



Business Opportunities in the Eurasian Market— Turkey's Automobile and Parts Industry

1. Basic Overview of Turkey, the Converging Point of Europe and Asia

Turkey is a country overlapping Europe and Asia. Since most of its territory is located in Asia, Turkey is geographically considered as a part of Asia. It is rich in mineral resources, mainly boron, chromium, copper, iron, bauxite and coal, etc. The reserves of boron trioxide and chromium ore are among the best in the world. In economic development, Turkey's agriculture is well developed and its food supply is sufficient domestically, with a small portion exported. It has a good foundation for industry development. Its primary industries include textiles, food processing, energy, chemicals, steel, cement, and automobiles. It mainly exports textiles, processed food, cotton yarn, leather products, chemicals, mineral products, steel, automobiles, household appliances and machinery.

Turkey borders Western Europe (automobile production base) and Eastern Europe (consumers market) to the north, and to the south borders the Middle East and African countries known as the world's luxury vehicle consumers markets, to the west borders Western Asian and Southern Asian markets such as Iran, Pakistan, and India, and to the east borders Russia located across the Black Sea with great potential of automobile consumption. Turkey is at the intersection in the vast markets overlapping Europe and Asia.

2. Overview of Turkey's Automobile and Automotive Components Industry

The development of Turkey's automobile industry began in the mid-1990s. At that time, it mainly relied on technology and investment from Europe and the United States. As time went by, Turkey began to develop its local automobile manufacturing industry, and some independent brands emerged, such as Tofa and OYAK-Renault, Turkey's famous leading automobile manufacturers. These companies not only provide automobiles for the Turkish domestic market, but also export to Europe and the Middle East, gradually rising to prominence in the world market.

The distinctive feature of the Turkish automobile industry is diversity. It not only produces fuel vehicles, but also actively engages in the research, development and manufacturing of EVs and hybrid vehicles. In recent years, the global automobile industry has turned to clean energy and smart vehicles, and Turkey has also begun to Expand investment in these fields and strive to occupy a place in the new energy vehicle market. In automobile manufacturing, it introduces global advanced technologies while also constantly innovating and improving local manufacturing technology levels. The automobile industry not only emphasizes product quality and performance, but also focuses on beautiful design and meeting market demand, enabling cars assembled and produced in Turkey with strong competitiveness in the world market.

The Turkish government's support for the automobile industry is also an important factor in promoting development. The government provides tax incentives, financial support, and the establishment of automobile industry parks and other measures to encourage the development and technological innovation of the automobile industry. Industrial policies have effectively promoted the growth of the automobile industry and attracted many international leaders to establish a production base in Turkey. Facing the future, the automobile industry is actively adapting to the changes in the global automobile industry. In EVs and autonomous driving technology, it is striving to catch up with the international advanced level and occupy a place in the new trends of the global automobile industry. **Table 1** is Turkey's major automobile factories and production bases.



Table 1. Major Automobile Manufacturers in Turkey

Company Name	Leading Carmaker	Car Model	Production Base
Ford Otomotiv Sanayi AS	Ford	Passenger cars, vans, mini-buses, trucks	Kocaeli, Eskisehir
OYAK-Renault Otomobil Fabrikalari AS	Renault	Passenger cars	Bursa
Tofa _ Turk Otomobil Fabrikasi AS	Fiat	Passenger cars , vans, mini-buses	Bursa
Hyundai Assan Otomotiv San. ve Tic. AS	Hyundai	Passenger cars	Kocaeli
Mercedes-Benz Turk AS	Mercedes-Benz	Trucks, large and medium buses	Istanbul, Aksaray
Toyota Otomotiv Sanayi Turkiye AS	Toyota	Passenger cars	Sakarya
Otokar Otomotiv ve Savunma Sanayi AS	Otokar	Vans, (large, medium and small) buses	Kocaeli
Temsa Global San. ve Tic. AS	Temsa	Vans, large and medium buses	Adana
Anadolu-Isuzu Otomotiv San. ve Tic. AS	Isuzu	Vans, trucks, (large, medium and small) buses	Kocaeli
MAN Turkiye AS	MAN	Large and medium buses	Ankara
Honda Turkiye AS	Honda	Passenger cars	Kocaeli
Karsan OTOMOT V SANAY VE T CARET A.	Karsan	Vans, (large, medium and small) buses	Bursa

Source: Automotive Manufacturers Association, OSD

In addition, Turkey is also actively exploring sustainability of the automobile industry, focusing on environmental protection and energy conservation to respond to global demand for environmental friendliness. According to the Turkish Automobile Manufacturers Association, the Turkish automobile industry includes two parts: vehicle manufacturing and component manufacturing. Vehicle manufacturing, by vehicle type, covers passenger cars, trucks, pickup trucks and vans, trailers and semi-trailers, small buses, medium buses, general buses and field tractors, etc. Turkey has more than 400 first-tier suppliers that work with many OEM factories to supply various types of components required for automobile assembly and repair. Component manufacturers are mainly clustered in northwest Turkey, mostly in Bursa, followed by Istanbul, Izmit & Sakarya. Other major industries are located in provinces such as Izmir and Manisa in the southwest.

Turkey's auto parts industry is mainly composed of small and medium-sized enterprises, with more than 5,000 manufacturers. The leading manufacturers have OEM and export competitiveness. Smaller manufacturers mainly supply the after-sales and maintenance market, with product categories including engines and their parts, transmission and reduction mechanisms, braking systems and their parts, hydraulic and pneumatic components, suspension systems, safety systems, rubber parts, chassis components, castings and forgings, electrical equipment, lighting systems, batteries, automotive glass and seats. These can meet more than 85% of the procurement needs of local automobile manufacturers.

As Turkey is a major automobile manufacturing country with a geographical advantage of overlapping Europe and Asia and it has a vast surrounding market, the Turkish automobile parts industry attracts many foreign investments by having well-known manufacturers such as Bosch, Continental, Denso, Visteon, Delphi and Johnson Controls. They all deploy production in Turkey. In the tire sector, Bridgestone established a joint venture ("Brisa" with the largest capacity and market share) with the Turkish manufacturer Sabanci. Sumitomo Rubber established a joint venture ("Sumitomo Rubber AKO") with the Turkish manufacturer AKO. Pirelli and Goodyear established their subsidiaries in Turkey.

For the Turkish automobile industry, international collaboration is a key factor in achieving technological progress and market expansion. By working with leading international car manufacturers and technology companies, Turkey not only obtains advanced technology and management experience, but also expands in the international market and enhances the global brand influence. Overall, although the Turkish automobile industry faces many challenges, its development potential and future prospects are still worth looking forward to. With the continuous advancement of technology and the increasingly open market, Turkey is expected to play an important role in the global automobile industry.

3. Overview of Turkish EV industry

Turkey is a major automobile manufacturing country. Its production scale ranks 5th in the EU and 15th in the world. It has a strong capital structure, excellent technology and lower labor costs. It has large influence on suppliers and is closely connected with leading foreign car manufacturers, along with superior geographical location and other advantageous conditions. Since Turkey and the EU belong to the customs union and are integrated with EU regulations, Turkey faces EU's increasingly stringent carbon emission standards and groundbreaking technological developments in the automotive industry such as EVs. Meanwhile, major EU countries such as Germany have made it clear that they will ban the sale of fuel-engine cars in 2030. Turkey, as the main automobile supplier to Germany and other EU countries, has automobiles as its largest industry. To maintain economic development and its position in the automobile industry, Turkey also launched deployment in EVs. In 2018, Turkish Automobile Initiative Group (TOGG) was established by Anadolu Group, BMC, Kök Group, Turkcell and Zorlu Holding Group to engage in the assembly and sales of EVs. Limited by charging infrastructure, market acceptance and the lack of key components, the total number of EVs only accounted for 2.2 % of cars at the end of 2023. There is still considerable room for growth in the future.

4. Turkish Automobile Industry, Production and Sales

Unique geographical advantages coupled with low labor cost make Turkey an ideal target country for the world's major multinational automotive companies to invest and build factories. Ford, Renault (Nissan), Iveco, Peugeot, Mercedes-Benz, Fiat, Land Rover, MAN, Toyota, Honda, Isuzu, and Hyundai among other global car leaders have all established factories in Turkey through direct investment, joint ventures, collaborations and other means. Most of the cars they produce are exported. Turkish cars are export-oriented and have become one of Turkey's pillar industries.



Industry Focus

In recent years, the automobile industry has ranked as Turkey's largest export industry. According to the Turkish Automotive Manufacturers Association (OSD), the export value of the automobile industry in 2023 reached USD 28.5 billion, accounting for 13.9% of Turkey's total export value. The Turkish automotive import value was USD 21.84 billion, accounting for 9.2% of total imports. Tofa (a joint venture between FIAT and Turkish Koc Holding), OYAK Renault (a joint venture between Renault and Turkish OYAK) and Ford Otomotiv Sanayi (a joint venture between Ford and Turkish Koc Holding) are the top three automakers in terms of vehicle production and export.

Taking 2023 as an example, Turkey produced 953,000 passenger cars and sold 516,000 commercial cars. Most of Turkish cars are exported, similar to Thailand which assembles cars and exports most of them. Since Turkey signed a customs union agreement with the EU in 1996, Turkish automobiles are mainly exported to the EU market. The Turkish automobile export value was worth USD 35 billion at the end of 2023. The growth of the domestic market and export jointly supported the performance of Turkish automobile industry in 2023. Figure 1 shows the comparison between Turkey's automobile production and sales volumes in the past two years.

Turkey's sales volume in 2023 increased 55.2% compared with 2022, and the production volume increased 8.6%. Turkish Automobile Industry Association (OSD) announced that new car sales in December 2023 increased 35.0 % compared with the same period of the previous year, reaching 164,000 units . Cumulative sales in 2023 increased 55.2% compared with the same period of the previous year to 1.284 million vehicles, including 967,000 passenger vehicles and 317,000 commercial vehicles of various types .

According to statistics from the Turkish Automobile Sales Association (ODD), looking at the sales of light cars by brand in 2023, Fiat ranked first and sold 193,622 units (market share 15.7 %), Renault ranked second and sold 135,645 units (market share 11.0%) , the third was Ford selling 102,380 units (market share 8.3%), the fourth was VW selling 88,776 units (market share 7.2%), and the fifth was Peugeot selling 78,632 units (market share 6.4%). In new car sales in December 2023, sales of light vehicles other than medium and heavy commercial vehicles increased 37.7% from the previous year to 158,653 units. Figure 2 shows the market share (sales proportion) of Turkey's major car manufacturers in 2023. In 2023, Turkey's passenger car sales accounted for 75.3%, various commercial vehicles at 20.7%, pickup trucks at 3.6%, mini-buses and big buses at 0.4%. Figure 3 shows the sales proportion of various types of Turkish automobiles in 2023.

Figure 1. Comparison of Turkish Automobile Production and Sales Volumes in the Past Two Years

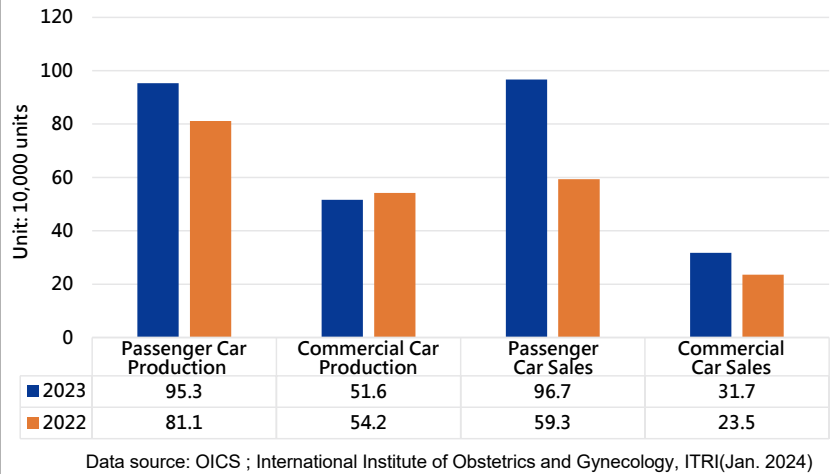


Figure 2. Market Share of Major Turkish Car Manufacturers in 2023

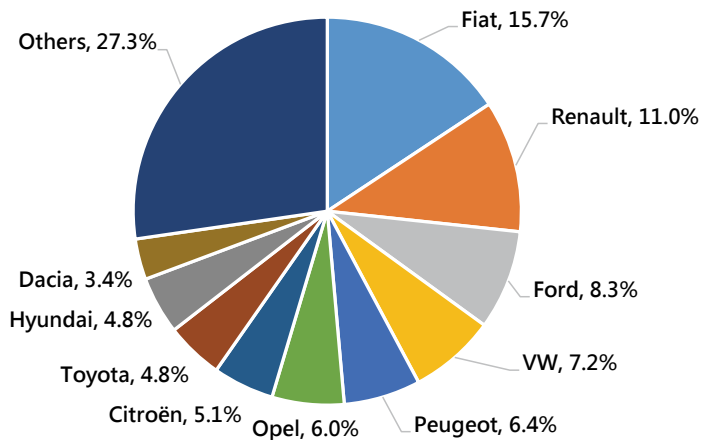
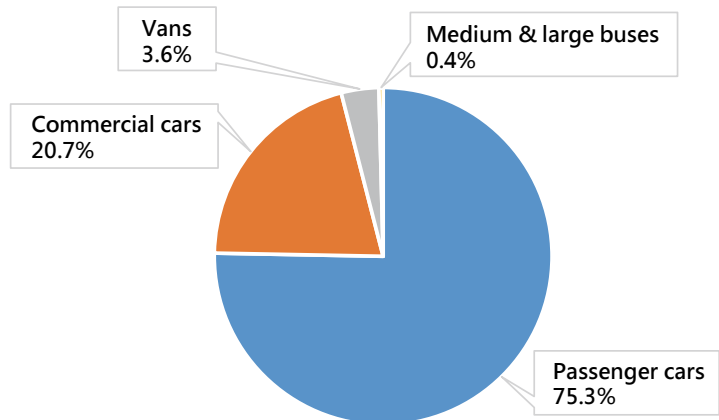


Figure 3. Sales Proportion of Various Types of Cars in Turkey in 2023



In 2023 based on exhaust volume, passenger car models of 1,600CC and below increased 51.7% from the previous year to 781,535 units, accounting for 80.8%. On engine types, sales of gasoline vehicles increased 58.1% year-on-year to 646,385 units (accounting for 66.8%), diesel vehicle sales increased 29.1% year-on-year to 133,374



units (accounting for 13.8%), hybrid (gasoline-electric hybrid) cars increased 62.8% from the previous year to 104,804 units (accounting for 10.8%), and pure EV (EV) increased 833.4% compared with the previous year to 72,179 units (accounting for 7.5%). Distinguished by transmission, sales of A/T (automatic transmission) vehicles increased 73.1% from the previous year to 803,877 units (accounting for 83.1%).

On the other hand, automobile production in December 2023 fell 16.2 % from the previous year to 119,314 units, and the total production in 2023 increased 8.6% from the previous year to 1,468,393 units. In 2023, the import volume increased 79.6% from the previous year to 815,693 units, and the export volume increased 5.0% from the previous year to 1,018,247 units. Although Turkey is not yet a member of the EU, it has actually become the EU's

automobile production base and a strong rival to Central and Eastern European countries that have benefited from the eastward shift of the EU's automobile industry. Compared with Asia, Turkey is a country with a larger automobile production volume and market. Compared with the EU, Turkey is also a country with larger automobile production. Its production volume of large buses ranks first, followed by commercial vehicles, and its production of pickup trucks ranks seventh. Its passenger car production ranks ninth.

According to statistics from the Turkish Ministry of Economy, Turkey's auto parts export value in 2023 was US \$ 17.95 billion. The main products included engines and their components, tires and inner tubes, car bodies, wheels and their parts, rubber and plastic components, transmission and reduction mechanisms, and brake system components. The main export markets included Germany, France, Italy, UK, Romania, Russia, the U.S., Spain, Belgium and Poland. The import value was US\$23.38 billion. The main products included diesel engines for large commercial vehicles, gearboxes, tires and inner tubes, engines and their parts, internal combustion engines, transmission shafts and brake system controllers. The main import sources included Germany, Italy, UK, France, China, Poland, India, South Korea, Japan and Spain.

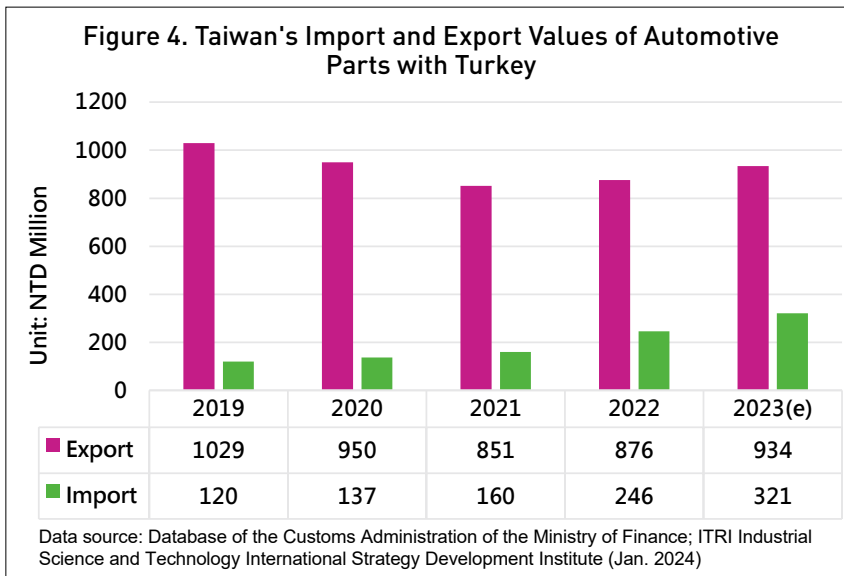
5. Opportunities for Taiwanese Manufacturers

Let's look at the attributes of the car and component industries. **In terms of the car industry, both Turkey and Thailand export most of their assembled vehicles to EU countries (Turkey mostly exports passenger cars) or the U.S. (Thailand mostly exports commercial vehicles or pickup trucks). In terms of the automotive parts industry, Turkey is similar to Taiwan. Both have complete industrial supply chains.** Turkey relies on leading European manufacturers for technical support, while Taiwan has long-term collaboration with Japanese manufacturers. The classification of parts is also very similar. In addition to supporting domestic automobile assembly, most parts and components are exported (Turkey exports mostly to EU countries; Taiwan exports mostly to European and North American countries); Taiwan's EV industry, whether it is electric motorcycles or electric car industry chain or charging infrastructure, is more complete than Turkey's. EV electronic products in Taiwan are more diverse and booming than in Turkey.

For long, Taiwan has focused more on the European and North American markets, with less focus on the Middle East and Western Asian countries. Taiwan's import and export of auto parts with Turkey, whether in terms of value, type or quantity, are much smaller than with the European and North American markets. **Figure 4** shows Taiwan's import and export values of automobile parts with Turkey in the past 5 years. Taking 2023 as an example, Taiwan's export value of automobile parts to Turkey was NTD 9.34 billion. The main export items included bumpers and various types of car lights, rubber and plastic products and transmission components. The import value was NTD 3.21 billion and the import items were mainly electrical components and various electromechanical controllers. The export and import values respectively accounted for 0.4% and 0.3% of Taiwan's total export value of automobile parts. There is considerable room for growth.

Turkey's automotive vehicle assembly technology and component manufacturing technology are mostly derived from leading international manufacturers. Taiwan has cost competitiveness in mold and fixture technology. Turkey's automobile-related industries, including mechanical hardware, precision stamping parts, rubber and plastic injection molding, and fasteners (such as cylinder and engine screws and nuts, door lock fasteners and exterior trim parts) have room for industrial complementarity.

In addition, due to the development of automotive electronics in recent years, the proportion of automotive components is getting higher and higher. It is estimated that by 2030, automotive software and electronic equipment proportion will rise to 60% of all automotive components. Plus, the EU's regulations on related energy consumption, safety regulations, vehicle emissions and other aspects are becoming increasingly stringent. Electronic Stability Control (ESC) system has been listed as a standard safety equipment. With the integration of Turkish and EU regulations, the demand for automotive electronics will continue to increase. Taiwan has a competitive advantage in the semiconductor industry, and its automotive electronics industry supply chain is complete with its own niche. Autonomous vehicles and connected vehicles will promote advanced driving safety assistance systems, such as automotive imaging systems, blind spot detection, and lane departure warning systems, parking assistance systems, automotive LED and other products. Therefore, automotive electronics are also important products for Taiwan to expand in the Turkish market. ■



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