

Trade, Border Effects, and Regional Integration between Russia's Far East and Northeast Asia

Russia's Far East (RFE) is set to benefit from Russia's growing economic cooperation with China in the face of Western sanctions. This project examines the barriers to cross-border trade between RFE and its Northeast Asian (NEA) neighbors (China, Japan, and Korea) and compares these to the hurdles on trade with the rest of Russia. The results indicate that the border between RFE and NEA imposes much higher costs on trade than the one between RFE and the rest of Russia. Policy recommendations aimed at lowering border effects in RFE include the upgrade of transportation links and improvements in the business environment.



RESEARCH BRIEF

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RESEARCH IN CONTEXT

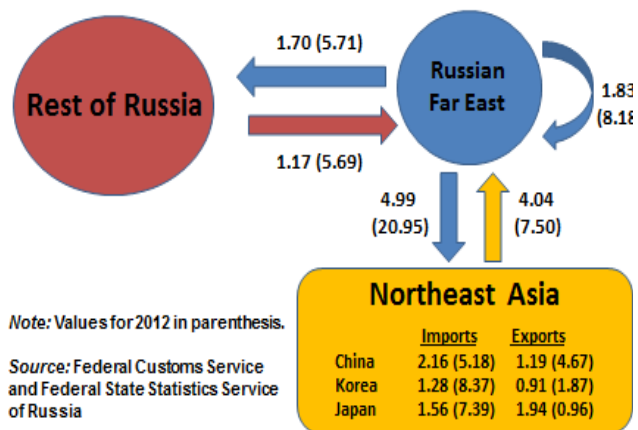
The recent Western economic sanctions and the retaliatory measures by Russia highlight the role of national borders as barriers to trade. However, even in the absence of any physical signs of borders, it might be costly to move goods between regions within a country because of bad infrastructure or institutional hurdles.

Russia's Far East (RFE) is a perfect case study for the impact of borders on economic development, cross-border trade, and regional integration. This region, originally claimed by China, became part of the Russian Empire in the 19th century. But until the 1920s, borders did not represent a major obstacle to trade and investment. RFE was well integrated within Northeast Asia (NEA) as people, goods, and financial capital flowed in from China, Japan, Korea, and the United States. Porous borders, the limited reach of a central government located more than 6,000 miles away, and a rich endowment of natural resources turned RFE into a land of opportunity. The arrival of Soviet rule in the early 1920s resulted in a gradual sealing of the border, which severed economic ties with neighboring countries for the following 70 years. The Soviet government promoted the economic integration of RFE with the rest of the country by setting up industries (mostly in the defense sector), expanding and improving the infrastructure, and by providing subsidies that lowered transportation costs and attracted migrants from other regions.

The breakdown of the Soviet Union in the early 1990s marked the beginning of a new period. Cross-border trade with China, Japan, and South Korea was revived as borders opened again following a thaw in Russia's relations with these countries. The integration of RFE with NEA gained in importance as the transition to a market economy weakened the power of the central government in Moscow and financial inflows from the federal budget seized.

The turn of the century provided additional opportunities for the economic development of RFE. The Chinese economy needs large amounts of natural resources to sustain its rapid growth and

Fig. 1: Russian Far East's Trade Flows, 2005 and 2011:
(in billion USD)



has been interested in obtaining those from neighboring RFE. For this purpose, the Chinese government invested heavily in the infrastructure of border towns and has been eager to participate in joint projects, such as the construction of a bridge across the Amur River that forms the border between the two countries. In 2013, one of the major border towns in China was allowed to introduce the Russian ruble as a parallel currency in an attempt to attract Russian businesses and tourists. Furthermore, the Russian government declared the economic revitalization of RFE as one of the top national priorities and established a dedicated Ministry for the Development of RFE at the federal level in 2012. In that same year, Russia hosted a summit of the Asia-Pacific Economic Cooperation (APEC) in Vladivostok, RFE's largest city.

The economic cooperation between RFE and NEA is likely to expand in the near future, especially as Russia is facing Western sanctions. This calls for a detailed empirical analysis that measures the impact of borders on the trade of RFE and helps identify the factors that impede trade. The results allow the author to formulate policy recommendations aimed at reducing trade barriers and fostering integration.

RESEARCH PROCESS AND RESULTS

Borders can be conceptualized more generally as the cost of trading goods with a region that has a different economic, institutional, cultural, geographic, or social structure. These costs, referred to as “border effects”, are incurred in addition to the cost of producing the traded goods, and can thus be viewed as a form of tariff that creates differences in prices across borders. Border effects are analyzed empirically using statistical models known as gravity regressions, which study the determinants of trade. In particular, the effects of borders on cross-border trade are estimated relative to a benchmark, which could be the trade within a given region or between regions of a given country. The theoretical underpinnings of the gravity models were developed by Anderson (1979) and Anderson and Van Wincoop (2003), while the application of these models has produced some interesting results. For instance, McCallum (1995) showed that the trade between two Canadian provinces is 22 times larger than the trade between a Canadian province and a US state. This is surprising given that most Canadian provinces share a border with US states and free trade agreements between the two countries have eliminated most restrictions to trade.

The current project employs a gravity model to estimate the effect of borders on the trade between RFE and the rest of Russia as well as between RFE and its three neighbors in NEA (China, Korea, and Japan). The trade among the regions of RFE serves as the benchmark for assessing all other trade flows. The border effects are estimated after controlling for, among others, the size of the economies involved and the distance between their capital cities.

The analysis consists of three parts:

1) Descriptive analysis of trade flows

The value of the trade between RFE and its neighbors in 2005 and 2012 is shown in Fig. 1 and indicates that RFE’s exports exceed its imports making RFE a net exporter. Moreover, RFE’s exports to its NEA neighbors are three times larger than the exports to the rest of Russia. The exports within RFE are also larger than those destined for other regions in the country.

Over the seven-year period between 2005 and 2012, RFE’s exports increased fourfold, while

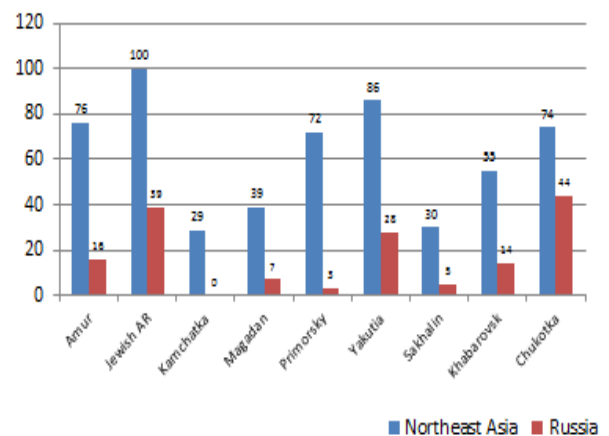
imports increased only twofold. In 2005, China absorbed almost half of all RFE exports to NEA, followed by Japan. In 2012, Korea emerged as the main destination for RFE exports with 40% of all flows to NEA, followed by Japan. Regarding imports, Japan exported more to RFE in 2005 than China and Korea taken together. Seven years later, China was responsible for more than 60% of all exports to RFE from NEA, while Japan had fallen to a distant third.

These statistics indicate several tendencies. First, RFE’s trade with China, Japan and Korea is much more intensive than with the rest of Russia suggesting that RFE is better integrated within NEA than within the Russian Federation. However, this conclusion should be interpreted with caution given that the descriptive analysis does not allow controlling for the effects of various factors, such as distance and the size of the economies.

Second, RFE is running a trade surplus, which was relatively modest in 2005 but expanded rapidly over the following years. This was mainly due to the boom in exports to NEA compared to a modest increase in imports. The primary goods from RFE seem to be in great demand in its resource-poor (Japan and Korea) and rapidly growing (China) neighbors.

Third, the economic integration among RFE’s regions has deepened over the sample period as illustrated by the fivefold increase in intraregional exports. This suggests a stronger

Fig. 2: Border Effects of Russia's Far East by Region (2005-2012)
(Tariff equivalent, in %)



Source: Calculations by the author.

integration within RFE than between RFE and the rest of Russia.

2) Border effects

The estimates of the border effects expressed as tariff equivalent are presented for each RFE region in Fig. 2. The red bars show the border effects between RFE and the rest of Russia, while the blue bars are for RFE and NEA. The specification of the gravity model controls for the effects of the economic size of the trading partners (as measured by the GDP), the distance between them, and any other unobserved regional factors that might affect trade.

It is immediately clear that the border effects between RFE and NEA are significantly higher than between RFE and the rest of Russia. Furthermore, the values for the regions Amur, Primorsky, Jewish Autonomous Region, and Khabarovsk, which share a border with China, are among the highest in the sample. For instance, when goods cross the border between Primorsky region and its three NEA neighbors, they incur a quasi tariff of 72%. In contrast, the corresponding tariff equivalent for the “border” with the rest of Russia amounts to only 5%.

At first glance, this finding is surprising, especially when compared to the results of the descriptive analysis that showed a much more intensive trade between RFE and NEA than with the rest of Russia. But it makes sense when one takes into account that the gravity model controls for economic size and distance. In other words, the results suggest that given the enormous size of the economies of China, Japan, and Korea and their close proximity to RFE, the trade between them should be significantly larger than it currently is. Despite being smaller, the goods flows to and from the rest of Russia end up being more intensive than with NEA when the smaller economic size of Russia and the enormous distance between RFE and the economically developed Western Russia are taken into account.

In summary, the results of the empirical analysis indicate that RFE is much better integrated with the rest of Russia than with China, Korea and Japan. This finding is in line with previous research (McCallum, 1995) showing that intranational integration is deeper than cross-border integration, even in the presence of a shared border. It is, however, important to identify the factors that make trade across thousands of miles within the country more lucrative than across the border with nearby

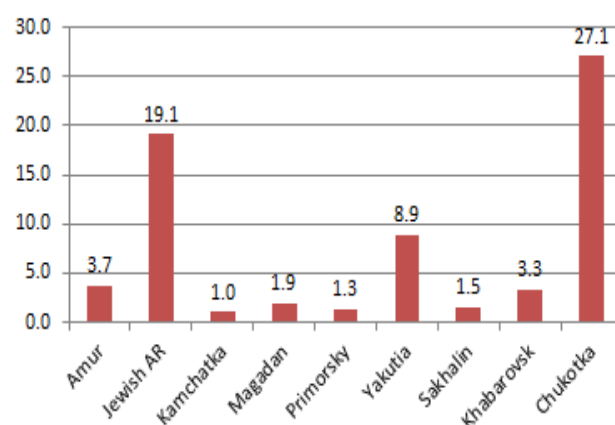
NEA.

Transportation costs represent a serious hurdle to trade in RFE. The infrastructure in RFE is underdeveloped and not well maintained. More importantly, there is not a single bridge across the Amur River that separates China and RFE. Goods and people rely on barges and ferries, while in the winter buses, trucks and cars drive across the frozen river. Institutional factors also have adverse effects. The increasing centralization of economic decision making in Russia over the past decade has limited the scope of policy initiatives at the regional level. The haphazard economic policies of the central government and their implementation at the local level increase the uncertainty and damage the business environment. In addition, red tape and corruption discourage potential foreign investors. Last but not least, Russian authorities are reluctant to lift many barriers to trade because of the threat that imports from NEA pose to uncompetitive local industries.

3) Intraregional trade

The results in Fig. 3 present trade within RFE relative to trade with the rest of Russia. For the majority of provinces, trade with other RFE regions was between 1.3 and 3.7 times larger than with the rest of Russia, which indicates that economic integration among the RFE regions was quite intensive over the sample period.

Fig. 3: Trade within Russia's Far East by Region (2005-2011)
(relative to trade between RFE regions and the rest of Russia)



Source: Calculations by the author.

CONTINUING RESEARCH

The current study provides estimates of the border effects on RFE trade with NEA and the rest of Russia. However, the gravity model does not allow for the decomposition of border effects. Accordingly, one of the key extensions of project will focus on employing an empirical model to explore the importance of various factors, such as transportation costs and institutional factors, in impeding trade in RFE. The main difficulty would be to find appropriate proxy variables that could account for the influence of these factors and are available at the regional level.

Another aspect that needs to be addressed in future research is the extent of border effects on the other side of the border. This would be particularly interesting for the Chinese provinces that share a border with RFE. An application of the gravity model would allow us to estimate whether these provinces are better integrated with RFE or with the rest of China. The results could then be compared to the situation with RFE and the rest of Russia. Anecdotal evidence suggests that Chinese provinces along the Russian border are very interested in expanding economic relations with RFE. For that purpose, local governments in China have invested heavily in infrastructure and have implemented various initiatives to attract Russian tourists and businesses.

Trade in goods is a major channel for cross-border economic integration but it is not the only one. Trade in services and investment flows can also deepen the economic links between border regions. Although data at the regional level are not easily available, limited evidence suggests that services trade in RFE is dwarfed by goods trade. But foreign direct investment from NEA into RFE (and vice versa) is worth exploring in the context of gravity models since it might face similar hurdles as the border effects suggest regarding goods trade.

Last but not least, it would be interesting to extend the sample period to earlier years and explore whether border effects have changed over time. However, this is conditional on data availability.

RELEVANCE TO POLICY COMMUNITY

The main finding of the current study is that the border represents a serious hurdle to trade and economic cooperation between RFE and NEA. The policy recommendations are therefore aimed at reducing trade barriers and deepening economic integration. Such measures are particularly relevant at a time when Russia is intensifying its economic interactions with China in the face of Western sanctions.

One of the most effective measures in promoting trade would be an **upgrade of the transportation links** between RFE and China. This would mainly involve the construction of road-rail bridges across the Amur River connecting the main border towns, such as Blagoveshchensk and Heihe, but also the expansion and upgrade of land border checkpoints such as between Pogranichny and Suifenhe. Such improvements would reduce transportation costs and help boost trade and investment flows.

Another key initiative would consist of **lowering institutional barriers to trade**. High tariffs, haphazard tax policies, random closings of border checkpoints to imports from China, red tape and bureaucratic hassles have an adverse effect on the business environment in RFE and increase the uncertainty among potential investors and traders from NEA. Streamlining bureaucratic procedures, establishing predictable economic policies, and creating incentives for Asian investors would help alleviate the adverse effects of borders on trade and investment.

Although the focus of the present study is on trade between RFE and NEA, it is worth noting that the United States also shares a border with RFE. Despite the current sanctions and retaliatory measures between the US and Russia, both countries would benefit from **expanding the trade and investment cooperation over the medium and long term**. Even during these difficult times, more than 60% of snow crab and king crab legs in the US are imported from RFE and this share is set to increase significantly this year. If such interactions could be expanded to include other sectors of the economy, the US could become one of the major trading partners of RFE. For this to happen, both Russian and US policymakers need to resist calls for imposing protectionist measures and need to work actively on lifting economic sanctions and retaliatory bans.

REFERENCES

Anderson, J. A. (1979). "A Theoretical Foundation for the Gravity Equation." *American Economic Review* 69(1), pp. 106–116.

Anderson, J. A., and Van Wincoop, E. (2003). "Gravity with Gravitas: A Solution to the Border Puzzle." *American Economic Review* 93(1), pp. 170-192.

McCallum, J. (1995). "National Borders Matter: Canada-U.S. Regional Trade Patterns." *American Economic Review* 85(3), pp. 615-23.

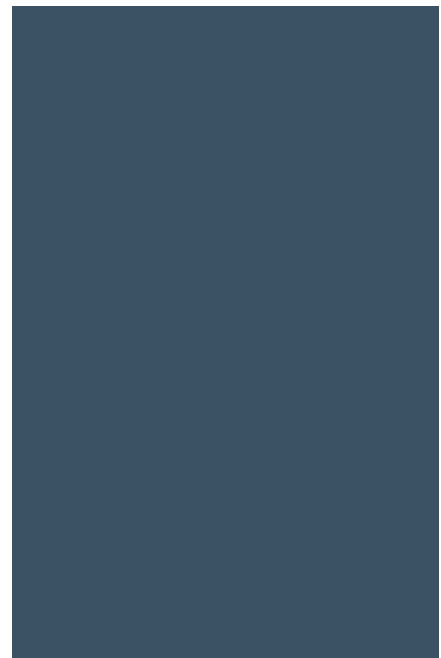
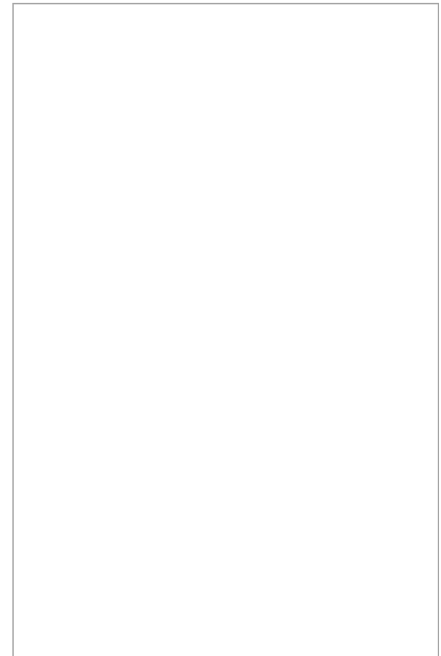


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