

**Automotive Industry in Russia:
Impact of foreign investments in car
assembly plants on suppliers' entry**



European Bank
for Reconstruction and Development

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Abstract

In recent years, a number of leading international car manufacturers have established assembly facilities in Russia. The purpose of this paper is to assess how the entry of a large number of foreign car manufacturers can assist the emergence of a viable automotive industry in the Russian Federation, given their initially relatively small scale and focus on import substitution. The paper concludes that currently established or planned car assembly plants have already created a sufficient critical mass to encourage an entry of many types of component suppliers, despite limited production volumes of individual models, and a further expansion of the sector would enable the entry of even the most capital intensive investments in tooled components within a few years, provided the announced investment plans are implemented.

Keywords: automotive, Russia, suppliers, linkages

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Introduction

Russia is one of the world's fastest-growing automotive markets, with estimated total sales of 2 million units worth US\$ 30 billion in 2007. In recent years, a number of leading international car manufacturers have announced establishment of assembly facilities in Russia (see Table 1 on planned automotive investments, including expected volumes, as of January 2008). This reflects the rapidly growing importance of central and eastern Europe (CEE), and in particular of Russia, for the world's automotive industry (see, e.g., report on the automotive sector in CEE prepared by Unicredit Group in December 2007). Within the last few years local assembly grew from a few percentage points to one-third of foreign brand car sales.

It has long been assumed that, over the medium term, the Russian car industry should experience both an entry of international suppliers and upgrades of potential local suppliers as a result of these investments by foreign car producers. The purpose of this paper is to assess the likely developments in this area in the short to medium term, and to outline the perspectives of the Russian automotive sector in the context of the worldwide developments in the automotive sector in large emerging markets (see, e.g., Thun, 2006, on China, Shapiro, 1996, and Christiansen et al., 2003, on Brazil, Halle, 2001, on Indonesia, Brid, 1996, on Mexico, and Belzowski et al. 2007) as well as lessons from historical developments of the automotive sector (see Annex 1).

Despite a robust entry of foreign manufacturers, the development of the Russian car industry faces significant challenges. Many car manufacturers investing in Russia are currently establishing relatively small assembly lines, producing less than 100,000 passenger cars per year, with the intention to increase the production gradually over the medium term. This poses the question at which point would a large number of manufacturers with relatively small scale facilities attract suppliers' entry¹.

In addition to business rationale of suppliers being restricted by the relatively small scale of individual car assembly plants, suppliers are also likely to face more significant business obstacles than large international car manufacturers - red tape (standards, safety, environmental) and local infrastructure constraints, especially land, shipment logistics and the reliability of power supply. The availability of skilled labour at competitive wage levels for newly-established facilities, both by car manufacturers and their suppliers, is also uncertain.

The analysis in this paper focuses on the determinants of car suppliers' investments, including their location decisions, timing and the scale of the entry, importance of a critical mass of local production for different types of suppliers, and the key bottlenecks for the development of a viable and competitive automotive industry in Russia, including local infrastructure constraints, regulatory and other business environment constraints, and the availability of skilled labour. The note draws on the international best practice in public policy and business organisation in support of car industry development, taking into account factors specific to the country, the companies involved, the sector and other material characteristics. Although most of the discussion concerns the manufacturing of passenger cars, similar arguments apply to light commercial vehicles, trucks, and buses. It should be noted that the production volumes of these specific categories are significantly smaller. For some, such as

¹ In this approach the car producers' entry to Russia differs from transition countries in central Europe which experienced an entry of a small number of manufacturers producing several hundred thousand units of limited number of models per year, attracting their suppliers almost immediately.

buses, labour content is often higher and the share of suppliers in total value added lower than those for passenger cars. Nevertheless, it is equally possible to produce small volumes of these special categories of vehicles profitably from components mostly sourced from unrelated suppliers.

1. Background

In recent years, the Russian economy has entered a period of strong economic boom, supported by the significant increase in oil prices since the August 1998 crisis. The real disposable income of the population has been growing due to both wage increases and the expansion of consumer credit, including the expanding availability of consumer finance for car purchases. This has put Russia at the top of the agenda for most global automotive players. Russia is one of the world's fastest growing automotive markets. In value terms it grew 14 per cent year on year in 2005, 36 per cent in 2006, and 67 per cent in 2007.

The spending on Russian brands, however, remained relatively stable, despite comparative price increases. Volume sales of Russian brands declined to 27 per cent in 2007, down from 38 per cent in 2006, and 58 per cent in 2004. In 2007, 43 per cent of car sales was accounted for by imports of new cars, 14 per cent by imports of used cars, and 16 per cent by foreign brands produced in Russia, up from 8 per cent in 2004.

Most forecasts predict more than a 50 per cent increase in the Russian car market by 2010, with foreign brands acquiring more than an 80 per cent market share. The forecasts of the rapid expansion of the Russian car market are mostly based on the past trend of a strong growth rates in car sales as well as the low density of cars per capita. At present car density (cars per 1000 people) in Russia is around 180, compared to 552 in Germany, 512 in the UK, 389 in the Czech Republic and 328 in Poland. This low car density, coupled with the growth in real incomes and the further liberalization of the credit market, gives every reason to believe that the market estimates are not unrealistic and could indeed be conservative, provided the Russian economy continues to move forward at similar growth rates as in the past 5 years.

The forecasts of the increasing market share of foreign brands are based on the analysis of the competitiveness of the existing local brands. Avtovaz is the only remaining significant player in the passenger car sector, producing just below 800,000 units per year at its site in Togliatti. In December 2007, the new management team of Avtovaz, installed by the government, signed an agreement with Renault regarding its acquisition of a controlling stake of 25 per cent plus one share in Avtovaz. The two companies intend to extend AvtoVaz's model range with new models, share know-how and develop the Lada brand. The terms and conditions for sharing Renault platforms with Avtovaz are however still to be negotiated.

At the moment foreign brands are mostly imported. Those made in Russia come from comparatively small production facilities. Ford has the largest local presence, producing almost 70,000 units, while the Chevy Niva Joint Venture of GM with Avtovaz produces around 60,000 units. However, by 2009 there could be four foreign producers with 100,000+ production facilities (Ford, Renault, VW, and Hyundai/Kia), while by 2015 three producers are expected to reach 300,000+ capacity (Ford, VW, and PSA Peugeot), according to their current announcements in the press. It is also likely that the plans for expansion of the plants of the manufacturers who already have solid plans will be faster than the announcements made.

2. Determinants of Original Equipment Manufacturers' investment decisions

In the ideal world every Original Equipment Manufacturer (OEM) would like to make the choice of plant location, size and manufacturing process on the basis of best practice in efficient production, location of its markets and suppliers, and available infrastructure and labour. The closeness to existing suppliers is particularly important, since the OEMs are dependent on their suppliers for the reliability of delivery, assurances of quality and, increasingly, investments in research and development. The cars resulting from this ideal arrangement would then be shipped in a Built Up (BU) condition, suitably protected against the elements, to both domestic and export destinations.

This is how the automotive industry has been organised since its emergence at the beginning of the last century (see Annex 1 on Development of business strategy of OEMs and their suppliers in historical perspective). As the global car market grew, the OEMs increased capacity, considering all the above factors in the selection of a site for a new efficient plant that satisfied their business strategy for local markets and from where it was also possible to export to other markets.

The changes in the structure of the global automotive industry only occurred as the industry had to adapt to the economic pressures in its export markets due to i) changes in transport costs, ii) labour/material costs, and last but not least iii) custom duties/tariffs/ government restrictions. In addition, OEMs often had to be seen as a local manufacturer and not as a foreign producer, to secure the market. Curiously this situation applies in reverse in central and eastern Europe, including in Russia today, due to the poor reputation of local car manufacturers inherited from the central planning period. This does not mean that the reputation of local manufacturers cannot change – Skoda Auto in the Czech Republic is the most visible example of a local car brand with a poor reputation from the pre-transition period which was turned around and is now rapidly expanding market share in the most demanding car markets in Western Europe, including Germany.

Once the need for new investment is recognized, the review of the options begins. The investment sums are huge and the commitment is for the long term. The knowledge of the new country is always less than one would wish and the comfort feeling plays a greater role than can ever be openly discussed. Indeed, one could argue that the comfort feeling is the single most important determinant of the decision to invest in a particular country, given the amounts of investments (and thus potentially unrecoverable costs) involved.

It should be kept in mind that views on investment locations change and the good choice of yesterday may not be the best choice today. The UK or Belgium are now unlikely candidates for new car manufacturing plants to supply the European market due to their high labour costs and the distance from the fastest growing markets. The choices faced by OEMs today are rather whether to build a new greenfield facility in either Slovakia or Romania. This poses the question “and why not Russia?” To make such a choice, the OEMs decide on their level of comfort feeling about the country, as well as the strength of the business case for a new greenfield plant.

At present, car OEM planning for investment in new production facilities in Europe focus primarily on new EU member states. The ease of communication, membership of the EU, future commitment to the euro and, despite any local problems, the knowledge that local governments are firmly supportive of foreign direct investment (FDI) in the automotive sector gives a great deal of comfort for potential investors in central Europe. Russia, compared to central Europe, does not have the same ease of access to the EU market and OEMs are thus driven by different considerations, with the market size the key factor.

Recent entry of a large number of OEMs to Russia shows that there is sufficient comfort feeling and also a strong enough business case for some car assembly investment. Nevertheless, one needs to ask why are there so many OEMs with small multi-vehicle assembly plants in Russia today and what the implications are. Leaving the issue of investors' comfort aside, would these plants be competitive in the absence of the trade barriers? How likely is it that their suppliers would enter Russia as well? And are there any policies that could be pursued by the authorities to encourage establishment of a viable, internationally competitive automotive industry in Russia?

In many ways we can see history repeating itself in Russia. The tariffs in Russia are relatively low, compared to other emerging markets (see Annex 2, 'Policies used to promote on government policies to promote the automotive sector in emerging markets: lessons for the Russian Federation'). However, they are sufficiently high to protect the local market and, in this case, also to protect local producers, while encouraging the entry of foreign producers with small assembly plants substituting imports. This is primarily due to low margins in the passenger car industry.

The determinants of business strategy for foreign manufacturers considering investments in Russia are not much different from the days of the Ford Model T a century ago. OEMs are essentially deciding whether the Completely Knocked Down (CKD) packing and shipping costs with a lower duty on components plus local assembly costs are lower than shipping a Built Up (BU) vehicle plus a greater duty. Is the difference sufficient to justify an investment?

The answers were sufficiently encouraging to persuade some very modest and hesitant first steps already in the mid-1990s. These steps took the form of Semi Knocked Down (SKD) shipments. SKD means that the vehicle is taken complete and ready for sale from the OEM's final assembly line. The engine, transmission, axle, suspension units and wheels are then removed and packed separately and the painted body with or without seats is protected and packed in a case and shipped. The re-assembly can be done in a very basic low investment garage facility. Even the local content of this assembly work justifies the tariff reduction and gives the OEM some local credibility and experience.

As the market in Russia took off and the first OEM's gained confidence, more producers decided that they could not be left behind and the first investments have grown from a garage to a full CKD assembly plant. These plants, however, still primarily aim only to serve the Russian and CIS markets and are justifiable for tariff and transport reasons.

The demographics in one sense help because the market concentration is in the Western corridor from St Petersburg in the north to the Samara Region in the south and this is where the investments have taken place. However, despite the size of the labour market, potential investors have already started to face constraints of scarce

labour. With Ford, GM and Toyota already present in and around St Petersburg, the labour problems of higher wages and benefit demands extracted by union-led strikes that have crippled Detroit are already beginning to appear in St. Petersburg because of the competition for scarce resources. Even in Samara foreign investors in the automotive sector confront similar difficulties in finding skilled quality trained operatives and bilingual office staff. .

The consequence of a still high country risk perception and scarce labour is that, for those who do invest, the capital outlay is restricted and if possible spread. The plants are low-tech, with low automation and few if any robots, and can therefore produce a small volume of a number of different models to supply the Russian and maybe some of the CIS markets. Most of the components will be imported and the plants will produce a number of models from four different architectures with relatively low volumes for each.

With volumes of less than 20,000 per architecture per year for a plant, there is unlikely to be much scope for suppliers requiring a high critical mass to invest in producing unique components requiring expensive tooling with long lead times. As the plants expand, however, the second and third phases will allow for expansion and the establishment of a supplier park. A first stage would be to attract suppliers of more generic components, such as wheels and tyres, seat manufacturing, exhaust systems, welded body sub assemblies etc., which can be delivered on a just-in-time basis and do not require large investment outlays. However one needs to ask what would be the implications of being based in such a park for potential suppliers? Would other OEMs be comfortable to depend on a supplier based in an industrial park established in a close cooperation with their competitor? Who would be the preferred off-taker in case the supplier is unable to satisfy the demand of several competing OEMs, for example if there is an accident or a strike which restricts production?

3. Determinants of suppliers' investment decisions

Automotive suppliers can be divided roughly into three categories:

- proprietary/generic components such as wheels & tyres, batteries, radios, starter motors
- raw materials such as sheet steel and tubing
- tooled components (unique to the vehicle) such as bumpers, instrument panels, exhaust systems, seats.

Examples from each category illustrate the problems as well as the opportunities of justifying local sourcing and the determinants of a critical mass local production, which differ for each type of components. Let us assume the Russian assembly plant is receiving the vehicle as a 100 per cent set of components in containers that it unpacks and assembles. In an effort to reduce costs it decides to stop importing certain items and obtain them locally in addition to those raw materials such as paint, oils and other fluids, which it is not economical to import.

The list of opportunities starts with the tyres and batteries, which require no OEM investment, are usually easily justifiable on a comparison of the local purchase price vs. the value of the import price, including freight costs, are produced in volume and are largely independent of individual model designs. Providing the OEM's quality requirements can be met, this is the easiest area for local sourcing and indeed has

already experienced significant investments in Russia (e.g., tyre production which has been driven mostly by the replacement market rather than increasing sales of newly-built cars). This is also the area where an increase in the overall volume of cars produced in Russia helps to create the critical mass to attract suppliers regardless of the small number of units of different models produced by individual assembly plants.

It is important to note that the source plant usually does not consider full cost for a particular component in its analysis of local sourcing of components. This is for a number of reasons such as the recovery of its intellectual property charges, interest in keeping volume, the loss of which might increase its own costs etc. Easy non-capital items such as screws, nuts and bolts and some wiring are the next non-significant volume-related candidates.

The more difficult area with regard to localisation of components comes when local tools have to be purchased by the OEM or amortised in the price per piece payments. It should also not be overlooked that the components in the containers are increasingly coming from low-cost, high-volume sources, which a small-volume Russian-based producer, with maybe higher labour costs, could find hard to match. The key question for the investor is whether the volume of that part and the time it is likely to be in production, after tooling completion, is enough to pay for the tool and still provide significant cost savings.

Opportunities for localisation of tooled parts are clearly where the freight cost is high and the tooling relatively simple and quick to install. Examples are the local assembly of seats and exhaust systems with the major tooled and easier to ship sub-components still coming from the source plant. Other examples could be the simpler glass parts. These can be justified on volumes of maybe 10,000 a year per part and suppliers of such parts are already starting to invest in Russia.

At the other end of the scale, an instrument panel or a plastic body bumper with tool costs in the US\$ 1 million plus range and completion times of over a year would be difficult to justify even at volumes of over 100,000 per part. The per part volume would have to be large to justify making a duplicate die set in the hope of offsetting, with maybe lower local labour and steel costs, the unit plus freight and packing costs from the source plant. Localisation of such components is yet not justifiable in the specific case of Russian foreign OEMs with small volume plants (50,000 to 70,000 a year) assembling a variety of models. An increase in the number of such small plants would not help localisation of these suppliers. According to present investment and production plans, it is only over the next few years that a small number of Russian located OEMs (e.g., Ford, GM, Toyota, Renault, VW, and Hyundai/Kia) might find justification to relocate tooled parts requiring more than 100,000 volumes per part, and indeed, it is only now that such suppliers are moving ahead with their investment plans for Russia.

If the local price were significantly lower, e.g., due to lower labour or energy prices, that would not only help the justification but perhaps enable the OEMs to import them for their own use in other assembly plants, as has happened in Spain or the Czech Republic. However, all the attempts by OEMs to source components in Russia have so far not shown either available capacity, quality or a sufficient cost advantage to make this happen (unlike for example in China) and despite low energy costs. An increasing aggregate of the existing and planned assembly plants, whatever their geographical location, which is likely to be in the same in St. Petersburg, Nizhny Novgorod, and the Samara corridor will do little to change this.

The combination of low individual part volumes, low ratings for quality among local suppliers, insufficient cost advantages and the inherent conservatism of the OEMs make investments by tooled components producers a difficult area for progress at the present time. The exceptions include producers of indispensable proprietary components such as Bosch in the proprietary category of fuel injection. Other exceptions in the tooled part category are exhaust systems and seats. The tooling in these cases is relatively minor and the saving is considerable in freight and packaging from the home source. These are however individual opportunities to be pursued by the OEM rather than, as has happened elsewhere, an economic groundswell of independent suppliers begun by the OEMs' entry. This is not only due to still small volumes of individual models but also due to the bureaucratic obstacles that confront attempts by smaller suppliers to set up a facility which can be very discouraging. As a result, smaller component suppliers would realistically only invest in Russia at the invitation of and under the protection of an OEM. This also implies that the recent entry of a large number of foreign manufacturers to Russia increases the probability that one of them would initiate an entry of a supplier of the particular component, demonstrating that it is possible for suppliers of other OEMs.

The point that should be stressed is that the initiative for relocation of component suppliers mostly comes from the OEM, except in the case of proprietary components. The manufacturers of components such as tyres, batteries, spark plugs, and windscreen wipers can act independently of the OEMs because they are able to serve the wider and more profitable replacement market and do not rely only on the new car assembly.

At present there is little demand for Russian sheet steel generated by the foreign OEMs making small volumes of many different models in Russia, although this could change once stamping plants for OEMs with the largest planned volumes invest in the country. Until recently the poor surface quality of sheet metal coil available from the Russian steel mills would have discouraged such investments but there have been considerable improvements in the last few years, which make this perhaps a more hopeful prospect.

Another aspect which needs to be taken into account is that OEMs are also inherently conservative (despite their public pronouncements) with regard to component sourcing. It is often overlooked how dependent OEMs are on their suppliers. Between 70 and 80 per cent of the cost of a vehicle comes from suppliers, although this share is smaller for lower volume trucks and buses, and perhaps half of customer complaints concern the components they supply. The fault may be in the design, for which suppliers are sometimes not directly responsible, but nevertheless they are expected to help with suggesting and implementing the corrections for the present and future models. Consequently the working relationship on a part-by-part basis is very close. In the case of many suppliers to the Japanese OEMs, for example, only the supplier has the drawings and therefore if any local sourcing is to be done, it has to be done with the participation of the main supplier.

As to what type of supplier would enter the Russian market one needs to pay attention to the type of cars produced by OEMs in Russia today. The local assembly equation driven by tariffs always favours the more expensive vehicle over the low cost one. The cost of shipping containers of, say, Sports Utility Vehicle (SUV) components is much the same as shipping those of a cheap small car. Perhaps surprisingly the facilities required and the cost of assembling them is also very similar. The difference

is of course in the import penalty on a BU vehicle². We can therefore see that the OEM's strategy to invest in low-volume, low-automation, highly-flexible multi-volume assembly plants in Russia has its logic. If an OEM's competitor is importing its volume small car BU, including freight and duty, and selling it at a margin on the Russian market, one would have to make a case to assemble a similarly sized competing vehicle from an imported kit and sell it at a better margin to justify the capital investment. The arithmetic at the moment says that this is not the case and it is assumed that this will not change following the accession of Russia to the World Trade Organization (WTO). We are therefore indeed likely to see more foreign high-end products assembled in Russia from Completely Knocked Down (CKD) kits than low-end high-volume products, and as a result their suppliers entering the market first.

4. Conclusion

As discussed above, small-size multi-model plants are not a new idea. They serve a specific purpose, driven by the economic rationale underpinned by tax, tariff, and national attitude justifications. If economic dynamics are favourable, OEMs become sufficiently established, and the market for certain brands grows to a scale justifying localisation. Then a large number of small-volume plants could be replaced by a smaller number of larger, more efficient plants with a significant degree of local input. On current trends the latter may well happen in Russia over the next 5-10 years, including the disappearance of assembly plants of producers unable to scale up sufficiently fast to remain competitive vis-à-vis their larger, more efficient and more successful competitors.

The downside effect can be however equally dramatic, as the case of a closure of a number of EU manufacturing sites (in Amsterdam, Copenhagen, Antwerp, Cork and Lisbon) shows. In the case of Russia the main threat on the near-term horizon is the entry into the WTO and the decline in the already low tariffs, combined with further increases in local labour costs and currency appreciation³ which could make local assembly plants uncompetitive. Another risk faced by OEMs present in Russia today is related to the general economic environment, given the current global macroeconomic volatility and its potential negative impact both on emerging markets, such as Russia, and on commodity prices.

The key issue which may yet alter the potential future developments as described above and which overhangs every automotive investment decision in Russia is what the Chinese will do (see an interesting comparison of automotive sector development and the role of state support in China vs. Russia in Aervitz, 2007). So far China has made largely unregarded sales progress in Russia's eastern regions. The market share of all Chinese vehicles is less than five per cent of the total. The first sales of the Chery models assembled in Russia were 12,000 in 2006. They compete head on with Avtovaz models and provide their strongest price competition. Will they invest in large-scale assembly facilities in Russia? Or will they play to their strengths of probably the world's lowest cost production at their and their suppliers' plants in

² For illustration, if the long-term tariffs on imported BU vehicles are reduced to 10 per cent, then 10 per cent of the cost of a US\$ 20, 000 SUV would justify local assembly but 10 per cent of a US\$ 7,000 small car would almost certainly not. It also follows that the more expensive the vehicle, the more likely it is that the individual volumes will be lower.

³ Cost pressures through real exchange rate appreciation and skills shortages are already an important factor affecting competitiveness of the automotive sector in Russia. There is also an important risk of further substantial appreciation to stem inflationary pressures.

China and then ship across Siberia to satisfy the low-price segments of the market? How would the local policy makers react to such a possibility?

The large number of small-volume car assembly plants set up in Russia already creates a sufficient critical mass to encourage an entry of a large number of specific component suppliers, mostly proprietary/generic components as well as tooled components that do not require long lead times and their cost is low, compared to the shipping costs. There is an equally large number of suppliers of special tooled components, and in turn their suppliers, who require a significant volumes of single model production to enter Russia. It is over the next few years that some of the assembly plants should be moving towards the critical mass which encourages the entry of even expensive tooled components such as stamping plants requiring volumes of over 100,000 parts per year.

This assessment of the ways how OEMs interact with their suppliers and of what drives the investments in the automotive industry implies that the projects most important for the development of a viable automotive industry in Russia are likely to focus on the following categories:

- **Foreign producers with links to Avtovaz/other local car producers**, on the assumption that such links would help to transfer skills and know how, most importantly in management (as has happened in the joint-venture (JV) between GM and Avtovaz regarding the quality in Avtovaz and the relationship with its suppliers). Restructuring of local producers would include spin-offs or JVs of the component businesses owned by the local car producers.
- **OEMs' assembly plants moving towards a critical mass** enabling full-scale localisation —significant volumes of single model/car architecture (over 100,000 units of single model/architecture per year). This is likely to be the result of their expansion over a longer period of time, rather than from the start of production as is the case in key export-oriented car producing countries. The way forward is to select the most advanced foreign OEMs that are likely to increase production above the critical mass for supplier development, although how successful one can be in picking the winners in a competitive market remains to be seen.
- **Suppliers producing generic/ proprietary/and increasingly more expensive tooled components**, justified on the basis of current and planned volumes. Such projects could be both with local and foreign producers and the size of the project could vary, although it is likely that initially such projects would be relatively small and would grow in size only gradually.
- **Logistics and infrastructure for the automotive industry**, including foreign trade related infrastructure in ports and energy/utilities related infrastructure, preferably closely linked to assembly plants and prepared with the cooperation/ participation of OEMs. This could include industrial parks for components suppliers, although one would have to ensure that such industrial parks are not too close to individual OEMs to enable suppliers located there to diversify their customer base.

- **Automotive companies able to utilise the comparative advantage of Russia (cheap energy and natural resources)**, that could produce not only for Russian market but would also have a strong focus on exports (meaning at least 50 per cent of the market would be outside CIS). While this does not seem to be part of the strategy of any of the current automotive investors in Russia, it should be nevertheless considered in all automotive projects as export orientation in such a competitive industry would help to ensure the long-term viability of the sector in Russia.

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Table 1: The forecasted volumes of car production in Russia, as of January 2008⁴

EMs	Localisation of plant	Planned investment	Forecasted passenger car output in Russia (units)						Comments	
			2007	2008	2009	2010	2011	...		2015
Ford	Vsevolozhsk	US \$ 100 m	72,000	72,000	100,000	100,000	150,000		300,000	Planned US\$ 100 m investment will increase annual plant capacity. New Mondeo and Focus for Russian market
GM-Avtovaz	Togliatti		60,000	60,000	60,000	60,000	60,000		90,000	Produces Chevrolet Niva
GM	St Petersburg (Shushary)	US \$ 300 m			70,000	70,000	70,000		70,000	Will produce Chevrolet Captiva and three other Chevrolet and Opel models
Renault-Avtoframos	Moscow	US \$ 150 m	80,000	80,000	100,000	100,000	100,000		160,000	Planned US\$ 150 m investment will enable Renault to double production of the Logan
VW	Kaluga	US \$ 1,500 m		66,000	115,000	115,000	150,000		300,000	Will produce the Skoda Octavia, and a vehicle developed especially for the Russian market
Toyota	St Petersburg	US \$ 200 m		16,000	16,000	50,000	50,000		200,000	Will be assembling the Camry model
Nissan	St Petersburg	US \$ 200 m			50,000	50,000	50,000		50,000	Will be assembling an SUV and a Sedan, and a third vehicle could come on line
PSA Peugeot	Kaluga	US \$ 360 m				100,000	100,000		300,000	Investment announced in December 2007. Little information available at the moment.
Hyundai	St Petersburg	US \$ 400 m			100,000	100,000	100,000		100,000	Will produce C-segment cars specially adapted to the Russian auto market
Suzuki	St Petersburg	US \$ 125 m			30,000	30,000	30,000		30,000	Suzuki to substitute imported cars assembled in Hungary
Geely	Naberezhnye Chelny		30,000	30,000	30,000	30,000	30,000		30,000	KrASZ assembles Geely in Ukraine
Great Wall	Naberezhnye Chelny	US \$ 100 m			50,000	50,000	50,000		50,000	Construction of the plant is halted for the moment due to regulatory problems
UAZ-Severstal-Avto	Naberezhnye Chelny		75,000	75,000	75,000	150,000	150,000		150,000	Assembles cars for Fiat and SsangYong
Avtotor	Kaluga		40,000	40,000	40,000	100,000	100,000		150,000	Avtotor assembles cars for Chery and Kia
Avtovaz	Togliatti		800,000	800,000	800,000	800,000	800,000		800,000	Produces the Lada
Gaz	Nizhny Novgorod		210,000	210,000	330,000	400,000	400,000		400,000	Produces the mostly Gazelle but also the Volga and a new rebadged Sebring
Sok Group	Izhevsk		65,000	110,000	110,000	110,000	110,000		220,000	Assembles cars for Kia
Tagaz	Rostov		55,000	55,000	55,000	55,000	55,000		55,000	Assembles cars for Hyundai. Will assemble cars for SsangYong next year
TOTAL			1,477,000	1,604,000	2,121,000	2,460,000	2,545,000		3,485,000	

⁴ This information was compiled from public sources and does not reflect the EBRD views on the investment plans of various car manufacturers.

Annex 1

Development of business strategy of Original Equipment Manufacturers (OEMs) and their suppliers in historical perspectives

One of the first examples of the optimal expansion strategy is the Ford Model T. Originally made only in Detroit and shipped across the world, demand outstripped supply and large plants were set up in Canada, the UK and Germany. Originally these plants were importing components from the original plant in the USA and assembling them. Increasingly, these plants were making or buying components themselves and exporting the BU product to other British Imperial and European countries. The European plants became so independent that they started designing and producing their own products.

The European countries, in the first half of the 20th century, had considerable tariff barriers against each other and insisted on local assembly so vehicles were shipped in a Completely Knocked Down (CKD) condition from the source plants in the UK and Germany. This CKD could take many forms but usually the engines, transmissions, axles, electrical equipment, brakes etc would be shipped complete. The body sheet metal pressings in various states of sub assembly would be unpainted and such items as seats might just be shipped as metal frames for local cutting and sewing of the fabric and upholstery. There was, of course, a saving in the transport costs, as boxes were cheaper to move than cars, but the packing of the components at the source plant and the cost of painting and assembling them in a small, low-capital investment assembly plant would never have been justifiable unless it had been cheaper than paying the tariff or sometimes the only way of gaining access to a particular market. All this became brutally clear with the arrival of the Common Market in the second half of the 20th century. As the trade barriers fell, the small, multi-vehicle CKD assembly plants with less than 100,000 units per year closed all over Europe. Cities such as Amsterdam, Copenhagen, Antwerp, Cork and Lisbon to name a few. For most plants, no other use could be found for them or for their employees.

Spain provides an interesting example of successful government policies to support viable domestic automotive industry. Until the 1970s Spain under Franco was virtually closed to car imports. The major OEM was Seat, producing Fiat models, Ebro, making old model Ford trucks, and a few other very low-volume CKD plants such as those established by Citroen and Austin/Morris. The Government decided to encourage a major automotive investment but the conditions were strict. Most importantly 80 per cent of the production by value had to be exported. The rationale for this requirement was partly to ensure macroeconomic stability through the impact of this requirement on the current account and partly to encourage local sourcing by ensuring large local demand for components.

The first licence under these terms was granted to Ford to build a 250,000-unit-per-year assembly plant for the Fiesta model, including investments in a stamping plant for the body parts and an equal capacity engine, and transmission plants. The whole complex was launched in 1976 and supported by over 200 suppliers from the UK, Germany and the USA, who either invested separately or formed joint ventures with existing Spanish suppliers. GM followed while Volkswagen took over and transformed Seat.

The differences from Russia are startling but the reasons are simple. The Spanish government knew what it wanted and made the OEMs feel confident and comfortable. The OEMs got a low-cost manufacturing base for their increased capacity requirements, a plentiful labour force, export incentives and access to an otherwise closed market. At the beginning the suppliers had only one customer, Ford, but a significant daily volume of 1000 plus of one model/engine/transmission, ensuring significant economies of scale, in addition to the protected market and low labour costs. The suppliers had to meet US/German quality standards due to the focus on exports and everyone benefited when the GM and VW volumes arrived to encourage yet more investment.

Similar comparisons, if not so dramatic, can be made with the Japanese investments in England in the 1980s and the more recent large capacity plants in the Czech Republic, Poland, Slovakia and Hungary. The reasons for their success are much the same: national and local government support, suitability of the site location for inward and outbound logistics, a plentiful and trainable supply of personnel for management and operatives who are likely to stay. Each site has its own critical mass, usually producing only one but sometimes two closely related models. This makes possible local sourcing of components, enabling suppliers to make significant investments on the strength of existing off-takes. All of these investments have all benefited their host countries but this was not the prime intention for car manufacturers. What also does not happen today is any substantial transfer to the host country of the OEM's Research and Development (R&D) for an independent product development, although some elements of research and development activities are increasingly also transferred to some of the host countries.

The reasons for the choice of country are probably slightly different in each individual case. Even within the framework of the strong rules on subsidies of the European Union (EU), countries find ways of bidding to make themselves attractive to investors in large greenfield developments, as shown by the fierce competition among new EU members in central Europe. Above all other considerations, however, is the OEMs' need for capacity to supply its successful product from a low-cost base closer to its new and growing markets.

There have been previous attempts to invite OEMs to Russia going back to the mid-1980s, the early days of Perestroika. A Joint Venture was proposed in 1986 between GAZ and Ford to replace the ageing Volga car (still being produced today) with the Ford Scorpio and its new engine. The new assembly plant was to be located in the area of the then closed city of Gorki, now Nizhny Novgorod. The proposal was not dissimilar to the Spanish model quoted above, with a heavy concentration on exports to what were then hard currency countries. The scheme did not progress largely because the capital investment required grew beyond what could be raised, let alone repaid. The concerns over the quality of the export vehicles, security (in the sense of the safety of property and person) and the unrealistic demands by the authorities on an increasingly unwilling Ford management brought the comfort feeling to zero.

Ford had in fact been the donor of the original truck model to GAZ and Detroit engineers had laid out the plant on a personal initiative from Mr. Ford in 1932. In this case, history was not to repeat itself but there were two indirect consequences which helped GAZ in its future business development. GAZ developed the Gazelle, a light commercial vehicle (LCV) with an uncanny resemblance to the Ford Transit, based initially, as was the original Transit, on their own available passenger car

engines/transmissions/axles. In addition GAZ' engine supplier developed a 4-cylinder fuel injected petrol engine similar to the one which would have been built in the original project. It is hard to conceive of GAZ survival through the 90s and up to the present day without these products. One of the potential negative consequences is that perhaps this early failure discouraged other foreign investors and the political and currency uncertainties made everyone wait and see. To date no foreign producer has initiated another export-led investment in the automotive sector in Russia, following this early attempt of Ford more than 20 years ago.

The market for basic low-cost family transportation that was filled for 35 years by the Lada from Avtovaz, is still there. Avtovaz attempts to replace it with the 2010 and the Kalina models have not been the anticipated success. Most of the foreign brands supply this market with BU imports and only a few are assembled in Russia /CIS, such as the Koreans Kia and Hyundai and Renault with the Logan model launched to replace the Dacia in Romania and now being assembled in Moscow. It is certainly possible that the Renault acquisition of 25 per cent of Avtovaz perhaps points the way to a Logan successor to be produced from Avtovaz' enormous (800,000 a year) and partly updated facilities in Togliatti. Further up the model scale is the purchase by GAZ of the tooling for the previous Chrysler Sebring model, to be marketed in Russia as the Siber. Initially components will come from North America but, depending on its success, there must also be many good opportunities for localisation.

Annex 2

Policies used to promote the automotive sector in emerging markets: Lessons for the Russian Federation

The purpose of this annex is to provide an overview of policies used by the Russian government to support the expansion of the Russian automotive sector, and compare them to approaches taken in other emerging markets. The choice of policies is particularly important now that the automotive sector in Russia has begun attracting significant investments from international automotive companies, and domestic car producers and their suppliers are restructuring their operations in response. Domestic Russian producers have rapidly lost market share, though in a growing market. Government policies will influence both the international competitiveness of the Russian car sector and market structure for years to come.

Comparisons in the note draw mainly on evidence from large non-transition emerging markets, such as Brazil, China, India, Indonesia, Mexico, and South Korea, as well as from central and eastern European transition countries with successfully expanding automotive industries (Czech Republic, Hungary, Poland, Romania and the Slovak Republic). A key difference between these two groups of countries is the fact that the automotive sector in the large non-transition emerging markets focused initially on the domestic market, while the automotive investments in medium-sized central European countries targeted export markets.

The current assumption, which is likely to be behind the policy choices of the Russian authorities, is that the Russian automotive sector will follow the path of the large non-transition emerging markets, with producers focusing at least initially on serving the domestic market.

Trade policies

Import barriers: Trade policy is doubtless the single most powerful instrument of industrial policy available to governments. In emerging markets and transition economies, the imposition of significant import barriers (including import tariffs, outright bans, and complex non-tariff barriers, such as certification of standards) has virtually always had two main purposes:

- **Infant industry argument:** to protect the domestic market from international competition during the initial development or restructuring of the local automotive sector. Import barriers can provide valuable breathing space during start-up or restructuring, but the international experience is littered with examples of infant industries that never grow up and develop into expensive albatrosses. Unless the import barriers are credibly limited in time, it is unlikely that they can in themselves ensure international competitiveness of the protected automotive sector in the longer run.
- **Attracting FDI:** to provide an incentive for foreign manufacturers to produce locally rather than exporting to Russia (“tariff hopping”). The imposition of import barriers has played an important role during negotiations on the establishment of new greenfield plants by international automotive companies.

This, however, does not necessarily imply that import barriers were crucial to ensuring the viability of these operations.

Table 2: MFN Import Tariffs in 2005, in % (HS-8703 and HS-8708)

Relatively liberal countries			Relatively restrictive countries		
	Cars	Parts		Cars	Parts
Brazil	35	10-20	India	105	30
Chile	6	6	Malaysia	60-150	12-30
China	34	11-17	Thailand	62-80	10-42
Indonesia	40	15			
Mexico	20-30	14-18			
Russia	25	0-15			
South Africa	31	8-20			

Usually, imports of new cars are treated differently from used cars. The latter tend to be a more immediate competitive threat to emerging car producers who usually seek to enter car markets at the low-quality/low-cost end. Quite apart from protecting local industries, import barriers for used cars may reflect safety and environmental concerns.

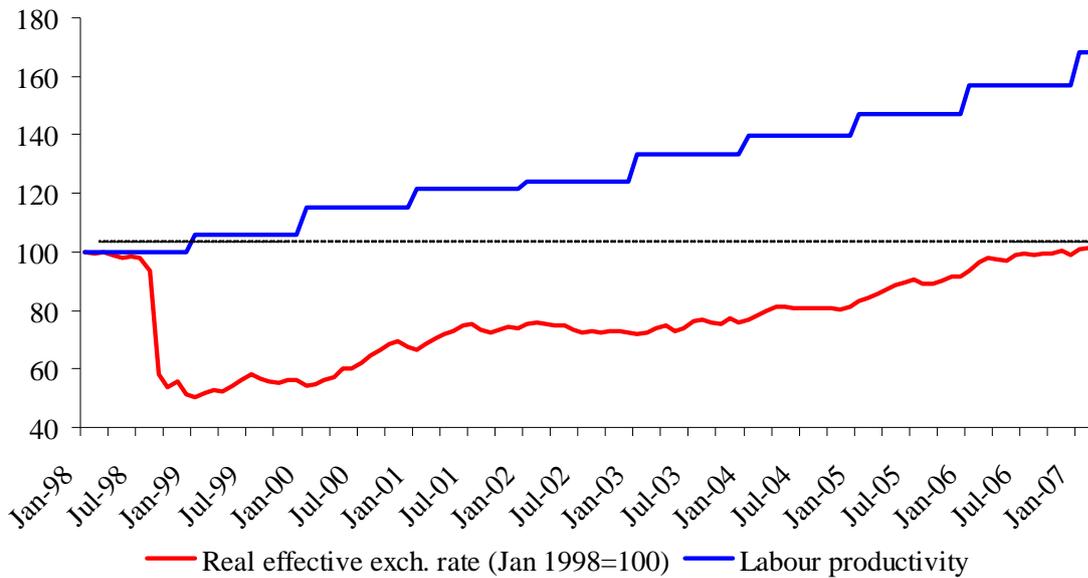
- **New cars:** At early stages of their car sector development, Indonesia, Thailand, China, India and Brazil all had import tariffs of up to several hundred percent, as well as quantitative restrictions. Often, the effect was (and still is) compounded by the application of domestic indirect taxes on the tariff-inclusive import price. Tariff barriers in Korea were far lower, but the country made extensive use of non-tariff barriers, such as discriminatory taxes, red tape related to certification, restrictions on advertising, etc. Import tariffs in most countries have been reduced in recent years, but are still generally higher than in Russia (see table above).⁵⁶
- **Used cars:** During the early stages of development of their car sectors (until the first half of the 1990s but in some cases up to the present day), Brazil, China, Chile, and Mexico banned imports of used cars altogether, while India and Thailand imposed tariffs of over 100 per cent. The central European transition countries also imposed strict limits on imports of used cars over a certain age (Czech Republic), or progressively increased tariffs according to car age (Poland).

Compared with other emerging markets, Russian tariff protection is relatively low at 25 per cent. Based on WTO accession commitments, the import tariff for new passenger cars would be further lowered to 15 per cent, following a 7-year transition period. Tariffs on used cars, differentiated by engine size and age, have recently been raised and are now prohibitively high for vehicles more than 5 years old.

⁵ In Korea, the discriminatory tax regime for foreign car dealers or manufacturers was replaced by the national tax scheme for both domestic and foreign vehicles, which depends on the size of engine cylinder and thus does not act as an import barrier anymore.

⁶ For several of the countries in the table, such as Mexico and Thailand, the MFN tariff exaggerates the level of protection due to bilateral trade agreements covering a significant share of trade.

Real exchange rate and labour productivity



Source: Rosstat and IIF.

Incentives for import of components: A standard policy to promote domestic car production in all emerging markets has been to set import barriers for components — particularly those not produced domestically — well below those for fully assembled vehicles. The combination of high finished goods tariffs and low tariffs on inputs tends to raise “effective protection”, i.e., profits and possibly wages, disproportionately. In Russia a major legislative bill enacted in 2005 encourages the assembly of vehicles by providing low (3-5 per cent) or no import duties for a number of components used exclusively for vehicle manufacturing, including zero duty on components not produced in Russia. The preferential rate applies to manufacturers with capacity above 25,000 units per year and is subject to agreement with the Russian Ministry of Economic Development and Trade. The incentives for imports of supplies were recently extended to car component manufacturers, due to the structure of the industry which has several tiers of suppliers.

Real exchange rate: Countries in east Asia have traditionally sought to maintain relatively depreciated exchange rates as a means of stimulating exports. Low real exchange rates also act as an effective barrier to imports (or, equivalently, they provide a labour cost advantage to local producers). In the years following the financial crisis of 1998 — which gave a strong stimulus to domestic production — Russia’s real exchange rate has, however, been allowed to strengthen considerably, partly due to the impact of inflows related to natural resources exports. On average, growth in labour productivity has been able to keep pace with the exchange rate appreciation (see chart below). Still, and while the “correct” level of the exchange rate may be subject to debate, it is clear that Russian car producers do not benefit from a powerful source of competitiveness that has been available to their peers in the Asian emerging markets.

Location policies

Special economic zones (SEZ): Some countries have used special economic zones in order to attract investments to specific regions, usually those with high unemployment. SEZs tend to offer lower taxation, less red tape and certain legal protections. However, such an approach discriminates against existing companies, both local and foreign-owned, that would generally not be able to access all the benefits of SEZs unless they relocate to the eligible location. The international experience with SEZs is mixed as some countries established SEZs in regions which were far from major population centres and did not have a sufficiently skilled labour force and necessary transport infrastructure. The most successful SEZs were those established in areas targeted by investors even in the absence of special incentives, i.e., SEZs which followed investors rather than the other way round.

In Russia, the special economic zones (SEZ) legislation enacted in late 2005 further encourages investments by foreign automotive companies. Companies that invest in SEZs benefit from certain tax allowances, including the abolishment of asset and land taxes, and protection against changes in the tax regime. It is still too early to judge the success of this legislation; however, as drafted, the current law is discriminatory, therefore open to rent-seeking and possibly less effective than it could be.

Industrial zones: An alternative to a SEZ is an industrial zone, usually created through zoning decisions and infrastructure investments by local authorities. An advantage of industrial zones is that they tend to have far greater buy-in from the local authorities, which can be an important success factor. A disadvantage is the inability of most local authorities to provide significant tax incentives or subsidies, and the resulting complexity of coordination with the central government.

In Russia, industrial zones providing necessary zoning decisions, resolved property issues and ready infrastructure largely do not exist. However, some regional administrations, such as St. Petersburg/Leningrad Region (Toyota, GM, Nissan) and Kaluga (VW), provide extensive support for large investors (over US\$ 100 million). As a result smaller investors, including car component manufacturers, may need to resort to the purchase of brownfield sites or establishment of joint ventures. While this can bring benefits to the economy (restructuring, skills transfer), it also discourages investors due to the higher costs typically associated with brownfield site rehabilitation, the potential for unresolved environmental issues, and the need to accommodate the interests of local partners in the joint venture.

Tax incentives and subsidies

Tax incentives: An alternative to tax allowances for companies in SEZs is the provision of tax incentives for all eligible investors, usually in the form of tax credits, depreciation allowances, tax discounts or tax holidays for a specific number of years. Unlike SEZs, tax incentives can be structured to be less distortionary by allowing companies to decide on the location of their investments and by enabling local companies to access tax incentives as well. The eligibility criteria can be fine-tuned, e.g. by limiting tax incentives only to anchor investors with potentially significant linkages to local companies.⁷

⁷ Interestingly, a study by one of the tax consultancies has found that the central European transition countries had similar effective tax rates for major investors in the automotive industry, between 10 and

Surveys show that, although tax incentives are among the criteria considered by investors in making location decisions, they are rarely critical when investment decisions are driven by access to the domestic market.

In Russia, local administrations can provide specific tax exemptions such as property tax and profit tax exemptions, but there are no non-discriminatory tax incentives at the federal level. The Russian tax system for large automotive investors, with its low flat tax rate, is competitive in international comparison, and further incentives may be wasted. The major concern of investors relates to uncertainty regarding changes in the tax regime and the operation of the tax administration, particularly in relation to the social security tax.

Subsidies for infrastructure and transport upgrades: The issue of land has been critical for some recent investments in central European transition countries given the scarcity of land for industrial projects near major conurbations and dispersed private ownership of land. A significant bottleneck in many other emerging markets is inadequate transport infrastructure which requires significant investments. Public investments in transport networks have often been an important part of the state support for the development of the local automotive industry. Some governments provide specific investment incentives for automotive producers which include land for a symbolic price and connections to infrastructure networks (including transport infrastructure to connect production sites with key markets and to connect suppliers with final manufacturers).

In Russia, access to land with the necessary infrastructure connections (e.g., an electricity connection costs US\$ 1000 per kw) has not been an issue for existing large car producers as well as large foreign investors who have benefited from significant discounts on land prices. However, it may be a critical issue in the decision of smaller automotive investors, particularly small producers of niche automotive components.

Subsidies for training and development: The availability of skilled labour has been a significant factor in expanding automotive sectors. Countries with indigenous experience in car manufacturing have a significant advantage. The Russian Federation has had a large automotive sector for many years, so in principle the blue collar skill base and related educational infrastructure is in place. However, significant investment in training of skilled labour as well as mid-level management in modern automotive practices relying on just-in-time delivery and a focus on quality seems often to be necessary. Many countries — both emerging and developed markets — have supported large investors in the automotive sector with training grants and by developing linkages between the local educational system and automotive companies. In Russia as in central Europe, the latter has proven to be the more effective strategy.

Linkages to local companies

Minimum local content: Domestic content requirements on investments have been a classic tool to encourage deepening of the productive base in the automotive sector (e.g., China had a domestic content requirement of up to 80 per cent, Spain had a domestic content requirement of 60 per cent which was phased out only gradually following its EU accession). Domestic content requirements might help to establish

11 per cent, despite wide variation in the provision of tax incentives (flat tax in Slovakia, SEZs in Poland, tax allowances for eligible investors in the Czech Republic).

initial relationship between foreign investors and local component suppliers as well as encourage component suppliers to invest in the country. However, in the long term the sustainability of such linkages depends on the ability of local suppliers to satisfy requirements of final producers and the experience to date is mixed. The obligation to use a minimum share of domestic components has often proven to be a significant constraint on international competitiveness.

At present there is an obligation for foreign car producers in Russia to use partly domestic components, but as part of its WTO accession negotiations Russia has agreed to remove this restriction after a transition period.

Promotion of linkages to local companies: The low import duties on components reduce the pressure on car manufacturers to rely on local suppliers. However, time limits on the duty exemptions, cost pressures and the need for just-in-time deliveries to minimise costs, the distances involved in importing components, and delays on borders are likely to encourage component manufacturers to invest in Russia, irrespective of the presence or absence of such incentives. Some governments in emerging markets have actively encouraged linkages between foreign car producers and local suppliers through specific promotion and marketing activities.