Journal of Global Strategic Management | V. 1 | N. 2 | 2007-October | isma.info | 40-50 | DOI: 10.20460/JGSM.2007118698

THE COMPETITIVE STRATEGIES THAT TURKISH AUTOMOTIVE SUPPLIER INDUSTRY IS FACED WITH BOTH IN DOMESTIC AND INTERNATIONAL MARKETS

Ayşegül SAMSUNLU
Beykent University, Turkey

ABSTRACT

The automotive sector has functioned as a locomotive industry in the economy because many sectors are related to it. The automotive industry is made up of two sectors Firstly, the main automotive sector and secondly the supplier industry.

The automotive sector uses inputs such as steel, sheet iron, plastic, chemistry, glass and electrical pieces. Thus the automotive sector is one of the key driving sectors of the economy in all industrialized nations and developing countries like Turkey. As the automotive industry develops, the supplier industry also develops.

The leading companies that manufacture vehicles are from the United States, the countries that are members of European Union and the countries in Central and Far Asia. The main automotive companies need numerous parts and components. There are different procedures in the procurement of these parts. There are procedures that are widely used by the basic mega suppliers. These mega suppliers move to the production regions of the main automotive manufacturers. The ownership structures of some of these companies are %100 foreign. Some of the other companies are formed as joint ventures and they make investments.

The main automotive firms, have moved their production to the countries where the cost is lower and the conditions are suitable in order to adapt to the global competition. Thus, the manufacturing processes have been moved to Eastern European Countries, Turkey and Asian countries.

Turkey has been connected increasingly to the world's automotive market since 1990. The manufacturing of the famous models of the well-known companies have been encouraged. Legal provisions have been made to encourage these processes.

In this paper, the relationship between the main automotive industry and the supplier industry has been studied. Strategic alliances and joint ventures which are part of the supplier sector have also been studied. In the automotive sector, the impact of the imports and exports on the economy is researched. These issues have had an increasing importance for the economy of the country. The automotive sector has become more important in recent years. The production, exports and imports have been researched by using the available data and evaluation has been made.

Key Words: Supplier industry, competitive strategies, joint ventures, imports, exports.

INTRODUCTION

Automotive manufacturing is the largest manufacturing organization of the world. More than 60 million vehicles are manufactured every year. It directly affects the supplier sector because the industry has been consuming world's %15 of steel production, a quarter of glass production and half of tire manufacturing. (Taysad, 2006)

The automotive industry acts as a barometer and flagship of the national economy. First tier suppliers are essential enablers in the success of the sector.(Childerhouse at al., 2003)

The automotive main sector (OEM industry) (Original Equipments Manufacturer) and supplier industry has importance in the country's economy due to the fact that it provides added value and employment. These factors are important both for industrialized countries and developing countries like Turkey.

The automotive sector triggers the technological development in sectors such as iron and steel, weaving, tire, plastic, electronics, paint and glass. In order to manufacture high number of vehicles, there is need for various industries and firms. Thus, employment is provided for many employees.

The general idea about employment is that an employee who works in the automotive industry provides employment for three people in the supplier industry and he/she provides employment for five people indirectly. Generally, the automotive sector is viewed as a sector that acts like a locomotive industry and this industry affects other sectors directly. (Morgues and Karabiber, 2002)

A car is made up of approximately 10.000 pieces. Each piece requires a detailed designing production process. These developments require that the automotive company invests in plants. All of these show us that the company cannot do everything by itself alone. It is very difficult to work with hundreds of suppliers and coordinate activities with hundred thousand of employees by using only one center. The result would be inefficiency and difficulty at the workplace. Consequently, it is inevitable that the main company needs to work with more than hundred and even thousand supplier companies that deliver products to them. (Arabacı, 2006) The total number of parts of a car is 6600. (Gökşen, 2007) As a result of globalization around the world, the competition in the automotive sector has become more intense. Consequently, well-known automotive companies have been forced to invest in other countries. The cost of production has become an important factor for the main automotive companies and the supplier industry due to the global competition. The firms move their production facilities to the countries where the cost is lower and the conditions are more suitable. Thus, the manufacturing processes have been moved to the countries like Eastern European countries, Turkey and Asian countries. In this context, the firms that have been privatized in Eastern Europe have been acquired by FIAT, Volkswagen and Renault. (Radosevic and Rozeik, 2005)

The main automotive companies and suppliers make important investments in Poland, Hungary, Chezch Republic, Slovakia and Turkey. There is cheap and qualified labor force in these countries. Thus, high standards of production have been reached by the technology that has been utilized by this workforce. (Lung, 2004)

The companies that are defined as "the main companies" are the manufacturer of cars. These companies want that all the models of cars that they manufacture around the world have the same quality and possess the same properties. This is only possible if they use the same pieces for the cars in different countries where they manufacture cars. This is only possible if they establish the supplier industry in the country where they manufacture. However, sometimes this is not possible. Then they import the pieces of the cars. (Humphrey and Memedovic, 2003)

The automotive main industry has developed during the last fourty years in Turkey. Seventeen firms operate in the sector. Most of these companies have the characteristics of joint ventures. Joint ventures are the companies that are characterized as part of strategic alliances.

There are six motives found to be important for collaborators in a strategic alliance. These are product, technology, marketing, protectionism, product cost, and direct payment. Joint ventures are generally seen in the supplier industry According to the theoretical studies, there are two kinds of joint ventures. These are project based and fully blown joint venture. (Erimez, 1998)

In parallel to the development of the automotive main industry, the supplier industry has also developed in Turkey. The number of supplier companies in Turkey is around 900. Of these 900 companies, 400 of them are first tier (first level) companies and 500 of them are second tier firms. 400 firms among these companiers manufacture original equipments for the main industry directly. These companies can compete in international markets and they also export to other markets. Other 500 firms have been formed on a small scale and they work for renewal markets. These companies in international auditing have became similar to the OEM firms in the developed western nations. There also 40.000-50.000 suppliers that can be regarded as Small and Medium Sized Enterprises. (SMSEs). Around 100 major component manufacturers from Europe and other countries have close ties with Turkish producers via joint ventures. There are 226 companies that are members of Taysad and they have a leading position in the sector. These 226 members of Taysad represent 65% of the output of the automotive supplier industry and 70% of the industry's exports. (Taysad, 2007)

As the result of the increase in manufacturing and exports of the automotive sector, the imports of parts and components and pieces have also increased. The difference between the imports of the products of the supplier industry and the amount of exported products has been around 4 billion USD in 2005. As the production of the main industry increases, the deficit in the foreign trade of the supplier industry also increases.

In this paper, the main automotive industry and the supplier industry has been studied. The relationship between them and strategic alliances have also been researched. The impact of the imports and exports of the automotive sector which has an increasing importance on Turkish economy is researched .The production, exports and imports of the supplier industry are researched by using the data that are available.

The Developments in the Automotive Supplier Industry on The World

Automotive industry is a global industry constituting a significant portion of global industrial production and international trade. (Özgür, 1999)

The automotive production is the largest scale manufacturing organization around the world. % 65 of the added value in the automotive industry is provided by the supplier industry.

If the total vehicle producton is studied, it is seen that, % 80 of the total vehicle production is manufactured by USA (3 firms), Japan (3 firms), France (2 firms), Germany (1firm) and South Korea (1 firm). In other words, ten firms are important in the production of vehicles. USA, Japan, Germany, China and South Korea possesses the first five places in the manufacturing of motor vehicles.

The big three automotive main firms in USA have been successful in the 1990s. These firms are Chrysler, Ford and GM (General Motors). U.S. auto industry has made significant strides towards partnership relationship during recent years. Several of the Japanese-owned assemblers (Honda and Toyota in particular) have established intensive technological assistance programs for their U.S.-based suppliers. (Fine et al., 1996)

Japanese and U.S. firms alike balance a portfolio of relationships rather than rely on one type. The relationship types differ based on specific investments made by either partner to the relationship. These relationship types (namely, strategic partnership, market exchange, captive buyer, captive supplier) differ along various sets of contextual factors. (1) the characteristics of the product exchanged and its underlying technology, (2) the level of competition in the upstream market, (3) the capabilities of the suppliers available in the marketplace. (Wasti, 2004)

There are three different applications of the methods of procurement of parts from the supplier industry by the main automotive firms in USA, EU-member countries and Japan. In USA, the automotive firms, prefer either to have the products of the supplier industry to be produced in the main factory or the production of these parts by the affiliates of the main company or the partner of the main company. American companies prefer vertical structuring. European main firms prefer to work with many independent supplier firms. Thus they use horizontal structuring. The situation is different in Japan. The main automotive company is responsible for the assembly of parts. This situation brings with it the fact that all the parts are manufactured by the supplier industry. Keiretsu is semi-vertical structuring. In this situation, the main automotive firms procure the parts from a small number of suppliers that are large scaled instead of obtaining them from numerous suppliers that have different sizes. In this case, the main firms obtain finished supplier industry products that are ready for assembly. This is the characteristics of horizontal structuring. On the other hand, the main industry emphasizes the issues such as new model development, product improvement, increasing the quality and production at low cost by receiving advantage from the joining of the supplier industry into the system. The situation in Japan involves both a vertical and a horizontal system. In addition to the horizontal structuring, the main automotive firms may prefer to obtain products from large scale companies by preparing long-term contracts. In some cases, the main firm becomes the partner of these supplier firms by acquring small number of shares. The system might involve a rather vertical structuring in financing and trust situation. Therefore, this organization structure is called semi-vertical structuring. (Bedir, 1999)

When the countries are researched, it is seen that the main automotive firms in USA and European Union work with higher number of first tier suppliers compared to Japan. If the number of first tier suppliers that some of the firms work with directly is studied, it is seen that Toyota has 196, BMW has 700, VW-Audi has 1200 and GM has 2000 suppliers. (Wells and Rawlinson, 1994)

Especially American and European companies have decreased the number of suppliers that they work with and they have given importance to first tier suppliers. The first tier suppliers have had more responsibility. The rise of the global megasuppliers indicates the effect of globalization on the automotive sector. Firms such as Bosch, Denso, Visteon, Johnson Controls, Lear, Manga, and Valeo have been preferred by the main automotive firms.

The business relationships of auto manufacturers with their first tier suppliers have resulted in the reduction of the number of suppliers by component even towards a single global supplier and to the purchasing of full subsystems for assembly on common platforms. It is possible therefore to reduce the purchasing unitary cost, taking advantage of the supplier scale economies. (Erkılıç, 2002)

The megasupplier firms have started to function in the production areas of the main automotive firms. Most of these supplier firms have started production in the developing markets by forming joint ventures. For example Valeo, which is a French company, had 40 plants overseas in 1986. 33 plants of these were in Europe and 7 factories were in American continent. Valeo has increased the number of firms in Europe to 61 in 1997. In the same year, it has increased the number of supplier firms in American continent to 33 and the number has increased to 10 in Asia. The total number of supplier firms of Valeo overseas has reached 104 in 1997. (Humphrey and Memedovic, 2003)

The situation that has been mentioned above is seen in many developing markets. For example in Brazil, 17 supplier firms of 20 companies have been acquired by the foreign companies. Some of these 20 firms were fully owned by foreign companies. Some of them were partnerships with partial ownership. (Humphrey and Memedovic, 2003,) In South Africa, the local ownership in supplier firms that provide pieces to four main automotive firms have declined from % 55.6 to % 42.3 in the period between 1997 and 2000.(Kaplinsky, 2000)

In the countries where the automotive sector has developed new firms have been formed in addition to the already existing companies. This is the result of the developments in the sector. Some of these companies need foreign capital for various reasons. Therefore, they want to cooperate with foreign firms. In the developing markets, the companies with foreign capital, prefer to form joint ventures with the local supplier firms. One reason for this strategy is to decrease the investment risk. Another reason is to adapt to the conditions of the developing market. However, the foreign firm tends to acquire the whole company once high level of production is reached and high amount of profit is attained. Another factor that supports this tendency is the fact that the main automotive companies force the supplier firms to form partnerships with them in order to reach production and quality standards. On the other hand, the main automotive firms have formed mergers. There is an increasing trend of mergers in the automotive industry. In addition to this, there is not enough study about the standardization of design and production. These have important effects on the suppliers. The global standards have become important. Consequently, the manufacturers of pieces have to cooperate with the purchasing firms in order to benefit from global design studies. Global procurement webs and the desire of the main automotive firms to obtain the pieces from the same suppliers result in the wiping out of the local suppliers in the sector. (Arabacı, 2006)

In developed countries, the automotive main industry and the supplier industry prefer to work together in the designing of parts and components. In this way, the supplier industry becomes more active. According to the projections that have been made around the world, there are thirteen main automotive firms in 2000. This figure will drop to ten in 2015. If the same figures are compared for the supplier industry, it is seen that it will drop from 5500 to 2800 respectively. (Yılmaz, 2006)

As a result of the competitive trends, global competition has evolved. The automotive industry in the United States is also in trouble. The situation of the supplier industry in USA is in a difficult condition. This is due to the fact that Japanese and Korean firms did not work with the current supplier industry in USA. They preferred to work with the supplier industry that they are used to. The local production has decreased as the customers preferred the technological and economical cars instead of buying American-made cars. Consequently, the position of the supplier industry in USA became worse. The supplier industry in England is also in a bad situation and the suppliers are in very depo trouble. (Gülşen, 2007)

Supplier involvement in designwork is also found to have positive relationship with selected performance outcome measures. The outsourcing of design work has been neglected. If the supplier involvement is studied US firms show no significant difference from their US counterparts. (Wasti, 1995)

The Supplier Industry In Turkey

There has not been much remarkable production of vehicles except the manufacturing of tractors until the foundation of Ford Otosan and Tofaş companies. Therefore the pieces that consist of low amount of sheet iron and steel had been made in places that could be described as. small manufacturing units. As the manufacturing of cars started to increase, new supplier

firms that manufactured more complex pieces resumed to be formed during the period between 1964 and 1993. (Fidansoy, 2001)

In Turkey, 3000 vehicles were manufactured in 1963. This figure has increased to 914.359 in 2005. This puts Turkey in the seventeenth position on the world and seventh position in Europe. The production of vehicles in Turkey has increased rapidly during recent years. The percentage of Turkey's production in the world's total output is %1.

From the industry's inception in 1954 until 1980, the import substitution strategy which has been adopted by the government allowed assemblers to take advantage of the protected market and emphasize price over quality. On the other hand, the scarcity of local suppliers stimulated assemblers to provide technical and financial support to build their supplier base. (Kozan, Wasti and Kuman, 2006)

Until 1980 in which imports were free in Turkey, government supported the development of the supplier firms. On the other hand, the main automotive firms have also supported the supplier industry. During that period, the imports were low and the competition was limited. Therefore the supplier industry has not developed. As a result of this, the pieces were manufactured within the plants of the main automotive firms. During that period, the capacity of supplier firms were limited. There was a closed market. New models started to be developed in the automotive industry after the adoption of the Law of 1990. The government had mentioned that once the companies start to manufacture new models that they would be encouraged. Tofaş, Renault and Ford Otosan started to build actual models. The supplier industry manufactured the parts of these cars in Turkey. There was an opportunity that supplier industry could export their products to other countries. (Belgin, 2006)

75% of the main automotive production facilities in Turkey are located in the Marmara Region. The facilities are distributed to four main provinces; Bursa, Izmit (Kocaeli), Istanbul and Adapazarı (Sakarya) 100 % of Turkey's passenger car production is in the Marmara Region. The firms prefer the suppliers that are closer to the facility. At the same time, supplier prefers to be close to the facility for their operation. Most of the suppliers of automobile components are mostly found in three cities, Istanbul, Kocaeli and Bursa. (Üçer, 2005)

In 1990s, the demand for vehicles has increased and the supplier firms have formed partnerships with foreign supplier firms to reach the quality standards. As a result of this, local supply firms could reach technology. Due to the increase in demand for vehicles, production and exports, there have been many technological developments and partnerships in the supplier industry since 1990s.

Radical changes have been made the sector during 1990s. The economy was soon to be part of the Customs Union. Investments were made in order to produce a new and a contemporary model. In this way, the industry became a competitive sector and the Customs Union that had been established with EU had accelerated this process. In this process, Turkish automotive firms have learned the quality approach and its application from their partners. Efforts have been made to develop the supplier industry. Technical conditions and adaptations have been done . %80 of the products of the suppliers have European standards. (Tezer, 2007)

Today, the automotive industry is one of the largest and most innovative sectors in Turkey, with heavy foreign investment. It has had the first position in exports in 2006. (Etkin et al., 2000).

Tofaş, Renault and Ford Otosan works with an average of more than hundred suppliers. On the other hand, Toyota, Honda and Hyundai works with an average of twenty suppliers.

The relationships with the suppliers that could not reach a certain potential were weakened and sometimes they were completely abolished. The supplier industry had utilized many programs such as quality system and process audit. Thus the supplier industry could attain standards like İSO 9000, QS 9000, İSO 14000, İSOTS 16949 and OHSOS 18000. These documents needed to be attained and the process audits were made by the main automotive industry. This development has resulted in the fact that the supplier industry has started to sell products to the main automotive industry not only in Turkey but also in Europe and also around the world.

In Turkey, some of the suppliers who have not received standard qualifications such as ISO 9000, ISO 14000, QS 9000, ISO 14000 and other standards have been eliminated from the supplier list of the companies like Tofaş, For example, the number of suppliers of Tofaş has dropped to half the number in recent years. Limited number of Taysad members have received the qualification standards like ISO 9001 and ISO 14001. 98 members have received ISO 9001 and 56 members have received ISO 14001. (Taysad, 2006)

After automotive giants have chosen Turkey as a production base, their intense integration with both local partners and supplier industry has resulted in the process of technological strengthening of industrialization. Automotive manufacturers share their R&D background with the supplier. Today's production methods in Turkey are equivalent to those by the parent company at the international level. (Yılmaz et al.,2005)

Automotive supply industry manufactures parts and pieces for the vehicles manufactured in Turkey and the global market, as well as for the OEM and after market. Complying with the international standards, automotive supplier industry performs the manufacturing and sales processes in congruence with the conditions, such as quality, price target, delivery details, etc.. These conditions are specified by the customer main industry companies.

Turkish automotive components industry is comprised of some hundreds of plants operating in various branches of activities. In the last 10 years, the quality of Turkish parts and components have reached the international standards. They have been exported to the western industrialized countries. Major domestic component manufacturers are engaged in substantial programs to improve their production.

In Turkey, global mega suppliers such as Bosch, Densa, Lear and Valeo have made investments mainly after 1990s. The reason that the investments have been made heavily during this period is that the automotive main firms have decided that Turkey should be the production site of some of their models. Another important reason is that some important foreign companies like Toyota, Honda, Hyundai and Ford Otosan have opened their plants in Turkey. Toyota has opened its plant in 1994. Honda and Hyundai have established their factories in 1997. Finally, Ford Otosan has built its factory in Kocaeli in 2001.

Turkish automotive industry uses local parts and this accounts for % 20. The supplier industry sells %80 of their products to other countries. On the other hand, the sector imports % 80 of the required part from other countries and this brings a balance in the sector. (Belgin, 2006)

For every hundred dollars worth of the exports of the supplier industry, there is fourty-six dollars worth of imports. (Gülşen,2007)

The trend that the automotive companies move to Eastern European countries is critical for Turkey. The big automotive companies will be proactive in this situation. As a strategy, they will keep sales and design in hand. They will try to gain profits from these areas. This way they will try to overcome the competition that moves to the East. They will try to keep in hand design, molding manufacturing, tests of the starting of driving and approvals. As a result of the use of high technology in cars, some of the parts with high added value also are included in the car. These parts and components will be provided by the parent companies. The technological developments first started with air bags. There have been so many developments with airbags and currently there are 12 airbags in the cars. The latest development is that there is an air bag in the sun canopy and safety belts. Systems like road monitoring indicators are more developed than ABS systems. They will bring more technology and the companies will retain know-how and gain profit. (Bilgin, 2006)

The low labor cost in Turkey has started to disappear. Since low labor cost does not continue, the companies should be active in receiving a share in design and this should be the main goal. The design of the products in the industry should be made by both the main automotive and the supplier industry. After the design has been made, molding process is started. Testing and the approval systems should be used to increase the added value. (Taysad, 2007)

In Turkey, it can be mentioned that the main automotive firms have vertical structuring. The percentage of the supplier firms that the main automotive companies own shares is at a level of % 3,1 . (Wasti, 2000) The only exception is Temsa which is situated in Adana. Since it is far away from the supplier industry, it has formed its own supplier industry park. In this area, the parts that carry risk and the parts that require R&D activities are manufactured. Mercedes also want to establish such a park in Aksaray.

Hundred major component manufacturers from Europe or other countries have close ties with Turkish producers via joint ventures. There are currently, 192 foreign capital partnerships in the automotive supplier industry.

The total turnover of the supplier industry is 5.3 billion USD in 2004. Approximately 50% export-shared market is rapidly growing at a rate of 7-10 %.(Fahlbusch, 2005)

Table 1: The Production and the Sales of the Supplier Industry (Million $)(Taysad, 2005)

Year	2000	2001	2002	2003	2004
Sales to the Automotive Main Industry	1145	500	975	1500	2100
Renewal Market and Sales to the Other Sectors	250	220	290	390	500
Production	2735	2412	3167	4280	5300
Capacity Utilization Ratio(%)	30	27	35	48	59
Sales to the Automotive Main Industry/Production (%)	42	21	31	35	51
The total number of vehicles that has been manufactured	468.381	285.737	357.217	562.148	862.035

Total exports of the Turkish automotive industry are destined for 172 countries.

The product range of Taysad (Turkish Automotive Manufacturers Association) members covers all sorts of parts except a few items and is significantly diversified to support 85-90% local parts ratio in domestically-produced motor vehicles. A production line that includes all the parts except spark plugs and carburators exists.

Even though these production opportunities exist, the companies in Turkey still import parts and components from other countries. Companies supply major European manufacturers such as GM, VW and Ford. The reason for this is the fact that the domestic production of the manufacturing companies increases. The supplier industry exports to 75 countries including Germany, France and Italy. These exported products are made as the sales of direct pieces. Besides these developments, the supplier industry has a foreign trade deficit. (Taysad Buyer's Guide, 2006)

The Impact of the Automotive Supplier Industry on the Foreign Trade of the Supplier Industry of Turkey

The automotive sector is one of the sectors in which the globalization has very strong and fast impact. In Turkey, important developments have been made in this industry. In 1990s, a transition to new models was encouraged in order to develop the industry. Important laws have been passed and the companies were forced to have the required standards. The Customs Union which was signed in 1996 was a turning point for the sector. Important steps have been taken to become active players in the global market by the manufacturers.The goals have almost been reached. The supplier industry is one of the rings of the chain. Thus, its development depends upon the growth of the whole industry. As it is seen in Table 1, the production of the supplier industry increases as the production of the automotive main industry increases. Consequently, sales of the automotive sector have increased during recent years. As the table shows, As it is seen in the table, the capacity utilization ratio also increases. During recent years, firms have been successful in terms of productivity. This factor has proven the success of the production on a global scale. In this table, the number of vehicles that has been manufactured is shown in order to make comparisons and to have a general idea about the sector.

As it is seen in Table 1, the exports of the main automotive industry has continued to increase during recent years. EU member countries export %75 of the products of the supplier industry. The top four countries that Turkey exports to are the following: 1.Germany, 2. France, 3.Italy and 4. England. The percentage of exports of Germany is 23 %. France's percentage is 14 % and Italy exports 12% of the products of the supplier sector in Turkey. The percentage of exports to England is % 6. These countries have leading position in the automotive industry. (Taysad, 2006).

With the increase in the exports of the main automotive industry, the imports of the parts and components of the supplier industry also increase. The main automotive firms, announce that they want to purchase parts and components to all the world sellers and they purchase from the company that has the most suitable proposal. As it is seen in Figure 1, the imports of parts and components have increased paralel to the increase in exports. There have been decrease in the imports of parts and components in 1994, 2001 and 2002. During those years, there was an economic crisis in Turkey. (OSD,2006)

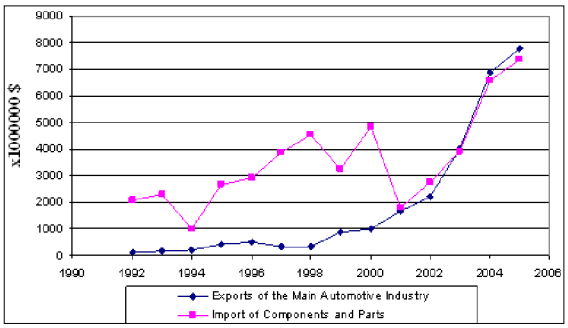

Figure 1: The Automotive Sector and the Imports of Parts and Components.

In 2006, the total amount of imports of the supplier industry has been 8,916 billion dollars. The payment has been distributed in the following manner: 581 million dolllars worth of this figure is for the inner and outer tires, the battery and the special security windows, 2,350 billion dollars worth of motors and 5,985 billion dollars worth of components and parts. The parts that are related to the motors are highly technological products.

In order to decrease the amount of imports which is very high, Oyak-Renault considers to make an investment on the manufacturing of motors. On the other hand, there is need for a special molding for the plastics and rubber. Since its investment is very high, the companies prefer to import it. (Gülşen, 2007) ABS brakes, gearbox, air conditioner and automatic control are imported because they cannot be easily manufactured in Turkey. Therefore, the supplier industry needs to manufacture these complex products and also produce parts that do not require high tehnology. Some of these parts that do not require high technology are pieces of iron sheet, parts of rubber, hood, the door handle. Apart from these two types of production, the supplier sector has to manufacture new products that have high added value. Consequently, it can be mentioned that as the production of the automotive main industry increases, it is inevitable that the foreign trade deficit of the supplier industry also increases.

Figure 2 is about the foreign trade balance of the automotive sector. If the curves of the foreign trade are studied, it is seen that the exports of the main automotive industry (vehicles) have an increasing trend with positive values. Paralel to this development, the curve of the supplier industry presents negative values. The automotive sector has had a trade deficit for the recent years except for 2001 and 2002. Since 2001, foreign trade equilibrium of vehicles have had positive values. The foreign trade of the parts and components have negative values. On the other hand, the foreign trade deficit of the whole industry is getting better and the deficit is getting less during recent years.

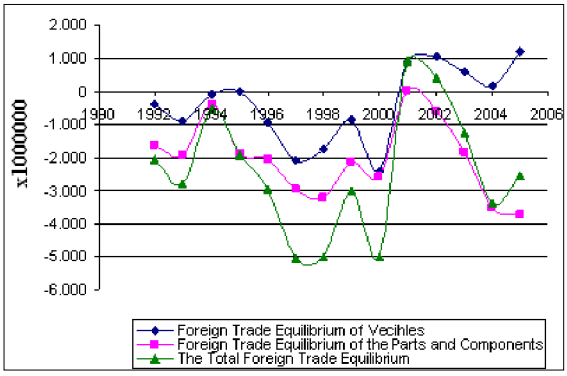

Figure 2: The Equilibrium of Foreign Trade of the Automotive Sector

The share of the automotive sector in Turkey's foreign trade has been growing. About 1 million vehicles have been manufactured in Turkey in 2006. In 2006, the automotive sector accounted for %18 of the total exports of Turkey. The dynamism seen in the automotive OEM and supplier industry manifests itself in export figures. The sector has achieved $ 569 million of exports in 1992; with the driving force of being integrated to world markets, it has reached an export value of $14,350 billion in 2006. This figure puts the sector in the top position in the sectors that export to other countries in Turkey. (BÜSİAD, 2007).In the last decade, exports of the automotive supplier industry have had a significant upward trend. Exports were $442 million in 1992. This figure has increased to $4.427 billion in 2006. (OSD, 2007)

CONCLUSION

In Turkey, the efforts that have been shown to create a Turkish car have been unsuccesful. The automotive industry and the supplier sector has had competitive advantage for the last 40 years. There have been remarkable improvements in technology, quality, design, qualified workforce and performance especially since 1990s. Today, the automotive industry is developing rapidly and has a locomotive position in terms of the value added as a result of production and exports. The sector became the champion of exports.

Limited number of companies in the supplier industry and Taysad member companies. have the qualification documents and have the standard to produce for OEMs. Most of these companies have foreign capital.

Some of these companies are global megasuppliers that are %100 owned by foreigners. Some of the other firms are joint ventures. Firms may also change their ownership structure and become 100 % owned entities due to factors like investments, technology and R&D.

The manufacturing of cars and exports have increased during recent years. This has caused an increase in the import of parts and components. The automotive supplier is in a position of a net importer. It imports twice as much as exports. At this point, it should be noted that the machine investments that have been imported are also included in the import figures. The main reason for the increase of imports is that the cost in Turkey is higher than the other countries that compete with Turkish suppliers.

There can be problems with R&D and similar issues so companies prefer to import parts and components in Turkey. Efforts should be made to solve theses problems. In Turkey, there are not many R&D centers and the companies do not participate in innovative activities and design processes. The companies have limited participation in the test and measurement process. Another disadvantage is that the companies do not have the patent of the products. All of these factors show that Turkey is in a disadvantageous position. During recent years, R&D activities have been performed within the context of technoparks. The government aims to provide the conditions for R&D in these technoparks and prepare the necessary provisions. R&D has very important consequences for the success of supplier companies in this globally competitive environment. On the other hand, the companies have to receive the necessary quality certificates like ISO 9001 and ISO 14001 and etc. This issue is very important for the supplier industry. However, many companies in the sector have not received them. When the supplier firms receive the standards, they will accomplish an important step in globalization with the world markets.
If the foreign trade balance of the automotive sector is studied, it is seen that there has been a continuous trade deficit recently except for 2001 and 2002. During these years, there were economic crises in Turkey. The production of the automotive main industry and exports have lessened the deficit relatively.

It is important that strategic goals should be determined for the maintaining of the development of the automotive industry and measures should be taken not to lose the attractiveness of Turkey as a market for foreign capital investments. The automotive main industry should make Turkey a design and production center. The main industry has to cooperate with the supplier industry about these issues. The supplier industry shoud be made a part of the global automotive industry. The government should support the industry so that it does not fall behind in the global competition.

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