

The Uzbekistan Auto Industry: Sources of Growth Outside the Sector

Uzbekistan is pursuing an active industrial policy designed to provide sustainable, high rates of economic growth and a shift of focus from the production of raw materials to finished products with higher added value. The industrial policy involves the selection of priority sectors whose development can generate not only a direct effect by increasing production and creating jobs but also a multiplier effect. The latter is derived from the fact that the sector's products are used by other sectors or that the sector increases demand for the products of other sectors. In other words, priority should be given to the sectors that are capable of creating and extending the multiplier effects to the whole economy.

Based on these criteria, the priority sectors in Uzbekistan are electric power, the chemical and petrochemical industries, oil refining, machine building and metalworking, the auto industry, transport services, oil production, nonferrous metallurgy and construction. These industries are in the right-hand yellow quadrant above and to the right of the medians (Fig. 1)¹.

The sectors must become the primary reference points for industrial policy and the drivers of sustainable economic growth of at least 8% per year.

Now it is important to determine how most effectively to stimulate the development of the selected priority industries as drivers. It is worth noting here that each priority sector has its own locomotives, its own engines, that maximize their development. The calculations done during the study helped to identify these locomotives for each priority sector. They may be seen in the right-hand yellow quadrant in the diagrams of Fig. 2.

According to the results, the driving sectors for virtually all of the key sectors are the chemical industry, machine building and the auto industry (Fig. 2), whose multiplier effects stand out in comparison to the other sectors. Out of these three sectors, however, the auto industry is best suited for the role of "engine" of the priority sectors. This conclusion is derived from the following factors:

1. Despite the fact that each of these sectors has goods in which Uzbekistan has a comparative advantage², among all these goods automobiles have the greatest technological

sophistication (Fig. 3). The high degree of technological sophistication means that, all other factors being equal, this industry makes a bigger contribution to the processes of structural transformation than others do.

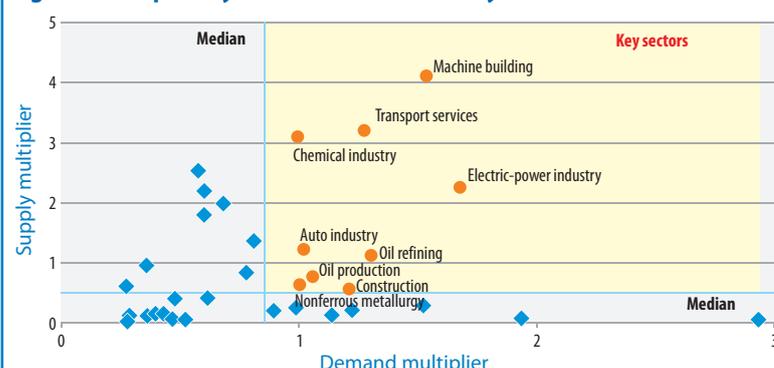
2. The share of automobiles in total exports is also significantly greater than the share of goods from the chemical or machine building industry in which Uzbekistan has a comparative advantage (Fig. 3). Having established its own niche in export markets, the industry is forming a market inside the country for other sectors that can manufacture components and materials for auto production. Accordingly, the industry's growth generates growth in the markets for industrial goods within the country.

Therefore automaking could become an effective driver of growth for the key sectors: oil refining, the chemical industry, the energy industry, machine building and metalworking, construction, the transport sector and nonferrous metallurgy.

The strategic importance of the auto industry is based not so much on direct as on indirect multiplier effects³ that promote economic growth and structural reforms.

The fact that the auto industry's influence on the development of other sectors in foreign countries is much greater than in Uzbekistan shows that the appropriate potential exists for this purpose. The potential increase in the auto industry's effect on the development of the priority sectors is indicated by the arrows in Fig. 2. For example, the demand multiplier for machine building goods may increase more than tenfold; in oil refining, fivefold; in the chemical industry, more than threefold;

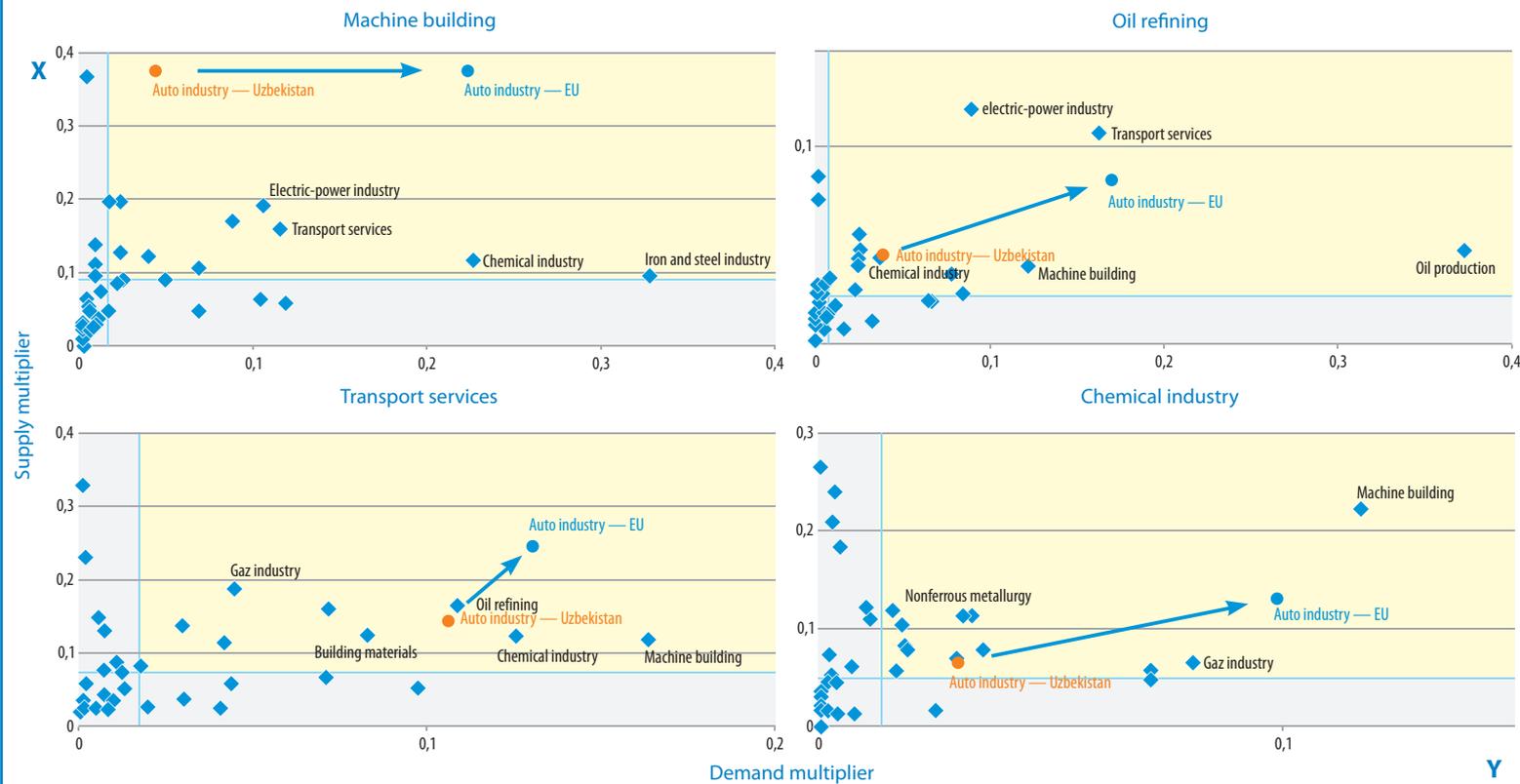
Figure 1. The priority role of the auto industry is based on the benefits that the sector generates for the economy



The diagram shows values for the demand multiplier and the supply multiplier for all sectors of the economy. The farther right sectors are on the graphic, the more demand they create for goods in other sectors. The higher the sectors are in the graphic, the greater the supply they generate for other sectors. Through their influence on demand and supply, the key sectors have a major impact on production growth in other sectors of the economy. The sectors that are highest and farthest to the right are priority sectors – drivers of the country's economic development. In the diagram key industries (top-priority sectors) are highlighted in red and are in the right-hand yellow quadrant

Figure 2. The potential multiplier effect of the auto industry has yet to be fully realized

(Arrows indicate the distances between the multiplier effects in Uzbekistan and the EU countries (X-axis: supply multiplier; Y-axis: demand multiplier))



Qualitative changes in the auto industry alone can produce equally significant qualitative changes in other sectors that are key for Uzbekistan: machine building, oil refining, transport and the chemical industry.

The higher the sector, the more products it consumes from the sector in question. The farther right, the more it generates increased demand for products in that sector.

in transport services, by 20-25%. The supply multiplier may increase by 120% in oil refining; by 150% in transport services; and by nearly threefold in the chemical industry. A comparable increase in demand and consumption will also occur in other sectors, such as R&D and vocational education.

Given these facts, the main objective of industrial policy is to activate this potential and transform the auto industry into a driver of growth for the priority sectors and, therefore, Uzbekistan's entire economy. Uzbekistan has already taken the first step to achieve this objective. At this stage the auto industry has managed to become a driver of growth for enterprises inside the automaking cluster. For example, the auto industry complex today has more than 200 localizing enterprises, has set up processes for more than 260 new types of components, and the level of localization exceeds 50% for new models and 80% for the Nexia and Matiz models. For all of the pluses, its main deficiency is that [the entire benefit is confined to the automaking complex](#) and is not providing the necessary impetus for the development of other sectors.

What is of interest for long-term growth is [the effect that the auto industry can provide and is providing for other sectors](#). The boundaries of the sector's future growth are expanding, and the sector itself is beginning to play a more substantial role. Its development is beginning to transmit a powerful impetus to the priority sectors of industry and, as a result, to the rest of the economy. Significant demand is developing for more skilled labor, which is bringing about changes in the system of vocational education. This is also where the foundations

are being laid for the independent development of new production facilities for semifinished industrial products.

In order to fully unleash the existing potential, the following measures must be taken:

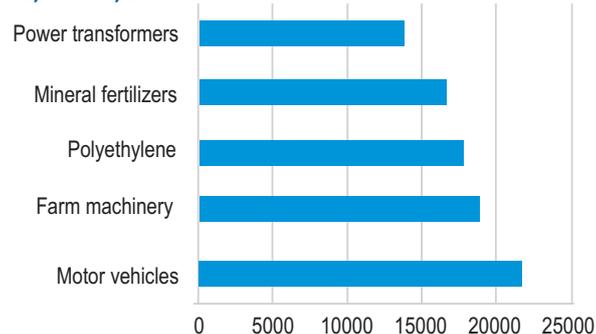
1. The **critical mass of enterprises**, and hence production volume, must be increased in the auto industry complex. Based on the targets for development of the key sectors in the economy up to 2020, the formation of such a critical mass requires at least a 30% increase in production by the auto complex (the auto industry and satellite enterprises) by 2020. In the process, the expansion of production capacities should be accompanied by measures to make production significantly more competitive. Major institutional changes are needed to develop real competition in the sector.

2. On a parallel track, additional efforts must be made to **develop intersectoral cooperation** between the auto industry and other priority sectors.

Specifically:

- One of the main strategic areas in the metals industry is the development of production facilities for iron and aluminum castings, which may be used to manufacture intermediate goods for the production of engines, chassis and, in the future, braking-system components;
- The machine building industry must establish within the country the production of high-tech modules and components, e.g. ABS and EBD systems, gearboxes and braking-system and steering-system components;

Figure 3. A high level of technological sophistication means that, all other factors being equal, this sector makes a bigger contribution to the processes of structural transformation than others, PRODY, USD⁴



- An important area in the glass industry is the construction of a plant to manufacture flat sheet glass, which is widely used in the auto industry;
- A promising area in the chemical industry is the manufacture of polypropylene, which has broad applications in the auto industry. Tire production should be localized for the industrial-rubber sector.

Greater cooperation with manufacturers of components and materials for the auto industry will become the basis for increasing indirect benefits and the multiplier coefficient.

3. In order to successfully confront current and future threats, it is essential to step up the **localization of production** of high-tech modules and components for motor vehicles, diversify the participation of transnational corporations in added-value chains and significantly expand both the assortment and geography of exports. On the one hand, the benefit from investments in auto-assembly production can be realized only if this new sector develops a demand for the products of Uzbek enterprises. On the other, the production of spare parts, modules and pre-assembled units is less susceptible to changes in specific markets.

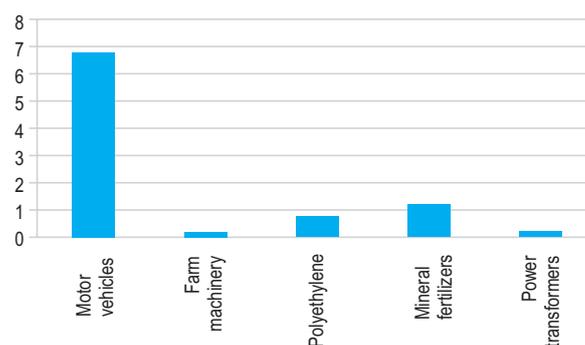
4. **The development of Uzbekistan's own engineering and R&D capability** is an essential condition for realizing the potential of intersectoral cooperation. The R&D sector should initially be developed at the laboratory attached to the local branch of Turin Polytechnic University, which must be encouraged to realize the potential of R&D not only for the automobile complex but in other, allied sectors as well.

5. Achieving the objective of increasing the indirect benefits from the automaking sector also requires reform of the administrative system in the industry. Specifically, the current model, in which the majority of auto-complex enterprises are subsidiaries of the auto industry, does not create sufficient incentives for these enterprises to introduce innovations and expand and diversify their products. In order to create the necessary incentives and, therefore, favorable conditions for the development of allied sectors, a system should be created in which these enterprises will have a large measure of autonomy and the auto industry will be able to choose its contractors (e.g. on the basis of competitive bidding).

Implementation of these measures:

- will help ensure the sustainability of high rates of growth – at least 8% a year; more intensive processing of local raw materials, the generation of demand for products of allied sectors and the concomitant development and expansion

Figure 4. Having established its own niche in export markets, the industry is forming a market inside the country for other sectors, %



- of key sectors as drivers will become an important factor in the structural transformation of the economy;
- involves the development of production facilities in various parts of the country. Hence the development of the auto industry will promote more uniform spatial development and a reduction of regional imbalances;
- will contribute to the creation of productive jobs, to an improvement in the quality of human capital and to an acceleration of the processes of social transformation, considering that the key sectors are mostly processing industries;
- will contribute to the diversification of the country's economy, thereby creating the foundations for long-term sustainability and stability.

¹ The data in the first quadrant of the input-output matrix for Uzbekistan that is used to calculate the multipliers includes import data. Data that excludes imports could provide a more accurate picture.

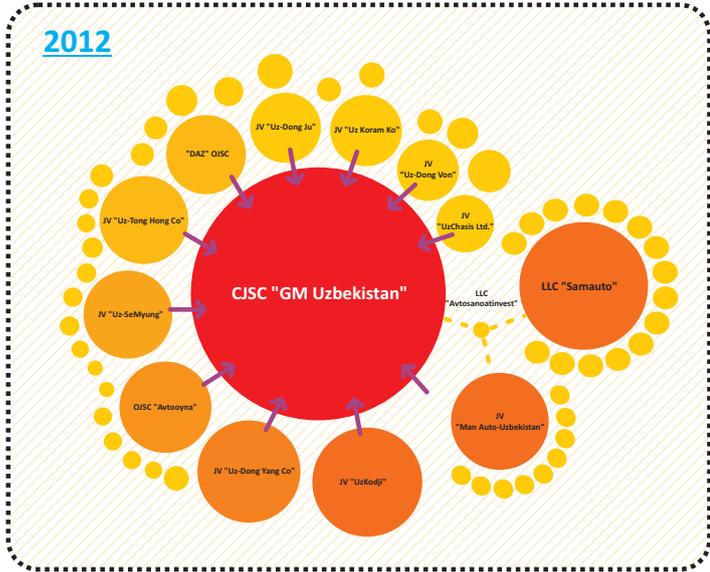
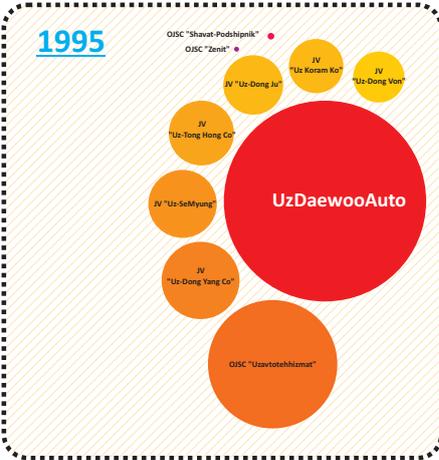
² The following have a comparative advantage: in the auto industry, motor vehicles; in the chemical industry, polyethylene and mineral fertilizers; in machine building, farm machinery and power transformers. .

³ The multiplier for the auto industry shows how much production increases in other sectors if production in the auto industry increases by UZS 1.

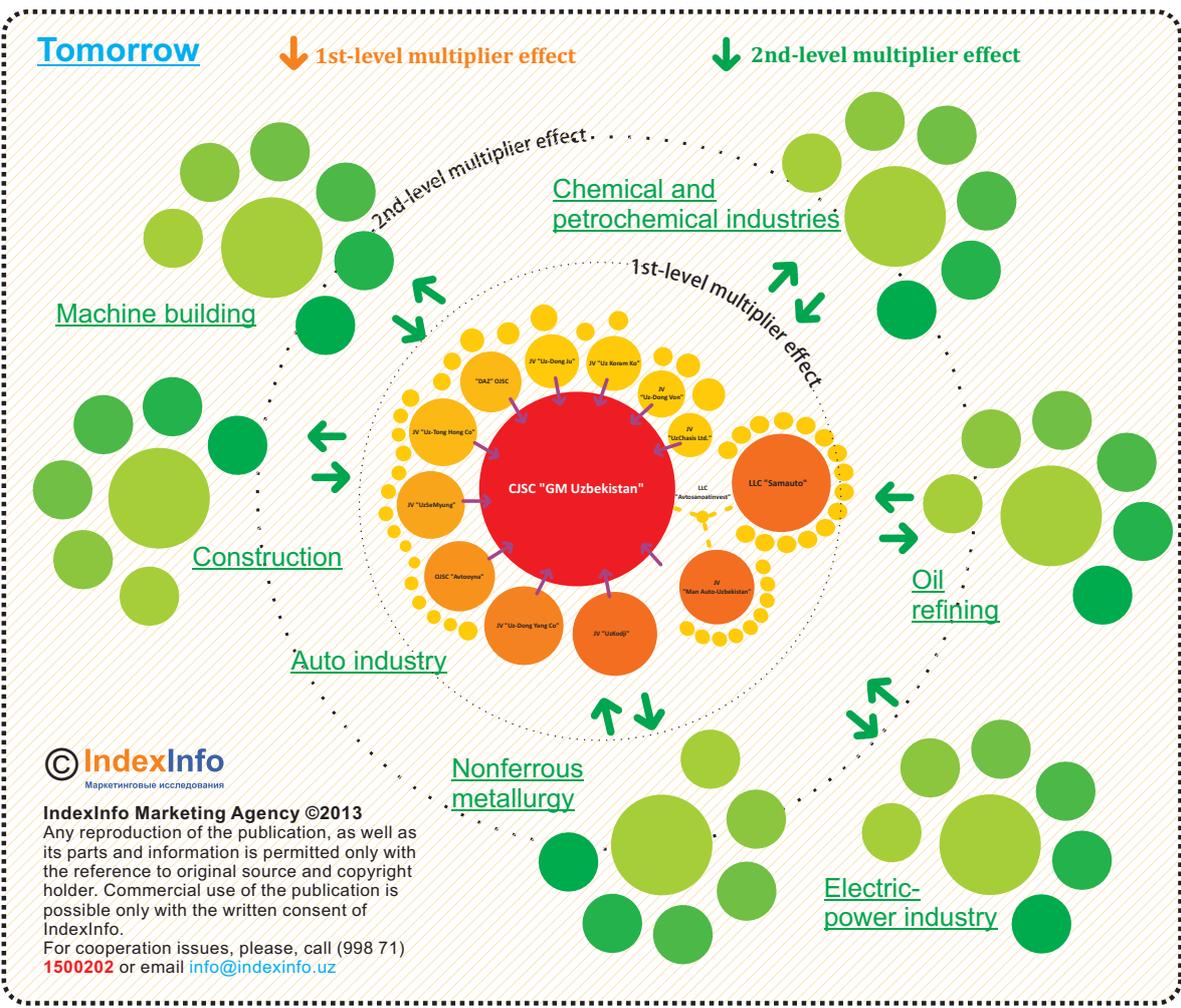
⁴ PRODY is an index of the technological sophistication of a good, calculated as the weighted average real income per capita of countries exporting that good with a comparative advantage. The higher the index, the greater the technological sophistication, since this means that the good is exported by countries that have a high per capita income.

Figure 5. What is important in the long term is the effect that the auto industry will provide for other sectors

The auto industry is the driving force for the development of the priority sectors



The future



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