Quantifying the Impact of Non-Tariff Barriers Reduction in the EEU

EDB Centre for Integration Studies

2015
Founded by Eurasian Development Bank in 2011.

- Focus on quantitative studies:
  - Effects of the CU and SES
  - Effects of widening of the CU and SES

- Monitoring of mutual investments
- Macroeconomic modeling
- Eurasian integration indicators system

- Public opinion
Non-tariff barriers in SES: problem statement and methodological basis for the study

On May 29, 2014 Belarus, Kazakhstan and Russia signed a Treaty on the establishment of the Eurasian Economic Union, which stipulates that Member States shall not apply non-tariff measures, except for cases provided for by the Treaty;

The Member States developed a technical regulation framework, and defined its order, rules and procedures; general framework for application of sanitary, veterinary & sanitary and phytosanitary quarantine measures;

Methodological basis for the study


Quantifying the impact of non-tariff barriers on trade between Member States of the CU and SES

Step 1:
• Surveys and focus groups were conducted among companies of Belarus, Kazakhstan and Russia that export goods and services to the markets of the CU and SES. The survey aimed to collect respondents' opinions about the NTBs they face in mutual trade in the CU and SES countries. More than 530 industrial enterprises were interviewed. The results of surveys have yielded quantitative estimates of NTBs as a percentage of the value of exported goods.

Step 2:
• Calculation of an index reflecting the degree of impact of NTBs on trade in Member States of the CU and SES, based on the survey of exporters of Belarus, Kazakhstan and Russia.
• Based on gravity model, calculation of trade cost equivalents (similar to ad valorem equivalent) related to NTBs for core industrial activities in Belarus, Kazakhstan and Russia.

Step 3:
• An assessment of the impact of NTBs reduction for each of the SES countries was carried out by applying a computable general equilibrium model. The NTBs estimates obtained from survey of enterprises, and the gravity model were used in CGE simulations. A computable general equilibrium model allowed us to quantify the effects of various NTBs reduction scenarios.
Survey of SES exporters

The results of the survey of exporters allowed to address a number of important tasks:
• Get first-hand information on the subject from sufficiently large number of managers and leading industry experts (about 530 industrial enterprises were surveyed in three countries in total) and take into account their views when deciding on reduction of NTBs within the SES;
• Evaluate existing NTBs to bilateral trade between the SES countries
• Assess relative significance of various NTBs in general and by various types of economic activities;
• Quantify NTBs and determine the possible effect of their reduction
Assessment of the cumulative effect of non-tariff barriers on the value of exports, % of the value

Quantitative assessment of the restrictive effect of NTBs was carried out using open-ended and closed-ended questions with calculation of ordinary and trimmed mean.

Exporters from Belarus estimate the cumulative effect of all barriers at no higher than 15% of the value of exports, regardless of the destination of exports.

Quantitative estimates of non-tariff barriers by Russian exporters are close to 25% of the value of exports both to Kazakhstan and to Belarus.

Interpretation of Kazakh exporters survey results is the most ambiguous. Their estimates of barriers vary depending on the method of calculation and destination of trade from 16.3% to 78.9% of the export value. To further simulate the effects of reduction of non-tariff barriers, it is advisable to use the least estimated values, i.e., 16.3% of the cost when exporting to Russia and 29.1% - to Belarus.
Barriers to international road freight transport

- Belarusian carriers identified the following major barriers to access to road freight transport market of Russia and Kazakhstan in terms of bilateral traffic and transit: fuel VAT refunds (fuel VAT refund is available in the EU), limited Green Card coverage in Russia (coverage is only around 3,000 EUR), permits for international road haulage for Belarus’ carriers to deliver goods to Russia from third countries and vice versa, bulky goods transportation (Kazakhstan), large number of checks (e.g., driver rest periods) and fines.

- Belarusian transport companies evaluated access to the Russian market for transportation from third countries to Russia and vice versa as nearly absolutely closed. With that, respondents cited the following main restrictions relating to international road haulage from third countries to Russia and Kazakhstan: number of permits issued, residency principle during customs clearance of goods.

- Belarusian carriers cited the number of permits issued as one of the most pressing problems, and mentioned it among the main barriers to expansion of international road haulage from third countries to Russia.

- In Kazakhstan, the respondents cited bureaucratic procedures, large number of checks and fines charged by transport inspection and road inspection departments as the restrictions and barriers to freight transportations to Russia. At the same time, all of the Kazakh companies responded that in general there were no barriers and constraints to freight transport operations in Belarus (bilateral, transit to/from third countries).

- According to Belarusian carriers, elimination of permits system will double cargo turnover in three years and increase truck fleet by 30-40% every year.

- Respondents from Kazakhstan believe that the barriers and restrictions present in the Russian market result in increase in the cost of transport services by an average of 10-20%. Abolition of barriers and restrictions in Russia would lead to growth of freight traffic by 30-35%.
Results of expert survey of CEOs of financial services companies in the EEA

- In the course of the expert survey of CEOs of companies rendering financial services in the markets of the CU and SES, **Belarusian and Russian companies rated the access to the market of financial services in Kazakhstan as restrictive and moderately restrictive, respectively.** While estimates of Belarusian respondents for Russia and Russian respondents for Belarus corresponded to conditions, which are not restrictive, Kazakh companies on average also rated the conditions for providing financial services in Russia and Belarus as almost nonrestrictive.

- During the survey, respondents provided quantification of barriers to mutual trade in financial services as a percentage of the increase in the costs of financial services. **Respondents of Belarus assessed the barriers associated with entry to the market and operations both in Russia and Kazakhstan at 10% of the costs. Kazakh companies believe that the both groups of barriers constitute 10% of the costs in Belarus and 15% in Russia. Russian companies assessed the barriers in Belarus at 13% and 15%, respectively, and 15% and 10% in Kazakhstan.**
Quantifying NTB index based on survey of exporters

Average non-tariff barrier index, points

<table>
<thead>
<tr>
<th></th>
<th>Kazakhstan</th>
<th>Russia</th>
<th>Belarus</th>
<th>Russia</th>
<th>Belarus</th>
<th>Kazakhstan</th>
<th>Russia</th>
</tr>
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<tbody>
<tr>
<td>1,32</td>
<td>1,31</td>
<td>1,83</td>
<td>2,06</td>
<td>1,62</td>
<td>1,60</td>
<td></td>
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</table>

Source: authors’ calculations

The index was calculated for each of the Member States of the CU and SES by fourteen activities and sixteen non-tariff measures (UNCTAD classification) on the basis of enterprises survey using 5-point scale.
Econometric analysis of the impact of NTBs on mutual trade in the SES

- An econometric model characterizing the impact of NTBs on exports in each pair of countries within the CU and SES is estimated.

- The model is based on data by six country pairs and fourteen types of economic activities for the same period of time, i.e., there is a specific data panel without time dimension.

- The absence of dynamic aspect in the panel is due to the fact that there are only data of the single survey conducted in 2014 and all the variables in the model should be in line with NTB index.

- In addition to traditional indicators of gravity model, NTB index, calculated on the basis of surveys is used.

- Assessments of the impact of NTBs on the value of exports are transformed into trade costs equivalent (similar to ad valorem equivalent) using elasticities of import on tariffs.

- Only the CU and SES countries (Belarus, Kazakhstan and Russia) are analysed.

- No tariff restrictions in trade between the CU and SES.

- Database for econometric analysis is very limited compared to traditional gravity models, as only the effect of NTBs (their reduction) within the CU and SES is analysed. In our case, there are only six country pairs, namely: Belarus-Kazakhstan, Belarus-Russia, Kazakhstan-Belarus, Kazakhstan-Russia, Russia-Belarus, Russia-Kazakhstan. Taking into account trade flows to/from the rest of the world does not help in solving the problem.

- It is difficult to use dummy variables for assessing the impact of non-tariff barriers, as is often done in analyzing the effects of NTBs in gravity models, since many non-tariff measures have been used in the SES for many years. This means that it is quite difficult to take into account the dynamic aspect in econometric modeling.

- Company survey results were included in the econometric model.
Impact of individual groups of non-tariff barriers

- (1) impact of sanitary and phytosanitary measures, (2) technical barriers, (3) pre-shipment inspections and other formalities, (4) non-automatic licensing, quotas, prohibitions and quantitative control measures other than sanitary and phytosanitary measures and technical barriers (NTB-T);
- impact of all other NTBs, except as specified above (NTB-P).

<table>
<thead>
<tr>
<th>Activity</th>
<th>Belarus</th>
<th>Kazakhstan</th>
<th>Russia</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Kazakhstan</td>
<td>Russia</td>
</tr>
<tr>
<td>NTB-T average</td>
<td>4.9</td>
<td>1.8</td>
<td>10.7</td>
</tr>
<tr>
<td>NTB-P average</td>
<td>11.2</td>
<td>4.5</td>
<td>29.1</td>
</tr>
<tr>
<td>NTB average</td>
<td>16.3</td>
<td>6.3</td>
<td>39.8</td>
</tr>
</tbody>
</table>
Quantification of reduction of non-tariff barriers using computable general equilibrium model: model description

- Static computable general equilibrium model for three countries (Belarus, Kazakhstan, Russia)
- Model is based on constant elasticity of substitution production function. Each sector produces one product using the products and services provided by other sectors and inputs.
- One of the key model assumptions is the full mobility of production factors, i.e. labor and capital. Although the time is not specified directly in the model, difference between the initial equilibrium prior to reduction of NTBs and a new equilibrium, in which the economy has fully adjusted to shock is about 5-7 years (medium-term effects). On the consumption side, the model distinguishes between government, investment and intermediate consumption and final consumption of households. Consumers consider imported and domestically produced goods as imperfect substitutes. Export and import vary by trading partners and are modeled with constant elasticity of transformation.
- The model has been implemented in GAMS/MPSGE.
Simulation results: scenarios and impact of reduction of non-tariff barriers on GDP and welfare of population of the SES countries, %

- **Scenario 1: aggregate.** Reduction of NTB-T and NTB-P in each of the SES countries in trade with the other two SES countries.

- **Scenario 2: reduction of NTB-T.** Reduction of NTB-T in each of the SES countries in trade with the other two countries - partners of the CU and SES.

- **Scenario 3: reduction of NTB-P.** Reduction of NTBs-P in each of the SES countries in trade with the other two SES countries.

<table>
<thead>
<tr>
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<th>Scenario 1: aggregate</th>
<th>Scenario 2: reduction of NTB-T</th>
<th>Scenario 3: reduction of NTB-P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impact on welfare:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>0.5</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Belarus</td>
<td>7.3</td>
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<td>4.2</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>1.3</td>
<td>0.8</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Impact on GDP:</strong></td>
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<td></td>
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</tr>
<tr>
<td>Russia</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Belarus</td>
<td>2.8</td>
<td>0.9</td>
<td>1.6</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>0.7</td>
<td>0.5</td>
<td>0.3</td>
</tr>
</tbody>
</table>
Impact of reduction of non-tariff barriers on the welfare of the SES countries, cumulative %

More active reduction of non-tariff barriers lead to higher welfare growth rates. Welfare growth rate is the highest in Belarus and the lowest in Russia.

Source: authors' calculations.
Impact of reduction of NTBs on output of individual sectors

Scenario 1:
- Trade liberalization resulting from reduction of NTBs within the CU and SES is most advantageous for Belarus. The model shows that reduction of NTBs will have the most positive impact on the Belarusian production of machinery and equipment, as well as on chemical industry, manufacture of rubber and plastic products and iron and steel industry.
- In Kazakhstan, the key sectors that will benefit from reduction of non-tariff barriers to trade between the SES countries will be primarily machine-building complex and production of vehicles.
- Relative gain of Russia, as compared to other SES countries, is insignificant and is concentrated in such sectors as food processing, manufacture of leather, leather products and footwear, as well as agriculture.

Scenario 2 and 3:
Reduction of NTB-T (scenario 2), and NTB-P (scenario 3) has different effects on various activities in the SES:
- For Kazakhstan, reduction of NTB-P leads to more significant changes in output as compared to reduction of NTB-T.
- For Belarus, it is important to reduce both NTB acting as taxes (NTB-T) and losses (NTB-P).
- For Russia, the relative gain in comparison with other SES countries is insignificant both for NTB-T, and for NTB-P.
Thank you for attention!

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