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## THE AUTOMOTIVE VALUE CHAIN IN RUSSIA: TRENDS AND PERSPECTIVES

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**Abstract.** *The Russian automotive industry is closely linked with the global one, and the financial economic crisis has strengthened these links even more. The paper provides an overview of the major trends taking place in the Russian automotive industry with a special emphasis on the structure of the automotive value chain and the trends in global automotive industry, including a shift of automobile manufacturing locations from developed countries to emerging markets and an increasing role of auto components suppliers. The author identified three main segments of the automotive cross-border value chain in Russia, such as assembly, supply of auto components, sales and aftermarket; and notes that all of them do not get high level of value added. To improve its position in the automotive value chain Russia needs to change the current vertical specialization of Russian original equipment suppliers (OESs) and enhance localization of foreign manufacturers.*

**Keywords:** *automotive industry, cross-border value chain, Russia, original equipment manufacturers (OEMs), original equipment suppliers (OESs), vertical specialization.*

## Introduction

Since the Russian economy is closely linked and interdependent with the world's economy, its automotive industry is also closely connected with the global automotive industry. It is often thought that the world's automotive industry is one of the most globalized industries. Its products are sold around the world by a limited number of companies with worldwide recognition. The automotive industry develops, manufactures, markets, and sells motor vehicles, making it one of the most important economic sectors by revenue. Russia is not an exception. Important trends in the automobile industry usually occur as a result of two inter-related developments—increased competition among firms and globalization. The current global financial crisis has strengthened this interrelation even more.

The objective of this paper is to provide an overview of the major trends taking place in the Russian automotive industry with a special emphasis on the structure of the automotive value chain and the trends in global automotive industry. The goals of the paper are as follows:

- to identify the segments in the cross-border value chain;
- to point out major changes in the global automotive industry from the point of view of its location;
- to identify the new role of auto part suppliers both in mature and emerging markets;
- to determine the place of Russian firms in value added chain that foreign auto makers are establishing on the territory of the Russian Federation;
- to propose author's view on favorable opportunities and future challenges for the Russian automotive industry.

To achieve these goals, we use the following research methods: empirical data classification, the evaluation method, and the comparative method.

The research subject matter of the article is relatively new and poorly investigated in economic literature, though there are plenty of publications on the state and major trends of the Russian automotive industry and market. More or less comprehensive surveys of Russian automotive market in general are represented by publications of such research institutions as Deloitte<sup>1</sup>, Ernst & Young<sup>2</sup>, Pricewaterhouse Coopers<sup>3</sup>, and the

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- 1 Deloitte. A New Era Accelerating Toward 2020 – An Automotive Industry Transformed [interactive] 2009 [accessed 25-10-2010]. <[http://www.deloitte.com/assets/Dcom-Global/Local%20Assets/Documents/A%20New%20Era\\_Online\\_final.pdf](http://www.deloitte.com/assets/Dcom-Global/Local%20Assets/Documents/A%20New%20Era_Online_final.pdf)>.
  - 2 Ernst & Young. Automotive market in Russia and the CIS: Industry overview [interactive]. 2010 [accessed 05-11-2010]. <[http://www.ey.com/Publication/vwLUAssets/Automotive\\_market\\_insights\\_-\\_Russia\\_and\\_the\\_CIS/\\$FILE/Russia\\_Automotive\\_Market\\_and\\_the\\_CIS\\_2010.pdf](http://www.ey.com/Publication/vwLUAssets/Automotive_market_insights_-_Russia_and_the_CIS/$FILE/Russia_Automotive_Market_and_the_CIS_2010.pdf)>; Ernst & Young. Automotive market in Russia and the CIS: Industry overview [interactive]. 2008 [accessed 05-11-2010]. <[http://www.eurocartrans.org/\\_downloads/publications/Automotive%20market%20in%20Russia%20and%20the%20CIS%20Ernst&Young.pdf](http://www.eurocartrans.org/_downloads/publications/Automotive%20market%20in%20Russia%20and%20the%20CIS%20Ernst&Young.pdf)>.
  - 3 Root, S. Prospects for the Russian Automotive Market [interactive]. 2010 [accessed 01-11-2010]. <[http://www.pwc.com/en\\_RU/ru/events/2010/autobriefing/pwc-russian-automotive-market-2010-1-en.pdf](http://www.pwc.com/en_RU/ru/events/2010/autobriefing/pwc-russian-automotive-market-2010-1-en.pdf)>; Root, S. Effects of the crisis on the Russian automotive market [interactive]. 2009 [accessed 01-11-2010]. <[http://www.basel.ru/documents/2629/Stanley%20Root\\_eng\\_20Jan09\\_final%20\(2\).pdf](http://www.basel.ru/documents/2629/Stanley%20Root_eng_20Jan09_final%20(2).pdf)>.

International Organization of Motor Vehicle Manufacturers<sup>4</sup>. Nevertheless, the analysis of the development of value added chain in the Russian automotive industry was not the central point of these publications. Russian automotive markers were investigated mainly in the framework of comparison of its indicators prior to and during crisis. The same situation is seen in Russian sources.

To the best of our knowledge, we have not found systematic research on the structure of the automotive value chain in Russian. Some aspects of the issue have been touched upon in an article by V. Kondratiev<sup>5</sup>, particularly the shifts in global automotive value chains during last decade. V. Ptashinskij<sup>6</sup> examines the strategies used by auto retailers, especially their regional aspects.

In our analysis, we use two core sources on the value chain in the automotive industry: the research done by UNIDO framework “The Global Automotive Industry Value Chain: What Prospects for Upgrading by Developing Countries”<sup>7</sup>, and data from a research project carried out at Duke University<sup>8</sup>.

Therefore, we consider the undertaken analysis of the automotive value chain in Russia to be rather new, providing an opportunity to make some predictions on future developments in the field.

## 1. The Automotive Value Chain: Structure and Recent Changes

The value chain in the automotive sector for the most part is a trans-border chain and more likely global than regional at that. All the global original equipment manufacturers (OEMs) govern a set of functions in the framework of the cross-border value chain<sup>9</sup>, such as: design, supply of raw materials or auto components, assembly, marketing, distribution and sales, aftermarket.

The following are some details of the elements of a value chain.

*Design.* The value of the segment responsible for designing car models is relatively high, because the design process in the automotive industry is closely connected with research and development (R&D) and innovations. After researching consumer desires and preferences, automakers (OEMs) design car models tailored to future public demand. In the recent past, this design process was taking up to five years. Nowadays,

4 International Organization of Motor Vehicle Manufacturers. Correspondents survey. World motor vehicle production [interactive]. 2009 [accessed 05-11-2010]. <<http://oica.net/wp-content/uploads/ranking-2009.pdf>>.

5 Kondratiev, V. Avtomobilnaja promyshlennostj: perspektivy razvitija posle krizisa [Automotive Industry: Development Perspectives after Crisis] [interactive]. 2010 [accessed 05-11-2010]. <<http://www.perspektivy.info/print.php?ID=64426>>.

6 Ptashinskij, V. Budushee rossijskovo avtoritejla [The Future of Russian Auto Retail] [interactive]. 2008 [accessed 28-10-2010]. <[http://www.rcb.ru/data/articles\\_pdf/2008/06/Avtomir.pdf](http://www.rcb.ru/data/articles_pdf/2008/06/Avtomir.pdf)>.

7 Humphrey, J.; Memedovic, O. *The Global Automotive Industry Value Chain: What Prospects for Upgrading by Developing Countries*. Vienna: UNIDO, 2003.

8 Duke project on the automobile industry [interactive]. 2007 [accessed 05-11-2010]. <<http://www.duke.edu/web/soc142/team1/index.html>>.

9 Humphrey, J.; Memedovic, O., *op. cit.*, p. 27.

however, through the extensive use of computers, it is possible to develop “concept cars” from sketch in less than a year.<sup>10</sup> As a rule, this stage in a value chain is implemented under strict control of global OEMs (for example, Ford, Toyota, etc).

*Supply of raw materials.* This section of the value chain brings a relatively small share of the value added. Raw materials include rubber, glass, steel, plastic, and aluminium. Since the beginning of the 2000s, the cost of raw materials has increased significantly, mostly due to the price increase of oil and natural rubber. In addition, companies are now using aluminium and plastic instead of steel whenever possible in order to reduce the weight of the automobiles, which in turn improves fuel efficiency.<sup>11</sup> Usually OEMs purchase raw materials all over the world or at least in adjacent regions and locations implementing a strategy for enhancement of the whole production efficiency.

*Supply of auto components.* The production of auto components is a key segment of the automotive industry, gaining more and more share of the value in the chain. Tires, windshields, and air bags are examples of parts. This segment includes such firms as Bosch, Michelin, Magna, Johnson Controls, Faurecia, Delphi, Valeo, Lear, BASF, Federal Mogul, Autoliv, and others.

Traditionally, the industry supply chain has been organized in tiers: Tier-1, Tier-2 and Tier-3 suppliers. Tier-1 suppliers are firms, which supply directly to the assemblers. They sell finished components, such as starters or generators. Some of these suppliers have evolved into global mega-suppliers. Tier-1 suppliers require design and innovation capabilities, but their global reach may be somewhat limited. Tier-2 suppliers sell directly to the Tier-1 suppliers (e.g., copper wire or carbon brushes); they often work according to designs provided by assemblers or global mega-suppliers. In order to meet cost and flexibility requirements, they require process-engineering skills. Those that supply raw materials to any of the above are usually characterized as the Tier-3 suppliers; they usually provide basic products. In most cases, only rudimentary engineering skills are required.<sup>12</sup>

*Assembly.* The processes of assembly (according to Completely Knocked Down (CKD) and Semi Knocked Down (SKD) technologies) are characterized by a medium level of value added. The level of assembly in the automotive value chain (European plants) decreased to 20% or declined by four times during last 100 years.<sup>13</sup> Due to the combination of rising costs of raw materials and consumer search for the lowest price, companies are looking for ways to cut costs in the manufacturing process. Recent trends to reduce costs include using fewer parts in each vehicle component, minimizing industrial waste and pollution, and having parts delivered to assembly plants on a just-in-time basis.

*Marketing, distribution and sales* are characterized by a high level of value added. Marketing is an integral part of the value chain, because it is the primary basis for perceived values by consumers. Automakers and individual dealers work together to

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10 Duke project on the automobile industry, *supra* note 8.

11 *Ibid.*

12 Humphrey, J.; Memedovic, O., *supra* note 7, p. 22.

13 Duke project on the automobile industry, *supra* note 8.

create national, regional, and local marketing strategies. These may include television and radio advertising or special incentives offered to customers. In addition, firms have begun more advertising online. General Motors (GM), for example, spent 67% more on online advertising in 2005 than it did in the previous year.<sup>14</sup> After the production phase is complete, cars are distributed around the world with the help of dealers' networks. In most countries chain sections responsible for marketing, distribution and sales are interchanged and are executed by the same firms.

*Aftermarket.* An important segment of the automotive value chain is the market for replacement parts. Nowadays, there is international trade of aftermarket products. Firms in this sector compete predominantly by price. Access to cheaper raw materials and process engineering skills is important. Innovation is not required because designs are copied from the existing components, but reverse engineering capability and competence in translating designs into detailed drawings are important.<sup>15</sup> This is the sector that many firms in emerging markets (including Russia) first moved into, even before the local assembly sectors were developed.

In recent decades, considerable changes in the global automotive industry may be observed. The most important of them include a shift of automobile production locations from developed countries to emerging markets and the increasing role of auto components suppliers.

One of the most noticeable features of the auto industry in the 1990s was the way in which leading vehicle manufacturers extended their production operations into emerging markets. This was driven, in part, by the growth of car sales in these markets. For the global producers, rapidly growing markets in developing countries allowed the spreading of vehicle development costs, establishing cheap production sites of selected vehicles and components, and access to new markets for higher-end vehicles, which would still be produced in the Triad economies.<sup>16</sup>

Data on light-vehicle assembly plants owned by the top ten vehicle companies (OEMs) in 11 major developing countries shows that at the beginning of the 1990s these OEMs owned 28 light vehicle assembly plants in the leading emerging markets. As a result of extensive foreign direct investment (FDI) in the developing countries in response to the dynamics of these markets, the situation had changed dramatically by the late 1990s: the number of assembly plants had risen to 62, and all of the assemblers had increased their global coverage.<sup>17</sup> According to experts<sup>18</sup>, by 2030 Asian countries will account for 50% of world sales and 60% of world production compared to 25% and 35% in 2005 respectively. China and India with a high gross domestic product (GDP) growth rates (even in crisis times) will be the engine of the world's automotive industry.

At the same time there will be a decrease in the level of concentration in the world's car industry. The degree of concentration in the global auto industry in 2001 was as fol-

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14 Duke project on the automobile industry, *supra* note 8.

15 Humphrey, J.; Memedovic, O., *supra* note 7, p. 22.

16 *Ibid.*, p. 5–6.

17 *Ibid.*

18 Kondratiev, V., *supra* note 5.

lows: taken together, 13 leading car manufacturers (producing more than 1 million vehicles each) accounted for around 87% of the world's vehicle production.<sup>19</sup> The degree of concentration in the global auto industry changed by 2009: 14 of the world's biggest manufacturers (producing more than 1 million vehicles each) accounted for 76% of the total world production. Nevertheless, though the level of concentration has decreased, it is still rather high.<sup>20</sup>

The changing nature of the global assembly industry in the 1990s was likely to significantly affect the components industries, both in mature and in emerging markets. However, the full extent of this change cannot be understood without reference to more general changes in auto industry value chains. In the 1980s and 1990s, relationships between assemblers and suppliers changed considerably, as Western firms struggled to match the competitiveness of manufacturers from Japan and emulate their production and supply strategies. Vehicle manufacturers in North America and Western Europe reduced their in-house production levels and began to transfer design functions to their leading suppliers.

As mentioned above, structurally, the OEMs' supply chain was divided into three distinct but sometimes overlapping layers—Tier-1, Tier-2 and Tier-3 suppliers. This simple configuration no longer totally fits the actual structure of the automotive industry. The component industries in the Triad economies were considerably restructured during the 1990s as a result of a combination of changes in the relationships between suppliers and assemblers and the increasing global reach of the assemblers. Three significant changes took place.

First, there was a process of transformation of the largest Tier-1 suppliers into global mega-suppliers, sometimes referred as Tier-0.5 suppliers, because they are closer to the assemblers than the Tier-1 suppliers. These companies needed to have global coverage in order to follow their customers to various locations around the world. They needed design and innovation capabilities in order to provide “black-box” solutions for the requirements of their customers. Black-box solutions are solutions created by the suppliers using their own technology to meet the performance and interface requirements set by assemblers.<sup>21</sup> The new mega-suppliers are evolving into large global firms, which are either specialized in complex systems, or integrators of several simpler sub-systems.<sup>22</sup>

Second, there was a shift in design activities from auto manufacturers to mega-suppliers, with increasing dialogue between the two parties around the design. Suppliers who had previously provided ready-designed parts (for example, batteries) for many different companies in the period of mass production, moved towards greater customi-

19 Humphrey, J.; Memedovic, O., *supra* note 7.

20 International Organization of Motor Vehicle Manufacturers, *supra* note 4.

21 Humphrey, J.; Memedovic, O., *supra* note 7, p. 22.

22 Veloso, F.; Kumar, R. The Automotive Supply Chain: Global Trends and Asian Perspectives [interactive]. *ERD Working Paper*. 2002, 3: 21 [accessed 05-11-2010]. <[http://www.adb.org/Documents/ERD/Working\\_Papers/wp003.pdf](http://www.adb.org/Documents/ERD/Working_Papers/wp003.pdf)>.

zation, tailoring their products to the needs of specific companies. Now they are responsible for the design and engineering of car production system as a whole.

Third, a Tier-1 supplier (especially the mega-supplier) becomes responsible not only for the assembly of parts into complete units (dashboards, brake-axle-suspension, seats, cockpit assemblies and so on), but also for the management of Tier-2 and Tier-3 suppliers. This means that mega-suppliers become responsible, together with leading manufacturers, for the governance of the largest parts of the cross-border value chain. They are expected to have substantial responsibility for coordinating the supply chain necessary for their manufacturing and assembly.

There is no doubt that the global financial-economic crisis will substantially change the alignment of forces in the global auto market from the point of view of location (and re-location) of assembly plants in various regions as well as the role of suppliers (supplier-assembler relations) in the structure of the cross-border value chain. We may argue that the place of Russian firms in these cross-border chains does or will substantially depend on the overlapping impact of the mentioned factors and main trends in the global automotive market.

## 2. Specific Features of the Automotive Value Chain in Russia

What is the role of the Russian automotive industry in the value added chain that foreign auto makers are building up in the territory of the Russian Federation? In order to answer the question we need to identify the positions of Russian firms in every segment of the cross-border value chain which we described above (design, assembly, supply of raw materials and auto components, marketing, distribution, sales, and aftermarket). Based on the review of available data and empirical information, we may identify three main segments of the automotive cross-border value chain—assembly, supply of auto components, sales, and aftermarket.

*Assembly* is still the most developed segment in the automotive value chain in Russia, though local car manufacturers (including foreign firms that work in the Russian market) were dramatically hurt by the financial crisis. Two years ago it was predicted that Russia would leave Germany behind and would become the largest European automotive market. After the crisis of 2008, the Russian market has shrunk to more than half its former size. Sales of new imported light vehicles declined by 74% in 2009, and the total light vehicle production in Russia declined by 59%.<sup>23</sup> Now, the market is beginning to recover. For foreign automotive manufacturers with an established local production in Russia, the devaluation of the ruble and increase in car import customs duties were less painful. The governmental support—subsidized crediting started in 2009 and a scrappage programme launched in March, 2010—was also aimed at helping local OEMs, both Russian and foreign.<sup>24</sup>

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23 Ernst & Young. 2010: 7, *supra* note 2.

24 Association of European Businesses. Business Quarterly. Automotive Industry [interactive]. 2010: 6 [accessed 28-10-2010]. <[http://www.aebus.ru/application/views/aebus/files/magazines/18.\\_Automobile\\_magazinesFile\\_2010\\_08\\_17\\_12\\_59\\_03.pdf](http://www.aebus.ru/application/views/aebus/files/magazines/18._Automobile_magazinesFile_2010_08_17_12_59_03.pdf)>.

During the automotive boom, a whole range of international automobile manufacturers entered the Russian market with rather ambitious investment projects. Initially, Ford in St Petersburg, Renault in Moscow, General Motors (via its joint venture in Togliatti), and BMW with its assembly plant in Kaliningrad, were later followed by Volkswagen and the PSA Group in Kaluga, as well as Toyota and Nissan in the Lenin-grad region.<sup>25</sup> Currently (the end of 2010) there are approximately 12 automotive plants operating in the passenger car segment (the approximation is as a result of currently idle facilities) and producing foreign brands.

Table 1 below shows the changes in balance between cars produced in Russia and those imported in relation to sales of foreign and Russian brands, in unit terms.

Table 1. Sales of passenger cars in Russia (thousand vehicles), 2002-2010

Car category	2002	2003	2004	2005	2006	2007	2008	2009	2010 (1H)
Locally produced cars	853	924	1010	990	1080	1205	1280	750	490
Russian brands	842	870	880	840	800	765	700	390	240
Foreign brands produced in Russia	11	54	130	150	280	440	580	360	250
Imported cars	564	564	600	730	1000	1585	1895	652	273
Imported new cars	117	164	280	410	720	1205	1500	640	967
Imported used cars	447	400	320	320	280	380	395	12	6
TOTAL	1417	1488	1610	1720	2080	2790	3175	1402	763

Sources: author's calculations based on the data of Ernst & Young<sup>26</sup> and PWC<sup>27</sup>.

According to data in Table 1, we can identify certain significant shifts in the structure of the Russian passenger car market during the 7 year period before the crisis (2002-2008). There was a sharp decline in the share of Russian brands (from 63.1% to 22.2%) and imported used cars (from 29.2% to 12.4%). Simultaneously we observed an increase in the share of imported new cars (from 6.9% to 47.2%) and foreign brands produced in Russia (from 0.79% to 18.3%). Moreover, locally produced foreign-branded cars became the most dynamic segment of the market: changes in their sales (in monetary terms) were over 57% in 2007/2008 compared to 32% for imported new cars, 15% for imported used cars and 0% for Russian brands.<sup>28</sup> The crisis as well as import substitution, customs duties and government programmes made some corrections in the balance. For the first time, the units of foreign cars produced in Russia exceeded the units of Russian brands in the first half of 2010. The share of foreign cars manufactured in Russia, which has

25 Association of European Businesses, *supra* note 24, p. 28.

26 Ernst & Young. 2008: 9, *supra* note 2.

27 Root, S. Effects of the crisis on the Russian automotive market, *supra* note 3, p. 4; Root, S. Prospects for the Russian Automotive Market, *supra* note 3, p. 4.

28 Root, S. Effects of the crisis on the Russian automotive market, *supra* note 3, p. 4.

been growing constantly in quantitative terms since 2002, exceeded 30% in the first half of 2010. Overall, over 63% of all vehicles sold in Russia were manufactured locally.<sup>29</sup>

The production of foreign brands in Russia is mostly organized as SKD assembly that is connected with a relatively low level of value added. Only a few plants (Ford, Toyota and Renault-Avtoframos) use CKD technology. There is some explanation for this situation and the most important reason is the specific structure of the *industry of auto components* in Russia.

For many years, there was no independent supplier industry in Russia because all the traditional manufacturers produced the automotive parts themselves. Even now, the Russian automotive component industry is rather vertically integrated: Russian suppliers are still highly dependent on domestic OEMs and vice versa. The average level of integration is almost 80%, and of the 200 Russian component manufacturers over 95% supply Russian OEMs only.<sup>30</sup> Since Russian auto component suppliers are mostly engaged in the production of components for existing and outdated Russian car models, they are generally not competitive enough to meet the high requirements of global OEMs, which have started vehicle production in Russia and are very interested in localizing sources. Less than 5% of Russian suppliers supply foreign OEMs with manufacturing activities in Russia. Only 1% of the Russian auto components suppliers engage in export activities.<sup>31</sup>

The conventional tier division is still not clearly present in the auto component segment of the value chain. On average, one-quarter of the supplier base is raw material producers and the rest is component manufacturers. They usually have a worn and obsolete technological base, lack new developments and technologies, and often professional management. They are also typically short of investment resources and lack engineering skills to master new types of products and expand their customer base. Their products are of poor quality, which prevents them from supplying components to the international OEMs and to the original equipment suppliers (OESs).<sup>32</sup>

In quality terms, Russian automotive companies are still far behind their Western counterparts. By various estimates, up to 5% of the Russian vehicle component manufacturers comply with ISO-16949, which sets specific requirements for the quality management systems of automotive industry suppliers, and with other requirements of production quality and engineering. The common defect measure according to the industry standard ISO-16949 is below 70 parts per million (ppm), compared to the Russian industry average of over 1,000 ppm.<sup>33</sup> Based on international standards, there is no modern auto component industry in Russia.

29 Association of European Businesses, *supra* note 24, p. 10.

30 Ernst & Young. Automotive market in Russia and the CIS: Industry overview [interactive]. 2007: 21 [accessed 05-11-2010]. <[http://www.messefrankfurt.fr/d4d\\_editor\\_media/File/Auto%20Moscow/Industry\\_Automotive\\_RussianMarketOverview.pdf](http://www.messefrankfurt.fr/d4d_editor_media/File/Auto%20Moscow/Industry_Automotive_RussianMarketOverview.pdf)>.

31 *Ibid.*

32 Association of European Businesses, *supra* note 24, p. 24.

33 *Ibid.*, p. 26.

Led by the global OEMs, a number of foreign OESs set up business adjacent to Russian and foreign manufacturers in the Russian automotive clusters.<sup>34</sup> By the end of 2010, according to AEB information<sup>35</sup>, 20 global OESs had manufacturing presence in Russia, including Bosch, Michelin, Magna, Johnson Controls, Faurecia, Delphi, ZF Group, Valeo, Toyota Boshoku, Lear, BASF, Visteon, Magneti Marelli, Cummins, Federal Mogul, Autoliv, Benteler, DuPont, Tenneco, Sumitomo Rubber Industries. Currently, the presence of foreign suppliers in the country is fairly limited, comprising mostly bulky and lower value added component manufacturing which is not critical for a large-volume production.

A few global suppliers have invested in their own greenfield operations in Russia, as the majority (that have entered the Russian market) have decided to partner up with local players to take advantage of existing workforce and infrastructure and, in certain cases, enhanced OEMs and aftermarket access.<sup>36</sup> These joint ventures (JVs), created by Russian and foreign manufacturers, employ relatively modern production technologies and equipment supplied by international partners. They are usually engaged in the production of technically simple components with low added value (bumpers, harnesses, lights, etc.), designed by foreign partners, or on licensed assembly of sophisticated components with low level of subcomponent localization (transmission gears, engines, etc.). JVs have practically no intellectual property rights, in-house engineering and R&D centers, and generally specialize in a small range of products of one or two component categories. Russian suppliers participating in these arrangements can benefit from access to global automotive know-how and technology transfer, as well as improved quality and process management systems.<sup>37</sup>

What are the main challenges for global OESs in Russia? Global OEMs are very interested in seeing their traditional Tier-1 and Tier-2 partners enter the Russian market in the framework of the localization process. According to the Russian Government Decree No. 166 regulating localization, welding, and paint-shop requirements, the level of localization should be enhanced to 30% by 2010-2011. This Decree has spurred some new players to follow foreign car CKD assemblers. These auto suppliers are relatively new to the Russian market and still have a low level of localization of both, subcomponents and raw materials. Usually, they have insignificant production scale driven by overspecialization and rather limited customer base. Their target market is the domestic OEMs.

How are the OEMs working under Decree No 166 coping with localization schedules for the automotive components used for local production? Insufficient production volumes remain a major hurdle for most global suppliers who consider that sort of investment in new facilities; the international suppliers do not see the volumes in Russia that would attract them to establish local production. It takes time to increase volumes and persuade the suppliers. One of the reasons why the volumes are missing is the limitation

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34 Ernst & Young, *supra* note 30, p. 21

35 Association of European Businesses, *supra* note 24, p. 26.

36 Ernst & Young. 2010: 11, *supra* note 2.

37 Association of European Businesses, *supra* note 24, p. 24-26.

of export possibilities. To export cars to the European Union you have to pay a 10% customs fee. At the same time, the Russian market itself doesn't need a large volume of one model, rather smaller volumes of several models. This is one of the main disadvantages of localization. There are also some other issues for local manufacturers, for example, the limitation in the labor force in certain manufacturer sites, logistics difficulties.<sup>38</sup>

That is why, according to many experts, cooperation with established Russian suppliers will be the dominant "avenue" for the medium-term development of the automotive component supply base. Given the current state of the industry, the most favorable development scenario for the original equipment spares segment in the Russian Federation is the partnership scenario.<sup>39</sup> The challenging economic environment has created a number of transaction opportunities in the automotive supplier marketplace that would have previously been impossible. Russian companies that appeared confident and tough to negotiate with before the downturn are currently more amenable to selling or sharing high-quality assets and market access in return for financial and technological support. Furthermore, the credit crunch has accelerated the process of restructuring the highly vertically integrated Russian OEMs, and as a result, a number of carved-out component businesses are likely to emerge in 2011–2012.<sup>40</sup> To implement the chosen scenario, it is necessary to invest 148.5 billion rubles in production facilities and R&D.<sup>41</sup>

*Marketing, distribution and sales* are also very important segments in the automotive value chain. Sales of foreign brands are organized by the authorized Russian dealers that are working under license agreements with leading OEMs that operate (import and produce) in Russian markets. According to terms of these agreements, world automakers determine for Russian partners volume and time of delivery, prices for automobiles and spare parts, provide advertising materials, etc. Thus, they in fact control the activity of Russian dealers, though the latter receive about 10 % of value added.

Despite steady development towards a mature, transparent dealership scheme, the typical Russian dealership structure still exhibits several differences from its western counterparts. A major difference is that new car sales still remain the main source of revenue for a typical Russian dealer, while service and used vehicle sales are secondary.<sup>42</sup>

Major foreign car dealers entered the Russian market in 2007 by acquiring several significant dealerships or establishing joint ventures for car sales and services. British based car retailer Inchcape PLC bought in 2008 a 75.1 % stake in the Russian car dealer Musa Motors for an initial sum of \$200 million. Inchcape promised to pay the remaining amount depending on Musa's performance in the future, with the total amount paid for

38 Association of European Businesses, *supra* note 24, p. 6–7.

39 *Ibid.*, p. 26.

40 Ernst & Young. 2010: 11, *supra* note 2.

41 Association of European Businesses. Position Paper. [interactive]. 2010: 23–24 [accessed 22-10-2010]. <[http://www.aeb.ru/application/views/FCKEditor/files/FCKEDITOR/file/AEBPositionPaper2010\(1\).pdf](http://www.aeb.ru/application/views/FCKEditor/files/FCKEDITOR/file/AEBPositionPaper2010(1).pdf)>.

42 Ernst & Young. 2010: 13, *supra* note 2.

the 75.1 % stake not to exceed \$450 million.<sup>43</sup> In turn, major Russian companies strengthened their networks in both the Commonwealth of Independent States (CIS) and other foreign countries. Among others, Rolf Group has initiated the establishment of its network in Kazakhstan and is also considering setting up a network of five dealerships for the sale and service of premium brands in India.<sup>44</sup> The networks of GM, Ford, Hyundai and other companies have expanded at a rapid pace. Chinese car producers, however, have shown the highest growth rates. The number of dealers selling Chinese brands almost doubled over the year of 2008.

The used car market has also continued to evolve. The Czech company AAA has announced its entry into the Russian market. Rolf Group has initiated the BlueFish project in order to increase the sale of new cars through trade-ins and organize the sale of high quality used cars thoroughly checked by the dealer. Foreign cars will continue to grow as a proportion of the total number of registered cars.<sup>45</sup>

Typical Russian dealers, who geared their businesses around rapid market growth, were hit hard by the subsequent crisis slump in new car sales in 2009. Burdened by capital expenditures to fund recent expansion and personnel sized for sales predicted at double the recession levels, many Russian dealerships struggled to withstand the initial impact of the crisis and were forced to reconsider their capital structure in order to maintain operations. Predictably, only a few have managed to successfully restructure their debts. Aggravating this situation, some of the key international OEMs have revisited their dealership contracts, further eroding margins and taking out liquidity. This has caused a wave of insolvencies as even some of the largest Russian dealers failed to remain solvent in the face of tough market conditions. However, some of these situations have created market opportunities for the stronger players who have managed to quickly optimize their cost structure and adapt to new market conditions. Such companies, both local and international, were ideally positioned to seize market share from their ailing competitors and are positioned to reap more benefits in the midterm as the market resumes its growth.<sup>46</sup>

High sales figures in the Russian car market have stimulated the development of regional dealer networks. In some cases, the total number of regional dealers has increased through the acquisition of competitors with streamlined sale and service networks, rather than the establishment of new companies. The multi-brand strategy, as well as the setting up of car villages and large retail centers, has become increasingly common with car dealers. Although the Russian car market has large growth potential, dealers need capital for its development. Dealers typically try to mobilize capital through direct investment funds which have noticed the car market and have begun to invest in it.

Unfortunately, the participation of Russian firms in the automobile design process is not even on the agenda. This segment is the most important in the automotive value chain in different aspects: from the point of view of gaining high level of value added

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43 Ptashinskij, V., *supra* note 6, p. 2.

44 Ernst & Young. 2008: 24, *supra* note 2.

45 *Ibid.*

46 Ernst & Young. 2010: 13, *supra* note 2.

as well as value chain control and management. Russia lacks proper innovation technologies, R&D, expertise, professional engineering and design staff to integrate into this highly innovative activity. We do not anticipate that even in a medium-term perspective there will be considerable changes in this field.

## Conclusions

During last decade, the Russian automotive industry has developed along the processes of internationalization, integration into production systems, and insertion into global value chains. In this case, Russia needs to consider strategies for the auto industry within the context of trends in global markets. That does not mean the country should duplicate strategies that are appropriate across other emerging markets. On the contrary, Russia has to take into account specific ways of insertion of national automotive industries into the global economy.

The recent transformation of the relationship between assemblers and suppliers along the cross-border automotive value chain opens up favorable opportunities for Russian locally-owned firms, occupying the Tier-2 level of component manufacturing and gaining the larger share of value added. In some cases, this involves the production of unsophisticated parts with low-skilled labor. However, this is not always the case. In particular, as some of the largest Tier-1 global suppliers have transformed into Tier-0.5 mega-suppliers and have become providers of modules and systems, niches have emerged within the Tier-2 level for relatively sophisticated component suppliers. The most advantageous positions involve the possession of competences which include technology, innovations, quality control, competitive service and specific technical expertise, technical, financial and managerial endowment.

There are some areas in which locally-owned Russian firms might prosper within the global auto components industry: Tier-2 component manufacturers operating within value chains supplying assemblers in the domestic market; allied with transnational companies and supplying specialized products for global markets; as suppliers to both domestic and international aftermarkets.

Unfortunately in Russia there are some barriers to insert successfully into global and regional value chains as Tier-2 suppliers such as: lack of tiered divisions between component manufacturers due to the high level of integration with the major OEMs; lack of competitive technologies among Russian manufacturers due to a legacy of highly integrated vehicle manufacture, coupled with highly amortized equipment, which make most local component manufacturers less attractive; the relatively long-term process of adopting new technologies and applying the know-how to local manufacturers; economies of scale are required for attracting major foreign component manufacturers (most require well over 200,000 units of car production in order to make an investment economically viable).

The ability of locally-owned firms to compete in the sector of auto components can be influenced by support provided by local and national institutions. According to the

Governmental Russian Automotive Strategy 2020, in order to implement the development scenarios for the vehicles market segments, Russia needs to change the current vertical specialization of the Russian OESs and enhance localization of foreign manufacturers. For the government, the most important question is how to develop a policy that would maximize the potential for entrance into global value chains. In this respect, the transition from qualitative restrictions and local content requirements towards import-export balancing requirements would play an important role.

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## RUSIJOS AUTOMOBILIŲ PRAMONĖS VERTĖS GRANDINĖ: TENDENCIJOS IR PERSPEKTYVOS

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**Santrauka.** *Rusijos automobilių pramonė – neatsiejama pasaulinės automobilių pramonės dalis, o finansų ekonomikos krizė šių sąsaja dar įtvirtina. Straipsnyje pateikta pagrindinių Rusijos automobilių pramonės vystymosi krypčių apžvalga, daug dėmesio skiriama automobilių pramonės vertės grandinei bei tendencijoms, vyraujančioms pasaulinėje automobilių pramonėje. Šio straipsnio tikslas – apžvelgti esmines Rusijos automobilių pramonės tendencijas, pabrėžiant automobilių pramonės vertės grandinės struktūrą ir globalias automobilių pramonės tendencijas.*

*Pasaullinėje automobilių pramonėje vertės grandinė – didžia dalimi – tarpvalstybinė sistema ir dažniausiai globalaus, o ne regioninio pobūdžio. Visiems originalios įrangos gamintojams (OIG) globaliu mastu tenka tam tikros tarpvalstybinės vertės grandinės struktūros funkcijos, kaip, pavyzdžiui: dizainas, žaliavos tiekimas, automobilių dalių tiekimas, surinkimas, rinkodara, platinimas ir prekyba, aptarnavimas, automobilių nusipirkus. Pastaraisiais dešimtmečiais stebimi globalūs automobilių pramonės pokyčiai. Patys svarbiausi – tai automobilių gamybos perkėlimas iš išsivysčiusių šalių į naujai kylančias rinkas ir didėjantis automobilių dalių tiekėjų vaidmuo.*

*Pastarąjį dešimtmetį Rusijos automobilių pramonėje stiprėja tarptautiškumo procesai, integracija į gamybos sistemas, ir skverbimasis į globalias vertės grandines. Šiuo atžvilgiu Rusijai tenka derinti automobilių pramonės strategijas su globaliomis rinkos tendencijomis. Nauji surinkėjų ir tiekėjų santykio pokyčiai tarpvalstybinėje automobilių pramonės vertės grandinėje atveria puikias galimybes Rusijos vidaus kompanijoms įsitvirtinti antrajame detalių gamintojų lygmenyje ir užsitikrinti didesnę pridėtinės vertės dalį. Deja, Rusijoje yra kliūčių sėkmingam integravimuisi į antrąjį globalų ir regionų vertės grandinės tiekėjų*

lygmenį. Verta paminėti keletą faktų: nėra pasiskirstymo lygmenimis tarp detalių gamintojų, nes OĮG labai integruoti; Rusijos gamintojai neturi konkurencingų technologijų dėl tradiciškai išlikusio aukšto automobilių pramonės integravimo ir dėl didelio gamybos įrangos susidėvėjimo. Šalies vidaus kompanijų galimybę konkuruoti automobilių detalių sektoriuje galėtų padidinti regioninė ir valstybinė parama.

**Reikšminiai žodžiai:** automobilių pramonė, tarpvalstybinė vertės grandinė, Rusija, OĮG, OIT, vertikali specializacija.

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