Chapter 1

Oil and Gas in the Economic Transformation of Russia

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INTRODUCTION

Our studies of Russia's integration into the world economy have been characterized, first of all, by deep and minute analyses of the official statistics of Russia. First we gathered statistical materials from official sources and carefully read up on the literature of Russia's statistical methodology. Largely owing to Masaaki Kuboniwa's initiative, we have been in direct contact with statisticians working at the Goskomstat Rossii (State Committee on Statistics of Russia) or the Rosstat (Federal State Statistical Service of Russia) since 2004, and also at the Interstate Statistical Committee of the CIS.

The post-1991 period of economic transformation also represents the period of transforming statistics in socialist countries from statistics based on notions of Marxist economics to those internationally regarded as standards. In the sphere of national income statistics, this means the transition from the Material Product System (MPS) to the System of National Accounts (SNA). Kuboniwa played the role of an adviser to the Goskomstat Rossii during this transition and many Russian statisticians were invited to Japan to learn the statistical methods of Japan. At the same time, researchers in our group took advantage of consultations and meetings with Russian statisticians in order to deepen our knowledge of the specific practices of Russian statistics.

Secondly, our research has featured the intensive use of input-output tables. On the one hand, we investigated in the 1980s input-output tables compiled by the Soviet Union. We have learned much from Vladimir Treml's studies on the reconstruction of Soviet input-output tables. By

using these investigations, later we were able to deeply consider characteristics of the Russian economy and statistics, and its continuity from the Soviet period. On the other hand, in the 1990s Kuboniwa and Treml were appointed as foreign advisers to the Goskomstat Rossii for the compilation of Russian input-output tables based on the SNA. Owing to this, we have been able to obtain direct information on Russian input-output tables until now.

The third characteristic of our research has been the emphasis on foreign economic aspects of the Russian economy. Contrary to popular understandings that the Soviet economy had been little influenced by foreign trade, we paid close attention to the role and influence of exports of oil and imports of agricultural products in the Soviet era. In the period after 1991, when international factors played a larger role than before for Russia, we intensively investigated not only foreign trade statistics, but also the balance of payments statistics, which also began to be compiled in early 1990s. Akira Uegaki revealed important features of the Russian economy by comprehensively analyzing the balance of payments statistics (Uegaki, 1999). Uegaki also investigated regional aspects of foreign economic relations (Uegaki, 2001, 2002, 2003).

Fourthly and lastly, we have attached great importance to the state budget statistics. Although published state budget statistics are poor in content, the information included in them is indispensable for analysis of the Russian economy. Especially, as we are interested in flows of financial resources, the distribution of profits or value added through the state budget is critically important. Because in the budgetary system of Russia, regional budgets have occupied a significant part, we have also studied regional budgets and inter-budgetary transfers (Kuboniwa and Gavrilenkov, 1997; Tabata, 1998, 2003).[1]

In this chapter, we summarize our findings in recent joint research.

[1] In this connection we have visited many regions in Russia with the aim of investigating inter-budgetary relations in Russia. In the period from 1998 through 2003 we visited 15 regions ("subjects of the Federation" in Russian terminology), including Moscow city, Ivanovo and Voronezh Oblasts, Sankt Petersburg city, Vologda Oblast, Nenets AO (Autonomous Okrug), Rostov and Nizhnii Novgorod Oblasts, Tatarstan Republic, Sverdlovsk and Tyumen Oblasts, Khanty-Mansiisk AO, Novosibirsk and Irkutsk Oblasts and Khabarovsk Krai.

OIL AND GAS IN THE RUSSIAN ECONOMY

One of the most significant achievements in our study of the Russian economy is the finding concerning the real size of the Russian oil and gas industry. The official figure for the share of the oil and gas sector in Russian GDP can be derived from the input-output tables compiled by the Rosstat. The problem with the official figure is that it is very low, namely 6.5 percent in 2002. We argued that part of value added produced by oil and gas has been recorded in trade sectors as trade margins and in the transportation sector as transportation margins, and there were net taxes on oil and gas included in net taxes on products. This was caused by low prices on oil and gas extraction preferred by oil and gas companies in order to minimize tax payments (see Chapter 2 of this volume for a more detailed explanation).

Kuboniwa and the Rosstat jointly investigated this problem by using input-output tables and calculated "actual" contributions of the oil and gas sector to GDP (Kuboniwa, 2002, 2004; Kuboniwa et al., 2005). These data are summarized in Table 1, which shows that the share of value added produced by oil and gas in Russia's total GDP was 18.9 percent in 2002. The volume of value added recorded in the trade and intermediation enterprises has been the largest since 1999 among enterprises shown in Table 1.[2] This was due to the sharp increase in world oil prices, resulting in the increase in the share of total value added of the oil and gas sector (see Fig. 1).

As shown in Table 2, more than half of trade margins of oil and gas have been generated from export activities. This share was highest in 1999 and decreased to approximately 50 percent in 2001–2002. But, except for oil processing, this share was still high in 2001–2002. These data also suggest that the volume of value added recorded in the trade sector was influenced by exports of oil and gas, and accordingly by world oil prices.

This reminds us of continuity and discontinuity carried over from the Soviet period. The fact that economic growth depends heavily on exports of oil and gas has not been changed. In the Soviet period, however, all

[2] The decrease in value added of transport enterprises in 1999 was due to a change in statistical classification. In 1999 Gasprom's headquarters began to be classified as an economic unit in the foreign trade sector (Tabata, 2002, p. 612).

revenues earned by exports of oil and gas were included in the state budget as so-called "special foreign trade earnings," which was estimated to have accounted for 7–8 percent of the total state budget revenue (Tabata, 1996, p. 141). At present, the majority of these revenues seem to be captured by oil and gas companies. In this connection, we have investigated tax revenues of the state budget from oil and gas and revealed some improvements in tax collection from the oil and gas industry in recent years (Tabata, 2002, 2006a).

The price differences on oil and gas between domestic and world markets represent implicit subsidies for consumers of oil and gas in Russia, including manufacturing companies. This fact also constitutes "continuity" from the Soviet period. The present situation concerning implicit subsidies was discussed in Shiobara (2004) and Tabata (2006a).

As the next step in our study of the actual contribution of oil and gas to Russian GDP, we have analyzed Russian economic growth in real terms, explicitly taking into account the actual size of the oil and gas sector mentioned above (Tabata, 2006b).[3]

DUTCH DISEASE

As a result of our joint research, we argued that one of the most significant causes of the great depression of the 1990s in Russia was the high exchange rate of the ruble maintained by the competitive exports of fuels (Kuboniwa and Tabata, 1999; Tabata, 2000). By this high exchange rate, imports of consumer goods and manufactured goods were promoted, resulting in a reduction in the production of domestic manufacturing industries. This phenomenon is usually called "Dutch disease."[4]

Changes in real exchange rates of the ruble are shown in Fig. 2. Rapid appreciation in the period from 1992 through 1995 is outstanding. In the period from 1996 until mid-1998, when the so-called corridor sys-

[3] The same kind of analysis to measure the actual contributions of the oil and gas sector to GDP growth was also attempted in Ahrend (2006).

[4] See Chapter 3 of this volume for more detailed explanation about Dutch disease. Yasushi Nakamura analyzes the influence of oil and gas industries throughout the Russian economy by using social accounting and national accounting matrixes (Nakamura, 1999, Chapter 3 of this volume).

tem was applied, the high ruble rate was maintained.[5] This was the period when GDP continued to decline in Russia, except for a slight increase in 1997.

After the financial crisis in 1998, when the official rate of the ruble was devalued by half in real terms (see Fig. 2), the Russian economy recovered quickly. The effect of devaluation seemed to continue until 2001. In that period, manufacturing industries, including machinery, metallurgy, chemicals and textiles, recorded high rates of growth (Tabata, 2006b, pp. 102-103). Owing to sharp increases in oil prices which started in 2000, GDP growth accelerated and continued after 2001.

Due to increases in oil export revenues, the ruble has been gradually appreciated in real terms since 1999 (see Fig. 2). The real exchange rate of the ruble reached its pre-crisis level already in the beginning of 2004. Therefore, we observed some symptoms of Dutch disease, i.e., slowing in growth rates in manufacturing industries (ibid.). Then, we have to consider the reason why the present Russian economy is immune from Dutch disease. Tabata (2006a) argues that price differences in oil and gas between domestic and world markets that have widened in recent years partially explain this question. That paper also argues the considerable increases in state budget revenues, promoted by the simplification of taxation on oil and gas and the direct link of tax rates on oil to world market oil prices, contributed to continued economic growth in Russia.

Tabata (2006a) concludes that future perspectives for the Russian economy depend significantly on the use of the energy windfall revenues through the state budget and the Stabilization Fund. As pointed out in Gavrilenkov (2004) and others, the diversification of the economy is, undoubtedly, the best remedy for Dutch disease.

CAPITAL FLIGHT

For the diversification of the economy and for the renovation or innovation of manufacturing industries, foreign investment with high technology is definitely needed. Russia's particular economic situation can be characterized by its abundance of financial resources and its lack of do-

[5] See Chapter 4 of Uegaki (2005) for the exchange rate system and policy of Russia in this period.

mestic investment. Financial resources have been accumulated through a huge amount of trade surplus due to oil and gas exports. But the ratio of gross fixed capital formation to GDP has been low because of expected low return from investments in manufacturing industries suffering Dutch disease (Tabata, 1997). The difference between gross savings and gross capital formation (gross fixed capital formation plus changes in inventories) represents a surplus of current account plus statistical discrepancies, which is considered to be the upper ceiling of the possible level of capital flight. Tabata (1997) calculates these amounts using SNA statistics.

Uegaki tried to calculate more accurately the amount of capital flight by comprehensively analyzing the balance of payments statistics (see Uegaki, 1999, 2004a, Chapter 4 of this volume). He estimated the amount of capital flight as the sum of such items as "errors and omission," "foreign cash currency" and "unpaid export (import) charge."

Kuboniwa (2002, p. 2) suggested that one of the main sources of capital flight might be trade margins in relation to the oil and gas sector. This is another "role" of oil and gas in the economic transformation of Russia.

If we explicitly add government in the balance of savings and investment explained above, we could observe how private investments have been undermined not only by capital flight, but also by a significant amount of state budget deficits in the period 1995-1997 (Uegaki, 2004a, pp. 33-34).

POLICY ISSUES

Our statistical analyses of financial flows and our minute survey of changes in the economic system lead us to the evaluation of economic policies adopted by the Russian Government in the period of economic transformation. For example, we intensively analyzed the causes of the financial crisis in 1998 (Popov, 1999; Chapters 3 and 4 of Shiobara, 2004; Chapter 4 of Uegaki, 2005).

Uegaki (2004b) has written the most systematic evaluation or criticism of economic policies pursued by the Russian Government and recommended by the IMF and foreign advisers. Our consensus is that the financial crisis in 1998 implied the complete failure of policies recommended by the IMF, characterized by global liberalism, including com-

plete liberalization of currency markets, adoption of the corridor system, issuing a great amount of short-term domestic bonds and liberalization of state bond markets for non-residents.

We also investigated the problems concerning Russia's accession to the WTO (Konno, 2002). Special attention is paid to issues related to the oil and gas industries, including the difference between domestic and world market prices on natural gas as criticized by the EU.

Russia's economic policies toward CIS countries were critically analyzed in Tabata and Suezawa (2004) and Tabata (2005). These studies reveal that economic relations with CIS countries still play an important role in the economic development of Russia, especially in the sphere of foreign trade, including oil and gas. The specific role of small-scale integrations, such as the Eurasian Economic Community, the Union State with Belarus and the Common Economic Space with Belarus, Kazakhstan and the Ukraine, has been taken into consideration.

CONCLUDING REMARKS

Since 2005 we have launched a new joint project, entitled "Russian capitalism and the flow of financial resources." The aim of this new project is to clarify the specific characteristics of Russian capitalism by analyzing the flow of financial resources. We will continue our statistical analyses on the flow of financial resources on the basis of national accounts, input-output tables, balance of payments, budget, customs and banking statistics. We plan to deepen our analysis by investigating the balance sheet of oil and gas companies. We will continue to pay special attention to the factors of foreign economic relations with both CIS and non-CIS countries.

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Table 1. Value Added Produced by Oil and Gas (in percent of GDP)

	1995	1996	1997	1998	1999	2000	2001	2002
Oil and gas total	15.82	17.52	16.07	14.80	19.60	24.1	20.5	18.9
Oil extraction products						11.6	10.0	9.3
Oil processing products						5.4	4.6	4.5
Gas sector products						7.1	5.8	5.1
Producers	5.16	5.46	5.38	4.99	6.49	7.8	6.7	6.5
Oil extraction products						5.7	5.1	4.8
Oil processing products						1.1	0.9	0.8
Gas sector products						1.0	0.7	0.9
Transport enterprises	3.79	3.87	2.77	2.33	0.98	1.0	1.1	0.9
Oil extraction products						0.5	0.5	0.4
Oil processing products						0.4	0.4	0.4
Gas sector products						0.1	0.2	0.1
Trade and intermediation enterprises	4.79	4.56	4.76	4.66	8.62	10.7	7.7	7.4
Oil extraction products						3.9	2.7	3.0
Oil processing products						2.5	1.9	1.9
Gas sector products						4.3	3.1	2.5
Net taxes on production	2.07	3.64	3.16	2.82	3.52	4.6	5.0	4.0
Oil extraction products						1.5	1.7	1.1
Oil processing products						1.4	1.4	1.3
Gas sector products						1.7	1.9	1.6

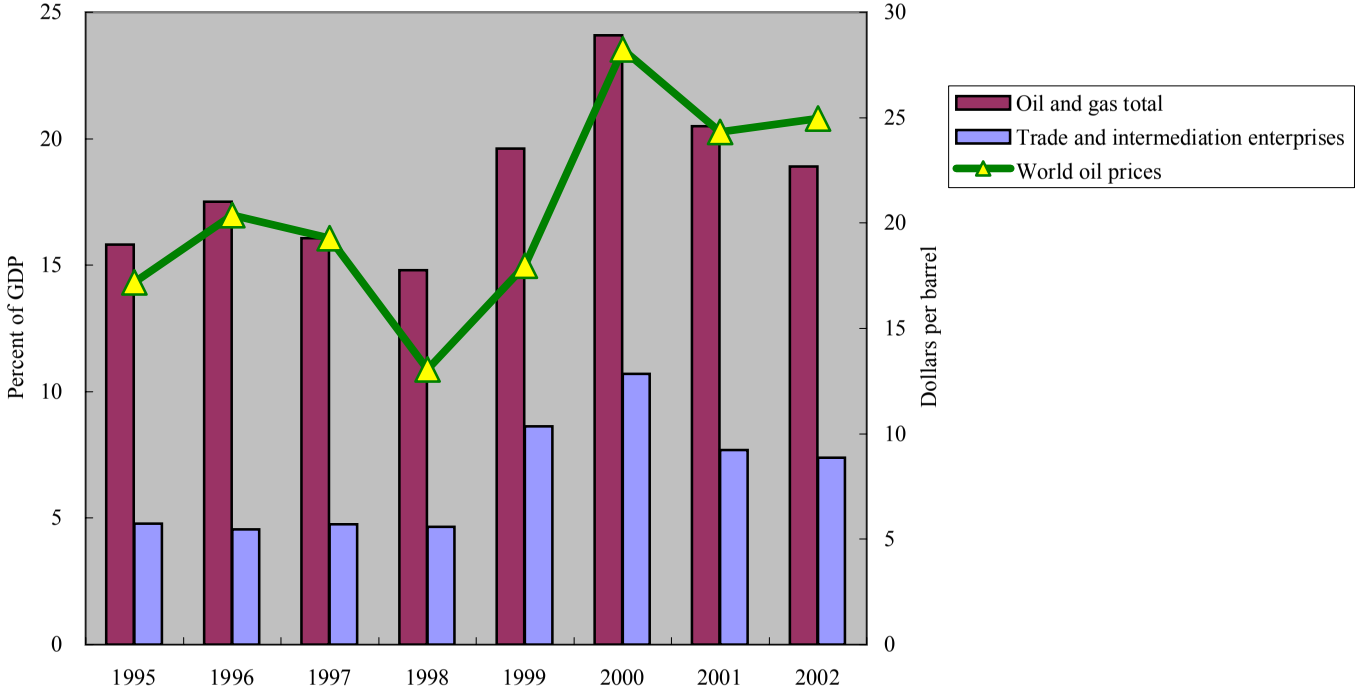
Sources : Data obtained by a joint project by Masaaki Kuboniwa and the Rosstat.

Table 2. Trade Margins of Oil and Gas (in billion rubles)

		1995	1996	1997	1998	1999	2000	2001	2002
Total	Oil and gas	101.6	128.3	154.9	161.7	552.3	997.3	942.7	1,154.7
	Oil extraction						342.4	315.7	451.8
	Oil processing						247.5	239.8	304.1
	Gas						407.4	387.2	398.8
Export margins	Oil and gas	54.9	86.6	91.8	98.9	417.4	650.4	473.1	575.4
	Oil extraction						221.6	174.8	327.0
	Oil processing						78.4	17.5	18.4
	Gas						350.4	280.8	230.0
Domestic margins	Oil and gas	46.7	41.7	63.1	62.8	134.9	346.9	469.6	579.3
	Oil extraction						120.8	140.9	124.8
	Oil processing						169.1	222.3	285.7
	Gas						57.0	106.4	168.8
Share of export margins	Oil and gas	54.0	67.5	59.3	61.2	75.6	65.2	50.2	49.8
(in percent)	Oil extraction						64.7	55.4	72.4
	Oil processing						31.7	7.3	6.1
	Gas						86.0	72.5	57.7

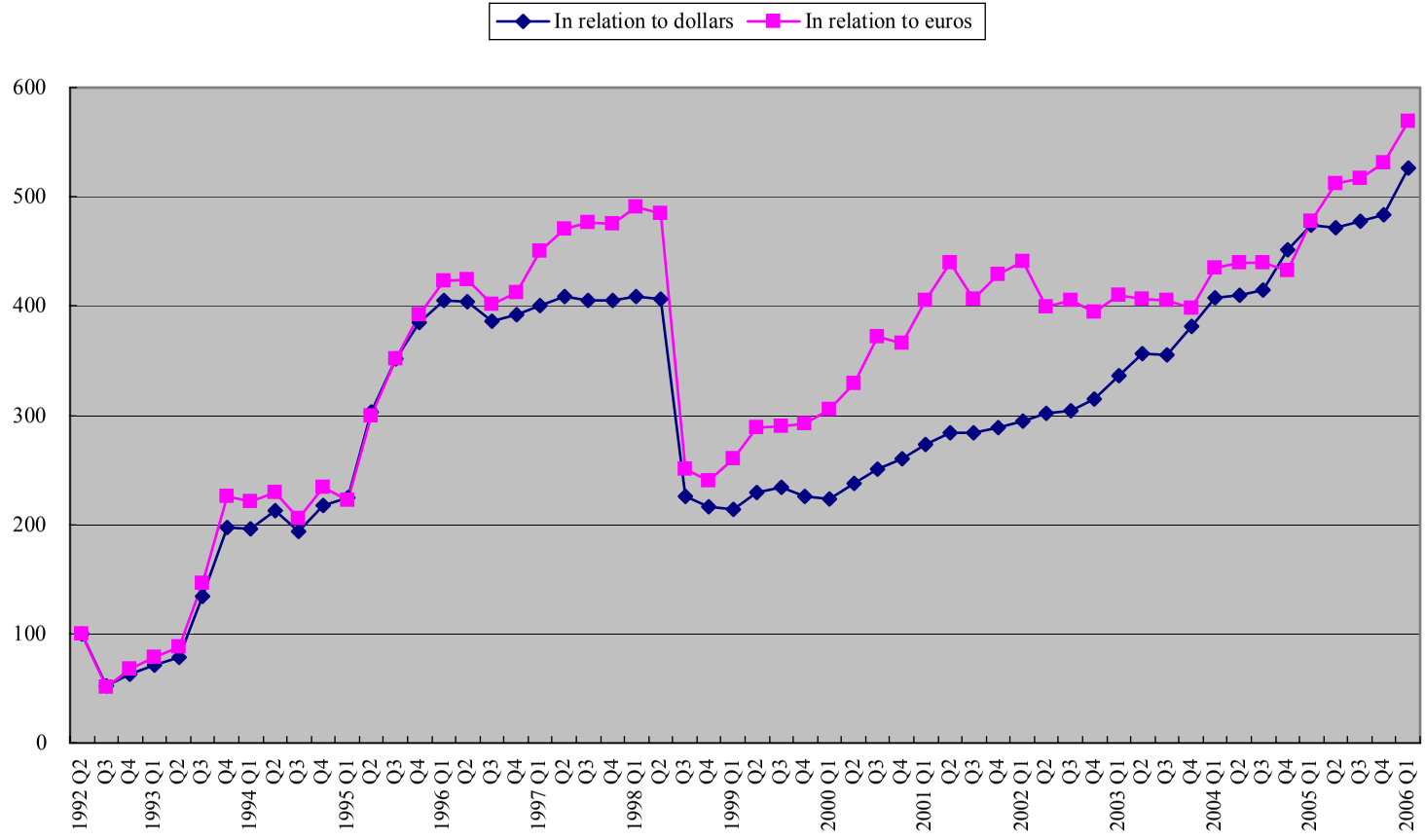
Sources : Compiled by the author from *Sistema* , various years.

Fig. 1. Value Added Produced by Oil and Gas and World Oil Prices



Sources : Compiled by the author from Table 1 and *IFS*.

Fig. 2. Real Exchange Rate of the Ruble (1992 Q2=100)



Sources : Compiled by the author from *Izvestiia*, June 3, 1992, p. 8, *Kratkosrochnye*, *SEP* and website of the Central Bank of Russia [http://www.cbr.ru].