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Japan's Trade and FDI Intensities with Russia

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Abstract: This study analyses contemporary trends in Japan's foreign trade and FDI and provides an estimation of the intensity of Japan–Russia bilateral economic relations relative to major Northeast Asian (NEA) countries based on trade and FDI flows at the beginning of the 21st century. The study demonstrates that, despite their geographic proximity, economic cooperation between Japan and Russia is comparatively low and that Japan and Russia are not favoured partners in terms of trade or FDI. The results of bilateral trade and FDI intensity indexes calculations suggest no evidence that the situation is improving. However, a decrease in Japan's trade and FDI intensities is observed in the majority of NEA countries since 2014. Despite the low general bilateral trade performance, Japan and Russia are leading partners in selected markets and have high dependency ratios in selected product groups. Positive trends in the development of bilateral relations in 2016–2017 as seen in the launch of the 'eight-point cooperation plan' and trade diversification, which led to a 14% trade growth in 2017, can give new impetus to the further development and strengthening of economic cooperation between Japan and Russia.

Keywords: Japan, Russia, trade, FDI, trade intensity index, FDI intensity index

JEL Classification Numbers: F14, F21, F51

1. Introduction

For several decades, overseas markets have been playing a significant role in consuming Japan's exports and contributing to its economic growth and prosperity. Since the early 1980s Japan's foreign direct investment (FDI) abroad has also surged, as many Japanese companies have set up production facilities overseas.

Economic liberalization policies have played an important role in this process. In the middle of the 20th century, Japan applied a variety of so-called 'grey area' measures (e.g. bilateral voluntary export restraints and similar measures). In the 1990s, Japan's trade policy, regarded as 'aggressive legalism', guided government authorities towards the meticulous implementation of multilateral trade rules and an avoidance of the bilateral and non-legal trade dispute settlements that had been favourable policy instruments in the past. Over time, however, this 'single-layered' vision under the multilateral WTO framework has been replaced by a multi-layered trade policy focusing on bilateral and regional free trade agreements, or FTAs (Podoba, Gorshkov, 2017, A). By the beginning of the 21st century, Japan was lagging behind other developed and main emerging countries in trade agreement participation.

One of the new goals of Abenomics is the promotion of free trade and economic partnership agreements (EPAs). The share of Japan's total trade represented by free trade agreements was supposed to reach 70% by 2018, but this level looks unattainable. According to an analysis of trade statistics conducted by the Japan External Trade Organization (JETRO), Japan's FTA coverage ratio was 23% in 2016. The EU–Japan EPA, which was broadly agreed in 2017, is expected to boost the ratio to 35%.

A free trade area agreement with major Northeast Asian countries, China, and the Republic of Korea, is currently under negotiation, but there is no intention to start such a negotiation with Russia. This study assesses Japan's trade and FDI intensities with Russia at the beginning of the 21st century relative to major Northeast Asian countries to reveal the potential for EPA negotiations based on trade and FDI flows.

The rest of this paper is organised as follows. The study's methodology is described in the next section. Section 3 presents the highlights of Japan's foreign trade. The next section examines Japan's trade intensity with Russia. Section 5 provides an overview of the general trends in Japan's outward FDI. Section 6 presents the results of the calculation of Japan's FDI intensity with Russia. Finally, Section 7 concludes the paper.

2. Methodology and data

Intensity indexes are often used to measure regional integration perspectives and potential. The trade intensity index approach was developed by Brown (1949) and Kojima (1964) in the mid-20th century. It evaluates bilateral trade conditions based on a country's global trade status and the size of its trading partner's economy. The trade intensity index indicates whether a country exports more to a partner than the world does on average as a percentage. It is calculated as follows:

$$TII = (x_{ijk}/X_{ik}) / (x_{wjk}/X_{wk}) \times 100,$$

where TII is the trade intensity index, x is the value of exports of product k from origin country i to destination j, and X is total exports from i of product k; w indicates the world as the origin.

The TII has a threshold value of 100. An index greater than 100 indicates a relationship more intense than the world average for the partner; the two nations would thus be considered favoured trading partners to each other.

It has been found that neighbouring countries tend to have a high TII and geographically distant countries a low trade intensity index value (Ng and Yeats, 2003). Though TII has been criticised for mixing the impacts of subjective barriers with the objective ones, it remains one of the most widely used indices in analyses of bilateral trade.

It is also possible to assess the intensity of the FDI relationship between a home country and a host country (Petri, 1994; Dunning, Fujita and Yakova, 2007; UNCTAD, 2007). The FDI intensity index

measures the relative importance of a host country for a particular home country by looking at the ratio of the share of the host country in the nation's outward FDI stock to the share of the host country out of the global stock, as follows:

FDI Intensity Ratio = FDI*ij* /ExpFDI*ij*
FDI*ij* = Actual amount of FDI stock from country *i* to *j*;
ExpFDI*ij* = Expected value of FDI stock from country *i* to *j* = (FDI*wj* / FDI*ww*) * (FDI*iw*/ FDI*ww*) * FDI*ww*
FDI*wj* = Total inward stock in *j* country;
FDI*iw* = Total outward FDI stock of *i* country globally;
FDI*ww* = Worldwide inward or outward FDI stock.

If the intensity ratio is greater than unity, the FDI relationship is stronger than would be expected based on the relative importance of the two home and host economies; if it is less than 1, it is weaker than expected.

The data for our analysis are collected primarily from International Trade Centre (ITC) Trade statistics for international business development, the World Bank's World Integrated Trade Solution (WITS), the World Trade Organization (WTO), The United Nations Conference on Trade and Development (UNCTAD), and The Japan External Trade Organization (JETRO). The study covers from the early 21st century to 2016.

3. Japan's foreign trade: A short overview

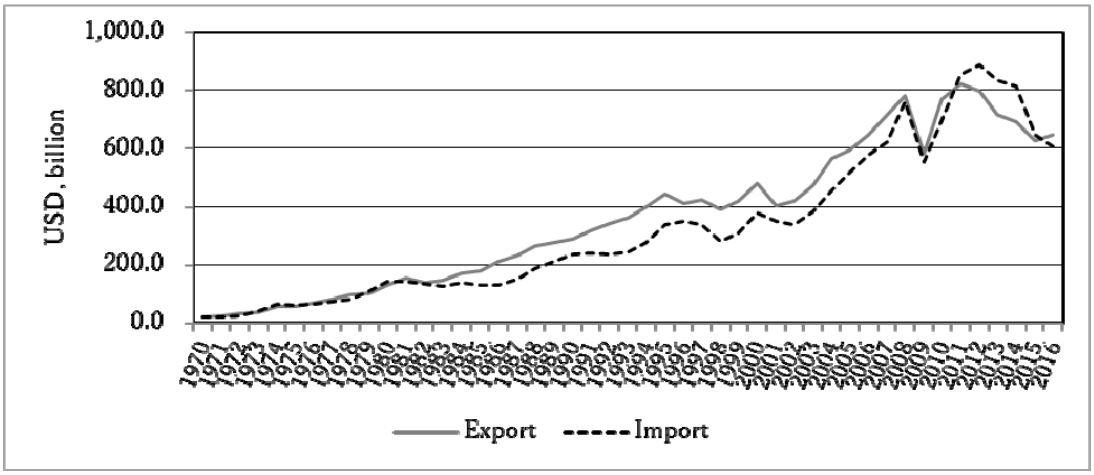
Japan is a significant force in world trade, but its share, like the shares of most developed countries in the international merchandise trade, is gradually shrinking. In 1990, it amounted to 7.5%, but it had decreased to less than 4% by 2015. Japan was the world's fourth-largest exporter of merchandise trade and the fifth-largest importer in 2016 (WTO, 2017). The United Kingdom overtook Japan as the world's fourth-largest importer of goods, behind Germany.

Japan enjoyed a trade surplus for 30 years. In 2011, however, after the Great Earthquake and Fukushima disaster, it faced a trade deficit. Only in 2016 did Japan's trade balance return into the black for the first time in six years (since 2011; see Figure 1).

Japan's high rank in international merchandise trade is supported by the country's comparative advantages. Japan has had for many decades a comparative advantage in capital goods and high-tech products such as electrical and general machinery, which require significant highly qualified human resources. Since 2009, Japan has also enjoyed comparative advantage in intermediate goods, which are a significant portion of Japanese exports to East Asia. In fact, the share of intermediate goods out of Japanese exports to East Asia was close to 70% by the 2010s (Urata, 2014). In East Asia's regional

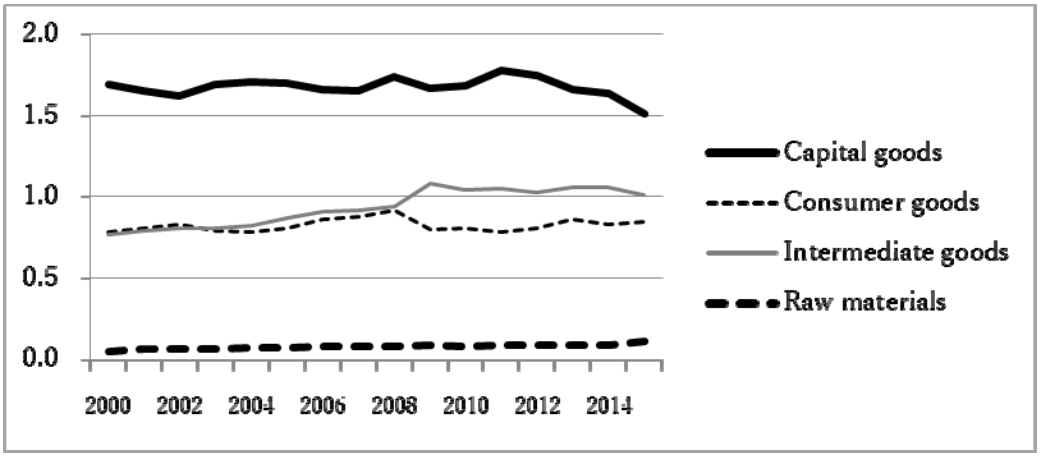
value chains, Japan performs as a supplier of intermediate goods to the region and as an importer of the final goods assembled using those intermediate goods. Foreign direct investment by multinational corporations played a major role in the establishment of these regional production networks.

Figure 1 Japan's Foreign Trade, 1970–2016



Source: WTO

Figure 2 Japan's Revealed Comparative Advantage Index



Source: Podoba and Gorshkov (2017) p.27.

Japan's merchandise trade composition has remained relatively stable over the last several decades. Transport equipment, general and electrical machinery, motor vehicles, and chemicals continue to

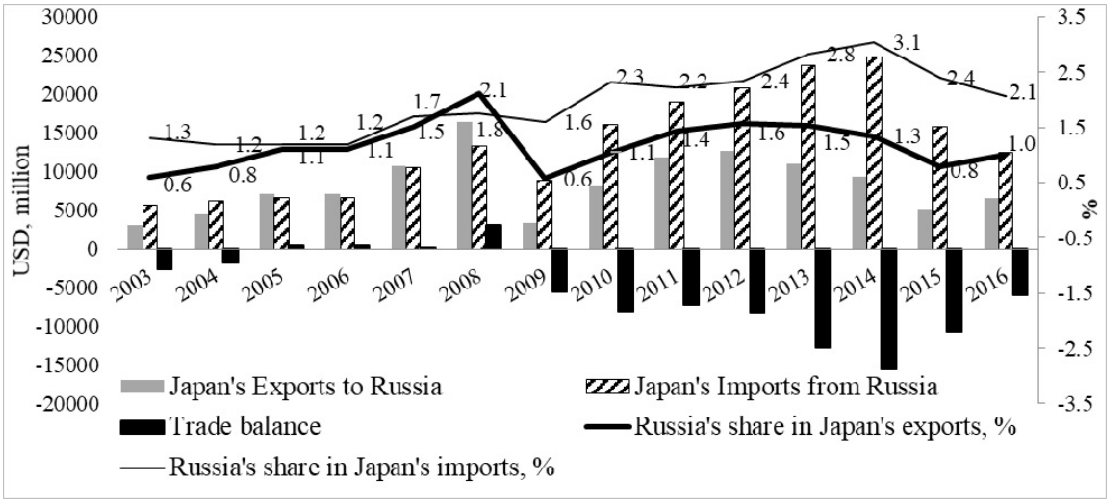
dominate Japan's exports, while its imports mostly comprise mineral fuels, foodstuff, machinery, and chemicals.

The United States, China, the EU, the Republic of Korea, Chinese Taipei, and Hong Kong are the major export destinations of Japan's merchandise trade, while most of Japan's imports come from China, the EU, the United States, Australia, and the Republic of Korea (JFTC, 2017).

4. Japan's trade with Russia

An analysis of the dynamics of bilateral trade between Japan and Russia at the beginning of the 21st century shows a gradual increase in trade volumes between the two countries between 2000 and 2008 and from 2009 to 2014. Japan's imports advanced relatively steadily until 2014 (except for 2009) thanks largely to an expansion of energy resource trade. However, 2009 (when a significant decrease occurred) and the 2014–2016 period showed the opposite trend, caused in the first case by the negative impact of the global financial and economic crisis and in the second by a downtrend in commodity prices, a slowdown in the economic growth rates of the two countries and of the global economy, weak global trade and capital flow indicators, and geopolitical changes (see Figure 3).

Figure 3 Japan's Trade with Russia



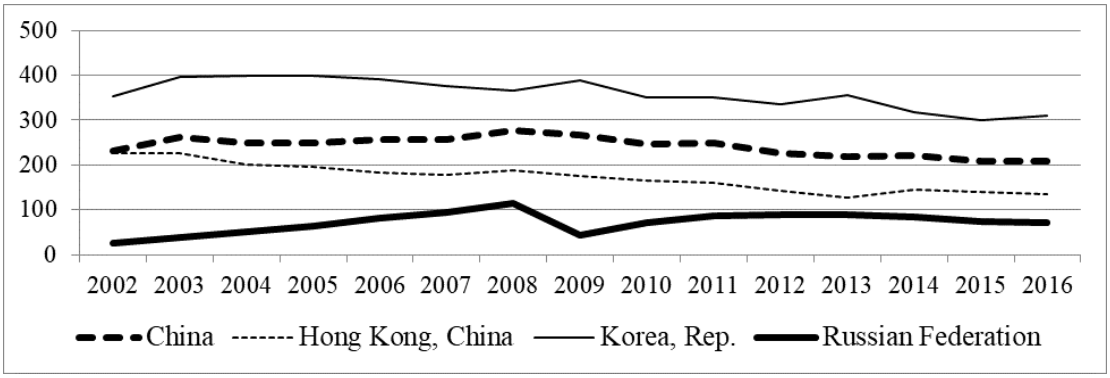
Source: Podoba and Gorshkov (2017) p.30.

The Russian Federation ranked 23rd among the export markets for Japanese goods and 13th in imports in 2016. Russia's share of Japan's foreign trade since the 2000s has ranged from 1 to 3%. On the other hand, Japan was seventh among Russia's trade partners (3.4% in 2016). Though the nations are neighbours, bilateral trade between Japan and Russia is far below its potential.

Let us look at the trade intensity index calculation results. The average ratio exceeds the threshold value, implying that the trade intensity is significant with all Northeast Asian countries and territories except Russia. Japan's TII with Russia is much lower than that with other major countries in the region. As can be seen from Figure 4, there was a steady upward trend in the value of the trade intensity index with Russia from the beginning of the current century until 2008, when the TII exceeded 100. This was followed by a dramatic drop during the global economic crisis, after which the trade intensity between the two countries has never been able to recover. Moreover, it had a downward trend since 2014, which indicates that Japan is trading more actively with other countries, but not with Russia (see Figure 4).

Interestingly, the average value of the trade intensity index for trade between Russia and Japan is higher than in the opposite direction. From 2013 to 2016, the index of Russian–Japanese trade intensity was slightly more than 100, which implies that bilateral relations between the partners had, on average, been developing more intensively than had Russia's trade with other countries. Furthermore, the increase in TII took place against the backdrop of a decline in trade volumes and Japan's accession to anti-Russian sanctions. It should be noted that they were introduced with great care (the most important sanctions included freezing commencement of negotiations on agreements relating to new investment, space cooperation, the prevention of dangerous military activities, and the prohibition of arms exports to Russia and related technologies) and did not significantly affect the activities of Japanese companies in Russia.

Figure 4 Japan's Trade Intensity Ratios with Russia and NEA



Source: Author's calculations based on data sourced from WITS and UN COMTRADE

In fact, despite their low general bilateral trade performance, Japan and Russia are leading partners in selected markets and have rather high dependency ratios in selected product groups.

Japan supplies the Russian market with high-value added products, primarily vehicles, machinery, equipment, rubber, and miscellaneous manufactured articles. Russia is highly dependent on the import of Japanese vehicles. In 2016, Japan accounted for 38% of Russia's imports of the HS 8703 product

group (motor cars and other motor vehicles) and 24% of Russia's imports of HS 37 (photographic and cinematographic goods). Japan is one of Russia's top three rubber suppliers.

Russia's exports to Japan are mainly comprised of raw materials, primarily mineral fuels (70% in 2016), metals, fish, and wood. Japan's imports from Russia cover around 7% of the country's mineral fuel needs. According to the Japan Foreign Trade Council, Inc., in 2016, Russia was one of Japan's top five largest suppliers of mineral fuels, behind Saudi Arabia, Australia, the UAE, and Qatar. The share of mineral fuels out of Russia's exports to Japan reached its maximum in 2013 (82.3%); since then, it has gradually declined, giving way to other goods. Russia is the third-largest exporter of coal, wood, fish, and maize to Japan. Japan is the largest importer of ships, boats, and floating structures from Russia; the second-largest importer of Russian coal and aluminium; and the third-largest importer of timber, frozen fish, and items in the 'ore, slag, and ash' commodity group.

Despite the overall decline in bilateral trade since 2014, the volumes of certain categories of goods have seen rapid growth. In recent years, Russia has increased its imports of Japanese ships, boats, and floating structures, various chemical and pharmaceutical products, wadding, nonwovens, twine, and silk. Japan's growing imports from Russia include cereals, preserved and frozen vegetables, mushrooms, animal products, chemicals, and chromium items.

5. General trends in Japan's outward FDI

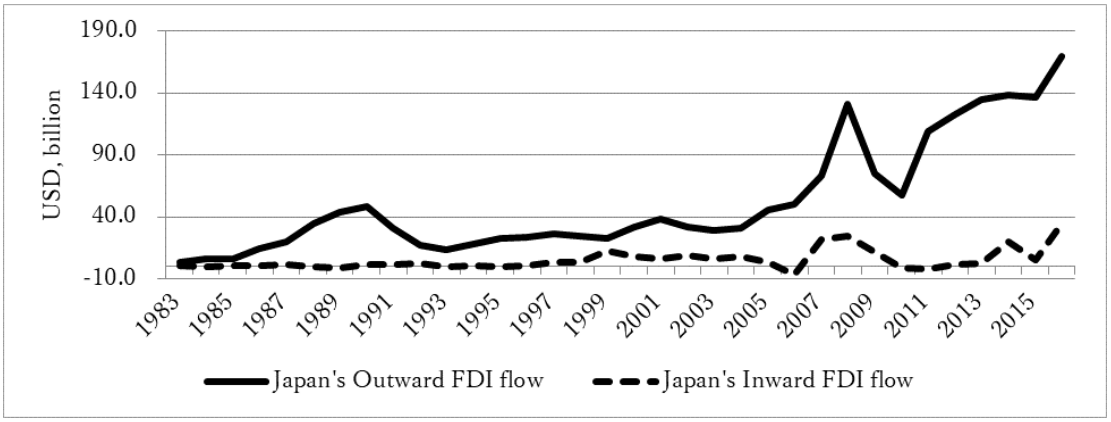
During the 1980s, Japanese multinationals became some of the world's most prominent outward investors. Several factors contributed to that effect. First, the Plaza Accord (1985), which sought to weaken the US dollar against other international reserve currencies, caused the appreciation of the yen, which in turn made foreign capital investments relatively inexpensive for Japanese companies. The sharply higher yen prompted Japanese manufacturers to shift production abroad, especially to Southeast Asia, to take advantage of the cheaper labour there. The second reason involved the trade protectionism used by major partners, primarily the US, against Japanese manufacturers. To ease trade frictions, Japanese automakers, which were particularly enmeshed in the raging trade protectionism in the US, accelerated production in that country. By the early 1990s, the number of vehicles they assembled in the US exceeded that of their US-bound exports. Japanese corporations also invested overseas to mitigate growth limitations in the domestic market. Another factor was the aspiration to overcome the energy shortage.

Japan is recognized as a large source country for FDI but has been under pressure to increase its inward FDI (see Figure 5). By 2016, Japan's outward FDI stock was equivalent to 30% of GDP, while its inward FDI stocks were much smaller, at 4% (OECD, 2017).

Currently Japanese companies are mostly interested in investments in non-manufacturing and services sectors, such as finance and insurance, wholesale and retail trade. The second important direction of Japanese outward FDI is in manufacturing, including motor vehicles and transport

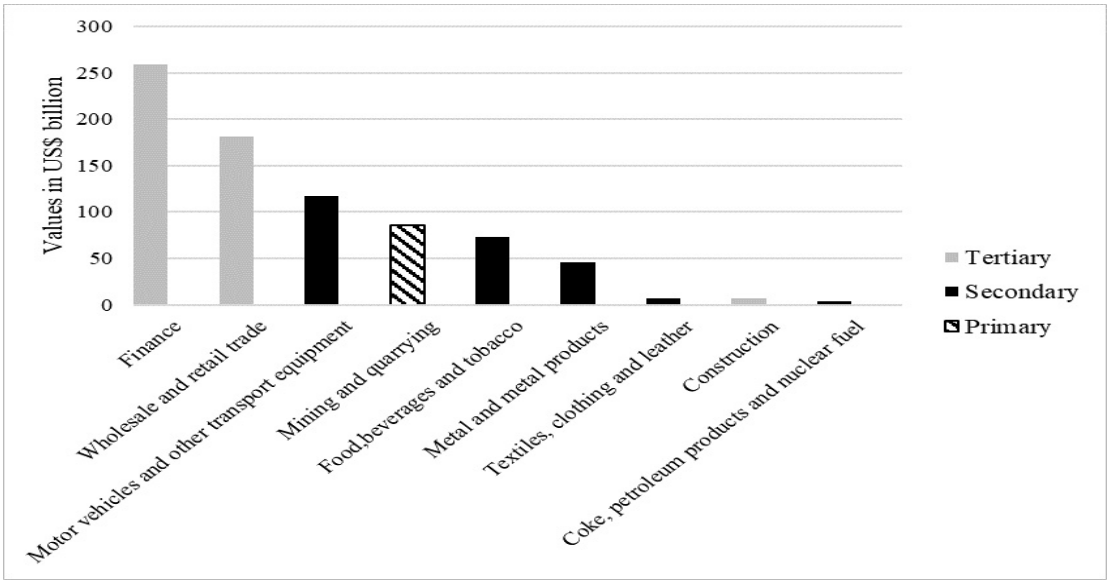
equipment, food, beverages and tobacco, metal and metal products, and others (see Figure 6).

Figure 5 Japan's Outward and Inward Flows



Source: JETRO

Figure 6 Japan's Outward FDI Stock by Sector, 2016



Source: INVESTMENT MAP

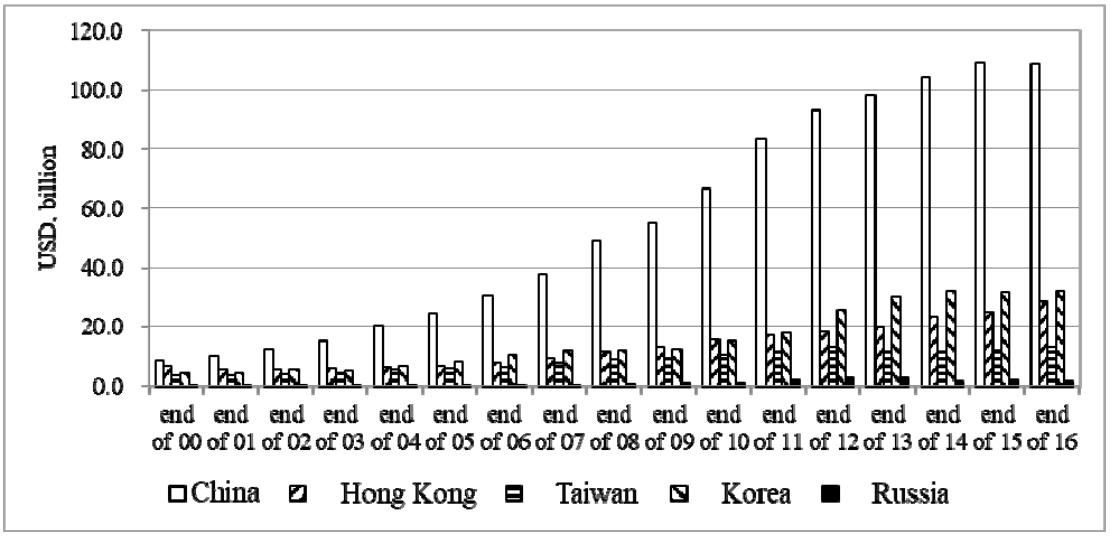
Japan's outward FDI has been increasing since 2012, while its inward FDI has remained broadly stable, adding to the significant outward orientation of Japanese investment. Japan's outward FDI in

2016 increased by 24.3% from the previous year to $169.6 billion (on a balance of payment basis, net, flow), which was a record high since comparable records began in the mid-1990s and surpassed its peak in 2013. A rapid surge of investment in the EU, primarily in the UK, contributed to that growth significantly. The US accounted for approximately 30% of total investment, remaining the largest destination country for seven straight years. The JETRO survey indicates that there remains a shift to ASEAN among Japanese companies. In the overall trend of restructuring bases and functions related to sales and production at home and abroad, there is a growing pattern of such transfers being made by Japanese companies from China to ASEAN.

6. Japan's FDI intensity with Russia

The amount of Japanese FDI to Russia is much lower than the volume invested in the major NEA countries, especially China. Stock FDI in Russia amounted to 1.5 billion dollars in 2016; in China, it was more than 107 billion dollars and was around 32 billion dollars in South Korea (see Figure 7). China's reform and opening-up policies since 1978 coupled with its World Trade Organization accession in the early 2000s made China the factory of the world. Japanese firms quickly shifted low value-added, labour-intensive manufacturing to China to take advantage of cheap wages and economies of scale.

Figure 7 Japan's Outward FDI Stock to NEA

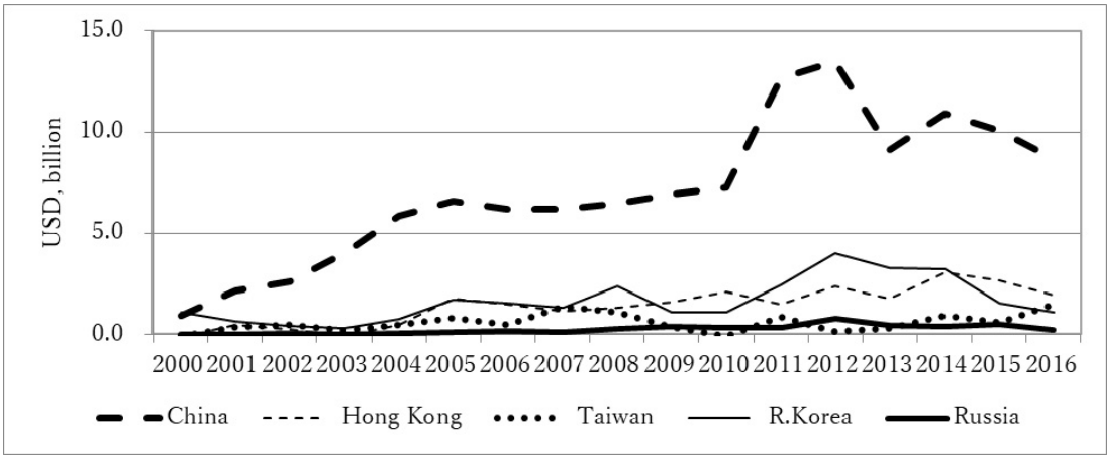


Source: JETRO

Japanese FDI to Russia followed a general upward trend until 2013, when the direction changed downward. Almost all countries and territories in the region, except Taiwan, have seen a decrease in

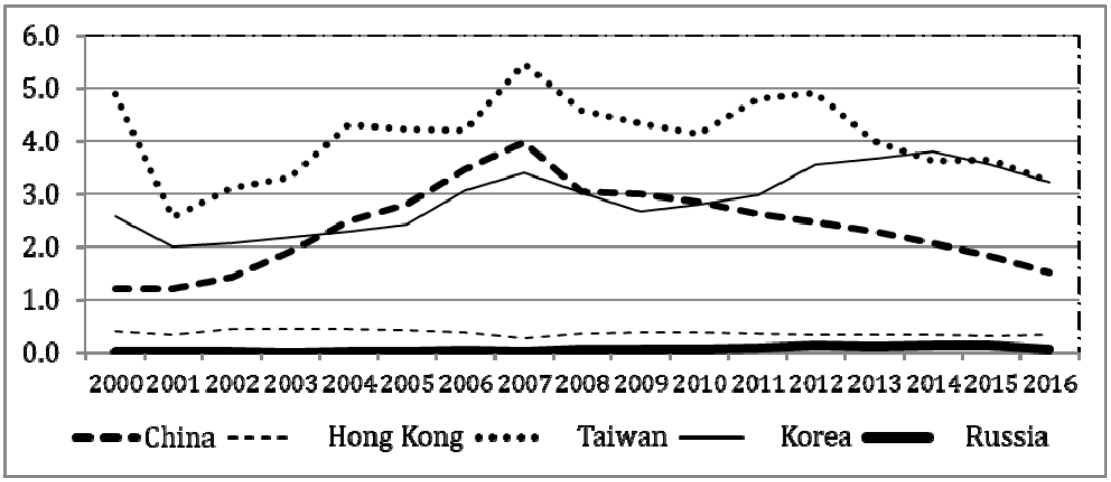
Japanese investment volume since 2014 (see Figure 8).

Figure 8 Japan's Outward FDI Flow to NEA



Source: JETRO

Figure 9 Japan's FDI Intensity Ratio with Russia and NEA Countries



Source: Author's calculations based on data sourced from JETRO, and UNCTAD

The analysis of the average intensity of the FDI relationship between Japan and Russia shows the following. First, since the beginning of the 21st century, the average value of the FDI intensity index has been less than 1, suggesting that FDI cooperation between Japan and Russia is much weaker than expected based on the relative importance of the two economies as host and home. However, the index

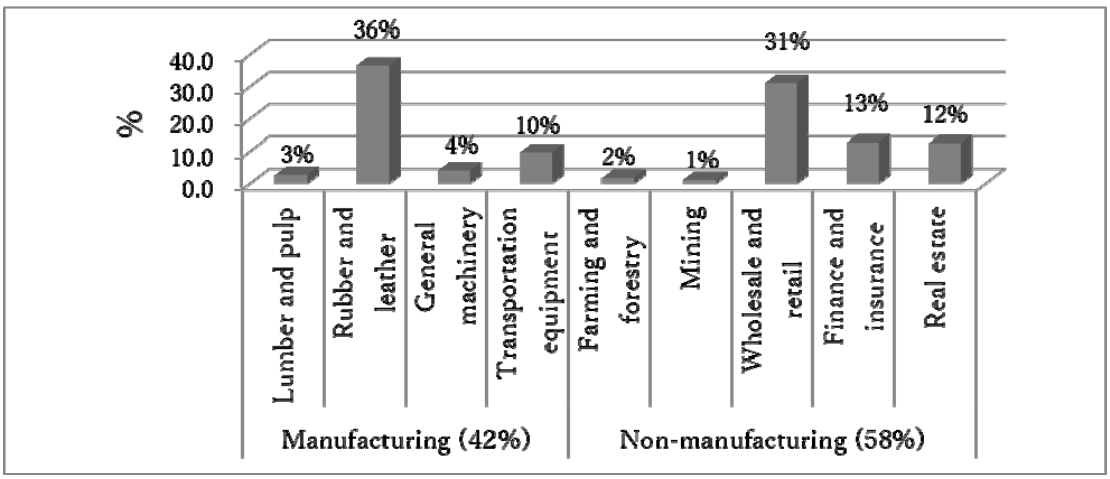
grew slightly from 2008 to 2015 (see Figure 9).

The more favourable position in terms of the FDI intensity index belongs to the Republic of Korea and Taiwan. But their ratios also started to decrease, in 2014 for Korea and 2012 for Taiwan. The index with China has followed a downward trend since 2009 (see Figure 9).

Japanese FDI in Russia is concentrated in the non-manufacturing sector (i.e. wholesale and retail trade, finance, and insurance), but manufacturing is still an important destination for Japanese FDI, especially rubber production (see Figure 10).

In the early 21st century, Japanese banks motivated by the 'follow the customer approach' intensified their entry into Russia's market. Starting in 2006, Japanese banks began to prefer brownfield-type investments and acquired a few Russian banks. An examination of the ultimate owners of banks with foreign capital participation showed that Japanese banking FDI was often directed to Russia via third countries such as Germany and the Netherlands. This situation is also relevant in other sectors of the economy and partly explains the low rates of investment from Japan to Russia (Gorshkov, 2017).

Figure 10 Japan's FDI Flow Structure to Russia by Industry, 2015



Source: MOF

The most attractive industries for Japanese FDI in Russia are oil and gas, vehicle production, and auto parts. There are joint investment projects in the electric power industry, chemical, timber processing, pharmaceuticals, power engineering, agriculture, and medicine.

From 2014 to 2016, Japanese investors did not actively participate in the development of mineral resources in Russia, although, in 2013, Japanese investment in hydrocarbon production amounted to 25%. At the same time, it is too early to talk about a complete cessation of cooperation in this field, as the energy sector still provokes the strongest interest among Japanese partners seeking to diversify the geography of their energy imports. Japan–Russia relations in the energy sector have advanced

substantially during the first decade of the 21st century, with the energy field becoming the basis for cooperation between the countries (Podoba, 2013). However, despite the considerable potential of energy cooperation, only a few large-scale feasible projects address the energy needs of both countries. The largest investment projects in the oil and gas are Sakhalin-1 and Sakhalin-2.

Needless to say, there are great geographical disproportions in the distribution of Japanese investment in the Russian Federation: 89.1% of companies with Japanese capital are registered in Moscow and the Moscow region, which is connected to the concentration of financial, human, and infrastructural resources in the central part of Russia.

Japanese investment has a positive influence on mutual trade. For example, the launch of the Sakhalin LNG plant promoted a sharp increase in energy imports from Russia to Japan. Another signal was sent by Toyota and Nissan, who built car assembly factories and brought in several car-parts suppliers. Since then, the supply of essential equipment and spare parts has become an important export item (Belov, 2017).

According to a 2017 survey conducted by KEIDANREN (Japan Business Federation), most of the respondent companies were optimistic about the potential for business development in Russia. On the other hand, the following were cited as reasons for pessimism: 'the risks associated with fluctuations in the exchange rate as a result of economic instability' and 'the decline in consumer demand due to the deterioration of the economic situation as a result of the decline in oil prices and economic sanctions'. The category 'natural resources and energy' (61.2%) attracted the greatest interest as the most promising area for doing business with Russia, followed by 'infrastructure' (35.5%) and 'cars and auto parts' (31.6%). The respondents cited Russia's complicated business environment, problems related to the executive branch and legal system, export–import procedures, tax system and financial policy among the main factors, limiting the economic ties between Japan and Russia (Keidanren, 2017).

7. Concluding remarks

Despite the nations' geographic proximity and the relative scale of their economies, economic cooperation between Japan and Russia is comparatively low. The study results show that Japan and Russia are not favoured partners in terms of trade or FDI, and the results of the bilateral trade and FDI intensity index calculations suggest that there are no visible signs that the situation is improving. At the beginning of the 21st century, political dynamics are still strongly influencing bilateral economic relations.

During the entire period under review, Japan's trade and FDI intensities with Russia remained low and significantly inferior to the ratios of the other Northeast Asian countries. However, a decrease in Japan's trade and FDI intensities has been observed in most NEA countries since 2014, demonstrating that economic sanctions against Russia, which were supported by Japan, are not the main reason behind the negative changes.

It is important to note that, despite the low general bilateral trade performance, Japan and Russia are leading partners in selected markets and have high dependency ratios in selected product groups.

Positive trends in the development of bilateral relations in 2016–2017 in terms of launching the 'eight-point cooperation plan' and trade diversification, which led to a 14% growth in trade in 2017, can give new impetus to the development and strengthening of economic cooperation between Japan and Russia.

Acknowledgement

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