

FOREIGN TRADE RELATIONS BETWEEN RUSSIA, CHINA AND JAPAN AS FACTOR OF LAND USE/COVER CHANGES IN THE AMUR RIVER BASIN

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The land surface of the Amur River basin has been considerably converted by various anthropogenic activities during the last century. The driving forces of these activities may have not only internal but also external character. Foreign trade is one of the most evident examples of the external driving forces. In this paper trade relations between Russia, China and Japan are examined from the position of its influence on land colonization in the Amur River basin in the 20th century.

The study of foreign trade impact on land use and land cover changes was based on the follows data sets: 1) areas of agricultural and forest lands in the basin, 2) output of agricultural and forest products, 3) volume of domestic consumption and export of those products. Dynamics of specified data and their correlation were considered in the context of economical and political changes in Russia and China. Spatially the study area covers wider territories than the Amur River basin embracing a whole Manchuria (Northeastern China) and the southern part of the Russian Far East.

1. SOME GENERAL FEATURES OF PRESENT-DAY TRADE RELATIONS BETWEEN RUSSIA, JAPAN AND CHINA

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 1). 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 1 Five principal foreign trade partners of Amur-Okhotsk region's countries in 2007,
% of export (import) total value [5, 9, 22]*

Foreign trade	China	Japan	Russia
Export	USA (10.7) Hong Kong (8.5%) Japan (4.7%) Republic of Korea (2.6%) Germany (2.2%)	USA (20.1%) China (15.3%) Republic of Korea (7.6%) Taiwan (6.3%) Hong Kong (5.5%)	Netherlands (12.1%) Italy (7.8%) Germany (7.5%) Turkey (5.2%) China (4.5%)
Import	Japan (14%) Republic of Korea (10.8%) Taiwan (10.6%) USA (7.3%) Germany (4.7%)	China (20.5%) USA (11.4%) Saudi Arabia (5.6%) Australia (5.1%) UAE (5.2%)	Germany (13.3%) China (12.2%) Japan (6.4%) USA (4.7%) Italy (4.3%)

China and Japan have especially high meaning as trade partners of the Russian Far East. In the 2000s from 45 to 50 % of the regional trade turnover destined China and Japan [6, 24]. In the last decades from 50 to 70% of the regional trade turnover were supplied by administrative units located in the southern part of the Russian Far East (RFE) and in the Amur River basin. Among all administrative units of the RFE Primorskii and Khabarovskii Krai were the biggest foreign traders up to 2006 [3]. China is the largest trade partner of the region. It has especially strong connections with economy of the Amurskaya oblast and JAO. In the last years the share of China in their structure of foreign trade was about 80-90% (Table 2).

Table 2 The share of China in the trade turnover of the southern part of the Russian Far East, % [3]

Administrative units	1995	2000	2003	2005	2007	2008
Primorskii Krai	14.4	27.5	37.8	39.0	32.6	36.5
Khabarovskii Krai	13.9	40.7	49.6	43.1	62.7	44.5
Amurskaya Oblast	38.9	81.2	68.9	81.6	75.1	77.2
JAO*	49.2	45.3	69.5	94.2	93.1	80.5
Far East, totally	12.5	20.3	26.9	22.9	20.5	20.2

*Note: JAO – Jewish Autonomous Oblast

According to the commodity structure of trade between Japan, China and the Russian Far East, the last one is the supplier of such resource products as mineral fuels, metals, wood and marine products. Its import is mostly formed by machinery and transport equipments (from Japan and China), manufactured goods and foodstuffs (from China). The trade between Japan and China lies in exchange by different kinds of manufactured products. Except machinery, clothing and some other manufactured goods, Japan imports from China various foodstuffs (Fig. 1).

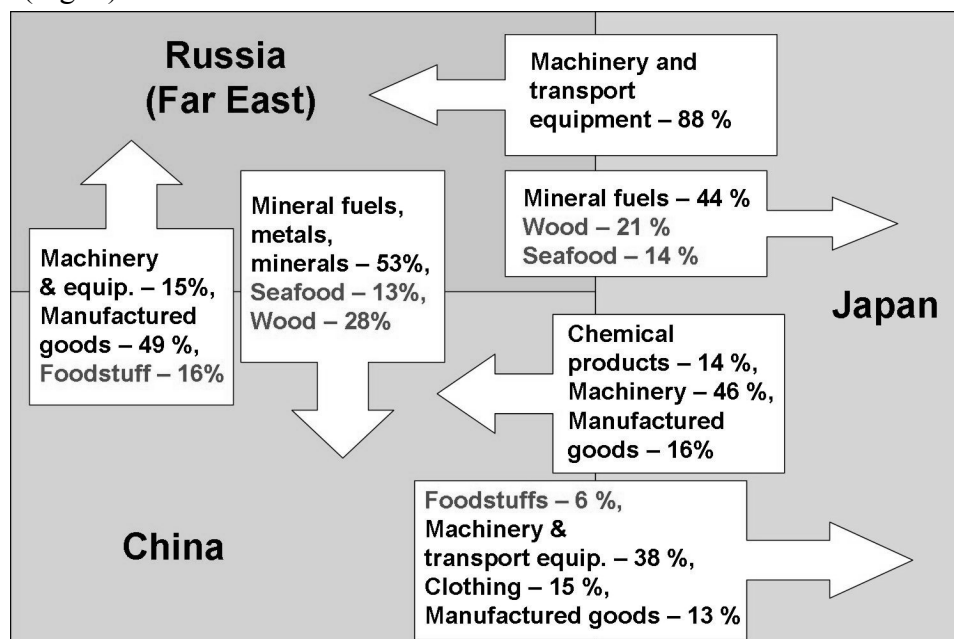


Fig. 1. The commodity structure of export/import relations between the Russian Far East, Japan and China, 2006-2007*, % [6; 9]

*Notice: China-Japan trade - 2007 data.

Presence of wood and foodstuffs in the commodity structure of trade between the RFE, Japan and China indicates the external influence of neighboring countries and foreign markets on the timber industry and agriculture of these countries and regions. Consequently the forest and agricultural lands dynamics in the examined territories are influenced by foreign trade relations too. The meaning of the forest trade relations between Russia, Japan and China for the development and utilization of the River Amur basin's forest was considered in [14]. Hereafter some results of the study focused on the external trade's influence on the agricultural lands dynamics in the Amur River basin are presented.

2. FOREIGN TRADE INFLUENCE ON THE AGRICULTURAL LANDS DYNAMICS IN THE CHINESE PART OF THE AMUR RIVER BASIN

In the Chinese part of the basin the most significant impact of foreign trade on agrarian development took place in the period of the 1890-1930s. Generally construction of the Chinese Eastern Railway (or CER) in 1896-1903s made the strong impulse for the economical development of the Northern Manchuria. It provoked fast colonization and settlement of this territory. The population of Manchuria grew very quickly (Table 3). In the period of 1906-1937s number of population increased almost in 3 times and achieved 37 million of people [10-11].

Table 3 Population of Manchuria (Manchoukuo since 1932), thousand people [2,7,18-19]

Territory	1906	1908	1916	1927	1929
Manchuria, totally	13265.88	15834	20112.2	27512.8	29197.92
Amur Province	1455.66	1456	2494	5154.9	5133.73
Kirin Province	3047.08	4222	5638.7	8766.8	9075.63
Mukden Province	8763.15	10156	11979.4	13591.1	14988.56

Population growth was followed by expansion of cultivated lands. By 1929 area of arable lands in Manchuria was over 13 million ha or about 17 % of total area. In Manchoukuo by 1940 area of cultivated lands were estimated about 18 million ha or 14 % of total area (Fig. 2).

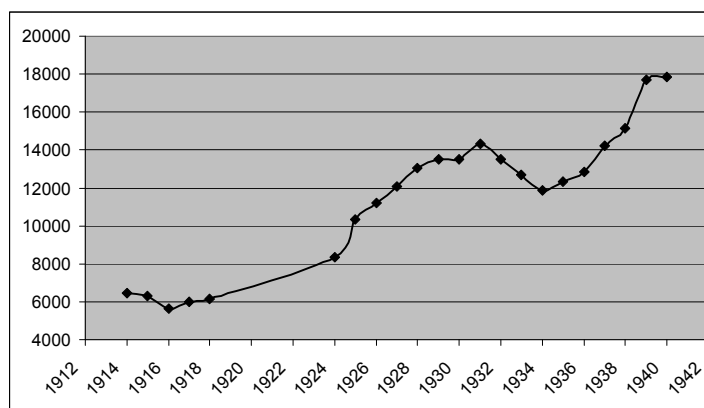


Fig. 2. Dynamics of sown area in Manchuria (Manchoukuo since 1932), thousand ha [11, 13, 23]

Agricultural colonization of the Northern Manchuria was enhanced not only by population's growth, but also by development of grain's and soybean's trade. Firstly growing demand for grain crops in the 1900s were determined by coming to the region Russians and Europeans worked on the railroad, and by export of grains to the Russia and some European countries (Germany, Netherlands). During the Russo-Japanese War in 1904-1905s demands for grains additionally grew because of increased military forces [15].

After the war requirement for the cereals declined and during a few years agriculture was reoriented to the soybean cropping because of high demand for this culture in the markets of China, Japan, Great Britain, Germany and other countries. In the early 1910s expansion of soybean sown areas started in the southern part of Manchuria (on the territory of present Liaoning and Jilin Provinces). In the Northern Manchuria this process started in the second half of the 1910s, when regular trade by grain crops via Vladivostok was broken [15].

In the 1920s soybean became the main commercial crop of Manchuria. Its sown areas were increased up to 1932 and on the maximum they occupied about 30 % of all cultivated lands (Fig. 3) [13]. In the 1920s more than 60 % of soybean yield were exported, and together with external trade by bean cakes and bean oil it formed more that half of Manchurian export value. Dynamics of soybean export volumes is shown in the figure 4. Totally for the period of 20 years export of soybean and soybean products increased almost in 3 times [11, 13].

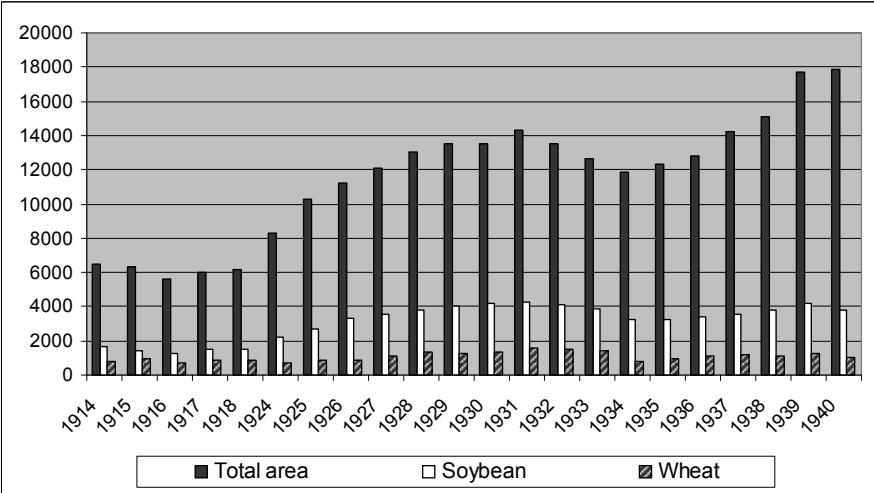


Fig.3. Dynamics of sown areas in Manchuria (Manchoukuo since 1932), thousand ha [11, 13, 23]

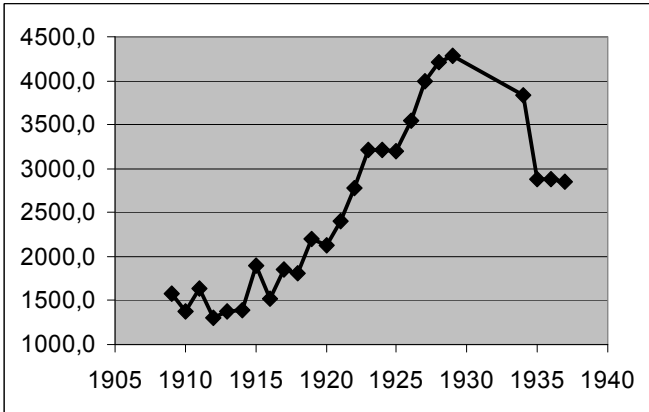


Fig. 4. Export of soybean, bean cake and bean oil from Manchuria (Manchoukuo), thousand ton [11, 18-19]

In the 1930s after foundation of Manchoukuo this territory still was the largest in the world producer of soybean and grew about 60 % of its world output. But export of soybean was gradually decreased. In this period Japan was one of the largest consumers of soybean and its products. The share of Japan in Manchurian export of soybeans in 1937 was 35%, and in export of bean cakes it had 78% [23]. It is necessary to note that generally in the 1930s Japan became the principal trade partner of Manchuria. About 45 % of Manchurian export and 70 % of its import destined Japan [11].

In spite of high export meaning of soybeans, in the 1930s its sown areas were gradually declined according to economical policy of Manchoukuo government oriented to the growth of production of industrial crops and rice. Finally in the 1930s foreign trade in the former Manchuria was transformed from rather free economical mechanism to the strictly managed by authorities economical instrument. The meaning of foreign trade as driving force of land use and land cover changes was notably reduced. The new waves of agricultural development of the Northern Manchuria lands after foundation of the People's Republic of China have already been determined by internal necessity of the country and region, not by interests of external markets.

3. FOREIGN TRADE INFLUENCE ON THE AGRICULTURAL LANDS DYNAMICS IN THE RUSSIAN PART OF THE AMUR RIVER BASIN

In the Russian part of the Amur River basin foreign trade's influence on the cultivated lands dynamics is connected with the import of foodstuffs and agricultural raw materials.

Agricultural colonization of the southern part of the RFE started in 1860. During the period from 1860 to the present days local producers supplied regional food requirements only in the 1900-1920s [12, 25]. Before and after this period the Russian Far East had some deficit of foodstuffs and agricultural raw materials mainly because of low efficiency of agriculture. In the Soviet Union time deficit of foodstuffs was compensated by provisions supplies from other parts of the country. In the beginning of the 1990s after USSR's collapse and under conditions of economical crisis foreign markets, first of all the Chinese one, became the main suppliers of agricultural products for the Russian Far East.

In the 1990s the share of foodstuffs and agricultural materials in the regional commodity structure of trade was about 20-30 % [24]. In the second half of the 2000s it decreased by 7 % [6]. But volume and value of imported agricultural products is growing. It happens under conditions of low growth of cultivated lands (Fig. 5) and some rise of agricultural output in the RFE (Fig. 6).

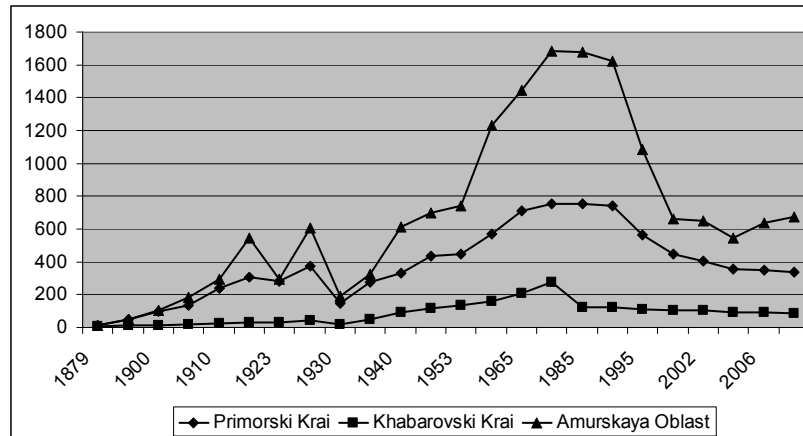


Fig. 5. Dynamics of sown areas in the south of the Russian Far East, thousand ha [17, 25]

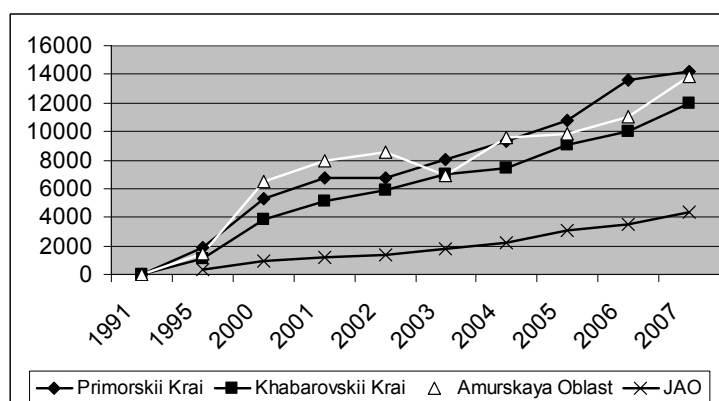


Fig. 6. Value of agricultural production in the south of the Far East, million rubles [17].

China is the main supplier of imported foodstuffs for the RFE. In 2005 its share in import of agricultural products to Primorskii Krai was 48.5% [4]. In 2000-2007 about 90 % of all imported to Amurskaya Oblast foodstuffs came from China [21]. The significant part of the imported to the RFE foodstuffs and raw agricultural materials is formed by fruit, nuts, and other goods, which production is impossible in the region. At the same time being produced in the RFE, cereals, vegetables and meat products are imported in rather big volumes too. In 2005 output of all cereals in the Primorskii Krai was 124.3 thousand ton while import of the grain crops reached 169.5 thousand ton (mostly rice). The volumes of imported and produced in the Krai meat products were 52.3 and 23.3 thousand ton respectively [1, 4].

Import of foodstuffs and agricultural products most intensively increases in Primorskii Krai. For the period 2005-2008 it grew almost in 3 times and since 2006 value of imported agricultural products exceeded value of agricultural output of Krai (Table 4). In the Amurskaya Oblast and Khabarovskii Krai, in spite of some growth of foodstuffs import, output of own agricultural products is much greater.

Unfortunately, agriculture of the Russian Far East still has many economical difficulties. Present conditions of its development include lack of financial support, deficit of skilled workers and managers, new equipments and technologies, the high level of different rates, taxes, costs of transportation; and other. Under such conditions import of foodstuffs and agricultural raw materials, which usually have relatively lower price, create significant competition to local and regional products of agriculture. As a result expansion of foodstuffs

import aggravates already existing problems in the domestic agriculture and complicates its development.

Table 4 Dynamics of import value of foodstuffs and agricultural raw materials (1) and value of own agricultural output (2), million of USD [1, 4, 16-17, 20-21]

Indicator	2005	2006	2007	2008
Primorskii Krai				
1	338.9	619.4	735.4	915.8
2	420.8	516.7	494.2	531.8
Amurskaya Oblast				
1	23.5	26.9	32.1	not available
2	383.7	419.0	508.4	not available
Khabarovskii Krai				
1	29.0	48.4	47.5	not available
2	355.2	380.5	487.4	not available

For instance in the last years Primorskii Krai had the worse tendencies in agricultural development compared with other administrative units of the southern part of the RFE (Table 4). In the period from 2005 to 2007 it has the lowest rate of agricultural production growth (17% against 37 % in Khabarovskii Krai and 32 % in Amurskaya Oblast), and the biggest decreasing of cultivated lands (-22.1 thousand ha while in Khabarovskii Krai it was -5.7 thousand ha, and in Amurskaya Oblast +128 thousand ha). At the same time import of foodstuffs increased in 1.7 times in Primorskii Krai. In the other territories its growth did not exceed 65%. We suppose that one of the important reasons of so low rate of agricultural development in Primorskii Krai is high level of foodstuffs import.

4. CONCLUSION

Our study demonstrates that the Russian Far East, the Northeastern China and Japan, ecologically closely connected with the basins of the Amur River and the Sea of Okhotsk, also have old and deep trade and economic relations.

External influence and foreign trade as part of such relations played in the 20th century and are still playing the important role in the development of agriculture and timber industry in the Amur River basin. The most intensive influence on the cultivated and forest lands took place in the Chinese part of the basin in the first half of the 20th century and in the Russian part of the basin – from early the 1990s up today.

While we underline the great meaning of the external impact on the land use dynamics in the region, the study shows that generally in the 20th century the internal factors (economical, political, socio-demographical) were more weighty for the development of the Amur River basin. In the separate indicated periods external influence became very important and evident but it always was transformed and changed according to local, regional or national factors and conditions. So, for the said periods the balance between external and internal driving forces changed, but domestic conditions dominated or these two groups of factors were in equilibrium state.

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