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Effect of the Formation of the Customs Union by Russia, Belarus, and Kazakhstan

< Summary >

- ◆ At the end of November 2009 Russia, Belarus and Kazakhstan agreed to establish a customs union (CU), and have introduced the new common external tariff (CET) since January 1, 2010.
- ◆ The aim of this paper is to empirically analyze the effects of the tariff changes on the trade flows of Kazakhstan and Russia.
- ◆ The results of the analysis suggest that for Kazakhstan, these impacts were accompanied by trade diversion effects which caused a decrease in import from China, and an increase in import from Russia and Belarus.
- ◆ The impacts of tariff changes on Russia's import appear to be a mixture of trade creation and trade diversion effects, the latter of which caused an increase in import from countries outside the CU.

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1. Introduction¹

At the end of November 2009 Russia, Belarus and Kazakhstan agreed to establish a customs union, and have introduced the new common external tariff (CET) since January 1, 2010.² The common external customs tariff (CET) is mainly based on the Russian duties. Since Russia's earlier tariffs were the highest among the three countries there have been significant duty hikes on a number of products in Belarus and Kazakhstan, especially in Kazakhstan.

In general, tariffs are imposed to constrain the volume of imports by increasing their cost to domestic consumers. Therefore, all other things equal, the higher (the lower) the tariff barriers, the more trade should fall (rise). International trade economists such as Viner (1950) analyze the effects of changes in tariffs in preferential trade arrangements, such as a FTA or a Customs Union (CU), in terms of trade creation and trade diversion.

The aim of this paper is to examine the extent to which changes in tariffs have this effect in practice as the results of the formation of the CU by Russia, Belarus and Kazakhstan.

For this purpose, I firstly overview the potential effects of tariff changes in the three countries. Secondly, I empirically analyze the effects of the tariff changes on the trade flows of Kazakhstan and Russia using the methodology of Isakova et. al (2013) which tackled with the same theme with this paper. Thirdly, results of the analyses are discussed.

2. Potential effects of the Formation of the Customs Union

The effects of tariff changes under preferential trade agreements (whether a FTA or a CU) are generally twofold. On the one hand, the removal of internal tariffs and reduction in external tariffs could lead to trade creation – a term coined by Viner (1950). Trade creation results in improved welfare for the importing country as consumers are given the opportunity to buy from more efficient foreign producers. In the context of the CU by Russia, Belarus and Kazakhstan, this effect can be expected only due to reduction in tariffs for countries outside the CU, because the member countries of the CU already have tariff-free access to the other CIS markets under various bilateral Free Trade

¹ This paper is based on the paper presented at the 46th Annual Convention of ASEEEES (Association for Slavic, East European, and Eurasian Studies) at San Antonio, Texas, USA on November 22, 2014.

² Resolution of the committee of the customs union No. 130 on Nov. 27, 2009 "On the unified regulations on customs tariffs of the customs union of Belarus, the Republic of Kazakhstan and the Russian Federation".

Agreements.

On the other hand, trade diversion occurs when suppliers in the rest of the world, who face an increased tariff, are more efficient than partner suppliers, but additional partner country imports displace the more efficient suppliers. Trade diversion leads to welfare loss since the consumers must pay more for high-quality products from the rest of the world. In the context of the CU by the three countries, this effect can be expected due to increase in tariffs for countries outside the CU.

Looking at average tariff rate of the three countries prior to the implementation of the CET, it was 10.5%, 10.6%, and 5.9%, for Russia, Belarus, and Kazakhstan, respectively (WTO, 2010). According to the Russian government (Minecon), in Kazakhstan, tariff rates on around half (45 percent) of the number of goods (tariff lines) were increased while only 10 percent were reduced at the time of introducing the CET. In Belarus, 18 percent of tariff lines were increased and 7 percent were reduced. In Russia, relatively few tariff lines changed since the common external customs tariff (CET) is mainly based on the Russian duties – only 4 percent of tariff lines were increased and 14 percent were reduced.

Where tariffs increase there is a scope for trade diversion, and where they decline there is a scope for trade creation. Thus, in terms of tariff changes, the potential for trade diversion is highest in Kazakhstan, and that for trade creation is highest for Russia.

In regard to a potential trade diversion for Kazakhstan, the supplier countries who could face increased tariffs (CET) and lose market share in Kazakhstan are the key trading partners outside the CU, such as China and EU. On the other hand, the countries who could increase export volumes to Kazakhstan are the other member countries of the CU, i.e., Russia and Belarus.³

³ Indeed, the common tariff of the customs union was negotiated and worked out in 2009 at the height of the global economic crisis and was viewed by many as an instrument to lock in some protectionist measures imposing higher tariffs on imports from non-CIS countries such as China, Germany or Turkey.

3. Measuring the effects

(1) Model specification

In the empirical analysis of this study, the same specification with Isakova et. al (2013) is estimated for Kazakhstan and Russia, and separately for major trading partners (the other two countries of the Customs Union, EU and China). The specification is :

$$\Delta M_{j,t} = \alpha \Delta d_{j,t} + \beta \Delta M_{j,t-s} + \lambda M_{j,t-1} + \varepsilon$$

The dependent variable $\Delta M_{j,t}$ is the change in the logarithm of imports of goods j from a certain major trading partner in the period of t (between 2009 and 2010). The change between 2009 and 2013 was also examined in order to check how the effects of tariff changes evolve over time.

Independent variable $\Delta d_{j,t}$ is the change in the tariff rate of goods j between 2009 and 2010. The expected sign for this variable is positive in the case of imports from a country forming the Customs Union, and negative in the case of imports from outside the CU indicating the trade diversion effects. $\Delta M_{j,t-s}$ is the changes in the logarithm of imports of goods j from the same trading partner over previous years (2006-08 and 2008-09) and those from the world.

$M_{j,t-1}$ is the logarithm of imports of goods j from the same trading partner in 2009. The estimation of the model is conducted by means of OLS regression.

(2) Data

The analysis below uses the annual bilateral trade data from the UN Comtrade database basically at the six-digit level of disaggregation of the HS classification Rev. 2007 (HS 2007). However, since the trade data of Kazakhstan and Russia in 2006 are reported only by the HS 2002 classification, the data by HS 2002 were converted to those by HS 2007 using the correlations table (UN, 2014). The trade volumes are reported in nominal US dollars and were converted to constant base year prices using nominal exchange rates and import deflators for Kazakhstan and Russia as reported in WDI. To minimize the “noise effect”, the analysis is restricted to “tariff line – country” pairs for which annual import values exceed US\$ 1 million.

The major differences in methodology between the work of Isakova et. al (2013) and this analyses are the following. Firstly, in this analysis, the tariff rates are taken from Market Access Map database of the International Trade Center of UNCTAD/WTO (ITC),

while in Isakova et. al (2013) the statutory tariffs are taken from official publications of respective countries, such as *Kazakhstanskaya Pravda* and *Rossiyskaya Gazeta*. In Russia and Kazakhstan, a number of statutory tariffs are often defined by both a specific duty (USD per unit or per kg) and an ad valorem duty at the same time. In Market Access Map database, all non ad valorem (NAV) tariffs, including specific duties, are converted to ad valorem equivalents (AVEs). In this study, these AVEs tariffs at the 10-digit of HS 2007 were converted to the 6-digit level by averaging them.

Secondly, in this analysis, tariff lines of HS 01-27, which basically consist of mineral resources and agricultural goods, are excluded. In general, prices of those goods are volatile since they are much influenced by commodity markets. Therefore, their trade volumes calculated from the import values, the nominal exchange rate and the import deflators may be misleading.

Thirdly, the effects of tariff changes on imports from the other countries of the CU are analyzed separately. Specifically, in the case of import of Kazakhstan, import from Russia and Belarus are analyzed separately, while they are combined into one category – “import from the CU” – in the work of Isakova et. al (2013).⁴

Table 1 summarizes descriptive statistics for selected variables for Kazakhstan and Russia. The table shows that the in-sample average tariff rate (for the imports from the world) increased by 4.4% points in Kazakhstan. In contrast, Russia’s average tariff rate decreased by 1.2% points, though a number of tariffs increased.

⁴ As the result of this methodology, the number of observations in this study is much smaller than those in Isakova et. al (2013). A decrease in the number of samples occurred also in the process of converting trade data from HS 2002 to HS 2007. Specifically, in the conversion process, the tariff lines, where the correspondence ratio between HS 2002 and HS 2007 is 1:n or n:n, are omitted. Eventually, only the tariff lines, where the correspondence ratio between HS 2002 and HS 2007 is 1:1 or n:1, are included in the sample.

Table 1: Descriptive statistics for selected variables

	Kazakhstan					Russia				
	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max
change in tariffs	987	4.37	7.80	-16.1	95.6	1544	-1.16	4.52	-36.6	92.9
decrease in tariffs	987	-0.29	1.33	-16.1	0	1544	-1.41	3.03	-36.6	0
increase in tariffs	987	4.66	7.51	0	95.6	1544	0.26	3.24	0	92.9
diff in log imports Russia 2009-10	357	-0.57	1.04	-4.92	4.17	-	-	-	-	-
diff in log imports Russia 2006-08	357	0.02	0.51	-2.15	1.77	-	-	-	-	-
diff in log imports Russia 2008-09	357	-0.36	1.03	-4.75	4.67	-	-	-	-	-
log imports Russia 2009	357	15.26	1.00	13.59	19.64	-	-	-	-	-
diff in log imports Kazakhstan 2009-10	-	-	-	-	-	31	-0.21	0.43	-1.03	1.11
diff in log imports Kazakhstan 2006-08	-	-	-	-	-	31	0.37	0.43	-0.84	1.13
diff in log imports Kazakhstan 2008-09	-	-	-	-	-	31	-0.54	0.52	-1.56	0.27
log imports Kazakhstan 2009	-	-	-	-	-	31	15.74	1.50	13.72	19.35
diff in log imports Belarus 2009-10	20	-0.43	0.20	-0.78	-0.12	40	0.30	0.36	-0.47	1.29
diff in log imports Belarus 2006-08	20	-0.15	0.60	-1.17	1.35	40	0.42	1.56	-2.34	3.5
diff in log imports Belarus 2008-09	20	-0.09	0.43	-0.92	0.69	40	-0.35	0.62	-3.06	1.35
log imports Belarus 2009	20	15.04	0.76	13.76	16.42	40	15.38	1.23	13.67	17.66
diff in log imports EU 2009-10	389	-0.02	0.60	-2.58	2.32	1089	0.19	0.55	-5.11	4.16
diff in log imports EU 2006-08	389	-0.04	0.64	-2.84	2.21	1089	0.33	1.88	-7.42	5.8
diff in log imports EU 2008-09	389	-0.13	0.59	-2.31	3.15	1089	-0.48	0.55	-4.75	2.36
log imports EU 2009	389	15.13	1.04	13.61	19.51	1089	16.11	1.39	13.65	21.93
diff in log imports China 2009-10	171	0.17	0.61	-2.37	1.65	291	0.53	0.49	-1.42	2.2
diff in log imports China 2006-08	171	0.24	0.69	-2.85	2.96	291	0.40	1.69	-5.38	5.7
diff in log imports China 2008-09	171	-0.17	0.52	-1.73	1.7	291	-0.29	0.59	-2.86	2.33
log imports China 2009	171	15.17	0.91	13.59	18.53	291	15.41	1.20	13.64	19.48
diff in log imports World 2009-10	987	-0.18	0.55	-4.64	2.25	1544	0.30	0.54	-5.16	3.37
diff in log imports World 2006-08	987	0.11	0.58	-3.55	3.52	1544	0.40	2.00	-8.27	6.38
diff in log imports World 2008-09	987	-0.19	0.53	-3.22	2.91	1544	-0.38	0.55	-3.89	3.87
log imports World 2009	987	15.56	1.18	13.58	20.92	1544	16.22	1.48	13.65	22.18

Source: Author's calculations.

(3) Results

a) Effects of tariff changes in Kazakhstan

Table 2 reports the regression results for Kazakhstan. Dependent variables are the changes in imports between 2009 and 2010. The first column reports the result for changes in the overall volume of imports, and the remaining four columns report those for key trade partners: Russia, Belarus, EU, and China. The only statistically significant coefficient on the change in tariffs is for China and the sign is negative, implying that a 4.5 percent point increase in the tariff (the average for the sample of 171 observations) leads to a 7.8 percent decrease in import volume from China. This may point to trade diversion effect in response to the formation of the CU. For all other trading groups, including the partners of the CU, the effect is negative but statistically non-significant.

As for other independent variables, the results imply that the higher the existing imports of a given group of goods from a given partner (bilateral and/or world imports in 2009), the slower the growth of trade. The results also point to a post-crisis recovery in trade with all partners but Belarus: the bigger drop in trade in 2008-09, the higher the growth rate in 2009-10.

The negative coefficient on change in tariffs, however, may potentially combine two different effects: a decrease in imports in response to an increase in tariffs and an increase in imports in response to tariff reductions. While the former effect can be regarded as trade diversion with respect to countries outside the CU, the latter will correspond to trade creation effect. In order to distinguish these asymmetric effects, the changes in tariffs are interacted with dummy variables for positive and negative changes.

The results (**Table 3**) suggest that only increases in tariffs had a significant and negative impact (trade diversion effect) on import volumes of Kazakhstan from China.⁵

⁵ The other statistically significant coefficient in Table 3 is that for imports from Belarus to Kazakhstan. It implies that decrease in tariff rate against countries outside the CU led to increase in import volume from Belarus to Kazakhstan. However, the number of tariff lines with decreased rates in the sample is too small (only two - HS 401120: New pneumatic tyres, of rubber, of a kind used on buses/lorries, and HS 481490: Wallpaper & similar wall coverings; window transparencies of paper).

Table 2: Effects of tariff changes (2009-10)

Dependent variables	World	Russia	Belarus	EU	China
<i>Δ log of imports (2009-10) from:</i>					
Independent variables					
<i>Δ tariffs (2009-10)</i>	-0.0012 (-0.38)	-0.0079 (-1.2)	-0.0071 (-1.36)	-0.0033 (-0.61)	-0.0174 ** (-2.31)
<i>Δ log of bilateral imports (2006-08)</i>		0.0009 (0.01)	-0.1579 ** (-2.96)	-0.0492 (-0.72)	-0.1326 (-1.4)
<i>Δ log of bilateral imports (2008-09)</i>		-0.2539 *** (-4.18)	0.3825 *** (4.19)	-0.4416 *** (-6.4)	-0.2734 ** (-2.29)
<i>log of bilateral imports in 2009</i>		-0.4624 *** (-7.56)	-0.1600 ** (-2.51)	-0.1107 *** (-3.13)	-0.1833 *** (-3.38)
<i>Δ log of world imports (2006-08)</i>	-0.2051 *** (-5.15)	-0.1507 (-1.33)	0.2119 (1.99)	-0.0042 (-0.06)	0.0456 (0.4)
<i>Δ log of world imports (2008-09)</i>	-0.3229 *** (-6.67)	0.0581 (0.47)	-1.0673 *** (-3.51)	0.1423 * (1.81)	0.0178 (0.15)
<i>log of world imports in 2009</i>	-0.0907 *** (-5.16)				
Const.	1.1960 *** (4.42)	6.4700 *** (6.93)	1.8183 * (1.96)	1.6333 *** (3.11)	3.0107 *** (3.64)
Observations	987	357	20	389	171
R-squared	0.1765	0.3865	0.6065	0.2492	0.192

Notes: The figures in parentheses report robust t-statistics.

***: Significant at the 1% level; **: Significant at the 5% level; *: Significant at the 10% level.

Source: Author's calculations.

Table 3: Kazakhstan: Asymmetric effects of tariff changes (2009-10)

Dependent variables	World	Russia	Belarus	EU	China
<i>Δ log of imports (2009-10) from:</i>					
Independent variables					
<i>Δ tariffs (decrease: 2009-10)</i>	0.0045 (0.47)	-0.0044 (-0.13)	-0.1104 ** (-2.8)	-0.0038 (-0.2)	0.0073 (0.35)
<i>Δ tariffs (increase: 2009-10)</i>	-0.0015 (-0.43)	-0.0081 (-1.16)	-0.0043 (-0.8)	-0.0033 (-0.58)	-0.0199 ** (-2.41)
Observations	987	357	20	389	171
R-squared	0.1767	0.3865	0.6789	0.2492	0.1965

Notes: The figures in parentheses report robust t-statistics.

***: Significant at the 1% level; **: Significant at the 5% level; *: Significant at the 10% level.

Source: Author's calculations.

Table 4 reports the effects of tariff changes in Kazakhstan on changes in its imports in 2009-13. The coefficients on the change in tariffs are positive and significant for both of the partners of the CU, implying that a 4.7 percent point increase in the tariff (in-sample average) led to a 5.6 percent increase in import from Russia and that a 6.8 percent point increase in the tariff led to a 40.0 percent increase in import from Belarus.

Regarding the asymmetric effects of tariff changes, the positive coefficient for the country of the CU potentially means either an increase in imports in response to an increase in tariffs to third countries (trade diversion) or a decrease in imports in response to tariff reduction. **Table 5** suggests that for Kazakhstan, increases in tariffs to third countries had a positive impact on imports from both Russia and Belarus (i.e., trade diversion effect), inter alia, the magnitude of the latter was large.⁶

Table 4: Kazakhstan: Effects of tariff changes (2009-13)

Dependent variables $\Delta \log$ of imports (2009-13) from:	World	Russia	Belarus	EU	China
Independent variables					
Δ tariffs (2009-10)	0.0127 ** (2.55)	0.0119 *** (2.70)	0.0584 *** (3.87)	0.0058 (0.77)	-0.0020 (-0.18)
$\Delta \log$ of bilateral imports (2006-08)		-0.2602 *** (-2.72)	-0.0718 (-0.54)	-0.1424 ** (-2.0)	-0.1452 (-1.04)
$\Delta \log$ of bilateral imports (2008-09)		-0.8052 *** (-16.46)	-0.2707 (-1.22)	-0.3796 *** (-3.81)	-0.3513 ** (-2.23)
\log of bilateral imports in 2009		-0.1145 *** (-2.62)	-0.0298 (-0.27)	-0.1828 *** (-4.77)	-0.1597 ** (-2.20)
$\Delta \log$ of world imports (2006-08)	-0.1393 *** (-2.86)	0.0123 (0.16)	0.7838 *** (3.21)	0.0452 (0.58)	-0.1310 (-0.85)
$\Delta \log$ of world imports (2008-09)	-0.4452 *** (-7.98)	0.3415 *** (3.49)	-0.1910 (-0.32)	0.0810 (0.60)	0.1108 (0.60)
\log of world imports in 2009	-0.1287 *** (-6.64)				
Const.	2.1716 *** (7.23)	1.8430 *** (2.85)	0.4153 (0.26)	2.8695 *** (5.0)	2.9430 *** (2.66)
Observations	1001	435	25	386	170
R-squared	(0.1868)	(0.6051)	(0.7089)	(0.2015)	(0.1244)

Notes: The figures in parentheses report robust t-statistics.

***: Significant at the 1% level; **: Significant at the 5% level; *: Significant at the 10% level.

Source: Author's calculations.

Table 5: Kazakhstan: Asymmetric effects of tariff changes (2009-13)

Dependent variables $\Delta \log$ of imports (2009-13) from:	World	Russia	Belarus	EU	China
Independent variables					
Δ tariffs (decrease: 2009-10)	-0.0038 (-0.29)	0.0132 (0.50)	0.3509 *** (4.8)	0.0092 (0.58)	0.0293 (1.32)
Δ tariffs (increase: 2009-10)	0.0135 ** (2.53)	0.0119 ** (2.48)	0.0480 *** (3.29)	0.0056 (0.71)	-0.0052 (-0.42)
Observations	1001	435	25	386	170
R-squared	0.1877	0.6051	0.7607	0.2015	0.1286

Notes: The figures in parentheses report robust t-statistics.

***: Significant at the 1% level; **: Significant at the 5% level; *: Significant at the 10% level.

Source: Author's calculations.

⁶ The coefficient on tariff reduction for Belarus is statistically significant in Table 5. However, the number of tariff lines with decreased rates in the sample is only a few, which makes the reliability of this analysis result very low, as is the case with that in Table 3.

b) Effects of tariff changes in Russia

Table 6 reports the regression results for Russia's import in 2009-10. Tariff changes had a negative and statistically significant coefficient for imports from the world as a whole. Unlike in Kazakhstan, tariffs declined on average in Russia. Therefore, the coefficient implies that a tariff reduction in Russia (by 1.2 percent point in-sample average) led to an increase in import from the world by 1.1 percent.⁷

However, the analysis of asymmetric effects (**Table 7**) suggests that not only a tariff reduction, but also a tariff increase impacted Russia's imports from countries outside the CU. Specifically, tariff reductions were associated with statistically significant increases in imports from the world (trade creation effect), while tariff increases were associated with decreases in imports from the world, EU and China (trade diversion effect). **Table 8-9** report the effects of tariff changes in Russia on its imports in 2009-13. The results are basically similar to those in the **Table 6-7**. Thus, the effect of tariff changes on Russia's import appears to be a mixture of trade creation and trade diversion.

Table 6: Russia: Effects of tariff changes (2009-10)

Dependent variables $\Delta \log$ of imports (2009-10) from:	World	Kazakhstan	Belarus	EU	China
Independent variables Δ tariffs (2009-10)	-0.0098 *** (-3.71)	0.0299 ** (2.25)	0.0015 (1.01)	-0.0005 (-0.16)	-0.0121 (-1.3)
$\Delta \log$ of bilateral imports (2006-08)		0.0394 (0.21)	-0.0193 (-0.4)	-0.0501 *** (-3.29)	-0.0482 (-1.63)
$\Delta \log$ of bilateral imports (2008-09)		-0.1819 (-1.14)	-0.2534 * (-1.84)	-0.4412 *** (-8.6)	-0.2051 ** (-2.38)
\log of bilateral imports in 2009		-0.0863 (-1.4)	-0.0123 (-0.23)	-0.0657 *** (-4.41)	-0.0486 (-1.53)
$\Delta \log$ of world imports (2006-08)	0.0059 (0.66)	0.0178 (0.48)	0.0587 * (1.91)	0.0579 *** (3.89)	0.0255 (1.09)
$\Delta \log$ of world imports (2008-09)	-0.3297 *** (-7.81)	-0.4021 (-1.5)	0.0644 (0.55)	0.0418 (0.76)	0.0744 (0.82)
\log of world imports in 2009	-0.0625 *** (-4.87)				
Const.	1.1784 *** (5.93)	0.8301 (0.83)	0.4234 (0.49)	1.0331 *** (4.56)	1.2316 ** (2.51)
Observations	1544	31	40	1089	291
R-squared	0.1484	0.3576	0.2657	0.2213	0.0908

Notes: The figures in parentheses report robust t-statistics.

***: Significant at the 1% level; **: Significant at the 5% level; *: Significant at the 10% level.

Source: Author's calculations.

⁷ In all of the Figure 6-9, the coefficients on tariffs for imports from Kazakhstan are statistically significant. However, here is also a problem that the number of the samples is too small to discuss the implications.

Table 7: Russia: Asymmetric effects of tariff changes (2009-10)

Dependent variables $\Delta \log$ of imports (2009-10) from:	World	Kazakhstan	Belarus	EU	China
Independent variables					
Δ tariffs (decrease: 2009-10)	-0.0119*** (-3.14)	0.0299** (2.25)	0.0128 (0.77)	0.0075 (1.4)	0.0000 (0.0)
Δ tariffs (increase: 2009-10)	-0.0080** (-2.56)	(omitted)	0.0008 (0.75)	-0.0081*** (-3.63)	-0.0466*** (-8.24)
Observations	1544	31	40	1089	291
R-squared	0.1486	0.3576	0.2759	0.2251	0.1174

Notes: The figures in parentheses report robust t-statistics.

***: Significant at the 1% level; **: Significant at the 5% level; *: Significant at the 10% level.

Source: Author's calculations.

Table 8: Russia: Effects of tariff changes (2009-13)

Dependent variables $\Delta \log$ of imports (2009-13) from:	World	Kazakhstan	Belarus	EU	China
Independent variables					
Δ tariffs (2009-10)	-0.0107** (-2.37)	-0.0867* (-1.85)	0.0032 (1.47)	-0.0030 (-0.95)	-0.0122* (-1.83)
$\Delta \log$ of bilateral imports (2006-08)		0.9218 (1.69)	0.0705 (0.86)	-0.0696*** (-3.74)	-0.0886** (-2.23)
$\Delta \log$ of bilateral imports (2008-09)		0.1199 (0.25)	-0.2005 (-0.95)	-0.4712*** (-8.33)	-0.4905*** (-4.35)
\log of bilateral imports in 2009		0.0379 (0.52)	-0.2236** (-2.16)	-0.0740*** (-3.91)	-0.0928* (-1.9)
$\Delta \log$ of world imports (2006-08)	0.0044 (0.38)	-0.0930 (-1.4)	0.0659* (1.8)	0.0756*** (4.1)	0.0770** (2.46)
$\Delta \log$ of world imports (2008-09)	-0.4002*** (-8.54)	-0.7821 (-1.51)	-0.1422 (-0.96)	0.0532 (0.85)	0.1950 (1.5)
\log of world imports in 2009	-0.0810*** (-4.78)				
Const.	1.7876*** (6.51)	-0.8154 (-0.63)	3.7550** (2.33)	1.4484*** (4.7)	2.1001*** (2.79)
Observations	1552	28	40	1092	292
R-squared	0.1315	0.436	0.328	0.1805	0.1698

Notes: The figures in parentheses report robust t-statistics.

***: Significant at the 1% level; **: Significant at the 5% level; *: Significant at the 10% level.

Source: Author's calculations.

Table 9: Russia: Asymmetric effects of tariff changes (2009-13)

Dependent variables $\Delta \log$ of imports (2009-13) from:	World	Kazakhstan	Belarus	EU	China
Independent variables					
Δ tariffs (decrease: 2009-10)	-0.0194* (-4.4)	-0.0867* (-1.85)	-0.0322 (-1.23)	0.0040 (0.74)	-0.0108 (-1.21)
Δ tariffs (increase: 2009-10)	-0.0029 (-0.71)	(omitted)	0.0055*** (3.13)	-0.0094*** (-2.92)	-0.0162** (-2.11)
Observations	1552	28	40	1092	292
R-squared	0.1341	0.436	0.3705	0.1825	0.17

Notes: The figures in parentheses report robust t-statistics.

***: Significant at the 1% level; **: Significant at the 5% level; *: Significant at the 10% level.

Source: Author's calculations.

4. Conclusions

The conclusions obtained from the analyses above may be summarized as follows:

1. The analysis above suggests that changes in tariffs by the implementation of the CET did have some impact on import volumes of Russia and Kazakhstan.
2. For Kazakhstan, these impacts were accompanied by trade diversion effects which caused a decrease in import from China in 2010, and an increase in import from Russia and Belarus in 2013. In other words, by forming the CU, Russia and Belarus gained additional exports to Kazakhstan at the sacrifice of the welfare of the country.
3. The impacts of tariff changes on Russia's import appear to be a mixture of trade creation and trade diversion effects. Both of these effects were observed principally on imports from countries outside the CU. The impacts on Russia's import from the other two countries of the CU were ambiguous.
4. In comparison with the preceding study by Isakova et. al (2013), analysis results are generally similar to each other, while in this paper, larger and statistically more significant coefficients are obtained for Kazakhstan (2009-13). This is likely due to the difference in data used for analysis, or suggests that effects of changes in tariffs in a few years can be larger than the immediate effects.

Reference

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