%	1.1495	1.1491	-0.0398%
Other industries	Trade Volume	11170	11152	-0.1579%	219042	219007	-0.0156%	5930	6069.9	2.3592%	62935	62876	-0.0945%
	Consumer Prices	1.1733	1.1737	0.0274%	1.15	1.1485	-0.1307%	1.1617	1.1303	-2.7019%	1.1733	1.1728	-0.0430%
Agriculture and services and forestry	Trade Volume	5856.7	5848	-0.1482%	552295	552116	-0.0324%	5684.6	6006.2	5.6576%	42032	41992	-0.0951%
	Consumer Prices	1.2565	1.2567	0.0167%	1.15	1.1487	-0.1120%	1.2032	1.1302	-6.0709%	1.2565	1.256	-0.0424%
Construction	Trade Volume	769.4	768.32	-0.1410%	581643	581615	-0.0049%	754.88	767.16	1.6264%	5581.1	5575.8	-0.0946%
	Consumer Prices	1.15	1.1501	0.0087%	1.15	1.1484	-0.1426%	1.15	1.1279	-1.9219%	1.15	1.1495	-0.0430%
Transport & Comunication	Trade Volume	7801.3	7791.3	-0.1280%	984547	984582	0.0036%	17918	18170	0.0000%	132475	132356	0.0000%
	Consumer Prices	1.15	1.1499	-0.0058%	1.15	1.1483	-0.1520%	1.15	1.1306	-1.6828%	1.15	1.1495	-0.0477%
Other services	Trade Volume	3350.1	3345.3	-0.1449%	7E+06	7E+06	-0.0050%	10438	10707	2.5823%	77171	77097	-0.0961%
	Consumer Prices	1.0722	1.0723	0.0130%	1.05	1.0485	-0.1425%	1.0611	1.03	-2.9370%	1.0722	1.0717	-0.0413%
Finance, banking and insurance	Trade Volume	482.21	481.53	-0.1418%	1E+06	1E+06	-0.0042%	1509.5	1533.2	1.5698%	11160	11150	-0.0944%
	Consumer Prices	1.2	1.2001	0.0096%	1.2	1.1983	-0.1433%	1.2	1.1777	-1.8613%	1.2	1.1995	-0.0432%

Table[C.3]: consumption in CEECs of goods either produced domestically (column CEEC) or imported from other regions (columns RUS, EU, ROW correspondingly) and consumer prices.

		imported from RUS			imported from EU			CEEC			imported from ROW		
		Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change
Electricity and heat	Trade Volume	969.99	959.23	-1.1097%	6.11	6.003	-1.7512%	49949	49879	-0.1417%	138.43	136.95	-1.0713%
	Consumer Prices	1.0591	1.05	-0.8625%	1.05	1.0485	-0.1421%	1.05	1.0297	-1.9296%	1.0591	1.0496	-0.9049%
Oil and Gas	Trade Volume	1975.8	1955	-1.0516%	1850.2	1835.9	-0.7716%	20068	20013	-0.2722%	979.81	969.72	-1.0300%
	Consumer Prices	1.0865	1.0764	-0.9272%	1.0819	1.0685	-1.2377%	1.07	1.0509	-1.7870%	1.0864	1.076	-0.9511%
Other Fuels	Trade Volume	11.49	11.523	0.2872%	10.38	10.262	-1.1368%	6854.8	6837.8	-0.2477%	103.55	103.9	0.3332%
	Consumer Prices	1.1783	1.1501	-2.3936%	1.1581	1.1484	-0.8360%	1.15	1.1291	-1.8138%	1.1783	1.1495	-2.4452%
Ferrous metallurgy	Trade Volume	769.61	792.65	2.9940%	3135.4	3132.7	-0.0859%	45642	45535	-0.2345%	829.62	854.61	3.0116%
	Consumer Prices	1.2276	1.1633	-5.2414%	1.1717	1.1484	-1.9906%	1.15	1.129	-1.8283%	1.2272	1.1626	-5.2595%
Nonferrous metallurgy	Trade Volume	1342.7	1356.3	1.0172%	1422.1	1411	-0.7762%	3667.3	3644.7	-0.6159%	468.34	473.31	1.0616%
	Consumer Prices	1.2039	1.1657	-3.1789%	1.1629	1.1485	-1.2326%	1.15	1.1338	-1.4097%	1.2041	1.1652	-3.2262%
Chemical industry and oil refinary	Trade Volume	1102.1	1096.7	-0.4860%	9263.9	9207.2	-0.6126%	49287	49113	-0.3536%	2841.3	2824.5	-0.5937%
	Consumer Prices	1.2202	1.2012	-1.5526%	1.1648	1.1484	-1.4132%	1.15	1.1305	-1.6978%	1.2183	1.2008	-1.4340%
Machinery and equipment	Trade Volume	2041.4	2061.5	0.9861%	46606	46791	0.3960%	98221	97576	-0.6566%	15413	15560	0.9492%
	Consumer Prices	1.2306	1.1919	-3.1457%	1.1782	1.1486	-2.5131%	1.15	1.1343	-1.3647%	1.2295	1.1913	-3.1065%
Light industry	Trade Volume	107.27	105.29	-1.8477%	7641.7	7725.5	1.0969%	4759.7	4683.5	-1.6001%	2619.2	2568.8	-1.9242%
	Consumer Prices	1.2596	1.2592	-0.0335%	1.1878	1.1491	-3.2637%	1.15	1.1464	-0.3134%	1.258	1.2586	0.0528%
Food-processing Industry	Trade Volume	490.09	523.84	6.8855%	3806.9	4283.5	12.5210%	132239	131982	-0.1942%	1718.3	1835.1	6.7989%
	Consumer Prices	1.2644	1.1498	-9.0668%	1.2214	1.049	-14.1130%	1.05	1.0303	-1.8724%	1.2625	1.1491	-8.9850%
Other industries	Trade Volume	2580.9	2621	1.5527%	10315	10291	-0.2250%	42421	42276	-0.3431%	2341.6	2377.4	1.5310%
	Consumer Prices	1.2193	1.1737	-3.7461%	1.17	1.1485	-1.8387%	1.15	1.1303	-1.7095%	1.2182	1.1728	-3.7231%
Agriculture and services and forestry	Trade Volume	749.06	780.5	4.1966%	3006.6	3298.6	9.7119%	86160	85874	-0.3316%	1085.9	1130.6	4.1235%
	Consumer Prices	1.3434	1.2567	-6.4559%	1.3004	1.1487	-11.6661%	1.15	1.1302	-1.7220%	1.3416	1.256	-6.3829%
Construction	Trade Volume	98.4	97.561	-0.8526%	1102	1094.1	-0.7176%	86819	86689	-0.1488%	347.08	344.46	-0.7537%
	Consumer Prices	1.1635	1.1501	-1.1479%	1.1635	1.1484	-1.2974%	1.15	1.1279	-1.9219%	1.1641	1.1495	-1.2575%
Transport & Comunication	Trade Volume	997.76	979.08	-1.8724%	18572	18248	0.0000%	61160	60935	-0.3674%	5658.1	5554.3	0.0000%
	Consumer Prices	1.15	1.1499	-0.0058%	1.15	1.1483	-0.1520%	1.15	1.1306	-1.6828%	1.15	1.1495	-0.0477%
Other services	Trade Volume	428.47	443.83	3.5855%	9526.2	9471.3	-0.5764%	683990	682886	-0.1615%	3179.3	3299.2	3.7737%
	Consumer Prices	1.1388	1.0723	-5.8425%	1.064	1.0485	-1.4531%	1.05	1.03	-1.9081%	1.1405	1.0717	-6.0322%
Finance, banking and insurance	Trade Volume	61.67	60.85	-1.3297%	3221.4	3182.9	-1.1940%	27555	27499	-0.2043%	949.23	937.39	0.0000%
	Consumer Prices	1.2076	1.2001	-0.6165%	1.2076	1.1983	-0.7685%	1.2	1.1777	-1.8613%	1.208	1.1995	-0.7085%

Table[C.4]: consumption in ROW of goods either produced domestically (column ROW) or imported from other regions (columns RUS, EU, CEEC correspondingly) and consumer prices.

		imported from RUS			imported from EU			imported from CEEC			ROW		
		Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change
Electricity and heat	Trade Volume	602.62	602.39	-0.0382%	2158.3	2160.2	0.0898%	56.84	57.823	1.7294%	1E+06	1E+06	0.0002%
	Consumer Prices	1.084	1.084	0.0000%	1.084	1.0825	-0.1422%	1.08402	1.0631	-1.9297%	1.0324	1.032	-0.0427%
Oil and Gas	Trade Volume	37732	37721	-0.0280%	13978	13990	0.0892%	785.85	798.402	1.5973%	1E+06	1E+06	0.0027%
	Consumer Prices	1.1406	1.1405	-0.0114%	1.1406	1.139	-0.1414%	1.14062	1.12023	-1.7870%	1.0863	1.0858	-0.0455%
Other Fuels	Trade Volume	932.3	931.88	-0.0450%	82.95	83.024	0.0892%	136.44	138.653	1.6220%	73400	73402	0.0026%
	Consumer Prices	1.1603	1.1603	0.0076%	1.1603	1.1586	-0.1419%	1.16025	1.13921	-1.8138%	1.105	1.1045	-0.0453%
Ferrous metallurgy	Trade Volume	17830	17821	-0.0513%	19105	19121	0.0862%	519.89	528.394	1.6357%	1E+06	1E+06	-0.0005%
	Consumer Prices	1.2117	1.2119	0.0146%	1.2117	1.21	-0.1382%	1.21172	1.18956	-1.8282%	1.1074	1.1069	-0.0420%
Nonferrous metallurgy	Trade Volume	35751	35739	-0.0311%	23789	23807	0.0757%	276.82	280.272	1.2470%	329361	329375	0.0043%
	Consumer Prices	1.1949	1.1948	-0.0079%	1.1949	1.1934	-0.1265%	1.19486	1.17802	-1.4096%	1.1039	1.1034	-0.0472%
Chemical industry and oil refinary	Trade Volume	9491.8	9489.6	-0.0233%	56863	56913	0.0892%	906.27	919.994	1.5143%	651726	651754	0.0042%
	Consumer Prices	1.2224	1.2222	-0.0166%	1.2224	1.2207	-0.1414%	1.22244	1.20168	-1.6979%	1.1174	1.1169	-0.0472%
Machinery and equipment	Trade Volume	14769	14763	-0.0415%	343520	343774	0.0741%	7479.78	7569.96	1.2056%	663546	663588	0.0062%
	Consumer Prices	1.2497	1.2498	0.0036%	1.2497	1.2482	-0.1247%	1.24974	1.23268	-1.3647%	1.1187	1.1182	-0.0493%
Light industry	Trade Volume	1325.9	1325.5	-0.0327%	36215	36228	0.0348%	4512.14	4523.17	0.2445%	996211	996259	0.0048%
	Consumer Prices	1.3139	1.3138	-0.0061%	1.3139	1.3128	-0.0811%	1.3139	1.30978	-0.3134%	1.1172	1.1166	-0.0478%
Food-processing Industry	Trade Volume	5210.8	5207.8	-0.0560%	33994	34010	0.0484%	174.21	177.131	1.6767%	2E+06	2E+06	-0.0023%
	Consumer Prices	1.1972	1.1975	0.0198%	1.1972	1.1961	-0.0962%	1.19723	1.17481	-1.8723%	1.077	1.0766	-0.0398%
Other industries	Trade Volume	5355.3	5351.9	-0.0629%	91765	91838	0.0795%	918.93	932.944	1.5250%	2E+06	2E+06	0.0006%
	Consumer Prices	1.2564	1.2568	0.0275%	1.2564	1.2548	-0.1306%	1.25644	1.23497	-1.7094%	1.1141	1.1136	-0.0431%
Agriculture and services and forestry	Trade Volume	8482.7	8478.1	-0.0532%	24320	24336	0.0627%	689.24	699.832	1.5368%	1E+06	1E+06	-0.0001%
	Consumer Prices	1.2393	1.2395	0.0167%	1.2393	1.2379	-0.1120%	1.2393	1.21796	-1.7219%	1.1056	1.1052	-0.0423%
Construction	Trade Volume	1114.4	1113.8	-0.0460%	8147.5	8154.9	0.0902%	194.6	197.953	1.7230%	1E+06	1E+06	0.0004%
	Consumer Prices	1.1124	1.1125	0.0087%	1.1124	1.1108	-0.1426%	1.1124	1.09102	-1.9219%	1.1124	1.1119	-0.0429%
Transport & Comunication	Trade Volume	11299	11295	-0.0329%	137307	137443	0.0000%	3122.42	3169.27	0.0000%	2E+06	2E+06	0.0048%
	Consumer Prices	1.1046	1.1045	-0.0059%	1.1046	1.1029	-0.1520%	1.1046	1.08601	-1.6828%	1.1046	1.1041	-0.0477%
Other services	Trade Volume	4852.2	4849.8	-0.0499%	70430	70494	0.0000%	1743.55	1773.37	1.7101%	2E+07	2E+07	0.0011%
	Consumer Prices	0.95	0.9501	0.0129%	0.95	0.9486	-0.1424%	0.95	0.93187	-1.9081%	0.95	0.9496	-0.0437%
Finance, banking and insurance	Trade Volume	698.41	698.08	-0.0468%	23817	23838	0.0909%	515.09	523.674	1.6665%	2E+06	2E+06	0.0007%
	Consumer Prices	1.1334	1.1335	0.0095%	1.1334	1.1318	-0.1434%	1.1334	1.1123	-1.8613%	1.1334	1.1329	-0.0432%

Table[C.5] Relative Producer Prices

	RUS			EU			CEEC			ROW		
	Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change	Benchmark	Enlargement	Percentage Change
Electricity and heat	1	1	0.0000%	1	0.998579	-0.1421%	1	0.980704	-1.9296%	1	0.999573	-0.0427%
Oil and Gas	1	0.999886	-0.0114%	1	0.998586	-0.1414%	1	0.98213	-1.7870%	1	0.999546	-0.0454%
Other Fuels	1	1.000076	0.0076%	1	0.998581	-0.1419%	1	0.981862	-1.8138%	1	0.999547	-0.0453%
Ferrous metallurgy	1	1.000146	0.0146%	1	0.998619	-0.1381%	1	0.981717	-1.8283%	1	0.99958	-0.0420%
Nonferrous metallurgy	1	0.999921	-0.0079%	1	0.998735	-0.1265%	1	0.985903	-1.4097%	1	0.999528	-0.0472%
Chemical industry and oil refinary	1	0.999834	-0.0166%	1	0.998586	-0.1414%	1	0.983021	-1.6979%	1	0.999529	-0.0471%
Machinery and equipment	1	1.000036	0.0036%	1	0.998753	-0.1247%	1	0.986353	-1.3647%	1	0.999506	-0.0494%
Light industry	1	0.999939	-0.0061%	1	0.99919	-0.0810%	1	0.996866	-0.3134%	1	0.999523	-0.0477%
Food-processing Industry	1	1.000198	0.0198%	1	0.999038	-0.0962%	1	0.981276	-1.8724%	1	0.999601	-0.0399%
Other industries	1	1.000275	0.0275%	1	0.998693	-0.1307%	1	0.982906	-1.7094%	1	0.999569	-0.0431%
Agriculture and services and forestry	1	1.000167	0.0167%	1	0.99888	-0.1120%	1	0.98278	-1.7220%	1	0.999576	-0.0424%
Construction	1	1.000087	0.0087%	1	0.998574	-0.1426%	1	0.980781	-1.9219%	1	0.999571	-0.0429%
Transport & Comunication	1	0.999941	-0.0059%	1	0.99848	-0.1520%	1	0.983172	-1.6828%	1	0.999523	-0.0477%
Other services	1	1.00013	0.0130%	1	0.998575	-0.1425%	1	0.980919	-1.9081%	1	0.999587	-0.0413%
Finance, banking and insurance	1	1.000095	0.0095%	1	0.998566	-0.1434%	1	0.981387	-1.8613%	1	0.999568	-0.0432%

Appendix D: WTO accession.

Table [D.1]: Consumption in Russia of goods either produced domestically (column RUS) or imported from other regions (columns EU, CEECs, ROW correspondingly) and consumer prices.

		RUS			imported from EU			imported from CEEC			imported from ROW		
		Enlargement	WTO accession	Percentage Change	Enlargement	WTO accession	Percentage Change	Enlargement	WTO accession	Percentage Change	Enlargement	WTO accession	Percentage Change
Electricity and heat	Trade Volume	64815	64715	-0.1534%	54.754	54.147	-1.1086%	10.686	10.565	-1.1323%	29.303	28.984	-1.0886%
	Consumer Prices	0.9972	0.9972	0.0000%	1.0456	1.0591	1.2905%	1.0269	1.0405	1.3286%	1.0466	1.0598	1.2608%
Oil and Gas	Trade Volume	82751	82427	-0.3923%	4668.2	4614.5	-1.1516%	1799	1778.3	-1.1499%	2417.6	2390.1	-1.1389%
	Consumer Prices	1.1188	1.1216	0.2496%	1.1732	1.1882	1.2777%	1.1539	1.1686	1.2755%	1.1743	1.1891	1.2603%
Other Fuels	Trade Volume	8381.5	8364	-0.2084%	173.71	171.77	-1.1208%	25.724	25.427	-1.1546%	294.96	291.71	-1.1039%
	Consumer Prices	1.0151	1.0156	0.0497%	1.0642	1.0779	1.2825%	1.0464	1.0603	1.3241%	1.0653	1.0787	1.2594%
Ferrous metallurgy	Trade Volume	24974	24851	-0.4955%	2163.6	2140.8	-1.0565%	766.58	758.3	-1.0812%	6178.7	6114.6	-1.0371%
	Consumer Prices	1.0223	1.0259	0.3473%	1.1066	1.1189	1.1067%	1.0879	1.1003	1.1403%	1.1077	1.1197	1.0803%
Nonferrous metallurgy	Trade Volume	36104	35910	-0.5365%	4985.9	4930.7	-1.1077%	365.92	361.72	-1.1453%	3421.7	3383.2	-1.1248%
	Consumer Prices	1.0116	1.0158	0.4125%	1.098	1.1105	1.1325%	1.0839	1.0967	1.1803%	1.0989	1.1116	1.1543%
Chemical industry and oil refinary	Trade Volume	27823	27710	-0.4061%	7671.8	7668.3	-0.0457%	2340.1	2338.4	-0.0745%	10695	10692	-0.0244%
	Consumer Prices	1.052	1.0552	0.3038%	1.1434	1.1417	-0.1448%	1.1256	1.1243	-0.1092%	1.1445	1.1425	-0.1712%
Machinery and equipment	Trade Volume	87561	87263	-0.3397%	6390.9	6389.6	-0.0192%	14479	14473	-0.0452%	44496	44495	-0.0012%
	Consumer Prices	1.0562	1.0586	0.2226%	1.1686	1.1667	-0.1658%	1.1541	1.1525	-0.1343%	1.1695	1.1673	-0.1875%
Light industry	Trade Volume	11495	11462	-0.2868%	20966	20929	-0.1757%	4951.2	4942.1	-0.1850%	19487	19454	-0.1692%
	Consumer Prices	1.0514	1.0536	0.2039%	1.2102	1.2104	0.0141%	1.2074	1.2078	0.0300%	1.2106	1.2107	0.0030%
Food-processing Industry	Trade Volume	123672	123457	-0.1735%	9160	9082.1	-0.8497%	3270.2	3241.4	-0.8806%	30312	30063	-0.8233%
	Consumer Prices	1.1313	1.1317	0.0314%	1.2406	1.25	0.7572%	1.2186	1.2282	0.7906%	1.2413	1.2504	0.7286%
Other industries	Trade Volume	60837	60663	-0.2855%	2847.7	2854.2	0.2287%	1929.3	1933	0.1960%	7361.1	7379.5	0.2494%
	Consumer Prices	1.0425	1.0442	0.1624%	1.163	1.1574	-0.4886%	1.1446	1.1395	-0.4473%	1.1641	1.1581	-0.5146%
Agriculture and services and forestry	Trade Volume	139352	139068	-0.2042%	4011.2	3970.2	-1.0223%	428.82	424.31	-1.0524%	3505.8	3470.7	-1.0018%
	Consumer Prices	1.0171	1.0176	0.0500%	1.1244	1.1366	1.0850%	1.1063	1.1188	1.1233%	1.1252	1.1371	1.0587%
Construction	Trade Volume	115883	115708	-0.1506%	18.468	18.296	-0.9313%	169.72	168.11	-0.9516%	1273.4	1261.8	-0.9117%
	Consumer Prices	1.0373	1.0372	-0.0080%	1.0357	1.0491	1.2906%	1.0173	1.0308	1.3276%	1.0368	1.0498	1.2605%
Transport & Comunication	Trade Volume	104121	103864	-0.2463%	731.89	724.92	-0.9529%	235.89	233.6	-0.9721%	1144.6	1133.9	-0.9368%
	Consumer Prices	1.0137	1.0147	0.0960%	1.0123	1.0253	1.2889%	0.9967	1.0099	1.3218%	1.0133	1.0261	1.2615%
Other services	Trade Volume	234301	234144	-0.0670%	2566.8	2841.5	10.6992%	828.52	916.93	10.6710%	4014.3	4444.7	10.7202%
	Consumer Prices	0.7501	0.7509	0.1049%	0.8987	0.7586	-15.5894%	0.8828	0.7455	-15.5537%	0.8996	0.7591	-15.6160%
Finance, banking and insurance	Trade Volume	119854	119763	-0.0765%	749.71	850.19	13.4029%	241.92	274.19	13.3410%	1172.5	1329.9	13.4234%
	Consumer Prices	1.0003	1.0009	0.0633%	1.2485	1.0117	-18.9634%	1.227	0.9952	-18.8892%	1.2497	1.0124	-18.9878%

Table[D.2]: consumption in EU of goods either produced domestically (column EU) or imported from other regions (columns RUS, CEECs, ROW correspondingly) and consumer prices.

		imported from RUS			EU			imported from CEEC			imported from ROW		
		Enlargement	WTO accession	Percentage Change	Enlargement	WTO accession	Percentage Change	Enlargement	WTO accession	Percentage Change	Enlargement	WTO accession	Percentage Change
Electricity and heat	Trade Volume	39.987	40.451	1.1604%	248892	248893	0.0007%	153.13	153.08	-0.0333%	556.01	556.16	0.0270%
	Consumer Prices	1.05	1.05	0.0000%	1.0485	1.062	1.2904%	1.0297	1.0434	1.3286%	1.0496	1.0628	1.2609%
Oil and Gas	Trade Volume	10739	10840	0.9346%	228668	228695	0.0119%	958.8	958.94	0.0140%	56329	56344	0.0274%
	Consumer Prices	1.0764	1.0791	0.2497%	1.0685	1.0821	1.2778%	1.0509	1.0643	1.2754%	1.076	1.0896	1.2603%
Other Fuels	Trade Volume	3.176	3.211	1.1020%	13331	13332	0.0077%	814.61	814.37	-0.0292%	4459.1	4460.4	0.0282%
	Consumer Prices	1.1501	1.1507	0.0498%	1.1484	1.1631	1.2825%	1.1291	1.1441	1.3241%	1.1495	1.164	1.2594%
Ferrous metallurgy	Trade Volume	8228.1	8297.7	0.8461%	208416	208428	0.0062%	3333.6	3332.8	-0.0236%	15835	15839	0.0298%
	Consumer Prices	1.1633	1.1673	0.3473%	1.1484	1.1632	1.2842%	1.129	1.1439	1.3178%	1.1626	1.1772	1.2577%
Nonferrous metallurgy	Trade Volume	17342	17478	0.7872%	33995	34012	0.0500%	2102.2	2102.3	0.0074%	39077	39089	0.0307%
	Consumer Prices	1.1657	1.1705	0.4125%	1.1485	1.1627	1.2350%	1.1338	1.1483	1.2829%	1.1652	1.1798	1.2566%
Chemical industry and oil refinary	Trade Volume	10847	10943	0.8856%	353128	353136	0.0023%	5176	5174.4	-0.0298%	49181	49193	0.0261%
	Consumer Prices	1.2012	1.2049	0.3037%	1.1484	1.1632	1.2886%	1.1305	1.1455	1.3248%	1.2008	1.216	1.2619%
Machinery and equipment	Trade Volume	25144	25385	0.9591%	1E+06	1E+06	0.0028%	36632	36622	-0.0255%	311123	311192	0.0224%
	Consumer Prices	1.1919	1.1946	0.2226%	1.1486	1.1634	1.2881%	1.1343	1.1493	1.3199%	1.1913	1.2064	1.2660%
Light industry	Trade Volume	2987.3	3016.5	0.9760%	72926	72938	0.0177%	8342	8342.3	0.0035%	63380	63397	0.0276%
	Consumer Prices	1.2592	1.2617	0.2039%	1.1491	1.1637	1.2713%	1.1464	1.1612	1.2874%	1.2586	1.2745	1.2601%
Food-processing Industry	Trade Volume	2463.5	2491.4	1.1328%	580300	580342	0.0073%	1513.3	1512.9	-0.0225%	29098	29108	0.0328%
	Consumer Prices	1.1498	1.1501	0.0313%	1.049	1.0624	1.2829%	1.0303	1.0439	1.3167%	1.1491	1.1635	1.2543%
Other industries	Trade Volume	11152	11265	1.0137%	219007	219013	0.0027%	6069.9	6067.8	-0.0346%	62876	62892	0.0262%
	Consumer Prices	1.1737	1.1756	0.1625%	1.1485	1.1633	1.2882%	1.1303	1.1454	1.3302%	1.1728	1.1876	1.2616%
Agriculture and services and forestry	Trade Volume	5848	5913.3	1.1157%	552116	552140	0.0044%	6006.2	6004.4	-0.0297%	41992	42004	0.0278%
	Consumer Prices	1.2567	1.2573	0.0501%	1.1487	1.1635	1.2862%	1.1302	1.1452	1.3246%	1.256	1.2718	1.2600%
Construction	Trade Volume	768.32	777.29	1.1685%	581615	581618	0.0006%	767.16	766.91	-0.0323%	5575.8	5577.4	0.0273%
	Consumer Prices	1.1501	1.15	-0.0080%	1.1484	1.1632	1.2905%	1.1279	1.1429	1.3276%	1.1495	1.164	1.2605%
Transport & Comunication	Trade Volume	7791.3	7875	1.0740%	984582	984603	0.0021%	18170	18165	0.0000%	132356	132391	0.0000%
	Consumer Prices	1.1499	1.151	0.0960%	1.1483	1.1631	1.2889%	1.1306	1.1456	1.3218%	1.1495	1.164	1.2615%
Other services	Trade Volume	3345.3	3380.9	1.0659%	7E+06	7E+06	-0.0013%	10707	10703	-0.0394%	77097	77118	0.0271%
	Consumer Prices	1.0723	1.0734	0.1049%	1.0485	1.0621	1.2927%	1.03	1.0437	1.3357%	1.0717	1.0852	1.2607%
Finance, banking and insurance	Trade Volume	481.53	486.84	1.1038%	1E+06	1E+06	-0.0041%	1533.2	1531.9	-0.0864%	11150	11152	0.0231%
	Consumer Prices	1.2001	1.2009	0.0633%	1.1983	1.2138	1.2958%	1.1777	1.194	1.3885%	1.1995	1.2147	1.2652%

Table[D.3]: consumption in CEECs of goods either produced domestically (column CEEC) or imported from other regions (columns RUS, EU, ROW correspondingly) and consumer prices.

		imported from RUS			imported from EU			CEEC			imported from ROW		
		Enlargement	WTO accession	Percentage Change	Enlargement	WTO accession	Percentage Change	Enlargement	WTO accession	Percentage Change	Enlargement	WTO accession	Percentage Change
Electricity and heat	Trade Volume	959.23	970.7	1.1958%	6.003	6.005	0.0333%	49879	49879	0.0008%	136.95	137.03	0.0606%
	Consumer Prices	1.05	1.05	0.0000%	1.0485	1.062	1.2904%	1.0297	1.0434	1.3286%	1.0496	1.0628	1.2609%
Oil and Gas	Trade Volume	1955	1974	0.9689%	1835.9	1836.7	0.0460%	20013	20023	0.0480%	969.72	970.31	0.0615%
	Consumer Prices	1.0764	1.0791	0.2497%	1.0685	1.0821	1.2778%	1.0509	1.0643	1.2754%	1.076	1.0896	1.2603%
Other Fuels	Trade Volume	11.523	11.655	1.1455%	10.262	10.267	0.0487%	6837.8	6838.1	0.0048%	103.9	103.96	0.0626%
	Consumer Prices	1.1501	1.1507	0.0498%	1.1484	1.1631	1.2825%	1.1291	1.1441	1.3241%	1.1495	1.164	1.2594%
Ferrous metallurgy	Trade Volume	792.65	799.63	0.8803%	3132.7	3134	0.0403%	45535	45539	0.0103%	854.61	855.15	0.0638%
	Consumer Prices	1.1633	1.1673	0.3473%	1.1484	1.1632	1.2842%	1.129	1.1439	1.3178%	1.1626	1.1772	1.2577%
Nonferrous metallurgy	Trade Volume	1356.3	1367.5	0.8215%	1411	1412.2	0.0841%	3644.7	3646.2	0.0415%	473.31	473.62	0.0647%
	Consumer Prices	1.1657	1.1705	0.4125%	1.1485	1.1627	1.2350%	1.1338	1.1483	1.2829%	1.1652	1.1798	1.2566%
Chemical industry and oil refinary	Trade Volume	1096.7	1106.8	0.9199%	9207.2	9210.5	0.0363%	49113	49115	0.0042%	2824.5	2826.1	0.0601%
	Consumer Prices	1.2012	1.2049	0.3037%	1.1484	1.1632	1.2886%	1.1305	1.1455	1.3248%	1.2008	1.216	1.2619%
Machinery and equipment	Trade Volume	2061.5	2082	0.9934%	46791	46808	0.0368%	97576	97584	0.0085%	15560	15568	0.0564%
	Consumer Prices	1.1919	1.1946	0.2226%	1.1486	1.1634	1.2881%	1.1343	1.1493	1.3199%	1.1913	1.2064	1.2660%
Light industry	Trade Volume	105.29	106.35	1.0096%	7725.5	7729.5	0.0517%	4683.5	4685.3	0.0375%	2568.8	2570.3	0.0617%
	Consumer Prices	1.2592	1.2617	0.2039%	1.1491	1.1637	1.2713%	1.1464	1.1612	1.2874%	1.2586	1.2745	1.2601%
Food-processing Industry	Trade Volume	523.84	529.95	1.1672%	4283.5	4285.3	0.0413%	131982	131997	0.0114%	1835.1	1836.4	0.0668%
	Consumer Prices	1.1498	1.1501	0.0313%	1.049	1.0624	1.2829%	1.0303	1.0439	1.3167%	1.1491	1.1635	1.2543%
Other industries	Trade Volume	2621	2648.5	1.0480%	10291	10295	0.0367%	42276	42276	-0.0006%	2377.4	2378.8	0.0602%
	Consumer Prices	1.1737	1.1756	0.1625%	1.1485	1.1633	1.2882%	1.1303	1.1454	1.3302%	1.1728	1.1876	1.2616%
Agriculture and services and forestry	Trade Volume	780.5	789.47	1.1500%	3298.6	3299.8	0.0384%	85874	85878	0.0043%	1130.6	1131.3	0.0617%
	Consumer Prices	1.2567	1.2573	0.0501%	1.1487	1.1635	1.2862%	1.1302	1.1452	1.3246%	1.256	1.2718	1.2600%
Construction	Trade Volume	97.561	98.735	1.2033%	1094.1	1094.5	0.0346%	86689	86691	0.0017%	344.46	344.68	0.0613%
	Consumer Prices	1.1501	1.15	-0.0080%	1.1484	1.1632	1.2905%	1.1279	1.1429	1.3276%	1.1495	1.164	1.2605%
Transport & Comunication	Trade Volume	979.08	989.93	1.1084%	18248	18255	0.0000%	60935	60939	0.0069%	5554.3	5557.6	0.0000%
	Consumer Prices	1.1499	1.151	0.0960%	1.1483	1.1631	1.2889%	1.1306	1.1456	1.3218%	1.1495	1.164	1.2615%
Other services	Trade Volume	443.83	448.72	1.1002%	9471.3	9474.4	0.0327%	682886	682848	-0.0055%	3299.2	3301.3	0.0611%
	Consumer Prices	1.0723	1.0734	0.1049%	1.0485	1.0621	1.2927%	1.03	1.0437	1.3357%	1.0717	1.0852	1.2607%
Finance, banking and insurance	Trade Volume	60.85	61.542	1.1372%	3182.9	3183.8	0.0300%	27499	27485	-0.0524%	937.39	937.92	0.0000%
	Consumer Prices	1.2001	1.2009	0.0633%	1.1983	1.2138	1.2958%	1.1777	1.194	1.3885%	1.1995	1.2147	1.2652%

Table[D.4]: consumption in ROW of goods either produced domestically (column ROW) or imported from other regions (columns RUS, EU, CEEC correspondingly) and consumer prices.

		imported from RUS			imported from EU			imported from CEEC			ROW		
		Enlargement	WTO accession	Percentage Change	Enlargement	WTO accession	Percentage Change	Enlargement	WTO accession	Percentage Change	Enlargement	WTO accession	Percentage Change
Electricity and heat	Trade Volume	602.39	609.22	1.1341%	2160.2	2159.6	-0.0262%	57.823	57.789	-0.0588%	1E+06	1E+06	0.0001%
	Consumer Prices	1.084	1.084	0.0000%	1.0825	1.0964	1.2905%	1.0631	1.07723	1.3287%	1.032	1.045	1.2608%
Oil and Gas	Trade Volume	37721	38063	0.9075%	13990	13988	-0.0149%	798.402	798.3	-0.0128%	1E+06	1E+06	0.0006%
	Consumer Prices	1.1405	1.1433	0.2496%	1.139	1.1536	1.2778%	1.12023	1.13452	1.2755%	1.0858	1.0995	1.2604%
Other Fuels	Trade Volume	931.88	942.03	1.0890%	83.024	83.008	-0.0193%	138.653	138.576	-0.0555%	73402	73403	0.0014%
	Consumer Prices	1.1603	1.1609	0.0497%	1.1586	1.1735	1.2826%	1.13921	1.15429	1.3242%	1.1045	1.1184	1.2595%
Ferrous metallurgy	Trade Volume	17821	17967	0.8191%	19121	19118	-0.0206%	528.394	528.127	-0.0505%	1E+06	1E+06	0.0029%
	Consumer Prices	1.2119	1.2161	0.3473%	1.21	1.2256	1.2842%	1.18956	1.20524	1.3178%	1.1069	1.1209	1.2577%
Nonferrous metallurgy	Trade Volume	35739	36011	0.7602%	23807	23812	0.0232%	280.272	280.218	-0.0193%	329375	329388	0.0039%
	Consumer Prices	1.1948	1.1997	0.4125%	1.1934	1.2081	1.2350%	1.17802	1.19313	1.2828%	1.1034	1.1172	1.2567%
Chemical industry and oil refinary	Trade Volume	9489.6	9571	0.8586%	56913	56899	-0.0245%	919.994	919.473	-0.0566%	651754	651749	-0.0007%
	Consumer Prices	1.2222	1.2259	0.3037%	1.2207	1.2364	1.2886%	1.20168	1.2176	1.3248%	1.1169	1.131	1.2619%
Machinery and equipment	Trade Volume	14763	14901	0.9321%	343774	343692	-0.0240%	7569.96	7566	-0.0523%	663588	663558	-0.0044%
	Consumer Prices	1.2498	1.2526	0.2226%	1.2482	1.2643	1.2880%	1.23268	1.24895	1.3200%	1.1182	1.1323	1.2660%
Light industry	Trade Volume	1325.5	1338.1	0.9489%	36228	36224	-0.0091%	4523.17	4522.12	-0.0234%	996259	996267	0.0008%
	Consumer Prices	1.3138	1.3165	0.2039%	1.3128	1.3295	1.2713%	1.30978	1.32664	1.2874%	1.1166	1.1307	1.2601%
Food-processing Industry	Trade Volume	5207.8	5265.4	1.1057%	34010	34004	-0.0195%	177.131	177.044	-0.0491%	2E+06	2E+06	0.0059%
	Consumer Prices	1.1975	1.1978	0.0314%	1.1961	1.2114	1.2830%	1.17481	1.19028	1.3166%	1.0766	1.0901	1.2543%
Other industries	Trade Volume	5351.9	5404.7	0.9866%	91838	91816	-0.0241%	932.944	932.372	-0.0613%	2E+06	2E+06	-0.0006%
	Consumer Prices	1.2568	1.2588	0.1624%	1.2548	1.271	1.2882%	1.23497	1.25139	1.3302%	1.1136	1.1276	1.2617%
Agriculture and services and forestry	Trade Volume	8478.1	8570.4	1.0886%	24336	24330	-0.0224%	699.832	699.436	-0.0566%	1E+06	1E+06	0.0009%
	Consumer Prices	1.2395	1.2401	0.0501%	1.2379	1.2538	1.2863%	1.21796	1.2341	1.3247%	1.1052	1.1191	1.2599%
Construction	Trade Volume	1113.8	1126.6	1.1414%	8154.9	8152.8	-0.0262%	197.953	197.836	-0.0591%	1E+06	1E+06	0.0005%
	Consumer Prices	1.1125	1.1124	-0.0080%	1.1108	1.1251	1.2905%	1.09102	1.10551	1.3276%	1.1119	1.1259	1.2604%
Transport & Comunication	Trade Volume	11295	11414	1.0469%	137443	137409	0.0000%	3169.27	3167.56	0.0000%	2E+06	2E+06	-0.0004%
	Consumer Prices	1.1045	1.1056	0.0961%	1.1029	1.1171	1.2889%	1.08601	1.10037	1.3218%	1.1041	1.118	1.2614%
Other services	Trade Volume	4849.8	4900.2	1.0388%	70494	70474	0.0000%	1773.37	1772.19	-0.0663%	2E+07	2E+07	-0.0026%
	Consumer Prices	0.9501	0.9511	0.1049%	0.9486	0.9609	1.2926%	0.93187	0.94432	1.3357%	0.9496	0.9616	1.2639%
Finance, banking and insurance	Trade Volume	698.08	705.6	1.0767%	23838	23831	-0.0309%	523.674	523.081	-0.1132%	2E+06	2E+06	-0.0037%
	Consumer Prices	1.1335	1.1342	0.0633%	1.1318	1.1464	1.2958%	1.1123	1.12775	1.3885%	1.1329	1.1472	1.2652%

Table[D.5] Relative Producer Prices

	RUS			EU			CEEC			ROW		
	Enlarge ment	WTO accessio n	Percentage Change	Enlarge ment	WTO accessio n	Percentage Change	Enlarge ment	WTO accessio n	Percentage Change	Enlarge ment	WTO accessio n	Percentage Change
Electricity and heat	1	1	0.0000%	0.99858	1.01147	1.2904%	0.9807	0.99373	1.3286%	0.99957	1.01218	1.2608%
Oil and Gas	0.99989	1.00238	0.2496%	0.99859	1.01135	1.2777%	0.98213	0.99466	1.2754%	0.99955	1.01214	1.2603%
Other Fuels	1.00008	1.00057	0.0498%	0.99858	1.01139	1.2826%	0.98186	0.99486	1.3241%	0.99955	1.01214	1.2594%
Ferrous metallurgy	1.00015	1.00362	0.3473%	0.99862	1.01144	1.2842%	0.98172	0.99466	1.3179%	0.99958	1.01215	1.2577%
Nonferrous metallurgy	0.99992	1.00405	0.4124%	0.99874	1.01107	1.2350%	0.9859	0.99855	1.2829%	0.99953	1.01209	1.2567%
Chemical industry and oil refinary	0.99983	1.00287	0.3038%	0.99859	1.01145	1.2886%	0.98302	0.99605	1.3249%	0.99953	1.01214	1.2618%
Machinery and equipment	1.00004	1.00226	0.2226%	0.99875	1.01162	1.2881%	0.98635	0.99937	1.3200%	0.99951	1.01216	1.2660%
Light industry	0.99994	1.00198	0.2039%	0.99919	1.01189	1.2712%	0.99687	1.0097	1.2874%	0.99952	1.01212	1.2601%
Food-processing Industry	1.0002	1.00051	0.0313%	0.99904	1.01186	1.2829%	0.98128	0.9942	1.3167%	0.9996	1.01214	1.2544%
Other industries	1.00028	1.0019	0.1624%	0.99869	1.01156	1.2882%	0.98291	0.99598	1.3301%	0.99957	1.01218	1.2616%
Agriculture and services and forestry	1.00017	1.00067	0.0501%	0.99888	1.01173	1.2862%	0.98278	0.9958	1.3247%	0.99958	1.01217	1.2599%
Construction	1.00009	1.00001	-0.0080%	0.99857	1.01146	1.2905%	0.98078	0.9938	1.3276%	0.99957	1.01217	1.2604%
Transport & Comunication	0.99994	1.0009	0.0960%	0.99848	1.01135	1.2890%	0.98317	0.99617	1.3218%	0.99952	1.01213	1.2615%
Other services	1.00013	1.00118	0.1049%	0.99858	1.01148	1.2927%	0.98092	0.99402	1.3357%	0.99959	1.01219	1.2607%
Finance, banking and insurance	1.0001	1.00073	0.0634%	0.99857	1.01151	1.2959%	0.98139	0.99501	1.3884%	0.99957	1.01221	1.2651%

Appendix E: Free Trade Area between Russia and the enlarged European Union.

Table [E.1]: Consumption in Russia of goods either produced domestically (column RUS) or imported from other regions (columns EU, CEECs, ROW correspondingly) and consumer prices.

		RUS			imported from EU			imported from CEEC			imported from ROW		
		Enlargement	Custom Union	Percentage Change	Enlargement	Custom Union	Percentage Change	Enlargement	Custom Union	Percentage Change	Enlargement	Custom Union	Percentage Change
Electricity and heat	Trade Volume	64815	64587	-0.3511%	54.754	55.665	1.6638%	10.686	10.762	0.7112%	29.303	28.801	-1.7131%
	Consumer Prices	0.9972	0.9972	0.0000%	1.0456	1.018	-2.6339%	1.0269	1.0124	-1.4034%	1.0466	1.066	1.8483%
Oil and Gas	Trade Volume	82751	82148	-0.7289%	4668.2	4743.4	1.6105%	1799	1811.3	0.6842%	2417.6	2375.1	-1.7580%
	Consumer Prices	1.1188	1.1238	0.4501%	1.1732	1.1424	-2.6216%	1.1539	1.1374	-1.4251%	1.1743	1.1961	1.8556%
Other Fuels	Trade Volume	8381.5	8346.4	-0.4190%	173.71	176.57	1.6429%	25.724	25.918	0.7542%	294.96	289.87	-1.7277%
	Consumer Prices	1.0151	1.0158	0.0754%	1.0642	1.0363	-2.6217%	1.0464	1.031	-1.4781%	1.0653	1.085	1.8564%
Ferrous metallurgy	Trade Volume	24974	24744	-0.9221%	2163.6	2251.5	4.0624%	766.58	790.47	3.1155%	6178.7	6069.9	-1.7610%
	Consumer Prices	1.0223	1.0295	0.6978%	1.1066	1.0438	-5.6816%	1.0879	1.0387	-4.5249%	1.1077	1.1281	1.8459%
Nonferrous metallurgy	Trade Volume	36104	35733	-1.0286%	4985.9	5212.4	4.5422%	365.92	379.52	3.7178%	3421.7	3359.2	-1.8267%
	Consumer Prices	1.0116	1.0201	0.8416%	1.098	1.0345	-5.7821%	1.0839	1.0313	-4.8519%	1.0989	1.1193	1.8598%
Chemical industry and oil refinary	Trade Volume	27823	27488	-1.2016%	7671.8	8038.7	4.7819%	2340.1	2427.7	3.7435%	10695	10503	-1.7902%
	Consumer Prices	1.052	1.0636	1.0972%	1.1434	1.0746	-6.0156%	1.1256	1.071	-4.8471%	1.1445	1.1656	1.8494%
Machinery and equipment	Trade Volume	87561	86692	-0.9921%	6390.9	6805.9	6.4942%	14479	15248	5.3073%	44496	43664	-1.8681%
	Consumer Prices	1.0562	1.0645	0.7839%	1.1686	1.0784	-7.7189%	1.1541	1.0795	-6.4598%	1.1695	1.1914	1.8729%
Light industry	Trade Volume	11495	11467	-0.2444%	20966	22601	7.8010%	4951.2	5303.4	7.1124%	19487	19455	-0.1617%
	Consumer Prices	1.0514	1.0725	2.0035%	1.2102	1.0817	-10.6221%	1.2074	1.091	-9.6412%	1.2106	1.2332	1.8598%
Food-processing Industry	Trade Volume	123672	123069	-0.4873%	9160	9755.7	6.5040%	3270.2	3441.5	5.2381%	30312	29693	-2.0429%
	Consumer Prices	1.1313	1.1329	0.1420%	1.2406	1.1558	-6.8364%	1.2186	1.1498	-5.6437%	1.2413	1.2641	1.8347%
Other industries	Trade Volume	60837	60393	-0.7303%	2847.7	3043.8	6.8866%	1929.3	2041.3	5.8051%	7361.1	7229.8	-1.7835%
	Consumer Prices	1.0425	1.0475	0.4832%	1.163	1.0641	-8.5045%	1.1446	1.0609	-7.3175%	1.1641	1.1856	1.8507%
Agriculture and services and forestry	Trade Volume	139352	138526	-0.5929%	4011.2	4258.8	6.1718%	428.82	450.92	5.1539%	3505.8	3442.4	-1.8102%
	Consumer Prices	1.0171	1.0201	0.2953%	1.1244	1.0387	-7.6280%	1.1063	1.0343	-6.5089%	1.1252	1.1461	1.8519%
Construction	Trade Volume	115883	115491	-0.3384%	18.468	18.157	-1.6840%	169.72	165.61	-2.4222%	1273.4	1254.9	-1.4539%
	Consumer Prices	1.0373	1.0371	-0.0227%	1.0357	1.0589	2.2344%	1.0173	1.0531	3.5190%	1.0368	1.0559	1.8484%
Transport & Comunication	Trade Volume	104121	103598	-0.5016%	731.89	719.34	-1.7143%	235.89	230.33	-2.3587%	1144.6	1127.4	-1.5043%
	Consumer Prices	1.0137	1.0153	0.1547%	1.0123	1.0348	2.2229%	0.9967	1.0301	3.3497%	1.0133	1.0322	1.8597%
Other services	Trade Volume	234301	233440	-0.3676%	2566.8	2523.6	-1.6848%	828.52	808.49	-2.4165%	4014.3	3955.7	-1.4595%
	Consumer Prices	0.7501	0.75	-0.0080%	0.8987	0.9188	2.2345%	0.8828	0.9139	3.5154%	0.8996	0.9162	1.8454%
Finance, banking and insurance	Trade Volume	119854	119453	-0.3346%	749.71	737.21	-1.6669%	241.92	236.17	-2.3736%	1172.5	1155.5	-1.4448%
	Consumer Prices	1.0003	0.9999	-0.0347%	1.2485	1.2763	2.2328%	1.227	1.2696	3.4697%	1.2497	1.2728	1.8491%

Table[E.2]: consumption in EU of goods either produced domestically (column EU) or imported from other regions (columns RUS, CEECs, ROW correspondingly) and consumer prices.

		imported from RUS			EU			imported from CEEC			imported from ROW		
		Enlarge ment	Custom Union	Percentage Change	Enlarge ment	Custom Union	Percentage Change	Enlarge ment	Custom Union	Percentage Change	Enlarge ment	Custom Union	Percentage Change
Electricity and heat	Trade Volume	39.987	40.787	2.0007%	248892	248875	-0.0067%	153.13	151.4	-1.1304%	556.01	557.87	0.3345%
	Consumer Prices	1.05	1.05	0.0000%	1.0485	1.0719	2.2344%	1.0297	1.0661	3.5264%	1.0496	1.069	1.8484%
Oil and Gas	Trade Volume	10739	10970	2.1480%	228668	228627	-0.0180%	958.8	948.15	-1.1109%	56329	56514	0.3280%
	Consumer Prices	1.0764	1.0747	-0.1588%	1.0685	1.0925	2.2473%	1.0509	1.0877	3.5035%	1.076	1.096	1.8555%
Other Fuels	Trade Volume	3.176	3.237	1.9207%	13331	13329	-0.0179%	814.61	805.95	-1.0630%	4459.1	4473.7	0.3272%
	Consumer Prices	1.1501	1.151	0.0754%	1.1484	1.1742	2.2472%	1.1291	1.1681	3.4479%	1.1495	1.1708	1.8564%
Ferrous metallurgy	Trade Volume	8228.1	8425.9	2.4050%	208416	208372	-0.0209%	3333.6	3296.6	-1.1116%	15835	15888	0.3366%
	Consumer Prices	1.1633	1.1582	-0.4373%	1.1484	1.1743	2.2506%	1.129	1.1685	3.5045%	1.1626	1.1841	1.8459%
Nonferrous metallurgy	Trade Volume	17342	17772	2.4829%	33995	33947	-0.1404%	2102.2	2080.8	-1.0194%	39077	39203	0.3243%
	Consumer Prices	1.1657	1.1596	-0.5212%	1.1485	1.176	2.3865%	1.1338	1.1723	3.3973%	1.1652	1.1869	1.8597%
Chemical industry and oil refinary	Trade Volume	10847	11396	5.0596%	353128	352982	-0.0413%	5176	5116.6	-1.1468%	49181	49345	0.3335%
	Consumer Prices	1.2012	1.1624	-3.2286%	1.1484	1.1745	2.2738%	1.1305	1.1706	3.5454%	1.2008	1.223	1.8494%
Machinery and equipment	Trade Volume	25144	26300	4.5998%	1E+06	1E+06	-0.0019%	36632	36187	-1.2142%	311123	312096	0.3127%
	Consumer Prices	1.1919	1.1591	-2.7558%	1.1486	1.1742	2.2290%	1.1343	1.1754	3.6239%	1.1913	1.2136	1.8729%
Light industry	Trade Volume	2987.3	3247.9	8.7245%	72926	72462	-0.6358%	8342	8207.9	-1.6075%	63380	63585	0.3243%
	Consumer Prices	1.2592	1.173	-6.8460%	1.1491	1.183	2.9539%	1.1464	1.1932	4.0844%	1.2586	1.2821	1.8598%
Food-processing Industry	Trade Volume	2463.5	2722.7	10.5236%	580300	580007	-0.0506%	1513.3	1495.3	-1.1883%	29098	29199	0.3465%
	Consumer Prices	1.1498	1.0517	-8.5294%	1.049	1.073	2.2843%	1.0303	1.0674	3.5939%	1.1491	1.1702	1.8347%
Other industries	Trade Volume	11152	11533	3.4141%	219007	218987	-0.0091%	6069.9	5999.3	-1.1623%	62876	63085	0.3323%
	Consumer Prices	1.1737	1.1559	-1.5160%	1.1485	1.1742	2.2372%	1.1303	1.1706	3.5635%	1.1728	1.1945	1.8507%
Agriculture and services and forestry	Trade Volume	5848	6442.9	10.1720%	552116	551975	-0.0255%	6006.2	5939.9	-1.1031%	41992	42131	0.3313%
	Consumer Prices	1.2567	1.1536	-8.2050%	1.1487	1.1746	2.2557%	1.1302	1.1697	3.4946%	1.256	1.2792	1.8519%
Construction	Trade Volume	768.32	783.86	2.0227%	581615	581576	-0.0067%	767.16	758.53	-1.1242%	5575.8	5594.5	0.3343%
	Consumer Prices	1.1501	1.1498	-0.0227%	1.1484	1.174	2.2344%	1.1279	1.1676	3.5190%	1.1495	1.1708	1.8484%
Transport & Comunication	Trade Volume	7791.3	7936.3	1.8601%	984582	984618	0.0036%	18170	17992	0.0000%	132356	132785	0.0000%
	Consumer Prices	1.1499	1.1517	0.1547%	1.1483	1.1738	2.2228%	1.1306	1.1685	3.3497%	1.1495	1.1708	1.8598%
Other services	Trade Volume	3345.3	3412.5	2.0093%	7E+06	7E+06	-0.0068%	10707	10587	-1.1211%	77097	77357	0.3370%
	Consumer Prices	1.0723	1.0722	-0.0080%	1.0485	1.0719	2.2346%	1.03	1.0662	3.5156%	1.0717	1.0915	1.8454%
Finance, banking and insurance	Trade Volume	481.53	491.32	2.0337%	1E+06	1E+06	-0.0053%	1533.2	1516.6	-1.0818%	11150	11187	0.3337%
	Consumer Prices	1.2001	1.1997	-0.0347%	1.1983	1.225	2.2329%	1.1777	1.2185	3.4698%	1.1995	1.2217	1.8491%

Table[E.3]: consumption in CEECs of goods either produced domestically (column CEEC) or imported from other regions (columns RUS, EU, ROW correspondingly) and consumer prices.

		imported from RUS			imported from EU			CEEC			imported from ROW		
		Enlargement	Custom Union	Percentage Change	Enlargement	Custom Union	Percentage Change	Enlargement	Custom Union	Percentage Change	Enlargement	Custom Union	Percentage Change
Electricity and heat	Trade Volume	959.23	989.61	3.1679%	6.003	6.071	1.1328%	49879	49878	-0.0005%	136.95	138.98	1.4809%
	Consumer Prices	1.05	1.05	0.0000%	1.0485	1.0719	2.2344%	1.0297	1.0661	3.5264%	1.0496	1.069	1.8484%
Oil and Gas	Trade Volume	1955	2019.8	3.3156%	1835.9	1856.5	1.1248%	20013	20017	0.0194%	969.72	984.02	1.4748%
	Consumer Prices	1.0764	1.0747	-0.1588%	1.0685	1.0925	2.2473%	1.0509	1.0877	3.5035%	1.076	1.096	1.8555%
Other Fuels	Trade Volume	11.523	11.88	3.0982%	10.262	10.378	1.1304%	6837.8	6842.4	0.0678%	103.9	105.43	1.4736%
	Consumer Prices	1.1501	1.151	0.0754%	1.1484	1.1742	2.2472%	1.1291	1.1681	3.4479%	1.1495	1.1708	1.8564%
Ferrous metallurgy	Trade Volume	792.65	820.99	3.5755%	3132.7	3167.8	1.1219%	45535	45543	0.0186%	854.61	867.28	1.4834%
	Consumer Prices	1.1633	1.1582	-0.4373%	1.1484	1.1743	2.2506%	1.129	1.1685	3.5045%	1.1626	1.1841	1.8459%
Nonferrous metallurgy	Trade Volume	1356.3	1405.9	3.6542%	1411	1425.1	1.0010%	3644.7	3648.8	0.1120%	473.31	480.27	1.4709%
	Consumer Prices	1.1657	1.1596	-0.5212%	1.1485	1.176	2.3865%	1.1338	1.1723	3.3973%	1.1652	1.1869	1.8597%
Chemical industry and oil refinary	Trade Volume	1096.7	1165.4	6.2605%	9207.2	9308.6	1.1012%	49113	49105	-0.0169%	2824.5	2866.3	1.4803%
	Consumer Prices	1.2012	1.1624	-3.2286%	1.1484	1.1745	2.2738%	1.1305	1.1706	3.5454%	1.2008	1.223	1.8494%
Machinery and equipment	Trade Volume	2061.5	2180.9	5.7954%	46791	47325	1.1410%	97576	97493	-0.0851%	15560	15787	1.4592%
	Consumer Prices	1.1919	1.1591	-2.7558%	1.1486	1.1742	2.2290%	1.1343	1.1754	3.6239%	1.1913	1.2136	1.8729%
Light industry	Trade Volume	105.29	115.78	9.9669%	7725.5	7764.2	0.4999%	4683.5	4660.9	-0.4829%	2568.8	2606.5	1.4710%
	Consumer Prices	1.2592	1.173	-6.8460%	1.1491	1.183	2.9539%	1.1464	1.1932	4.0844%	1.2586	1.2821	1.8598%
Food-processing Industry	Trade Volume	523.84	585.58	11.7867%	4283.5	4330.3	1.0918%	131982	131904	-0.0590%	1835.1	1862.5	1.4933%
	Consumer Prices	1.1498	1.0517	-8.5294%	1.049	1.073	2.2843%	1.0303	1.0674	3.5939%	1.1491	1.1702	1.8347%
Other industries	Trade Volume	2621	2741.5	4.5961%	10291	10408	1.1338%	42276	42262	-0.0327%	2377.4	2412.6	1.4790%
	Consumer Prices	1.1737	1.1559	-1.5160%	1.1485	1.1742	2.2372%	1.1303	1.1706	3.5635%	1.1728	1.1945	1.8507%
Agriculture and services and forestry	Trade Volume	780.5	869.72	11.4312%	3298.6	3335.4	1.1171%	85874	85897	0.0272%	1130.6	1147.4	1.4780%
	Consumer Prices	1.2567	1.1536	-8.2050%	1.1487	1.1746	2.2557%	1.1302	1.1697	3.4946%	1.256	1.2792	1.8519%
Construction	Trade Volume	97.561	100.67	3.1888%	1094.1	1106.5	1.1363%	86689	86695	0.0060%	344.46	349.57	1.4811%
	Consumer Prices	1.1501	1.1498	-0.0227%	1.1484	1.174	2.2344%	1.1279	1.1676	3.5190%	1.1495	1.1708	1.8484%
Transport & Comunication	Trade Volume	979.08	1008.7	3.0244%	18248	18457	0.0000%	60935	61029	0.1535%	5554.3	5636	0.0000%
	Consumer Prices	1.1499	1.1517	0.1547%	1.1483	1.1738	2.2228%	1.1306	1.1685	3.3497%	1.1495	1.1708	1.8598%
Other services	Trade Volume	443.83	457.93	3.1751%	9471.3	9578.9	1.1361%	682886	682947	0.0090%	3299.2	3348.2	1.4839%
	Consumer Prices	1.0723	1.0722	-0.0080%	1.0485	1.0719	2.2346%	1.03	1.0662	3.5156%	1.0717	1.0915	1.8454%
Finance, banking and insurance	Trade Volume	60.85	62.797	3.1997%	3182.9	3219.1	1.1376%	27499	27513	0.0488%	937.39	951.26	0.0000%
	Consumer Prices	1.2001	1.1997	-0.0347%	1.1983	1.225	2.2329%	1.1777	1.2185	3.4698%	1.1995	1.2217	1.8491%

Table[E.4]: consumption in ROW of goods either produced domestically (column ROW) or imported from other regions (columns RUS, EU, CEEC correspondingly) and consumer prices.

		imported from RUS			imported from EU			imported from CEEC			ROW		
		Enlargement	Custom Union	Percentage Change	Enlargement	Custom Union	Percentage Change	Enlargement	Custom Union	Percentage Change	Enlargement	Custom Union	Percentage Change
Electricity and heat	Trade Volume	602.39	612.4	1.6614%	2160.2	2152.8	-0.3404%	57.823	56.979	-1.4596%	1E+06	1E+06	-0.0005%
	Consumer Prices	1.084	1.084	0.0000%	1.0825	1.1067	2.2345%	1.0631	1.10059	3.5265%	1.032	1.051	1.8483%
Oil and Gas	Trade Volume	37721	38193	1.2513%	13990	13941	-0.3517%	798.402	786.898	-1.4409%	1E+06	1E+06	-0.0069%
	Consumer Prices	1.1405	1.1456	0.4502%	1.139	1.1646	2.2473%	1.12023	1.15948	3.5036%	1.0858	1.106	1.8556%
Other Fuels	Trade Volume	931.88	946.72	1.5926%	83.024	82.732	-0.3517%	138.653	136.722	-1.3927%	73402	73397	-0.0076%
	Consumer Prices	1.1603	1.1612	0.0754%	1.1586	1.1846	2.2473%	1.13921	1.17848	3.4479%	1.1045	1.125	1.8565%
Ferrous metallurgy	Trade Volume	17821	18004	1.0273%	19121	19054	-0.3546%	528.394	520.776	-1.4417%	1E+06	1E+06	0.0017%
	Consumer Prices	1.2119	1.2204	0.6978%	1.21	1.2373	2.2506%	1.18956	1.23125	3.5045%	1.1069	1.1274	1.8459%
Nonferrous metallurgy	Trade Volume	35739	36060	0.8976%	23807	23694	-0.4737%	280.272	276.49	-1.3494%	329375	329341	-0.0105%
	Consumer Prices	1.1948	1.2048	0.8416%	1.1934	1.2218	2.3866%	1.17802	1.21804	3.3973%	1.1034	1.1239	1.8597%
Chemical industry and oil refinary	Trade Volume	9489.6	9553	0.6680%	56913	56700	-0.3750%	919.994	906.408	-1.4767%	651754	651745	-0.0014%
	Consumer Prices	1.2222	1.2356	1.0972%	1.2207	1.2485	2.2738%	1.20168	1.24429	3.5455%	1.1169	1.1375	1.8494%
Machinery and equipment	Trade Volume	14763	14903	0.9495%	343774	342620	-0.3357%	7569.96	7453.09	-1.5439%	663588	663441	-0.0221%
	Consumer Prices	1.2498	1.2596	0.7839%	1.2482	1.276	2.2290%	1.23268	1.27735	3.6239%	1.1182	1.1391	1.8729%
Light industry	Trade Volume	1325.5	1323.7	-0.1375%	36228	35877	-0.9674%	4523.17	4435.61	-1.9360%	996259	996153	-0.0106%
	Consumer Prices	1.3138	1.3401	2.0035%	1.3128	1.3516	2.9539%	1.30978	1.36328	4.0844%	1.1166	1.1374	1.8598%
Food-processing Industry	Trade Volume	5207.8	5287.6	1.5317%	34010	33880	-0.3842%	177.131	174.442	-1.5181%	2E+06	2E+06	0.0115%
	Consumer Prices	1.1975	1.1992	0.1420%	1.1961	1.2234	2.2844%	1.17481	1.21704	3.5938%	1.0766	1.0964	1.8348%
Other industries	Trade Volume	5351.9	5417.3	1.2214%	91838	91523	-0.3428%	932.944	919.023	-1.4922%	2E+06	2E+06	-0.0026%
	Consumer Prices	1.2568	1.2629	0.4831%	1.2548	1.2829	2.2372%	1.23497	1.27897	3.5635%	1.1136	1.1342	1.8507%
Agriculture and services and forestry	Trade Volume	8478.1	8596.2	1.3921%	24336	24248	-0.3592%	699.832	689.802	-1.4332%	1E+06	1E+06	-0.0036%
	Consumer Prices	1.2395	1.2432	0.2953%	1.2379	1.2658	2.2558%	1.21796	1.26053	3.4946%	1.1052	1.1256	1.8519%
Construction	Trade Volume	1113.8	1132.6	1.6823%	8154.9	8127.1	-0.3404%	197.953	195.074	-1.4544%	1E+06	1E+06	-0.0005%
	Consumer Prices	1.1125	1.1122	-0.0227%	1.1108	1.1356	2.2344%	1.09102	1.12941	3.5190%	1.1119	1.1325	1.8484%
Transport & Comunication	Trade Volume	11295	11467	1.5202%	137443	136989	0.0000%	3169.27	3127.79	0.0000%	2E+06	2E+06	-0.0106%
	Consumer Prices	1.1045	1.1062	0.1547%	1.1029	1.1274	2.2228%	1.08601	1.12239	3.3497%	1.1041	1.1246	1.8598%
Other services	Trade Volume	4849.8	4930.7	1.6688%	70494	70254	0.0000%	1773.37	1747.63	-1.4511%	2E+07	2E+07	-0.0043%
	Consumer Prices	0.9501	0.95	-0.0080%	0.9486	0.9698	2.2346%	0.93187	0.96463	3.5156%	0.9496	0.9672	1.8527%
Finance, banking and insurance	Trade Volume	698.08	709.9	1.6932%	23838	23757	-0.3390%	523.674	516.28	-1.4119%	2E+06	2E+06	-0.0012%
	Consumer Prices	1.1335	1.1331	-0.0347%	1.1318	1.157	2.2329%	1.1123	1.1509	3.4697%	1.1329	1.1539	1.8491%

Table[E.5] Relative Producer Prices

	RUS			EU			CEEC			ROW		
	Benchmark	Counterfactual	Percentage Change	Benchmark	Counterfactual	Percentage Change	Benchmark	Counterfactual	Percentage Change	Benchmark	Counterfactual	Percentage Change
Electricity and heat	1	1	0.0000%	0.99858	1.020891	2.2344%	0.9807	1.015288	3.5264%	0.99957	1.018049	1.8484%
Oil and Gas	0.9999	1.004388	0.4503%	0.99859	1.021027	2.2473%	0.9821	1.01654	3.5036%	0.99955	1.018093	1.8555%
Other Fuels	1.0001	1.00083	0.0754%	0.99858	1.021022	2.2473%	0.9819	1.015716	3.4479%	0.99955	1.018103	1.8564%
Ferrous metallurgy	1.0001	1.007125	0.6978%	0.99862	1.021093	2.2505%	0.9817	1.016122	3.5046%	0.99958	1.018032	1.8460%
Nonferrous metallurgy	0.9999	1.008336	0.8416%	0.99874	1.022571	2.3866%	0.9859	1.019398	3.3974%	0.99953	1.018116	1.8597%
Chemical industry and oil refinary	0.9998	1.010804	1.0972%	0.99859	1.021292	2.2738%	0.983	1.017874	3.5455%	0.99953	1.018014	1.8494%
Machinery and equipment	1	1.007876	0.7840%	0.99875	1.021016	2.2291%	0.9864	1.022098	3.6240%	0.99951	1.018226	1.8729%
Light industry	0.9999	1.019974	2.0036%	0.99919	1.028705	2.9539%	0.9969	1.037582	4.0844%	0.99952	1.018111	1.8597%
Food-processing Industry	1.0002	1.001619	0.1421%	0.99904	1.021859	2.2843%	0.9813	1.016542	3.5939%	0.9996	1.017941	1.8347%
Other industries	1.0003	1.005108	0.4832%	0.99869	1.021036	2.2372%	0.9829	1.017932	3.5635%	0.99957	1.018069	1.8508%
Agriculture and services and forestry	1.0002	1.00312	0.2953%	0.99888	1.021413	2.2558%	0.9828	1.017125	3.4947%	0.99958	1.018087	1.8519%
Construction	1.0001	0.99986	-0.0227%	0.99857	1.020886	2.2344%	0.9808	1.015295	3.5190%	0.99957	1.018047	1.8484%
Transport & Comunication	0.9999	1.001488	0.1547%	0.99848	1.020674	2.2228%	0.9832	1.016106	3.3498%	0.99952	1.018111	1.8597%
Other services	1.0001	1.000049	-0.0081%	0.99858	1.020889	2.2346%	0.9809	1.015404	3.5156%	0.99959	1.018033	1.8454%
Finance, banking and insurance	1.0001	0.999749	-0.0346%	0.99857	1.020863	2.2329%	0.9814	1.015439	3.4698%	0.99957	1.018051	1.8491%