SOME ASPECTS OF FOREIGN TRADE RELATIONS OF THE AMUR-OKHOTSK REGION'S COUNTRIES

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Present-day transformation of natural environment of the Amur River basin is mostly determined by economic activity of human being. Intensity, the level and trends of land utilization in China and Russia arise from natural land conditions as well as from wide range of economic, social and political reasons. Some driving forces of land-use changes emerge and operate primary inside one country while other have international character like foreign trade. It has been known that the rise of resources demand in one country may result in their more intensive utilization and have negative environmental consequences in other. From that point of view land-use situation, capacity and restrictions of resources use in the Amur-Okhotsk region are strongly connected with the international trade among China, Russia and Japan.

Wood, marine and agricultural products are of the most importance in studying resources' and primary products' flows between principal countries of the Amur-Okhotsk region. Certainly the research of resources flows on the regional level of the Russian Far East and the Northeast part of China where the largest part of the Amur River basin is located are the most interesting and important. However for the analysis of the situation in separate regions it is necessary to understand the main features and tendencies of the whole country. That is why principal stages of that study are as follows.

1. Comparative analysis of the main indices, geographical and commodity structure of foreign trade of China, Russia and Japan.

2. Studying of the mutual trade of those countries (dynamics, commodity structure of import and export, principal partners).

3. Investigation of the participation of the Russian and Chinese administrative unites located within the Amur River watershed in the resources and primary products trade among China, Russia and Japan.

4. Analysis of interaction between the resources trade and land-use changes on the regional level of the Amur River Basin.

The basic source of data for resources and primary products exchange is national foreign trade statistics. The most part of data needed to carry out the first and second stages of the investigation was gathered in Japan during the author's work in Research Institute for Humanity and Nature (Kyoto) as an invited research fellow in April – October 2006. Some results of data analyzes for the period 1995-2004 are presented in this paper.

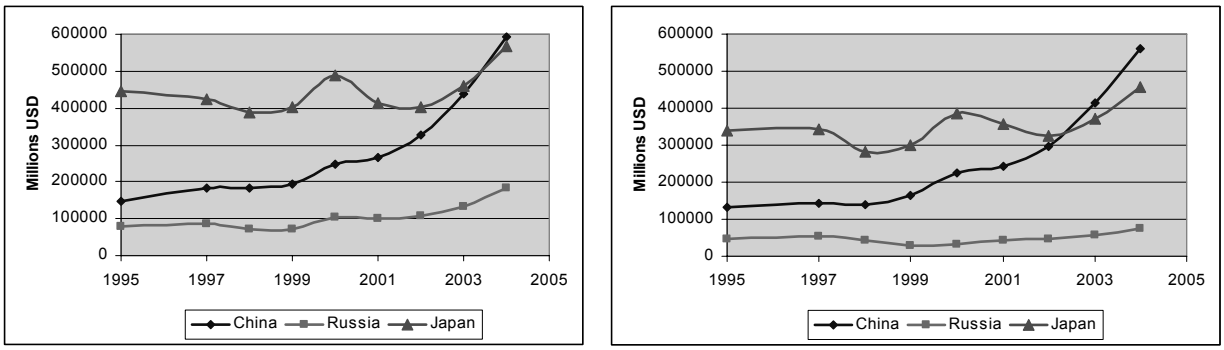
Comparison of few principal indicators of Russia, China and Japan (Table 1) represents significant contrast of the Amur-Okhotsk region. Average population density of Japan almost in 2,5 times exceeds a similar parameter of China and more than in 40 times the Russian one. GDP and GDP per capita of Japan exceed the Russian indicators almost in 15 and 17 times respectively whereas the difference between indicators of Russia and China is not so large.

Table 1. Some major country's indicators, 2004 [2, 7-8]

Indicator	Japan	Russia	China[1]
Total area, thous. km^2	387	17075	9597
Population, thous. persons	127687	144200	1299880
Population density, persons / km^2	342.4	8.4	135.4
GDP, millions of US $	4945121	329746.9	1653090.6
GDP per capita, US $ / person	38728	2287	1271

1- Excluding Taiwan, Hong Kong and Macao

The basic parameters of foreign trade of the Amur-Okhotsk region's countries also essentially differ (Fig. 1). In period from 1997 to 2001 Japan had rather significant fluctuations of export-import volumes and in 2001-2004 the stable expansion of the foreign trade turnover is observed. In China rapid growth of trade parameters took place since 1998. By 2004 foreign trade turnover of China has exceeded that of Japan. The balance of foreign trade in all examined countries was positive during 1995-2004.



A. B.

Fig. 1. Dynamic of export (A) and import (B) value of Amur-Okhotsk countries [1-2, 6-9]

More detailed analysis of data for 2000-2004 (Table 2) allows us to draw a conclusion that Japan had the most stable foreign trade activity during this period. Trade of balance of Japan increased in 9.5 % and turnover in 17 %. In the period under consideration the greatest growth of balance has taken place in Russia (more than on 50 %) in spite of the fact that expansion of import volumes was higher than export's rise. The trade of China was the most dynamical, it's foreign trade turnover has increased in 2.4 times. As well as in two other countries Chinese rates of import's growth were higher than export's parameters.

Table 2. The principal foreign trade indices, billions of US$ [2, 7-8]

Indices	Japan		China		Russia[1]	
	2000	2004	2000	2004	2000	2004
Total value	873.5	1022.1	474.3	1154.5	137	257.3
Export	487.3	566.4	249.2	593.3	103.1	181.7
Import	386.2	455.7	225.1	561.2	33.9	75.6
Foreign trade turnover	+101.1	+110.7	+24.1	+32.1	+69.2	+106.1

[1] Custom statistics

The commodity structure of export and import of the considered countries is also not equal. For the Russian export the high share of mineral products is characteristic. Mineral fuel, oil and materials of their processing form the most part of that group of goods. Its share in

exports of Russia increased from 42% up to 64 % from 1995 to 2005 [8-9]. The commodity structure of the Japanese export is defined by significant share of the machinery and transport equipment (66 % of exported production in 2004) [7]. The estimation of export structure of China is difficult because of a big part of industrial output unshared on categories of customs statistics. Nevertheless it is possible to note that in 2004 the greatest part of export was composed by goods of light and textile industry, rubber products, nonmetals and metallurgical production (27 %). Nonfood raw material had also significant specific weight in China exports (16 %) [1-2].

As a whole according to the United Nations international trade data (Table 3) the share of manufactured products in the Russian export was about 52 % in 2002. If to take into account that a number of industrial goods such as nonmetallic minerals, the basic metals and a significant part of wood are not deeply processed, then the share of raw materials in export can be increased approximately up to 60 %. China and Japan are defined by a significant part of the manufactured goods in their exports (95% and more 99 % respectively).

Table 3 Exports by industrial origin in 2002, % of total value [5]

Descriptions	China	Japan	Russia
Total exports	100	100	100
Agriculture	2.6	0.3	3.2
Mining quarry	2.2	0.1	44.6
Manufacturing	95.2	99.6	52.2
- Food, beverages, tobacco	2.8	0.4	0.7
- Textiles	23.1	1.6	0.7
- Wood and products	0.9	0.0	1.3
- Paper and products	0.7	0.7	1.8
- Chemicals	9.6	11.1	16.6
- Non metal minerals	1.7	1.0	0.3
- Basic metals	2.5	4.9	13.0
- Metal manufactures	48.0	74.6	8.2
-Other manufactures	6.0	5.4	9.7

The commodity structure of import of Russia is characterized by high specific weight of the machinery and transport equipment increased from 40 % in 2003 up to 44 % in 2005, and a significant share of agricultural raw materials and foodstuffs (28 % and 18 % in 1995 and 2005 respectively) [8-9]. The structure of Japanese import, as well as export, is various and roughly well balanced by ratio of different commodity groups. Each of such commodities as general and electronic machinery, foodstuffs, and manufactured goods make up approximately 10-15 % of imported production. The fuel's import has the more significant volumes only (20 % of import 2004) [7]. In China in 2004 the commodity-leader on volume of import was the group of the goods including light industry products, the nonmetallic and metallurgical goods, rubber (22 %). The share of the goods of the chemical industry has made up 20 %, nonfood raw material had almost the same specific weight (increase in 9 % since 1995) [1-2]. Thus, raw materials made up about 25 % of import of Russia in 2003 (foodstuffs, agricultural raw material, wood, etc.). In Japan and China such goods composed about 30 % of imports.

The analysis of a geographical structure of foreign trade of the examined countries has shown that today China and Japan are the major foreign trade partners for each other (Table 4). These countries also play a significant role in export and import of Russia whereas latter is not included in number of "top five" partners of China and Japan.

Table 4 Five principal foreign trade partners of Amur-Okhotsk region's countries, % of export (import) total value [2, 7-8]

Foreign trade	China, 2004	Japan, 2004	Russia, 2005
Export	USA (21%) Hong Kong (17%) **Japan (12.4%)** Republic of Korea (4.7%) Germany (4.0%)	USA (22.4%) **China (13.1%)** Republic of Korea (7.8%) Germany (3.3%) Singapore (3.2%)	Netherlands (10.2%) Germany (8.2%) Italy (7.9%) **China (5.4%)** Turkey (4.5%)
Import	**Japan (16.8%)** Taiwan (11.5%) Republic of Korea (11.1%) USA (7.9%) Germany (5.4%)	**China (20.7%)** USA (13.7%) Republic of Korea (4.8%) Australia (4.3%) Indonesia (4.1%)	Germany (13.5%) **China (7.4%)** **Japan (5.9%)** USA (4.6%) Italy (4.6%)

While carrying the comparative analysis of foreign trade of the Amur-Okhotsk countries, conformity of export volume of one country, for example of Japan to Russia, to import volume of Russia from Japan, and on the contrary was assumed. However, comparison of the foreign trade data from official statistical sources of Russia, China and Japan has shown their essential divergence. So in 2004 the Chinese parameters describing export and import of China to Russia exceed the Russian data on import and export to China on 20 % (Table 5). Volumes of import of China from Japan exceed the Japanese data of export to China approximately on 30 % whereas the Chinese data on export to Japan less than value of the import published by the Japanese statistical service also almost on 30 %. Distinction of export volumes of Russia to Japan and value of import of the Japanese side reaches 40 %. Difference of the Russian import from Japan and the Japanese export is not so great (26 %).

Table 5 Mutual foreign trade of the main countries of Amur-Okhotsk region in 2004 according to the state statistical sources, mln USD [2, 7-8]

		Export		
		Russia	China	Japan
Import	Russia	---	9098 / 7576	3120.4 / 3941
	China	10105 / 12127.4	---	74018.5 / 94326.7
	Japan	3404 / 5713	73509 / 9443562	---

Divergence of foreign trade volumes is so considerable that last years data on negative or positive character of Japan-China and Japan-Russia (Table 6) trade balance do not coincide too. According to the Chinese data in 2002 and 2004 imports from Japan exceeded export to

Japan, whereas the Japanese statistical data shows essential dominance of imports volume from China above value of export to China.

Difference of those data caused most likely by methods of import and export calculation in each of the countries. It is forced us to examine mutual foreign trade of the Amur-Okhotsk countries separately from positions of Russia, China and Japan. In accordance with data of table 6 the volume of the foreign trade operations of Russia is essentially less than that of China and Japan. Since 2002 the leading position by volumes of trade between the countries of the region is occupied by China.

Table 6 Dynamics of Foreign Trade, mln USD [1-2, 6-9]

Countries		Exports				Imports			
		1995	2000	2002	2004	1995	2000	2002	2004
China	Japan	28462.7	41654.3	48433.8	73509	29004.7	41509.7	53466	94326.7
	Russia	1664.7	2233.3	3521.7	9098.1	3798.4	5769.9	8406.7	12127.4
Japan	China	22172.0	30886.8	38307.7	74018.5	36354.8	56047.2	59446.2	94435.2
	Russia	1161	575.5	907.7	3120.4	4784	4660.4	3153.8	5713
Russia	Japan	3174	2764	1803	3404	763	572	980	3941
	China	3371	5248	6837	10105	865	949	2401	4746

In spite of the bigger volumes of Chinese trade with Japan in 1995-2004, the trade of China and Russia developed more actively. Import volumes from Russia to China exceeded volumes of export, but exports to Russia from China extended more rapidly - it increased in 5 times for 9 years. In Chinese trade with Japan growth of import volumes was higher. It also corresponds to Japanese statistical data specifying more intensive expansion of export deliveries in trade with China (more than in 3 times for 9 years). As a result China's share in export and import of Japan increased in 8 and 10 % respectively.

In Table 7 the commodity structure of Japan export to China and Russia is presented. It shows that more than 50 % of all Japanese export to China was made by machinery and transport equipment both in 1995 and 2004. Specific weight of raw materials in total amount of imported goods to China has changed insignificantly (by 1.1 %), however its value has increased in 5 times. Therefore the share of China in the total Japanese export of raw materials has changed from 9 up to 35 % (basically synthetic rubber, steel and scrap iron).

Table 7 Value and structure of Japan exports by principal commodity to Russia and China [7, 12]

Commodities	China				Russia			
	mln USD		% of total value		mln USD		% of total value	
	1995	2004	1995	2004	1995	2004	1995	2004
Foodstuffs	93.0	295.2	0.4	0.4	5.7	25.9	0.5	0.8
Raw materials & mineral fuels	525.0	2649.3	2.4	3.5	22.4	10.9	1.9	0.3
Chemicals	2040.0	9180.1	9.3	12.4	29.3	36.4	2.5	1.2
General machinery	6066.0	17076.5	27.7	23.1	439.5	398.8	37.6	12.8
Electric machinery	4806.0	19440.6	21.9	26.3	310.5	320.2	26.5	10.3
Transport equipment	941.0	4197.8	4.3	5.7	97.0	1967.8	8.3	63.0
Other	7460.1	21181.1	34	28.6	265.7	362.9	22.7	4.4
Total	21931.0	74020.7	100	100	1170.1	3122.9	100	100

The Japanese export to Russia during 1995-2004 increased the values of all commodity groups except for raw material and mineral fuel, but the significant gain was observed only in categories of foodstuffs and transport equipment. The growth of transport's share in export from Japan was huge from 8 up to 63 %. As a whole both in 1995 and 2004 the most part of the Japanese export to Russia was made by machinery and transport equipment, 84 and 86 % respectively. Their share in the all-Russian import of the given category of goods in 2004 has reached almost 13 % [4]. It is necessary to note that the structure of the Japanese export to Russia, estimated with the Japanese data basically coincides with the structure of import from Japan made by the Russian materials (Table 9).

Thus, Japan for China and Russia was and remains the supplier of the manufactured goods. According to JETRO (Japan External Trade Organization) in 1985-2000 their share in export to China made up 95-98 %. In the Japanese export to the USSR and then to Russia the specific weight of industrial production gradually increased from 90 up to 98 %, and its significant part was composed by products of machinery and transport equipment (also made growth with 40 up to 70 %) [10-13]. Comparison of the commodities of the Japanese industrial goods taken out to China and Russia shows that the structure of export to China is more balanced on shares of separate commodities whereas in export to Russia one category of the goods dominates.

Manufactured goods (including in field "other" at Table 8), machinery and transport equipment were the basic kind of products imported from China to Japan in 2004. Besides it Japan traditionally exports from China a plenty of foodstuffs (15 % of the total Japanese import of foodstuffs, 20 % of fish and 60 % of vegetables in 2004). Among raw goods the principal are wood, agricultural and textile raw materials. Totally Japan imported about 5 % of all primary goods from China and 3.2 % from Russia.

Table 8. Value and structure of Japan imports from Russia and China by principal commodity [7, 12]

Commodities	China				Russia			
	mln USD		% of total value		mln USD		% of total value	
	1995	2004	1995	2004	1995	2004	1995	2004
Foodstuffs	4704.1	7413.2	13.1	7.9	1353.1	1094.8	28.4	19.2
Raw materials	1354.6	1550.7	3.8	1.6	837.1	932.7	16.9	16.3
Mineral fuels	2097.1	3252.4	5.8	3.4	347.1	1469.3	7.3	25.7
Chemicals	1332.7	3048.6	3.7	3.2	53.7	74.8	1.8	1.3
Machinery & transport	5161.7	34026.0	14.4	36.0	5.1	7.3	0.1	0.1
Other	21271.9	45144.0	59.2	47.8	2166	2136.9	45.5	37.4
Total	35922.3	94434.8	100	100	4763.3	5715.8	100	100

As for import of Japan from Russia in 2004 the manufactured goods were leading by value and share commodity (36 %). The most part of that category of goods was composed by metal products. On JETRO data in 2000 Russia played a significant role in the Japanese import of lead and zirconium ores [13], and in 2005 about 33 % of all the Russian export to Japan fell at aluminium and its products [4]. Foodstuffs also have significant specific weight in import from Russia, 98 % of which consisted of fresh, chilled or frozen fish and seafood. 9/10 of raw materials imported by Japan from Russia are wood (mainly a round wood). For

the last 10 years an active growth of mineral fuel and oil imports is also observed. It is necessary to note that according to the data of the Japanese statistics the balance of trade with Russia was negative in 2004, and from the Russian data follows that trade with Japan was also negative (Table 6). Nevertheless the commodity structure of Japanese import from Russia compiled on the basis of the Japanese data practically has no divergences with structure of the Russian export to Japan Ttables 8, 10).

As whole modern structural changes of the Japanese import from China and Russia are the continuation of the processes that has started in the middle 1980s. Data of Table 9 confirm that during the last 20 years the shares of foodstuffs, raw material and fuel imported by Japan from China systematically reduced, and the share of manufactured goods actively increases. The specific weight of equipment and transport in the Chinese import at the beginning of the 1990s was only 3 %, thus the share of the given category has increased in more than 30 % for 15 years.

Table 9 Generalized structure of Japan import, % of total value [10-13]

Commodities	1985	1990	1995	2000
	China			
Foodstuffs	14.4	16.1	13.1	10.7
Raw materials & mineral fuels	58.6	33.2	9.6	6.6
Manufactured goods	24.7	50.2	76.9	82.7
Other	2.3	0.5	0.4	0.8
Total	100	100	100	100
	Russia			
Foodstuffs	7.1	9.6	28.4	28.6
Raw materials & mineral fuels	56.8	38.4	24.9	20.1
Manufactured goods	24.7	44.0	43.5	51.2
Other	11.3	8	3.2	1.6
Total	100	100	100	100

In import from the USSR and Russia till 2000 the share of raw material and the mineral resources also reduced. But that process was accompanied by growth of specific weight of fish and seafood, and different sorts of metal products made up and makes up 80-90 % of the manufactured goods of import. Besides that after 2000 significant growth of mineral fuel imported from Russia is observed (from 48.7 up to 139.5 billion US dollars in 2005), that essentially changes the commodity structure of foreign trade with Russia.

From the Russian position the volume of its export-import transactions with China extends more intensively than with Japan though the values of the foreign trade turnover with these countries are comparable, and import from these countries increases higher rates than volumes of export (Table 6). In structure of the Russian export to China (Table 10), as well as in trade with Japan the raw material and superficial processing production have significant shares. In the value of the goods taken out from Russia in 2004 mineral products (actually fuel and energy goods) had the greatest share. It is necessary to note that in 2000 the value and share of oil and fuel in export was in 8 times less than in 2004 [3-4].

Table 10 Value and structure of Russia foreign trade by principal commodity to China and Japan in 2004 [4]

Commodities	China				Japan			
	Export		Import		Export		Import	
	Mln USD	%	Mln USD	%	Mln USD	%	Mln USD	%
Foodstuff and agricultural raw	112.6	1.1	440.5	9.3	93.5	2.7	10.8	0.3
Mineral products	3085.8	30.5	87.2	1.8	914.8	26.9	10.2	0.3
Chemicals, rubber	1268.3	12.6	366.4	7.7	47.2	1.4	153.8	3.9
Wood, pulp and paper	1408.8	13.9	88.5	1.9	660.2	19.4	7.4	0.2
Textile materials and products, footwear	8.3	0.1	744.7	15.7	1.1	0.0	2.1	0.1
Metals and metal products	1620.3	16.0	276.3	5.8	1425.3	41.9	276.5	7.0
Machinery & transport equipment	1030.2	10.2	2012.6	42.4	17.1	0.5	3388.6	86.0
Other	1570.7	15.5	730.0	15.4	244.5	7.2	91.4	2.3
Total	10105.1	100	4746.2	100	3403.9	100	3940.9	100

Metals, basically black (about 80 %), and their products take the second place in export volumes. The share of that group of goods in structure of the Russian export to China was reduced to 12 % since 2000. The share of timber taken out in 2004 was kept at the level of 2000 due to almost a double increase of its value (from 763.7 million up to 1.4 billion USD). The share of foodstuffs in the Russian export to China was low, and more than 60% of that production made fish and seafood. Such industrial goods as machines, equipment and vehicles, and the goods of the chemical industry formed about 20 % of the exports.

In the import of the Chinese production to Russia in 2004 the greatest share belongs to products of machinery and transport equipment (Table 10). The share of that commodity rose in 30 % since 2000, and its value has grown in 18 times [3-4]. Stable position in structure of the import from China is occupied by textile production and footwear (from 149 up to 745 million USD in 2000-2004). The foodstuff has the greatest specific weight out of the goods which we considered as resource. Its value has increased in 3 times for the 4-years period, but the share in total amount of the imported goods was reduced almost by 7 %. In 2004 meat and meat products, vegetables, fruit and nuts, and their products which formed 60 % of foodstuff's value became basic objects of deliveries from China. In total 4 % of foodstuffs [4] were imported from China to Russia. As a whole import from China, as well as from Japan, differs by a high share of an industrial output significant part of which is made by the consumer goods.

On that transitional stage of the research we can make a few main conclusions. The analysis of foreign trade among the Amur-Okhotsk countries has shown that it has the basic tendencies inherent to trade of Russia, China and Japan. Among the given countries Russia has the least values of foreign trade, and in mutual trading contacts it takes the last place. In deliveries from Russia as a whole a share of a fuel and energy component increases, the share of metals and their products reduced, export of wood kept at some rather stable level. Those trends find reflection in the Russian-Chinese and Russian-Japanese trading contacts. In China increase in a share of the manufactured goods and expand of the import of raw material and

fuel is typical. And that situation is also represented in the Chinese trade with Russia and Japan.

For last 5-10 years China and Japan became for each other the leaders by the value of export-import operations, mainly due to escalating of trade by manufactured goods. Significant participation of those countries in the foreign trade turnover of Russia has the same reason while Russia remains for them mostly the supplier of raw material and not deeply processed production. But the Russian participation in maintenance of the raw-material base of Japan and China is essentially lower than a share of the given countries in import of the industrial goods by Russia.

Further investigation of foreign trade relations of Amur-Okhotsk countries in a greater degree will be looked to the trade of selected resources. The scale and level of the study will be mainly depended on details of accessible statistics.

In conclusion I would like to express my acknowledgement to Prof. Shiraiwa for the idea of resources flows study, as well as for the possibility of interesting work at the Amur-Okhotsk project and RIHN.

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