

BOFIT Policy Brief
2016 No. 6



Heli Simola

Economic relations between Russia and China
– Increasing inter-dependency?



Bank of Finland, BOFIT
Institute for Economies in Transition

BOFIT Policy Brief
Editor-in-Chief Juuso Kaaresvirta

BOFIT Policy Brief 6/2016
6.9.2016

Heli Simola
Economic relations between Russia and China – Increasing inter-dependency?

ISSN 2342-205X (online)

Bank of Finland
BOFIT – Institute for Economies in Transition

PO Box 160
FIN-00101 Helsinki

Phone: +358 10 831 2268
Fax: +358 10 831 2294

Email: bofit@bof.fi
Website: www.bof.fi/bofit

The opinions expressed in this paper are those of the authors and do not necessarily reflect the views of the Bank of Finland.

Contents

Abstract	3
1 Introduction	4
2 Low inter-dependency despite increased trade	5
2.1 Asymmetrical import dependency	6
2.2 Export dependency also unbalanced	7
2.3 Russia is more dependent on China than China on Russia	8
3 High-level relations improving lately – practical progress more moderate	9
3.1 Trade and investment have decreased	10
3.2 Oil plays a key role	11
3.3 Ambitious plans for natural gas	12
3.4 Arms trade historically low	13
3.5 Cooperation in border regions hampered by mistrust	14
3.6 Competing interests in neighboring countries	15
3.7 Realized development so far less impressive than plans	16
4 Potential for deeper cooperation exists, but challenges are substantial	17
5 Conclusion	19
References	20
Appendix 1. Trade in Value Added	22
Appendix 2. FDI from China to Russia	24
Appendix 3. Natural gas	25

Heli Simola

Economic relations between Russia and China – Increasing inter-dependency?

Abstract

The economic cooperation between Russia and China has increased notably during past couple of decades, although from a very low level. Despite the increase, economic dependency between countries remains relatively low and it is rather a one-sided dependency of Russia from China than a deeper inter-dependency. The economic relations have largely been characterized by traditional trade based on comparative advantage, whereas investment flows between countries have been relatively small. Since Russia's relations with the western countries have deteriorated, it has aimed at closer ties with China. The high-level relations are probably better than ever, but in practice the development has been more modest. Economic cooperation between Russia and China is likely to continue increasing gradually, but there are many challenges for deepening the relations and raising mutual inter-dependency.

Keywords: Russia, China, economic relations, trade, investment

1 Introduction

As Russia's relations with the West have deteriorated after Russia annexed Crimea in spring 2014, Russian policymakers have declared vigorously the country's "pivot to East" with China obviously a priority partner. Followed by numerous high-level bilateral visits and meetings giving rise to various declarations, agreements and memoranda first gave an impression that the economic co-operation between Russia and China would start blooming unprecedentedly. The initial boost seems to have been losing steam lately and the results achieved so far have not lived up to at least the most enthusiastic expectations. In this note, we assess the latest development in economic relations between Russia and China comparing it to the development of earlier years and exploring how deep the relations are in terms of inter-dependency. We also try to evaluate the possibilities and challenges related to the further development in the economic relations between the countries.

In general, the rapprochement of Russia and China started after the collapse of the Soviet Union following more tense relations of several decades and the first major steps were taken in the middle of 1990s when Russia and China agreed on a strategic partnership¹. In the following years, cooperation increased only gradually reflecting partly also economic crises experienced in Russia and Asia. After the first years of the new millennium, the economic cooperation between countries started to gain momentum with both countries recording rapid economic growth. Russia and China signed a new treaty of cooperation in 2001 serving as a basis for developing bilateral relations, but in practice the most visible progress in economic relations started in the middle of the decade. There were advancements in resolving of border disputes, plans for increased energy cooperation were presented (including building natural gas pipelines between countries) and special years celebrated in both countries (year of China in Russia and year of Russia in China). Economic relations were spurred also in practice with bilateral trade increasing rapidly and first significant investment deals introduced. The international financial crisis in 2008-2009 hit Russian economy hard affecting also bilateral economic relations, although Chinese financing in the form of credit for oil supplies provided some important support. With the recovery from the financial crisis proceeding, also the bilateral economic relations between Russia and China returned to growth track.

With the increasing importance of China and Asia in the world economy, Russia came up with the idea of a "pivot to East" already several years ago e.g. in its energy sector development plans and the issue was brought up also by president Putin already in 2012. The vision certainly gained substantially more steam in Russian publicity since spring 2014 when Russia's relations with the West deteriorated. This increased enthusiasm among Russian political leaders to strengthen bilateral economic ties with China has obviously improved the possibilities for enhancing economic cooperation, but in the following we try to assess to what extent this has actually happened.

In the first section we briefly depict the development of economic relations between Russia and China during the past couple of decades from the point of view of inter-dependency. In the second section we turn to more recent development of economic relations and also take a more detailed look in some of the key sectors and aspects in the economic relations between Russia and China. In the third section we try to evaluate the perspectives for further development of the economic relations between countries and challenges related to deepening them. We conclude by summing up the findings received from the analysis.

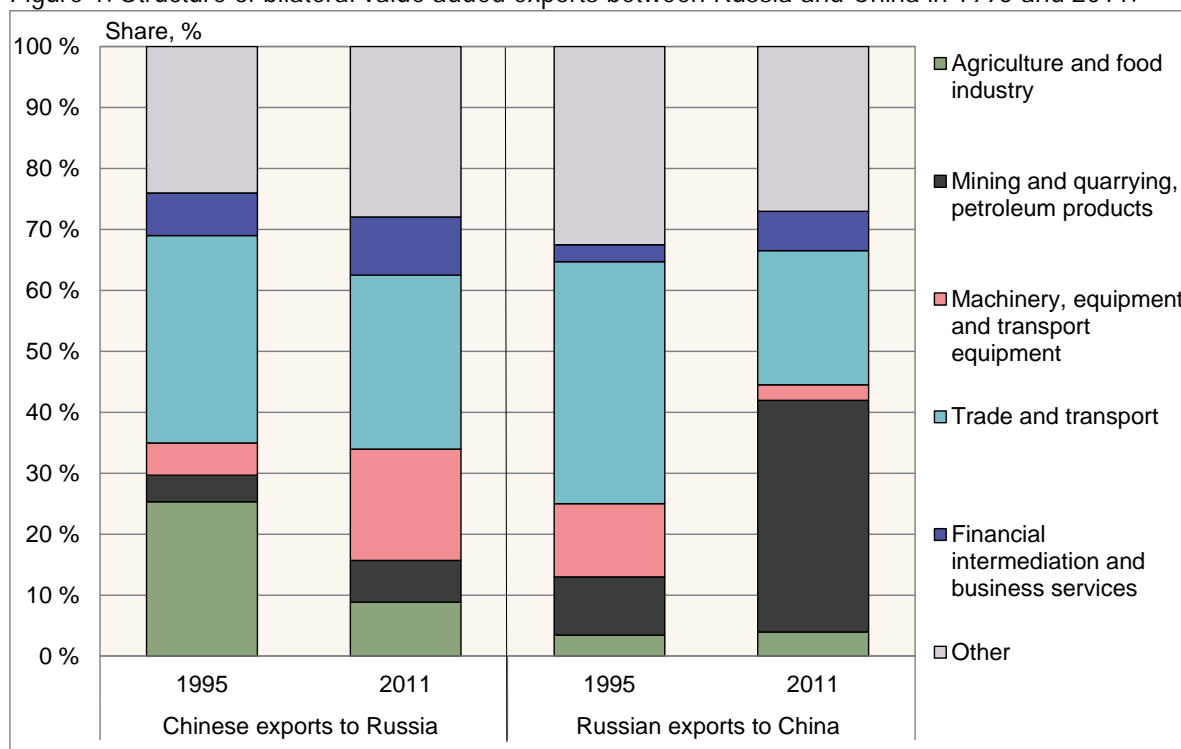
¹ For a review of relations in a longer perspective, see e.g. Hsu and Soong (2014), Henderson and Mitrova (2016).

2 Low inter-dependency despite increased trade

In this section we briefly examine longer term development in the economic relations between Russia and China and try to assess the level of inter-dependency and changes in it between the countries in 1995 and 2011. We concentrate on trade, because that has been the main feature of Russian-Chinese economic relations especially in earlier years. We use data on trade in value added² as it captures bilateral inter-dependency more accurately than traditional customs statistics in particular in the case of China.

In general, trade between Russia and China has grown substantially during past couple of decades and there have been some significant changes in the structure of trade. In 1995, the value added exports from Russia to China and vice versa were only about USD 2 bn. By 2011, the value of both had already climbed to around USD 35 bn. Between 1995 and 2011, the structure of Chinese goods exports to Russia has shifted from agricultural raw materials and food products to higher value added products like machinery and equipment (figure 1). In Russian exports to China, the development is quite the opposite, as the share of mining and petroleum products has increased notably squeezing the share of higher value added exports and especially that of machinery and equipment.

Figure 1. Structure of bilateral value added exports between Russia and China in 1995 and 2011.



Sources: TiVA, authors' calculations.

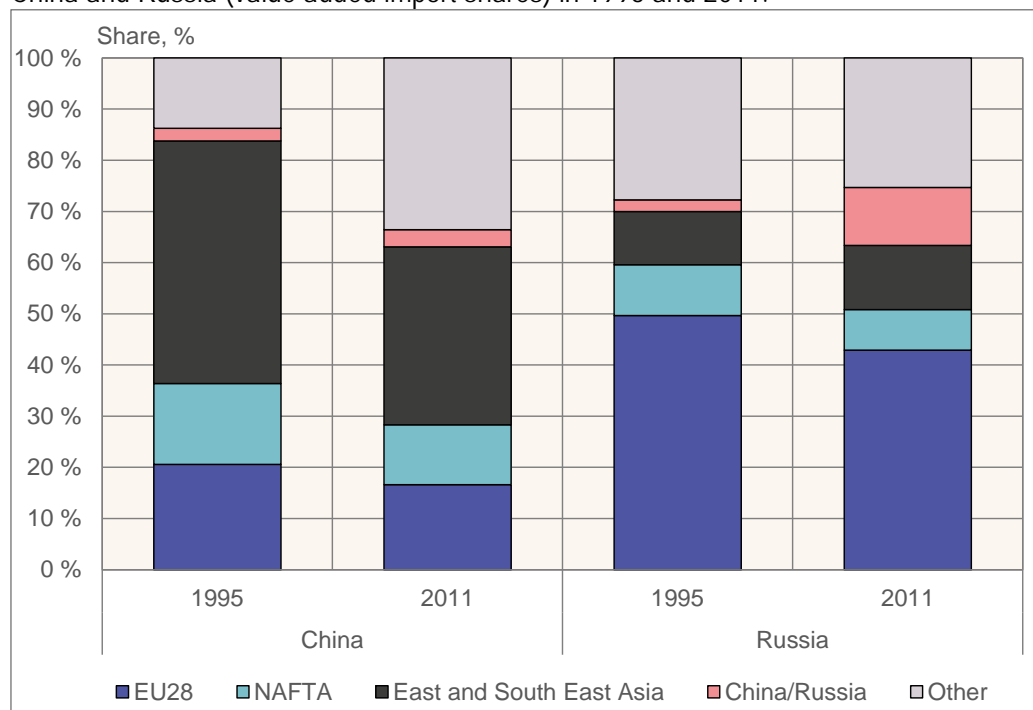
² More detailed information provided in Appendix 1

2.1 Asymmetrical import dependency

We start analyzing the inter-dependency between Russia and China from the supply side. We measure import dependency with the share of value added in a country's final demand originating in a partner country, so it can be thought of as the import share (taking into account also domestic supply)³. The supply for final demand is quite strongly dominated by domestic production in both Russia and China (as in most countries of the world), i.e. they are not very dependent on imports on the aggregate level. In 2011, only 15 % of Chinese final demand was covered by foreign value added, whereas the corresponding share for Russia was 22 %.

Starting from the import dependency structure of Russian final demand, we can see that the share of East and South East Asian countries and especially that of China has increased notably from 1995 to 2011 (figure 2). Despite its decreasing share, the EU still accounted for the largest part of foreign value added in Russian final demand in 2011. The share of China in Russia's total supply increased from 0.6 % in 1995 to 2.5 % in 2011 (in foreign supply or imports from 2 % to 11 %). In international comparison, Russia was in 2011 visibly more dependent on Chinese supply than a median country in the sample. The most dependent countries include East and South East Asian countries, but also some commodity producers like Russia, Saudi Arabia and Chile. In sector comparison, Russia was the most dependent on Chinese supply of textile industry and computer and electronic equipment manufacturing. In these sectors, 23 % and 16 % of Russia's final demand was supplied by China. In addition, Chinese supply covered 5-10 % of Russia's final demand in the sectors of machinery, electrical equipment, motor vehicles, other manufacturing, fabricated metal products as well as plastic and rubber products.

Figure 2. Import dependency of China and Russia: Regional shares in foreign value added in final demand of China and Russia (value added import shares) in 1995 and 2011.



Sources: TiVA, author's calculations.

³ Similar analysis for EU and China can be found e.g. in Simola (2015a). Here we concentrate only on final demand, since the results are very similar for export supply dependency (i.e. the share of value added in a country's exports that is originating in another country).

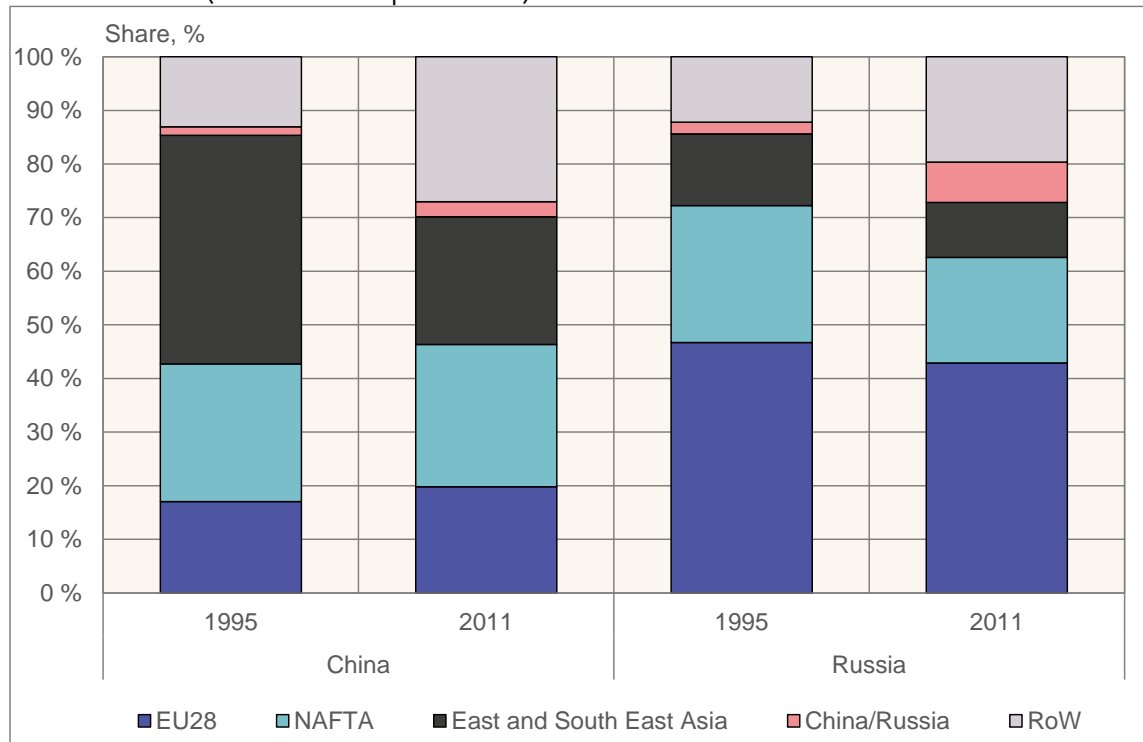
The share of Russian value added in China's final demand has increased very modestly from 0.2 % in 1995 to 0.5 % in 2011 (from 2 % to 3 % if we exclude domestic supply). For China, the neighboring East Asian countries still provide the largest part of foreign value added, but the share of emerging markets from rest of the world has increased significantly (although reflecting partly higher raw material prices). Also in international comparison, China was clearly less dependent on Russian supply than a median country in the sample. In sector level, China was the most dependent on Russian supply in raw material related industries. The share of Russian value added in the final demand of China's basic metal sector was 6 % and 2-3 % in the final demand of Chinese mining and quarrying and petroleum product industries.

2.2 Export dependency also unbalanced

Next we move on to export dependency, which indicates the share of the value added produced in a country that goes to fulfill the final demand of another country, so it basically represents the export share (again taking into account also domestic demand). Perhaps a bit surprisingly, Russia seems to be overall more dependent on foreign demand than China. In 2011, about 30 % of the value added created in Russia went for supplying foreign demand, whereas the corresponding share for Chinese value added was only 18 %. This reflects partly the significance of foreign value added in Chinese exports. Although China is the largest exporter in the world in gross terms, a large part of the exports consists of foreign value added. As Russia exports mainly raw materials, the share of domestic value added in Russian exports is very high. In addition, China has a substantially larger domestic market than Russia, which makes it capable of absorbing larger volumes of domestic production.

Taking a closer look at Russia's export dependency shows that the general picture is similar as in import dependency. The main change from 1995 to 2011 is the increase in the share of China (figure 3) as well as some other emerging markets (included in the category "RoW" in figure 3). But in 2011, the EU was still by far the most important foreign destination for Russian value added. The share of China as a destination for Russian value added has increased from 0.6 % in 1995 to 2.3 % in 2011 (from 2 % to nearly 8 % excluding domestic demand). Furthermore, also in the export dependency side, Russia was together with East and South East Asian countries as well as other commodity producers clearly more dependent on Chinese final demand than the median country in the sample. In sector terms, China was relatively the most important for Russian mining and quarrying, wood and metal industries being the destination of 6-7 % of value added created in these sectors. China also absorbed 3-5 % of value added created in Russian chemical industry, coke and petroleum product industry, fabricated metals production as well as pulp and paper industry.

Figure 3. Export dependency of China and Russia: Regional shares in Chinese and Russian value added destined abroad (value added export shares) in 1995 and 2011.



Sources: TiVA, author's calculations.

For China, Russia's importance as a source of demand is similar to that in supply. Despite slight increase in past decades, the demand dependency of China on Russia remains low. The share of Russia as a destination for Chinese value added increased from 0.2 % in 1995 to 0.5 % in 2011 (from 2 % to 3 % excluding domestic demand). The most visible change in the structure of demand dependency of China between 1995 and 2011 is the decline of the share of East and South East Asia with the NAFTA countries climbing as the foreign area absorbing largest share of Chinese value added. Comparing demand dependencies between countries shows that China was somewhat less dependent on Russia's final demand than the sample median with Central and Eastern European countries facing the highest dependencies on Russian final demand. In sector terms, Russia was relatively the most important destination of Chinese value added in computer and electronics manufacturing and textile industry, but only 1.6 % and 1.3 % of the value added created in these industries in China ended up to Russian final demand in 2011.

2.3 Russia is more dependent on China than China on Russia

Summing up the above analysis, we find that inter-dependency between Russia and China has increased during past decades, but it is still quite low. Both countries are more dependent on other countries than each other: Russia especially on the EU and China on other Eastern Asia and the U.S. Furthermore, the relationship is rather one-sided dependency of Russia from China than inter-dependency. China accounted for about 2.5 % of value added demanded and supplied by Russia on 2011, whereas the corresponding share for Russia in Chinese demand and supply was only about 0.5 %.

It should also be noted that our simple framework cannot take into account price effects, which are important in the case of Russia and China. Majority of Russia's overall export income is

determined by oil and other raw material prices. As China has risen among the largest consumers of most commodities in the world, it has an impact on their price development in the global markets. Taking into account this indirect effect, the actual dependence of Russia on China is higher than the trade analysis in this section suggests.

3 High-level relations improving lately – practical progress more moderate

During the past couple of decades, the economic relations between Russia and China have been mainly based on exchange of Russian oil to Chinese consumer goods. The Russian-Chinese trade has been based on traditional comparative advantage, following their general trade patterns. Outside the CIS countries, Russia exports mainly oil and some other basic raw materials. Russia's other production is not competitive in global markets with the exclusion of a few specific products. At the same time, China has risen as the largest exporter in the world led by its competitive consumer goods, which have conquered also the Russian markets. So, in trade there has thus far not been any special relationship between the countries.

Neither in deeper cooperation, as there has been very little investment between the countries despite some obvious potential and interest. This is largely due to the central role of the energy sector in the economic relations, as the energy sector tends to be among the most sensitive sectors politically. In both Russia and China (as also in most countries of the world), energy sector is dominated by few huge state-owned companies and the participation of foreign companies is quite limited. There has been some foreign investment in the Russian energy sector, but they may have been welcomed mainly due to technological advantages than financing, thereby preferring other than Chinese companies. The cooperation between Russia and China might have been further hampered by specific mutual suspicions due to common border and historical reasons. Chinese companies have strived for secure enough stakes in Russian energy companies whereas the Russian side has been reluctant to sell them. The situation has been similar for other commodity sectors like metals and agriculture.⁴

In manufacturing or services, there has been even less potential for bilateral investment. Competitiveness of Russian companies in these sectors is in general relatively poor, so they have overall made little foreign investment in any country. Chinese companies have started to invest more actively outside the raw material sectors only relatively recently. Instead of Russia, markets offering higher technological or price competitiveness and better business environment have been more attractive for Chinese investment. There exists a few exclusions, but so far investment cooperation between Russia and China has been limited.

It appeared that Russia wanted to change the situation after the deterioration of its relations with Western countries promoting vigorously a "pivot to East". The vision was that closer relations with emerging Asian countries and especially China would compensate for e.g. the problems caused by the economic sanctions that were imposed on Russia. High-level political meetings were organized and the relations between Russia and China appeared to be blooming. There has been some important steps forward, but the actual development of economic cooperation in the latest years has been more modest than many in Russia hoped for, as we discuss below in more detail.

⁴ Henderson and Mitrova (2016), Hill and Lo (2013), Rautava (2011), Zhao (2013)

3.1 Trade and investment have decreased

The development of goods trade between Russia and China has been visibly poorer in 2014-15 than in the preceding years. The value of total trade turnover between countries fell from nearly 100 billion USD in 2012-13 to less than 70 billion USD in 2015⁵. The weaker development of Russian exports to China mainly reflects the sharp fall in oil prices and to some extent moderating growth in Chinese demand. Chinese exports to Russia were cut by contracting demand and steep depreciation of the ruble. In relative terms, the significance of China for Russia continued to increase, whereas Russia's share in the trade of China declined. In 2015, China accounted for 19 % of Russian goods imports and 8 % of exports. The share of Russia in Chinese goods imports and exports was about 2 %. In service trade the trends are similar with weakening trade development in 2014-15 as well as increasing share of China and decreasing share of Russia in each other's trade.

Russian direct investment to China has been very small during the past decade and the situation has not changed in the most recent years with additional restrictions from the economic downturn and tighter financial situation in Russia. Chinese investment to Russia has been somewhat larger and it has increased in the 2010s compared to the previous decade, following the trend of China becoming overall a more active investor globally. It seems that the peak of Chinese investment activity in Russia was in 2013, whereas it has been slowing down since then. So there are no signs of a particular increase in investment from China to Russia in 2014-15. Moreover, some Chinese companies have actually divested their stakes in Russian companies in recent years. The significance of bilateral investments remains modest both in absolute and relative terms. According to the official statistics, the annual investment flows from China to Russia have been around USD 0.5–1 bn in past years (compared to China's total outward investment flows at USD 110-130 bn) and the flows from Russia to China even smaller⁶. The countries have even at highest accounted for only a few percentages of each other's foreign investment flow.

There are no signs of a visible boost in credit and other finances between Russia and China either. It appears that the availability of Chinese credit to compensate for closed financing possibilities in Western markets due to the sanctions has been tighter than some expected in Russia. The sanctions imposed by the EU and the U.S. restrict also to some extent Chinese banks operating in international markets, although China has not imposed sanctions on Russia. In addition, Chinese lenders often seem to perceive risks related to Russian credits relatively high requiring correspondingly higher prices.⁷ Despite lack of large-scale increase in Chinese credit flowing to Russia, some Russian companies and projects have received valuable financing from China. Financing has come mainly from Chinese state-owned financial institutions and given to Russian state-owned companies or projects related to them, like the USD 2 bn loan that Gazprom managed to agree with the Bank of China in spring 2016.

So in the aggregate level the economic relations between Russia and China have developed relatively poorly during the past couple of years. The high-level rapprochement has not boosted the economic relations in practice enough to compensate for the Russian economic downturn. However, there are some important issues in specific areas of cooperation where there seems to have been more progress. Next we move on to address these specific areas in more detail.

⁵ In this part we use ordinary customs and balance of payments statistics on trade because the TiVA database includes data only up to 2011. The gross figures are probably somewhat higher than value added figures as noted in Appendix 1, but the overall picture should remain very similar.

⁶ see Appendix 2 for more information on FDI statistics

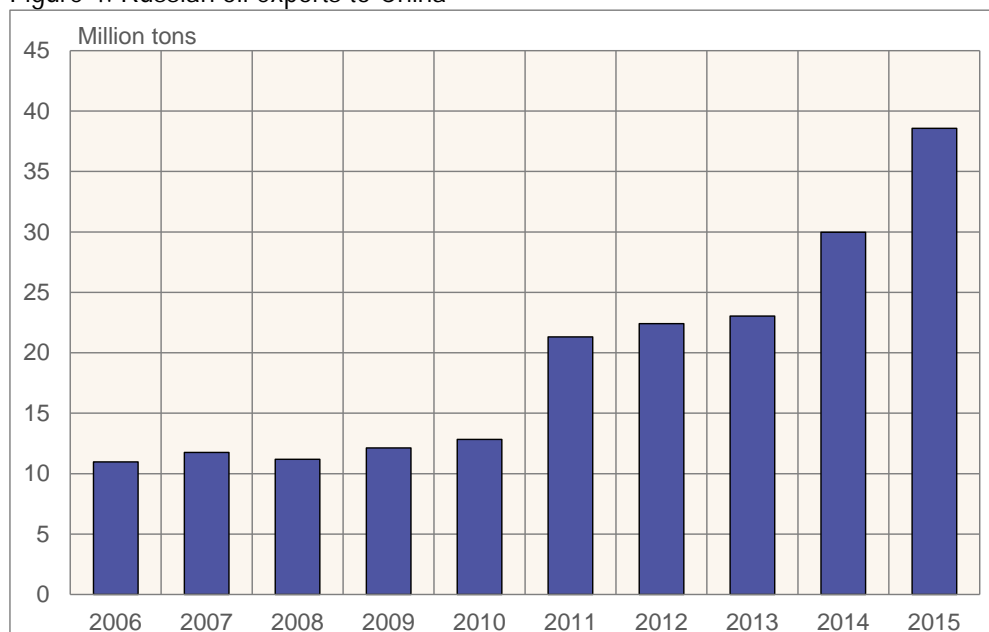
⁷ see e.g. Gabuev (2016).

3.2 Oil plays a key role

Oil trade is an essential part of the economic relations between Russia and China. There have been strong incentives for both countries to increase the bilateral oil trade, and it has grown substantially during the past decade. China has accounted for the largest part of global oil demand growth in past years providing a huge additional market for Russian oil. It is especially important for Russia's new oil fields that are largely located in the eastern part of the country so it is cheaper to transport their production to Asian markets than Europe. In addition, Russia has for several years aimed at diversifying its oil exports in order not to rely so heavily on its main export markets in Europe. China has strived for securing adequate fuel supply from abroad as its domestic supply has not been able to keep up with the growing demand. Russia has been an appealing supplier for China for diversifying its import supply and even more so with the possibility of pipeline imports as most of its other oil imports rely on sea transport.

Oil exports from Russia to China increased gradually in the first years of 2000s, but a breakthrough was achieved in 2008 when Rosneft and CNPC signed a sizable long-term agreement on oil supplies. Secured demand supported the launch and development of Russia's East Siberian oil fields and the huge credit provided by China in exchange for future oil supplies enabled construction of the East Siberian Pacific Ocean pipeline (ESPO) despite the economic crisis in Russia. ESPO extends to the Russian Far East port of Kozmino from where the oil is transported to several (Asian) countries so it is not relying only on Chinese demand, but it also has a branch going directly to China. Russian oil export volumes to China nearly doubled in 2011 when ESPO was taken into use. Additional long-term supply contracts signed in 2013 and extension of ESPO resulted to nearly doubling Russian oil exports to China again in 2014–15. In 2015, the volume of oil exports from Russia to China amounted to nearly 40 million tons, which accounted for 16 % of Russian oil exports and 13 % of Chinese oil imports. The next expansion for the Chinese branch of ESPO is scheduled to be completed next year, which could increase the oil exports to over 50 million tons.⁸

Figure 4. Russian oil exports to China

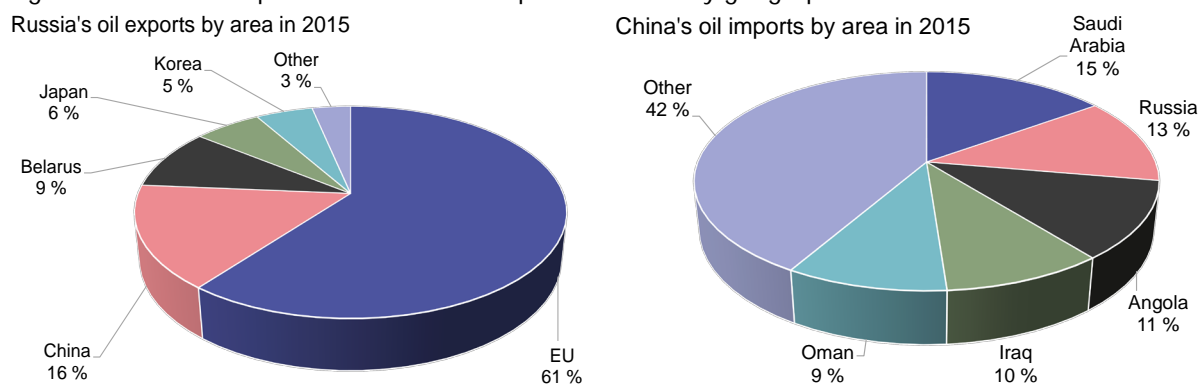


Source: CEIC

⁸ For a comprehensive review of the development of oil trade and other oil sector cooperation between Russia and China, see Henderson & Mitrova (2016).

Besides oil trade, cooperation in the oil sector has so far been limited to a few smaller scale common projects. There has certainly been plenty of plans and framework agreements during the past couple of decades, but in recent years not much has been materialized. Recently there has been discussion on CNPC purchasing a 19.5 % stake in Rosneft that the Russian government is planning to privatize. If that would happen, it would certainly be an important step towards deeper cooperation, but at the moment the deal seems quite uncertain. CNPC managed to purchase a small share in Rosneft in 2006 and increasing the share has been discussed ever since. On the other hand, privatization of Rosneft has been on the agenda of the Russian government for years, but it has been continuously postponed. CNPC and Rosneft also had a framework agreement on CNPC purchasing a stake in Rosneft's Vankor oil field, but the stake was sold to Indian state-owned energy company ONGC Videsh in spring 2016. In the related sector of petrochemicals, Chinese oil company Sinopec did, however, acquire a 20 % stake in Sibur in late 2015. Sibur is one of the largest Russian companies in the sector. The deal probably received a boost from the substantial financing needs of Sibur to continue its ongoing investment project of building a huge petrochemical production complex in Russia.

Figure 5. Crude oil exports of Russia and imports of China by geographical area in 2015.



Sources: Russian Customs, UN Comtrade.

3.3 Ambitious plans for natural gas

Contrary to oil, there has so far been very little trade in natural gas between Russia and China. Similar incentives apply to some extent also to gas trade than to oil trade, but the significance of natural gas is notably smaller than oil in both Russia's exports and China's energy consumption⁹. Supply security and diversification considerations are less spelling for China in the case of natural gas, as it already has concluded several long-term contracts fulfilling its current needs. China's imports are balanced in terms of land vs. maritime transport (i.e. pipeline vs. LNG), but in northern China there is no supply route and China's pipeline imports are relying quite heavily on a single country (Turkmenistan). In order to start natural gas trade with China, Russia needs to invest huge amounts in the launch of new fields and construction of pipelines, which would in practice rely solely on Chinese demand.¹⁰

These considerations dragged the negotiations on natural gas trade that Russia and China continued for a decade. In spring 2014, Gazprom and CNPC finally signed their first natural gas supply contract. The contract concerns the so called Eastern route with first deliveries currently

⁹ In Russian goods exports in 2015, the share of crude oil was 26 %, oil products 20 % and natural gas 12 %. In Chinese primary energy demand the share of oil was 19 % and that of natural gas 6 % in 2015.

¹⁰ A comprehensive review of cooperation between Russia and China in the natural gas sector is provided by Henderson and Mitrova (2016).

planned to begin in 2019-2021. At the moment, the production field for the deliveries is not yet in operation and there remains nearly 3,000 km of the pipeline to be constructed. Later the companies signed also a memorandum of understanding on gas supplies along the so called Western route, but the parties still have some important issues to resolve, like the price of these deliveries. The negotiations have lately been further hampered by persisting low oil prices, which reduce the attractiveness of the project for both countries.

On the other hand, in natural gas sector there already exists a significant common investment project. In 2013, CNPC purchased a 20 % stake in the LNG project developed by the largest Russian private sector gas company Novatek¹¹ in Yamal peninsula located in Northern coast of Russia. For this project, Chinese partners have provided valuable support in recent years as Novatek's financing possibilities have narrowed substantially after falling under financial sanctions of the U.S. Furthermore, Chinese Silk Road Fund purchased a stake of 9.9% of the project from Novatek last year and Chinese state banks have practically agreed to secure remaining financing needs for the project. The financing appeared to be a result of hard bargaining¹², although China may have additional interest in this particular project due to its location in the Arctic region and alongside the Northern sea route.

It will obviously still take years for these projects to be completed even if they would realize according to the current plans. In that case, Russia and China could become one of each other's most important trading partners in natural gas perhaps in the latter part of the next decade. With about 70 bcm annual natural gas shipments, Russia would be about as an important natural gas supplier for China as Turkmenistan and could account for up to 30 % of Chinese natural gas imports. For Russia, China could also make about 30 % of exports with the volume representing roughly half of that currently exported to the EU¹³.

3.4 Arms trade historically low

Arms trade has traditionally been an essential part of economic relations between Russia and China although it has been decreasing during past decade. In the first years of 2000s, China accounted for 40-60 % of annual military equipment exports of Russia and Russia was by far the largest provider of arms imports to China with a share of nearly 90 %¹⁴. In the middle of the decade there was, however, a drastic decline in arms trade and in past years the volume has been less than a third of the peak years (figure 6). Russia has still remained the main provider of arms imports for China with a share of 60-70% and China has accounted for 10-15 % of Russian arms exports.

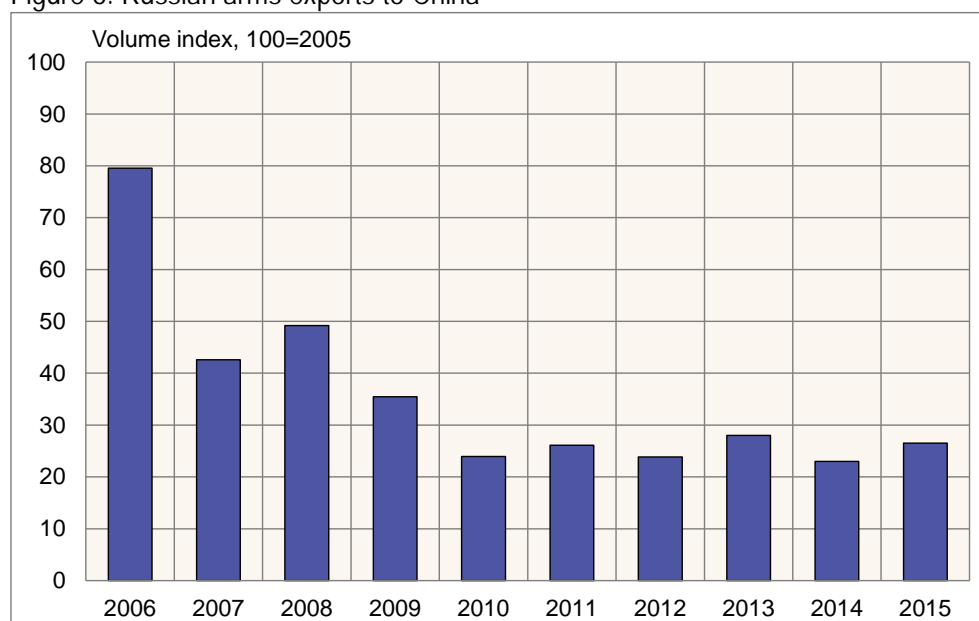
¹¹ State owned Gazprom has a stake in Novatek and the company is controlled by a businessman considered to be a close ally of the Russian president

¹² Henderson & Mitrova (2016)

¹³ More detailed information in Appendix 3.

¹⁴ Data on arms trade is based on SIPRI Arms Transfers Database (<https://www.sipri.org/databases/armstransfers>)

Figure 6. Russian arms exports to China



Source: SIPRI

Declining arms imports from Russia has partly reflected the fact that China is already capable of manufacturing domestically much of the military equipment that it needs based on the model of previously imported equipment. China has still had interest in purchasing the most advanced technology from Russia, but Russia has been reluctant to provide it in the light of growing and rapidly developing Chinese military capability and production¹⁵. In replace, Russia's arms exports to India have been on the rise.

The volume of arms exports from Russia to China remained quite stable also in 2014-15 compared to the previous years, but Russia appears to have made some concessions as in late 2014 Russia announced that it has agreed to sell an advanced air defense system to China in a deal valued at around USD 2 bn. A few months later, a second deal of similar value was signed. The deal consisted of China acquiring 24 SU-35 fighter jets from Russia. First deliveries are currently planned for 2017. The value of the deals is significant, but according to the official Russian information, the total value of Russia's military export contracts concluded last year was USD 26 bn and the military export order portfolio amounted to USD 56 bn at end of 2015¹⁶. If the deals are completed according to plans it would obviously mark an important step towards returning to closer military-economy ties with China.

3.5 Cooperation in border regions hampered by mistrust

As Russia and China share a common border of more than 4,000 kilometers, there has obviously been interest for the development of the border areas both in Russia and China. Especially in Russia, but to some extent also in China, these regions are in the periphery of economic activity and the areas are stated to be among priorities for regional development policy. The Russian regions possess natural resources, but due to harsh climate, remote location and poor infrastructure regions are not attractive to population. The Chinese border regions are more industry oriented but many of the production facilities located there are outdated and operate in industries that suffer from overcapacity in China.

¹⁵ Carlsson & al. (2015)

¹⁶ Russian government <http://government.ru/news/22717/>

The average income level is roughly at par (6,000-7,000 USD in 2013) on both sides of the border, but population in the Russian border regions is less than a tenth of the population in the Chinese side and diminishing continuously¹⁷.

The most potential sector for cooperation is again raw materials which are in vast supply on the Russian side of the border and demanded by the huge industrial plants on the Chinese side. For Russia, the perspective of Chinese financial flows is tempting, but it is held back by fears ranging from environmental problems to influx of Chinese workers and even a “colonization” of the region by China. Chinese companies on the other hand prefer to get adequate controlling power especially as investment projects would often require significant additional spending on infrastructure. Chinese – as well as other foreign – investment is also hampered by the particularly poor business environment of the area, even in comparison with other Russian regions. Beyond raw materials, the Russian side cannot offer much for Chinese investors due to its small markets and remote location combined with weak competitiveness: lack of skilled labor and high costs.¹⁸

Cooperation between border regions has frequently featured the agenda of high-level meetings and an inter-regional development program was even signed in 2009, but due to the above mentioned problems only modest results have so far been achieved. One of the most infamous examples is the bridge across the Amur river which remains to be finished (from the Russian side) although agreement on its construction was signed already in 1995¹⁹. Despite sluggish advancement in flagship projects, individual Chinese entrepreneurs seem to have seized the opportunities more swiftly e.g. by renting land for farming and logging (both officially and unofficially), but they have also been facing hostility from the Russian side. In addition, cross border tourism and border trade are popular especially between Russian Amur region and Chinese Heilongjiang province, where most international activities are performed indeed with each other (although rather due to the remote location of the areas than depth of the relations).

3.6 Competing interests in neighboring countries

From the point of view of larger regional economic environment, especially Central Asia, the relationship between Russia and China has rather been competitive than complementary. Russia has strived to maintain close economic relations with Central Asian countries that used to be part of the Soviet Union. However, China has powerfully challenged and in many cases already surpassed Russia in terms of both trade and investment with its more competitive manufacturing exports and urge to secure raw material supplies combined with capabilities of financing and executing the agreed projects²⁰.

In recent years, the competitive composition has even intensified with the initiation of somewhat overlapping frameworks for regional economic cooperation. Russia's priority project in Central Asia is the Eurasian Economic Union (EAEU), which was established in its current form in 2014, although launched already in 2010 as a customs union between Russia, Belarus and Kazakhstan. Later, also Armenia and Kyrgyz Republic have joined the union. The expressed goal of the EAEU is to increase economic integration between the member states starting from free trade, movement of capital and labor and extending to common markets in e.g. energy and financial sector. Formally the union is based on equal decision power of the member countries, but Russia has a

¹⁷ Border regions in the Russian side include Zabaykalsky kray, Amur oblast, Jewish autonomous district, Habarovsk oblast and Primorsky kray. In the Chinese side Heilongjiang province surrounds most of the border, but also Inner Mongolia and Jilin province are located in the vicinity.

¹⁸ CEFIR (2013), Gabuev & Spivak (2016), Shevtsova (2015)

¹⁹ RIAC (2015)

²⁰ see e.g. Rautava (2011)

dominant role with its economy over five times bigger than the other members combined. The EAEU emphasizes increasing integration within the region, whereas it applies protectionist policies towards outside countries, including China.

China's current priority project concerning the region is the "One Belt, One Road" (OBOR) initiative that was first introduced by president Xi in 2013. Instead of a precise program or project plan, OBOR is more like a general framework or vision for developing economic ties in the region and beyond mainly by improving transportation infrastructure that connects China with Asia, Europe and Africa. The official information on the project suggests that OBOR consists of the 21st Century Maritime Silk Road, building a new Eurasian Land Bridge and developing several other transport corridors from China to Europe and Asia. China has stated that the initiative seeks to promote economic globalization and global free trade and that it is open for all countries to join²¹.

The Russian and Chinese projects overlap especially in the area of Central Asia with e.g. Kazakhstan being a member of the EAEU and also a leg in many of the transport corridors sketched under the OBOR. Moreover, Russia itself features as a potential section of the OBOR transport corridors. At the launch of the OBOR, Russia was indeed quite wary of its implications²². In spring 2015 Russia and China signed, however, a joint declaration on coordinating the projects with emphasis on compatibility and complementarity of the projects. So far it has remained unclear what this coordination declaration should mean in practice. Possible projects linked to the OBOR include the construction of Moscow-Kazan high-speed railway with participation of Chinese companies and even extending it eventually to Beijing, as well as improving the Trans-Siberian railway that goes through Russia, but final decisions are still to be made. China certainly seems prepared for huge investment within the framework of OBOR as reflected e.g. by the recently established financial structures like the Silk Road Fund and the Asian Infrastructure Investment Bank, but it remains to be seen to what extent that will actually involve Russia.

Russia has also tried to develop its bilateral relations with other Asian countries in China's neighborhood, lately especially with India and Vietnam. Both countries are among the largest export markets for Russian arms and military technology surpassing even China. Participation of Indian companies in Russian energy sector has advanced somewhat more smoothly than that of the Chinese, possibly due to more favorable conditions offered by the Indians. India's state owned energy company ONGC Videsh has a minority stake in Sakhalin-1 oil and gas project and recently acquired a stake also in Rosneft's subsidiary operating the huge Vankor oil field despite Rosneft's long negotiations with Chinese companies on the same deal. In addition, Vietnam is the first country with which the EAEU has signed an agreement on free trade. With China, the EAEU has just started preliminary discussions on economic cooperation agreement.

3.7 Realized development so far less impressive than plans

It seems that following its annexation of Crimea, Russia was willing to make some concessions to prop up the economic relations with China to compensate for the deteriorating relations with the western countries. This effort bore fruit e.g. with finalizing the signing of the first natural gas trade contract between the countries after decade-long negotiations and deals on military equipment supplies. China took advantage of these improved conditions but was apparently not willing to give up on its own demands equivalently, especially taking into account Russia's weakened negotiation power. For China, economic relations with Russia are primarily based on economic interests instead of any "special" relationship. Therefore it seems that the progress in deepening relations has slowed

²¹ NDRC (2015)

²² see e.g. Zhang (2016), Gabuev (2016)

down recently and so far the actual results have fallen at least behind the most enthusiastic expectations, although it will obviously take time to realize the current agreements even if they proceed according to plans.²³

In the oil sector, trade has increased visibly in past couple of years but the growth stems rather from earlier advancements than any recent change. So far the latest rapprochement has not led to deepening of relations in the form of investment or major common projects in the oil sector. In the natural gas sector, the main advancement is the signing of the first pipeline gas trade deal and beginning the preparations for implementing it, but actual progress has been moderate. The other similar contract under negotiation still lacks agreement on some essential issues. The common ongoing LNG project was started already earlier, but it has recently benefitted from Chinese financing. In arms trade, a couple of new deals were signed and waiting for delivery. In cooperation between border areas there have been no major advancements lately and emphasizing the significance of China may have even provoked more opposition among the Russian population than before. In wider regional economy framework, the main advancement is that Russia and China have stated to coordinate their priority projects in Central Asia, although the practical implications remain so far unclear. Next we try to assess the future perspectives of economic relations between the countries.

4 Potential for deeper cooperation exists, but challenges are substantial

The most potential sectors for deeper cooperation in the future are still the most politically sensitive sectors like energy, raw materials and infrastructure. There appears not to be too much advancement for resolving the existing challenges in reaching mutually satisfying agreements. Obviously, China's bargaining position has strengthened due to Russia's tightened relations with the western countries. Therefore China has even less incentives to give in on its practices, like an adequately large ownership stake in a project and use of Chinese labor and other inputs. China's rapid demand growth for raw materials has been slowing down as China is gradually shifting to a more consumption and service led growth instead of investment and heavy industry²⁴. In addition, China has already moved on to secure its raw material supply by investing in other producer countries e.g. in Latin America and Africa. However, China might be more willing to settle for lighter terms in special projects related e.g. to the Arctic and the Northern sea route as well as in securing other infrastructure and construction projects in Russia. These kind of projects could bring Chinese companies new technological knowledge or help addressing China's industrial overcapacity issues, provide valuable references in a higher income level country and fit nicely into the framework of the OBOR flagship project.

Russia is still interested in receiving Chinese financing in its continuously difficult economic situation. But as it currently seems that the worst downturn in Russian economy is over, Russia is unlikely to accept too much of a discount. In current Russian economic policy, ever more emphasis is put on self-sufficiency and independence, which also makes Russia wary of turning over any control for foreign, including Chinese, investors. In addition, Russia has recently already made concessions for promoting cooperation, but apparently receiving in exchange less than it was hoping for. Therefore Russia might be reluctant to accept more bargaining from the Chinese side. On the other hand, although current common projects are relatively few, mutually satisfactory finalization of the major ones like the Yamal LNG project, could pave the way for further deepening of cooperation.

²³ Gabuev (2016), Henderson and Mitrova (2016), Hill and Lo (2013)

²⁴ Russia is among the countries with the most limited gains from the rebalancing of demand in China, as noted in Simola (2015b).

In other sectors, there is less potential for deeper cooperation. From the Russian side, there seems to be relatively limited possibilities for widening supply to China beyond current sectors. Russia is not producing many consumer goods so there are fewer possibilities for Russia to gain from the ongoing structural shift in Chinese demand (with the possible exception of agricultural products). Overall competitiveness of most Russian products other than raw materials is quite poor, so China has more incentives to purchase the products it needs from other countries. Russian production is globally competitive in only few narrow niches like nuclear power equipment, but most of the products are such that China aims to develop its own production instead of relying on imports. In contrast, there is certainly more potential for increasing Chinese supply to Russia, especially if China succeeds in its goal of developing its domestic production towards more sophisticated products. However, this might be hampered by the above mentioned Russian policy of striving for self-sufficiency and independency of foreign supply. It is not targeted primarily against China, but many Russia's protectionist and import substituting policies apply to all countries, also China. In addition, China is already Russia's largest individual import market with a considerable share as noted above.

The perspectives for creating more integrated production chains between the countries seem limited. Russian market is certainly still large, but the economy has been contracting and growth prospects are meagre which reduces the attractiveness of the market for Chinese investors. Chinese companies have shown increasing interest on foreign acquisitions in order to get access for technology and know-how. In this respect, Russia is not among the most attractive markets with high-technology production representing only a small share of the economy. Some Russian researchers have seen possibilities in complementary labor force of countries with a view that China has an abundance of unskilled, low-cost labor force and a shortage of high-skilled workers whereas in Russia the situation is the opposite.²⁵ The situation has been changing rapidly, however, and actually average wage level in Russia appears currently to be lower than in China after the contraction of the Russian economy and collapse of the ruble. For Chinese companies, several other neighboring countries still offer more affordable cost level. However probably the most important obstacle for Chinese – as well as any foreign – investment in Russia is Russia's poor business environment. In international comparison, Russia is well behind China itself and related issues like rule of law and corruption are mentioned among the most important obstacles for investing in Russia by Chinese companies²⁶.

Cooperation between Russia and China has so far been concentrated on the high-level political framework and led by large state-owned corporations. To some extent this is natural due to the fields of cooperation and overall large role of state-owned companies in both economies. But despite some efforts, it seems that in the private sector and grass root level there is less advancement in the economic relations. Moreover, there are signs of lack of interest and even reluctance for developing them²⁷. This restricts perspectives for wider cooperation beyond state-led sectors.

For developing further the state-led cooperation, the key question is if the countries can find more common than competing interests and a balanced form of cooperation acceptable for both. The historical framework of China being a junior partner in relation to Russia is certainly outdated as China has become one of the largest economies in the world. Russia cherishes its position as at least a regional economic power and is not willing to give up on it. Cautionary attitudes in both sides make it also more difficult to find solutions e.g. in common investment projects as both are interested in securing majority or otherwise controlling stakes. Therefore, significant deepening of economic relations could continue to be challenging, although recent steps forward might alleviate the challenges.²⁸

²⁵ RIAC (2015)

²⁶ Ernst&Young (2015).

²⁷ Lo (2010), Rautava (2011), Salin (2011).

²⁸ Li (2016), Gabuev (2015), Trenin (2015).

5 Conclusion

The economic cooperation between Russia and China has increased notably during past couple of decades, although from a very low level. Despite the increase, there is no general strong inter-dependency between the countries. Moreover, the economic relations are characterized rather by one-sided dependency of Russia from China than a wider inter-dependency with the exclusion of some individual products like oil.

Economic relations between Russia and China have largely relied on traditional trade based on comparative advantage: China has provided Russia with affordable consumer products in exchange for oil and other commodities. There has not been any special economic relationship between the countries, but rather the cooperation has been especially challenging. Investment between the countries has been limited as the most potential sectors like energy are also politically most sensitive, whereas in other sectors economic rationale has been weaker.

The deterioration of Russia's relations with the western countries seems to have led Russia to make some concessions in its economic relations with China, which led to conclusion of some important agreements. The high-level relations between countries are probably better than ever, but progress in the practical level has been more modest and not lived up to all expectations. Obviously, the planned projects are such that it will take several years to realize them even if they advance according to plans. Moreover, it remains to be seen to what extent the plans will be realized in the future.

There is still potential for deepening the economic relations, but also many challenges. Economically the most perspective sectors are also politically the most sensitive. China's bargaining position has even strengthened lately so it will probably be ever tougher negotiator. Russia might not be willing to make any additional concessions either with its slightly improving economic situation. In other sectors, there are less economic incentives for increased cooperation especially due to weak competitiveness and poor business environment in Russia. Economic relations between Russia and China are likely to continue increasing gradually, which is natural for large neighboring economies. However, there is a long way and many challenges for deepening the cooperation and increasing mutual inter-dependency and possibly even a lack of interest for it.

References

- Carlsson, Märta, Susanne Oxenstierna and Mikael Weissman (2015). *China and Russia – A Study on Cooperation, Competition and Distrust*. FOI Report 4087, June 2015.
- CEFIR (2013). *The Impact of Foreign Direct Investment on the Socio-Economic Development of the Far East of Russia*. Center for Economic and Financial Research, Moscow.
- Ernst & Young (2015). *Perspectives from China: how concerns about the Russian market influence Chinese investment strategies*.
- Gabuev, Alexander (2015). *A Soft Alliance? Russia-China Relations after the Ukraine Crisis*. European Council on Foreign Relations Policy Brief, February 2015.
- Gabuev, Alexander (2016). *A Pivot to Nowhere. The Realities of Russia's Asia Policy*. Carnegie Moscow Center Commentary, April 2016.
- Gabuev, Alexander and Vita Spivak (2016). *Should Russia be Afraid of Chinese Plans in the Far East?* Carnegie Moscow Center Commentary, June 2016.
- Garcia Herrero, Alicia, Le Xia and Carlos Casanova (2015): *Chinese Outbound Foreign Direct Investment: How Much Goes Where after Round-tripping and Offshoring?* BBVA Working Paper 15/17, June 2015, BBVA Research.
- Henderson, James and Tatyana Mitrova (2016). *Energy Relations between Russia and China: Playing Chess with the Dragon*. OIES Paper WPM 67, The Oxford Institute for Energy Studies, August 2016.
- Hill, Fiona and Bobo Lo (2013). *Putin's Pivot. Why Russia is Looking East?* Brookings Op-ed, July 2013.
- Hsu, Jing-Yun and Jenn-Jaw Soong (2014). *Development of China-Russia Relations (1949-2011)*. *The Chinese Economy*, vol. 47, No. 3, May-June 2014, pp. 70-87.
- Johnson, Robert C. and Guillermo Noguera (2012). *Accounting for Intermediates: Production Sharing and Trade in Value Added*. *Journal of International Economics*, 86 (2012), pp. 224-236.
- Koopman, Robert, Zhi Wang and Shang-Jin Wei (2014). *Tracing Value Added and Double Counting in Gross Exports*. *American Economic Review*, 2014: 104 (2), pp. 459-494.
- Lei, Shan, Hui Sun and Yong Ai (2016). *Review of Gas Transportation and Storage Facilities Construction in 2015*. *China Oil & Gas*, No. 1, 2016.
- Li, Lifan (2016). *The Challenges Facing Russian-Chinese Efforts to "Dock" the Eurasian Economic Union and One Belt, One Road*. *Russian Analytical Digest*, No. 183, May 2016.
- Lo, Bobo (2010). *How the Chinese see Russia*. *Russie.Nei.Reports* No. 6, IFRI Russia/NIS Center, December 2010.

National Development and Reform Commission (2015). Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road, March 2015. http://en.ndrc.gov.cn/newsrelease/201503/t20150330_669367.html

OECD-WTO. Trade in Value Added. Concepts, Methodologies and Challenges. Joint OECD-WTO Note.

Rautava, Jouko (2011). Russia's Economic Policy and Russia-China Economic Relations. In Moshes, Arkady and Nojonen, Matti (ed.): Russia-China Relations, FIIA Report 30, The Finnish Institute for Foreign Affairs.

RIAC (2015). Development of Russian-Chinese Trade, Economic, Financial and Cross-Border Relations. Russian International Affairs Council Working Paper 20/2015.

Salin, Pavel (2011). How Russians Perceive China. In Moshes, Arkady and Nojonen, Matti (ed.): Russia-China Relations, FIIA Report 30, The Finnish Institute for Foreign Affairs.

Shevtsova, Lilia (2015). Bad Romance. Brookings Op-ed, July 2015.

Simola, Heli (2015a). Tracing Trade Dependence between EU and East Asia. Global Economic Review, Vol. 44, Is. 4, pp. 420-430.

Simola, Heli (2015b). Rebalancing of Demand in China – Illustrating Possible Effects with an Input-Output Analysis. BOFIT Policy Brief 9/2015.

Trenin, Dmitri (2015). From Greater Europe to Greater Asia? The Sino-Russian Entente. Carnegie Moscow Centre, April 2015.

Valdai (2016). Toward the Great Ocean 4: Turn to the East. Preliminary Results and New Objectives, Valdai Discussion Club Report.

Zhang, Xin (2016). Has “Coordination” Started? Russian Analytical Digest, No. 183, May 2016.

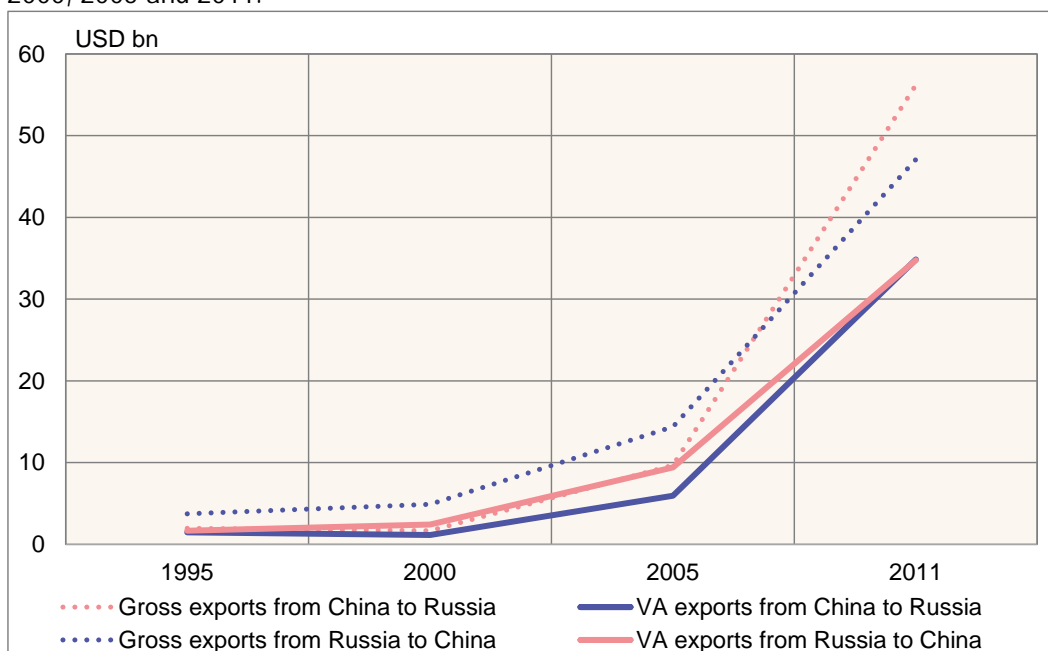
Zhao, Huasheng (2013). Does China Pose a Threat to Russia? China International Studies, No. 39, March/April 2013, pp. 55-71.

Appendix 1. Trade in Value Added

Trade in Value Added data (TiVA) is compiled and published by the OECD and WTO. TiVA data separates gross and value added trade flows, which can in some cases differ significantly due to globalization of supply chains. With different phases of production chains extending to several countries one good can be recorded multiple times in gross trade statistics. The TiVA data tries to fix this problem focusing on the actual value added created in a country. The TiVA data combines official statistics on national input-output tables and foreign trade in goods and services as well as estimated inputs to construct international input-output tables. They describe the international production structures and indicate the origin of actual value added contained in exports and final demand of countries. This distinction is especially important in the case of China, which is actively involved in global supply chains. The use of TiVA data poses some limitations as it currently includes only years 1995, 2000, 2005 and 2008-2011 and about 60 countries, but it complements the picture given by gross trade data and it is especially useful for international comparisons.²⁹

In the bilateral exports of Russia and China, the gross flows are somewhat larger than the value added flows but the development is similar (figure A1). Value added exports refer to the value added created in the exporting country that is embodied in the final demand of the destination country. Therefore, a (positive) discrepancy between gross and value added exports may arise from the supply side (gross exports include foreign value added) or from the demand side (destination country exporting further)³⁰. The former seems to be the main reason for the discrepancy in Chinese exports to Russia, whereas the latter appears to mainly explain the difference for Russian exports to China. In Chinese gross exports the share of foreign value added has varied between 30-40 % in 1995-2011, whereas in Russian gross exports it has been 13-14 % in nearly all of the years covered in the data.

Figure A1. Russian exports to China and Chinese exports to Russia in gross and value added terms in 1995, 2000, 2005 and 2011.



Sources: TiVA, authors' calculations.

²⁹ A more detailed description of the data and related issues is given in OECD-WTO.

³⁰ Methodology and implications of differentiating between gross and value added trade are discussed e.g. in Johnson and Noguera (2012), Koopman and al. (2014).

In Chinese exports to Russia, the discrepancy between gross and value added exports increased (in relative terms) until 2005 corresponding to the increasing share of foreign value added in Chinese exports in general, as China became more integrated in international production chains. Since then, the discrepancy has turned to decline, implying that the share of domestic value added in Chinese exports to Russia has increased, which is in line with the general development of Chinese exports. In addition, gradual increase of Chinese value added in the exports of other countries to Russia may also have contributed. In Russian exports to China, the discrepancy between gross and value added exports has continuously declined in relative terms. As the share of domestic value added has probably remained relatively constant like in Russia's exports in general, it seems that the development could be more related to changes in the demand side. This suggests that China has started to use a larger part of its imports from Russia in its own final demand instead of using it for export production.

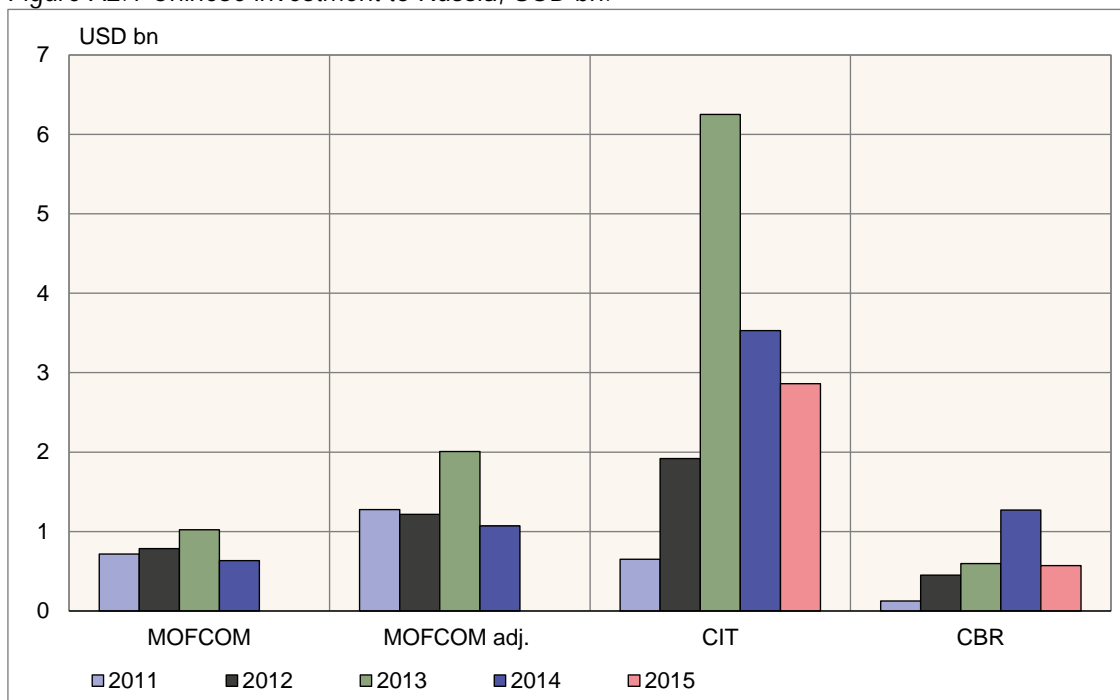
Appendix 2. FDI from China to Russia

Examining foreign direct investment especially on bilateral basis is a notoriously difficult task for any country due to uncertainty related to investment statistics. Increasing globalization and complexity of international financial flows poses considerable challenges for the compilers of the statistics in all countries. In cases of e.g. Russia and China additional challenges are due to wide use of off-shores and round-tripping. Therefore we try to combine different statistical sources to get a more comprehensive picture, but the figures should still only be interpreted as indicative.

It should be emphasized, that the figures from different sources are compiled by different methodologies and therefore they are not comparable between each other. Statistics provided by China’s Ministry of Commerce (MOFCOM) represent gross flows (they do not take into account divestment flows) and they are registered according to the immediate (not final) destination. We also present the MOFCOM figures adjusted for use of offshores and round-tripping. For this, we re-allocate a share of Chinese investment to Hong Kong and British Virgin Islands to Russia as suggested by Garcia Herrero & al. (2015). China Investment Tracker statistics published by American Enterprise Institute and Heritage Foundation are also best interpreted as gross flows. Central Bank of Russia (CBR) statistics are based on balance of payments data and therefore represent net inflows.

According to the official statistics, the annual investment flows from China to Russia have been around USD 0.5-1 bn in past years (figure A3.1), whereas the alternative estimates give somewhat higher values. The cumulative flow during the past decade would amount to about USD 10-25 bn, but the CBR reports the net stock to be only USD 1.5 bn at end-2015 (USD 2 bn if Hong Kong is included). Anyhow, judging on the basis of any of the numbers available suggests that the investment flows are relatively small and that Russia and China are not among each other’s most important investment partners.

Figure A2.1 Chinese investment to Russia, USD bn.



Sources: Ministry of Commerce of China (MOFCOM), China Investment Tracker (CIT), Central Bank of Russia (CBR), authors’ calculations.

Appendix 3. Natural gas

In recent years, Russia and China have moved forward with plans to start bilateral natural gas trade. In order to illustrate the magnitudes under discussion and their significance, we simply compare them to the current situation in natural gas trade of Russia and China. For both countries, gas trade is largely based on long-term contracts, but obviously these are just indicative calculations subject to considerable uncertainty related to demand and supply development.

In spring 2014, Gazprom and CNPC signed an agreement on annual supply of 38 bcm of gas for 30 years. The dispatches under the agreement were initially set to begin in 2019, now the plan is between May 2019 and May 2021. The gas should initially come from the new Chayanda field which Gazprom is planning to bring online in late 2018. As the peak production of Chayanda is estimated at 25 bcm per year, Gazprom is planning to fulfill the rest of the contract with production from another new field Kovykta, which it expects to bring online in 2022. The gas should be transported via a new pipeline “Power of Siberia” (Eastern route), which would be 2,200 km from the Chayanda field to the Russian border and further 800 km to connect also the Kovykta field. Of this, 115 km was constructed by end-May 2016.

In 2015, Gazprom and CNPC signed a memorandum of understanding on additional annual gas supplies of 30 bcm from Russia to China. The gas would come from the gas fields in West Siberia that are already in operation and exporting to European countries. The gas would be transported to China via another new pipeline “Power of Siberia 2” (Western or Altai route). To finalize this deal, the companies still need to agree on some key issues, like the price of the shipments. Russia would prefer this project, as it would be easier and more affordable to execute and provide an alternative export market for current gas production. In contrast, for China the Eastern route is much more appealing as it would bring the natural gas closer to main end-users that are located in the Eastern coast of China. In addition, China already has the Central Asia pipeline providing natural gas to Western China.

The third gas project is the Yamal LNG controlled by Russian Novatek, where CNPC has a 20% stake (as has also French gas company Total) and the Chinese Silk Road Fund a 9.9% stake. CNPC has also made a contract with Novatek to purchase 3 mln tons (4 bcm) of LNG annually from Yamal for 20 years. The LNG production in Yamal is set to start in 2017.

If all these projects would be realized according to current plans, Russian natural gas exports to China could amount to about 70 bcm annually in latter part of the next decade. During past years, Russia has exported annually about 200 bcm of its own natural gas (i.e. excluding re-exported gas from Central Asia). Assuming for simplicity that all the gas in Eastern route (and Yamal LNG) would be new exports but all the gas in Western route redirecting existing exports, the realization of the above mentioned projects would increase Russia’s total natural gas exports to about 240 bcm. Then China would account for about 30 % of Russian natural gas exports.

In China, the current natural gas import capacity is about 120 bcm annually (table A2.1) and other projects currently under construction would add the total capacity to around 160 bcm (there are plans for even more capacity but we did not include them as it is unclear whether and when they are realized). When adding the 70 bcm volume of Russian projects, the total capacity amounts to about 230 bcm. Hence the potential imports from Russia of 70 bcm could account for about 30 % of Chinese imports and as a natural gas supplier Russia could be of similar importance for China than the current largest supplier Turkmenistan. It should be noted that this is rather an upper-bound estimate because as mentioned above, there exists plans to increase China’s import capacity even more than currently under construction.

The price for the gas deliveries via Power of Siberia is not published and for the deliveries via Power of Siberia 2 is not even agreed. Gazprom's delivery prices differ by customer but they are usually linked to oil price development. Therefore the average price of Russian natural gas exported via pipeline has varied greatly during past years from 348 USD per tcm in 2012 to 225 USD per tcm in 2015. So in value terms a very rough estimate for the annual 70 bcm gas deliveries could be around USD 20 bn, although subject to much uncertainty depending on the agreed price between Gazprom and CNPC as well as future oil price development.

Table A3.1. China's natural gas import capacity in end-2015

	Capacity, bcm
<i>Capacity in operation</i>	
Central Asia pipeline (A+B+C)	55
Myanmar pipeline	12
LNG capacity (13 terminals)	56 (41 mt)
Total capacity in operation	123
<i>Capacity under construction</i>	
Central Asia pipeline (D)	30
LNG capacity (3 terminals)	11 (8 mt)
Total capacity under construction	41
<i>Planned deliveries from Russia</i>	
Eastern pipeline (Power of Siberia), under construction	38
Western (Altai) pipeline (Power of Siberia 2), planned	30
Yamal LNG, under construction	4
Total potential capacity from Russia	72

Sources: CNPC, Gazprom, Lei & al. (2016).

- 2012 No 1 Risto Herrala, Juuso Kaaresvirta, Iikka Korhonen and Jouko Rautava: Kiinan kasvava mahti maailmantaloudessa. BOFIT Kiina-tietoisku 2011
- No 2 Heli Simola: Russian import statistics in the mirror of world exports
- No 3 Seija Lainela and Alexey Ponomarenko: Russian financial markets and monetary policy instruments
- No 4 Iikka Korhonen, Vesa Korhonen, Seija Lainela, Heli Simola and Laura Solanko: BOFIT Venäjä-tietoisku. Venäjän talouden uusi aika
- No 5 Risto Herrala, Juuso Kaaresvirta, Iikka Korhonen, Mikael Mattlin, Jouko Rautava and Heli Simola: Valta vaihtuu, mikä muuttuu? BOFIT Kiina-tietoisku 2012
- 2013 No 1 K.C. Fung, Hsiang-Chih Hwang, Francis Ng and Jesús Seade: International trade and production networks: Comparisons of China and greater China versus India and South Asia
- No 2 Heli Simola, Laura Solanko and Vesa Korhonen: Näkökulmia Venäjän energiasektoriin
- No 3 Heli Simola, Laura Solanko and Vesa Korhonen: Perspectives on Russia's energy sector
- No 4 Hubert Fromlet: The Chinese Government Debt – What Do We Know and What Should Be Done?
- No 5 Laura Solanko and Lauri Vilmi: Globaalit energiemarkkinat murroksessa
- No 6 Laura Solanko and Lauri Vilmi: The transformation of global energy markets
- No 7 Andrei Yakovlev: Is there a 'new deal' in state-business relations in Russia?
- No 8 Iikka Korhonen, Vesa Korhonen, Seija Lainela and Laura Solanko: Venäjän kasvu vaatii muutakin kuin energiaa. BOFIT Venäjä-tietoisku 2013
- No 9 Sergey Vlasov: Analysis of Russia's fiscal sustainability under the new fiscal rules
- No 10 Heli Simola: Turkin talous – saadaanko kasvu kestäväälle pohjalle?
- No 11 Juuso Kaaresvirta, Iikka Korhonen, Jouko Rautava, Heli Simola and Laura Solanko: Kiina ja uudistusten aika. BOFIT Kiina-tietoisku 2013
- 2014 No 1 Jouko Rautava: Crimean crisis will cost Russia too
- No 2 Jouko Rautava: Krimin kriisi on jo nyt tullut kalliiksi Venäjälle
- No 3 Heli Simola: Tracing trade interdependency between EU and East Asia
- No 4 Heli Simola and Laura Solanko: Kaasu jälleen kiistakapulana Venäjän ja Ukrainan välillä
- No 5 Heli Simola and Laura Solanko: Gas once again a bone of contention between Russia and Ukraine
- No 6 Ilya Voskoboinikov and Laura Solanko: When high growth is not enough: Rethinking Russia's pre-crisis economic performance
- No 7 Iikka Korhonen, Vesa Korhonen, Seija Lainela, Heli Simola and Laura Solanko: BOFIT Venäjä-tietoisku 2014
- No 8 Zuzana Fungáčová and Laurent Weill: A view on financial inclusion in Asian countries
- No 9 Heli Simola: Russia's restrictions on food imports
- No 10 Zuzana Fungáčová and Iikka Korhonen: Ukrainian banking sector in turmoil
- No 11 Yin-Wong Cheung: The role of offshore financial centers in the process of renminbi internationalization
- No 12 Lev Freinkman and Andrei Yakovlev: Institutional frameworks to support regulatory reform in middle-income economies: Lessons from Russia's recent experience
- No 13 Yao Lei: Policy discussion of internet finance in China
- No 14 Riikka Nuutilainen: Shanghai ja Hongkongin pörssiyhteistyökeilu avasi Kiinan osakemarkkinat ulkomaisille yksityissijoittajille
- No 15 Hubert Fromlet: Deregulation of financial markets and the risk of financial crises: Lessons from Sweden for China and other emerging economies
- No 16 Annikki Arponen, Iikka Korhonen, Riikka Nuutilainen, Jouko Rautava and Heli Simola: BOFIT Kiina-tietoisku 2014
- 2015 No 1 Alexey Kudrin and Evsey Gurchikov: A new growth model for the Russian economy
- No 2 Heli Simola: Venäjän valuuttavaranto ja rahastot
- No 3 Stephan Barisitz and Zuzana Fungáčová: Ukraine: Struggling banking sector and substantial political and economic uncertainty
- No 4 Heli Simola: Russia's international reserves and oil funds
- No 5 K.C. Fung, Alicia Garcia-Herrero and Jesus Seade: Beyond minerals: China-Latin American Trans-Pacific supply chain
- No 6 Anni Norring: Suomen ja Venäjän välisten suorien sijoitusten tilastot
- No 7 Vesa Korhonen, Zuzana Fungáčová, Laura Solanko, Iikka Korhonen ja Heli Simola: BOFIT Venäjä-tietoisku 2015
- No 8 Yang Yao: When are fixed exchange rates an appropriate policy tool for growth?
- No 9 Heli Simola: Rebalancing of demand in China – illustrating possible effects with an input-output analysis
- No 10 Iikka Korhonen: How fast can Russia grow?
- No 11 Jouko Rautava, Riikka Nuutilainen, Anni Norring, Iikka Korhonen ja Jyrki Kallio: BOFIT Kiina-tietoisku 2015
- 2016 No 1 Riku Niemi: The Eurasian Union – much potential, little results
- No 2 Andrei Yakovlev: What is Russia trying to defend?
- No 3 Andrei Yakovlev, Lev Freinkman and Anton Zolotov: Domestic and external factors in the development of Russia's economic think tanks sector
- No 4 Mikko Mäkinen: Nowcasting of Russian GDP growth
- No 5 Iikka Korhonen, Tuomas Forsberg, Vesa Korhonen and Heli Simola: BOFIT Venäjä-tietoisku 2016
- No 6 Heli Simola: Economic relations between Russia and China – Increasing inter-dependency?