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**Present and Future Problems of Developments
of the Russian Auto-industry**

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1. Introduction

The ongoing development of the auto-industry is expected to become a key factor for diversification and modernization of the Russian economy. If the auto-industry's GDP share would amount to 3 to 4%, this could imply that most of the government target for diversification is achieved. Needless to mention, after the steady growth for 1999-2008, Russia has entered a recession along with the world financial crisis. Considering Russia's present situation with dual troubles (fall in oil prices and the Lehman shock), this paper focuses on problems inherent to developments of production and market of the passenger (light) car industry.

Table 1 shows an international comparison of the auto-industry including all motor vehicles and auto-components. The GDP share of the auto-industry in Japan (2000), USA (2000), and Germany (2002) with the most advanced foreign-make cars was 1.6%, 1.2%, and 3.1% respectively.

Table 1. An International Comparison of Auto-industry

Country	Year	GDP share %
Japan	2000	1.6
USA	2000	1.2
Germany	2002	3.1
Brazil	2005	2.0
China	2002	1.5
India	2003/2004	1.0
Russia	1987	2.4
	1995	0.9
	2004	1.2
	2005	1.0

Sources: Author's estimation using input-output Tables.

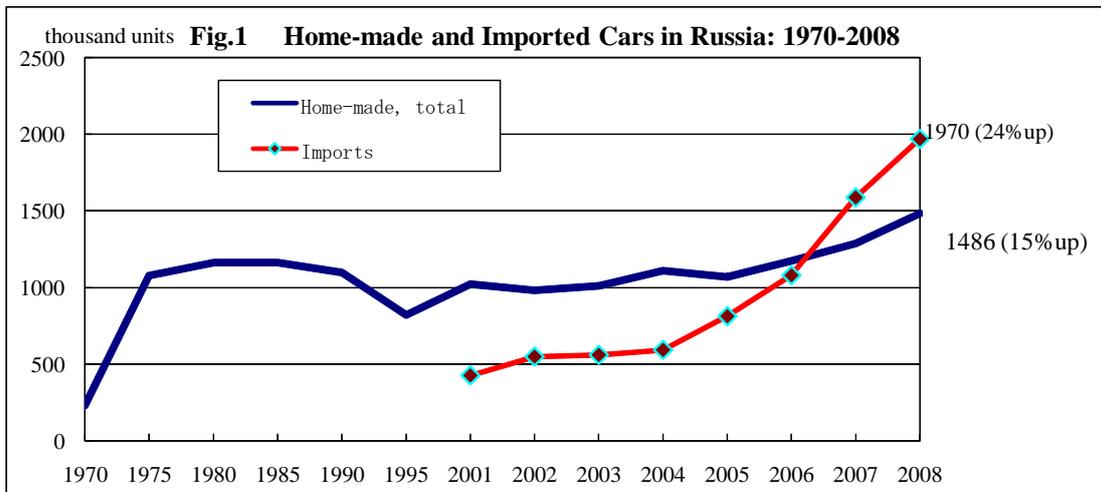
In any country, the auto-industry needs many intermediate goods and its value-added ratio (value-added to domestic output) is rather low. The GDP share in Germany, which is producing expensive cars, shows the largest value of the big 3.

Table 1 also shows the auto-industry's GDP share in BRICs. The GDP share of the auto-industry in Brazil (2005), Russia (2005), India (2003/2004), and China (2002) was 2%, 1%, 1%, and 1.5%, respectively. Brazil showed the largest share of BRICs. The domestic production level of passenger cars in 2005 was 2 million (Brazil), 1.1 million (Russia), 1.3 million (India), and 3.1 million (China) in physical number (*Automotive Yearbook, Japan*). In 2002, China's passenger car production was 1.1 million. This suggests that Russia's position in the auto-industry was the lowest of BRICs in 2005. All BRICs showed a rapid development in the auto-industry in the 2000s before the world crisis. The auto-industry in China and India, with small and cheap cars, has continued a rapid growth after the Lehman shock, while only Russia has shown a rapid fall.

In 1987 of the Soviet era, the auto-industry's GDP share of Russia was 2.4% with 1.2 million in passenger car production. This was achieved in a non-competitive environment. The Russian auto-industry's challenge in a competitive environment started just before the world crisis. Now it is facing serious difficulties. However, Russia has to develop the auto-industry if Russia really needs diversification of the economy. Russia has no other alternative for diversification and modernization. This paper provides some preliminary observations on problems for further developments of the Russian auto-industry.

2. Developments of Production and Market of Passenger (Light) Cars in Russia

Fig.1 shows the dynamics of passenger (light) cars produced and imported in physical unit number. From this, we can state the following:

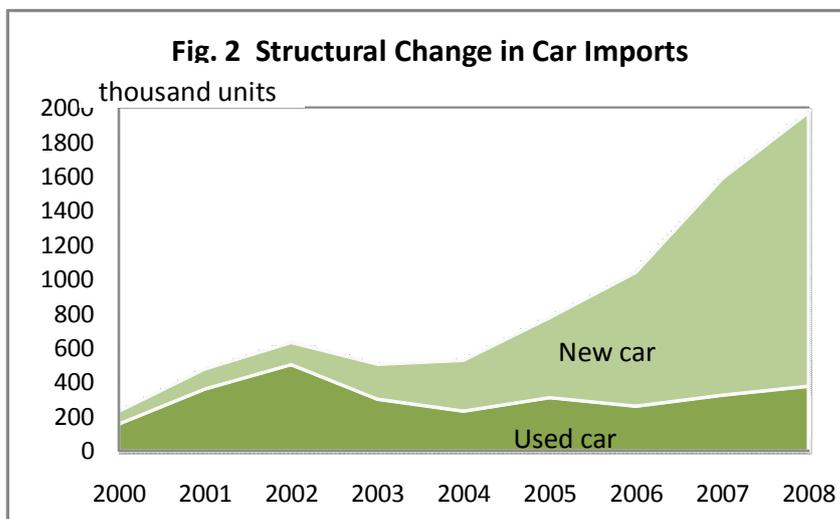


Sources: Rosstat, Federal Service of Customs.

First, the boost of passenger (light) car imports began in 2005 and continued until 2008. The number of car imports reached about 2 million in 2008, which was 3.3 times the number imported in 2004. In particular, it showed a remarkably high growth at 47% in 2007. Although in the second half of 2008, it slowed down but showed a high year-on-year growth at 24% in 2008 thanks to the boost in the first half of the year.

Second, the number of passenger (light) cars produced in Russia (or homemade cars) exceeded the Soviet peak level in 2006 and showed marked increases at 10% in 2007 and 15% in 2008. It reached about 1.5 million, which was 1.34 times the number produced in 2004.

Fig. 2 shows structural changes in car imports for 2000-2008. As can be seen, the proportion of new cars to used (second-hand) cars in physical number changed from 32:68 to 81:19 in 2008. The numbers of new and used cars imported reached 1 million, 594 thousand, and 376 thousand, respectively in 2008. As the average unit price of new cars imported is \$17,591 and that of used cars imported is \$5,392 in 2008, the share of new cars in the total imported, accounts for 93% in 2008, much higher than the share in physical number, 81%. Favorable macroeconomic conditions and consumer crediting after 2004 induced the rather overheating boost of new car imports.

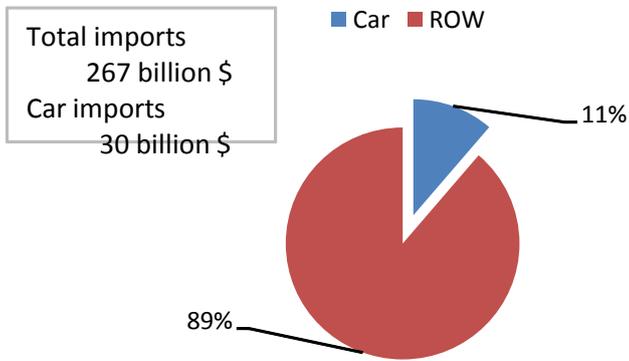


Source: GTA, Rosstat, Autostat, Bank of Moscow.

The car became Russia's major import commodity in the 2000s. As can be seen in Fig.3, its share in the total import amounted to 11% in 2008.

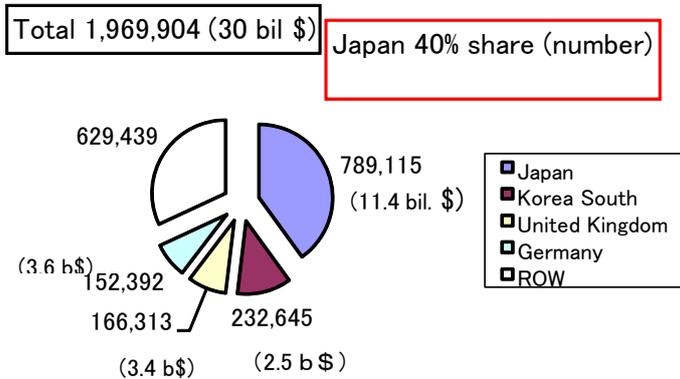
Fig.4, 5, and 6 show car imports by country in 2008. As is seen, the largest car import partner for Russia was Japan both in monetary and physical terms by every category, followed by South Korea in physical number. Japan's share in the total car imports amounted to 40% in number and 38% in monetary terms in 2008.

Fig. 3 Car Import Share in 2008

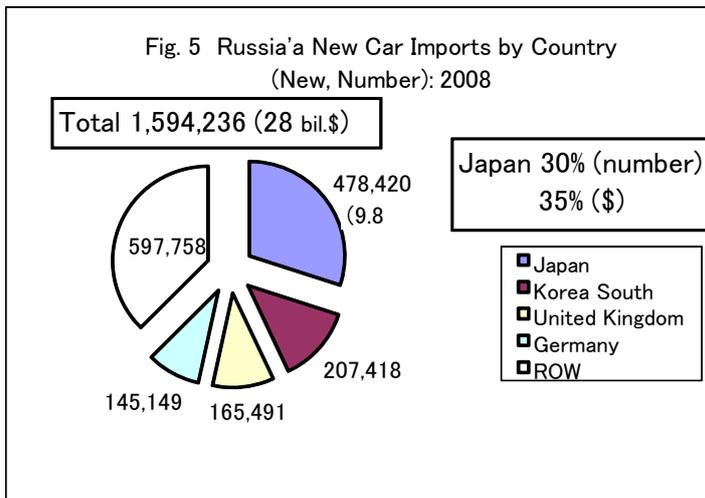


Source: GTA.

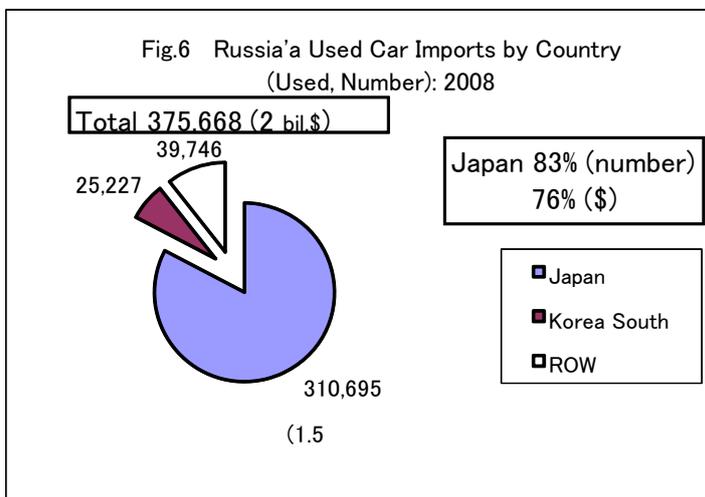
Fig.4 Russia's Car Imports by Country (Total, Number): 2008



Source: GTA.



Source: GTA.



Source: GTA.

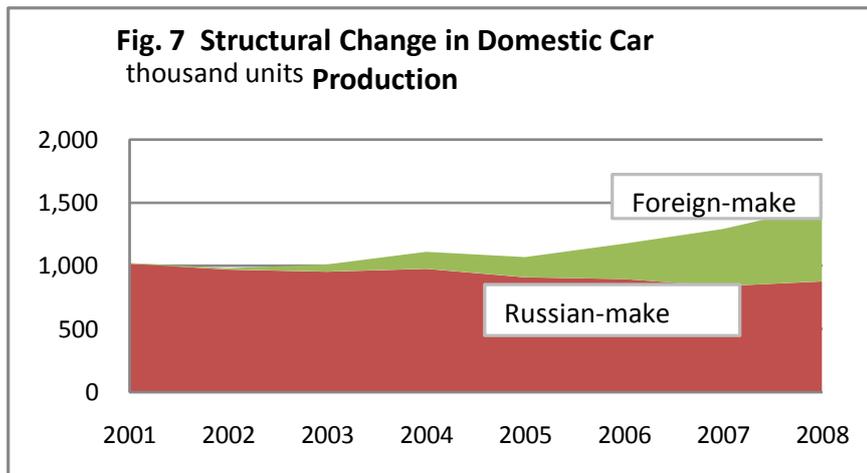
In 2008, Japan's share of the new car import amounted to 30% in number and 35% in monetary terms.

Japan exported 376 thousand units of its used car to Russia in 2008, which shared 83% in Russia's total used car import. As is known, Japanese used cars with right-hand handle are widely employed in the Russian Far East.

Fig.7 shows the structural change in Russia's domestic car production.

The boost of foreign-make cars made in Russia has been the major source for an increase in domestic car production for 2001-2008.

The number of foreign-make cars made in Russia increased from 5 thousand in 2001 to 591 thousand in 2008, by more than 100 times. Its share in the total domestic production increased from 0.5% in 2001 to 40% in 2008.



Source: GTA, Rosstat, Autostat, Bank of Moscow.

The Russian government, as well as most of Russian traditional carmakers, clearly reached a perception that Russian-make cars cannot be competitive in quality. Russian large carmakers, except for AvtoVAZ producing LADA, shifted to assembly of foreign-make (foreign-brand) cars. Major foreign carmakers began to expand their assembly in Russia, making full use of preferential import duties on car components. Thus, the boost of assembling foreign-make cars in the territory of Russia was brought about.

Table 2 shows the domestic production of foreign-make cars by maker. Russian makers, Avtotor and TagAZ, became major assembly factories of foreign-make for 2007-2008. Avtoframos, producing Renault small cars, was the third largest supplier of foreign-make cars produced in Russia for 2007-2008.

Although Ford in Vsevolozhsk of Leningrad region was the pioneering foreign carmaker in Russia, its production slowed down in 2008, which was likely to be due to some troubles with its labor union.

Some cities including St. Petersburg and Kaluga invited pure foreign makers to create the new industrial cluster based on the Industrial Assembly regime (Federal Law, No.166, adopted in 2005). GM in St. Petersburg and VW in Kaluga began to boost their own production of foreign-make, while the production level of Toyota in St. Petersburg remained very low in 2008.

The Industrial Assembly regime assumes the preferential duties on car component imports for (foreign or Russian) car assembly plants under the local content that they should meet the requirement of self-sufficiency rate of components higher than 30% within 4.5 years after their production start. Namely, makers enjoying the Industrial

Assembly regime are required to switch from CKD (complete knockdown method) to SKD (semi knockdown method) in several years. A marked increase in the self-sufficiency rate is the common interest for both the Russian government and the foreign makers. The foreign makers need to raise the self-sufficiency rate at least to 70% to reduce their production costs. The governments expect this increase would bring about radical developments of the Russian industrial base, which has been the major bottleneck for Russian manufacturing.

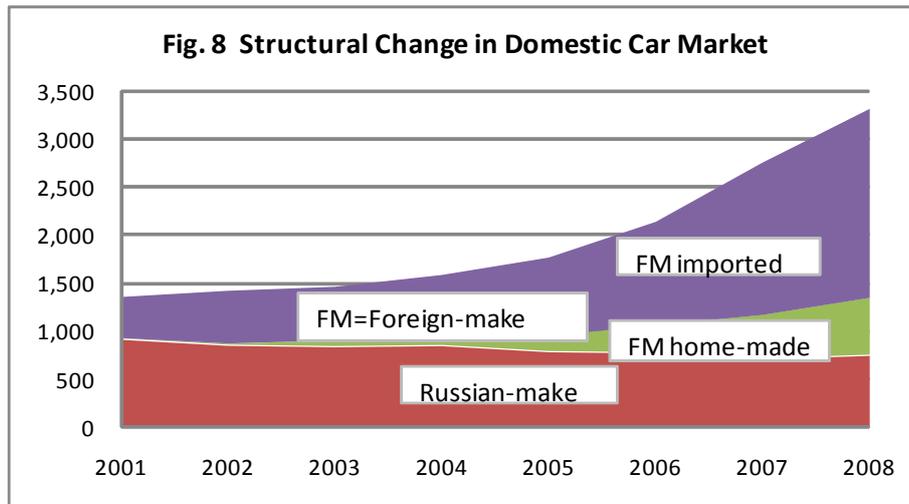
Table 2. Production (Assembly) of Foreign-make Cars in Russia
(thousand units)

	2005	2006	2007	2008
Avtotor, Kaliningrad (Chevrolet)	16.3	40.1	106.4	108.5
TagAZ, Taganrog (Hyundai)	42.5	48.4	71.1	96.6
Avtoframos, Moscow (Renault)	10.3	48.5	69.2	72.6
Ford, Vsevolozhsk	33.0	62.4	69.1	65.0
GM-AvtoVAZ, Togliatty	51.8	47.9	55.1	54.6
Volkswagen, Kaluga	-	-	1.2	63.5
IzhAvto, Izhevsk (KIA)	3.0	24.2	49.3	38.4
Sollers, Nab. Chelny	-	4.5	21.7	36.6
GM, St. Petersburg	-	-	5.7	41.5
Toyota, St. Petersburg	-	-	-	6.3
Nissan, St. Petersburg	-	-	-	-
PSA-Mitsubishi, Kaluga	-	-	-	-
Hyundai, St. Petersburg	-	-	-	-
Suzuki, St. Petersburg	-	-	-	-
Not elsewhere classified	0.2	0.8	1.5	7.6
Total	157.2	276.9	450.2	591.1

Sources: Autostat, Rosstat.

. By excluding new car exports from domestic production, we can describe the Russian car market situation. Here we assume that new car exports consist of only Russian-make cars. In 2008, Russia's exports of new cars amounted to 129 thousand in number and 0.9 billion dollars in monetary terms. The level of car exports from Russia to CIS countries has been much lower than that of car imports to Russia. However, it may not be plausible to make light of its share in Russian-make.

Fig. 8 summarizes the dynamics of the Russian car market for 2001-2008. The share of Russian-make in Russia's car market decreased from 68% in 2001 to 23% in 2008 by three times. In contrast, the share of foreign-make dramatically increased from 32% (0.4% foreign-make cars made in Russia and 32% cars imported) to 78% (18% foreign-make cars made in Russia and 60% cars imported).



Source: GTA, Rosstat, Autostat, Bank of Moscow.

3. Present and Future Tasks for Further Developments of Russia's Auto-industry

Immediately after the Lehman shock on September 15, 2008, Russian economy faced recession. Russian government prepared a large-scale package of economic supports greater than elsewhere in the world. In addition to direct financing supports to Russian carmakers including AvtoVAZ, the government took measures to protect domestic carmakers that entered into force on January 12, 2009 (*Kommersant*, January 13, 2009). These measures include an increase in duties on new car imports from 25% to 30%, and on imports of cars used for 3-5 years from 30 to 35%. Tariffs of duties on imports of cars used for more than 5 years are set in the range between 2.5 and 5.8 Euro per cc of engine displacement. The contraction of the Russian macroeconomics with ruble depreciation, and of the credit line for individuals, is already dramatically reducing imports in general. Therefore, the economic effect of the measure of a 5% increase in import duties on new cars, which is entirely against WTO rules, may be very doubtful. This increase may also badly affect some complete parts imported by foreign makers producing in Russia.

The marked increase in duties on used car imports will destroy the used car business in the Far East. This may be desirable for appropriate marketization against dark business, promotion of environmental improvements (including recycling and disposal of end-of-life vehicles), and traffic safety if this measure accompanies some compensation for the ordinary people in the Far East. In Kazakhstan, the imports of Japanese cars with right-hand handle were already prohibited for safety reason. Russian

government measure against used Japanese cars was too late.

At any rate, car imports in Russia will dramatically contract roughly by more than 50% in 2009 (from 2 million to 0.9 million). The number of car imports for January-February 2009 was 88 thousand. This number was much smaller than the level 263 thousand for January-February 2008, but greater than the level 82 thousand for January-February 2005 (based on web site of Federal Customs Service). It is also noted that the dollar amount, \$1.3 billion in car imports for the first two months in 2009 was greater than the level \$1.2 billion for the first two months in 2006. This is likely to be due to incentive to import new cars. The peak level in 2008 will not be restored within several years.

The government is forced to change its policy for restructuring Russian carmakers. The government drew a plan: first re-nationalization of AvtoVAZ under the state cooperation "Russian Technology," and next restructuring of AvtoVAZ through foreign capital's participation (sales of 25% + 1 stakes to Renault). This plan was implemented. Renault may be still interested in further development of this direction if they can prepare sufficient finance. However, the world financial crisis may make the sufficient enforcement of this direction difficult. If the restructuring is not based on any complete renovation plan with foreign capital's participation, the government support would not result in modernization but an inefficient use of taxes. In spite of government efforts, production of Russian-make cars will be likely to show a marked decrease in subsequent years.

Another government expectation is the development of Russian industrial base by inviting foreign carmakers. The government expects foreign assembly makers to organize auto-components production in Russia by themselves. Unlike the Chinese case, the Russian government had no industrial policy for further development of domestic production of components and parts except for the extension of the Industrial Assembly regime to foreign and Russian auto-parts makers. The government should provide more favorable investment environment for auto-parts makers including Russian SMEs and foreign giants.

There is still possibility for an increase in foreign makers' production based on their production plans (discounted or modified) for subsequent years roughly by 10 to 20% y-on-y. However, it should be noted that the number of domestic cars produced, including both Russian-make and foreign-make, for the first quarter of 2009 was only 123 thousand, which showed a 63% decrease in comparison with the level for the first quarter of 2008 (based on web site of Rosstat). Unlike the car import case, there is no excuse for domestic car production. Therefore, the total domestic car production will be

likely to show a marked decrease in 2009. However, it could be restored in subsequent years if radical restructuring of Russian-make car production would be introduced.

According to the author's input-output simulation using a special 2004 input-output table with the explicitly separate auto-industry sector, the Russian GDP will show a 5% increase when the final (net) demand for automobiles becomes twice the level by the reduction of car imports (import substitution) and/or some other reasons (self-sufficiency rate of auto-component is fixed at 30%). (The data was compiled with Rosstat's support.) If the self-sufficiency rate of auto-components shows an increase to more than 70%, the expansion effect of the auto-industry on GDP would be much greater through the reduction of the imports for the auto-industry. It should be noted here that both an assembled car and its components belong to the auto-industry sector. Thus, the expansion of domestic car production would provide a basis for further development of diversification of the Russian economy away from its dependence on the oil and gas sector.

4. Concluding Remarks

This paper discussed problems of production and market for the auto-industry. One of the remaining issues is to discuss recycling and disposal of automobiles, including passenger cars. As is well known, Japan and Germany have employed the extended producers' responsibility of recycling and disposal of end-of-life vehicles (ELVs), which can be regarded as a waste. (ELV Recycling Law entered into force in 2005 in Japan. All ELV traders must report every transfer of their ELVs by using the e-manifest system. The total number of the ELV disposal in 2005 was 2.66 million based on (Abe, 2008.)) Namely, carmakers owe final responsibility of recycling and disposal of ELVs if their products are used domestically. This responsibility is confined to only the domestic use case. Japanese or German carmakers do not have any responsibility for their products exported. Therefore, Russian government, importers, or consumers should be responsible for the recycling and disposal of foreign cars imported when the cars are in a position of ELVs. In Russia, producers' responsibility principle for ELVs has not yet been introduced within the author's knowledge. First, this principle for domestically produced cars should be explicitly introduced. Second, the Duma should discuss a federal law of the principle for imported ELVs, which will pose a serious environmental problem in the future.

As is shown by experiences in Japan and Germany, the introduction of producers' responsibility of ELVs does not automatically eliminate the illegal waste disposal or

dumping as in the case of waste disposal in general. (As for illegal dumping in general, ministry of environment, government of Japan informs us of the fact that in the fiscal year 2004, 673 cases of illegal dumping were found and the total volume of illegal dumping was 411 thousand tons.) In order to judge whether a waste disposal method is illegal or not, the legal framework for illegal or legal waste disposal should first be implemented. Then we will be able to design an economic mechanism with information efficiency that provides an incentive mechanism to eliminate illegal dumping. In Russia, many inappropriate disposal cases of wastes and ELVs can widely be found on the road and so on.

So many new and used cars made in Japan were exported to Russia. Furthermore, several Japanese carmakers started, or are going to start car production in Russia. As for Japanese-make cars exported to Russia or produced in Russia, Japanese economists are also interested in their disposal.

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