

GLOBALIZATION EFFORTS OF TURKISH CAR INDUSTRY

Lale Duruiz

Turkish automobile sector, 30,000 people working, especially on the way to integration with EU is an important sector for Turkey. The sector's developments indicate very significant signs about how the globalization and the industrial policies effect the firms' approaches to product development, technology strategy, organization of work, managerial techniques, profit strategies and investments.

In this paper, after a general look at the industrial development of the sector, production, export and import trends, the market structure, and investments trends are evaluated. In the second part interviews with the main producers about the market trends takes place.

The literature argues that development policy is susceptible to fashions. During 1950s and 1960s, when import substitution was in vogue, there was excessive optimism about what government interventions could achieve (Kruger,93) now that the outward orientation is the norm, there is excessive faith in what openness can accomplish. The appeal of opening up to global markets is based on a powerful promise; international economic integration will improve economic performance .As countries reduce their tariff and nontariff barriers to trade and open up to international capital flows, the expectation is that

economic growth will increase. However it is argued that without an investment strategy, established social institutions the macro economic stability cannot be easily achieved (Rodrik,D,1999) Successful economies have combined a certain degree of openness with policies that are conducive to investment, macroeconomic stability, and prudent management of capital inflows.

Turkish Automotive Industry had been founded as montage industry in the beginning of 1960s and turned to be a manufacture industry gradually. The industry have lived through the import substitution and export oriented policy periods. The industry faces major difficulties in adjusting to the demands of global market since there was no explicit technology policy during the protection period to promote the development of the industry to internationally competitive levels. The sector strives for protective shields to be kept as much as possible.

INDUSTRIAL DEVELOPMENT OF TURKISH CAR SECTOR

Passenger car production started in 1966 with Otosan's fibber glass bodied Anadol model through a unique dealer -assembler agreement with Reliant

Motor Company of Britain. Oyak-Renault was established via licensing agreement with Renault in France in 1969 and Tofas was formed in cooperation with Fiat SpA in 1968. Investment permits to both companies were issued with the conditions of achieving 85% local content rate in the fifth year of production. Import-substitution policy was being pursued at that time and the deficiencies of the regulations were no measures for the development of components sector, no concern about development of technological capabilities and about economies of scale.

Political instability and weakening in economy started in 1978 resulting in the huge external debt and an accelerating inflation rate. A major shortage of foreign trade due to the dramatic increase in oil prices and decrease in Turkish worker's remittances further restricted imports of necessary parts and components in the automotive sector

In 1980 export-oriented industrialization strategy was adapted and gradual liberalization of the importation of cars and gradual reduction of tariffs started. Financial support was given to the suppliers to form an internationally updated car. Import duties are lowered from 72-150 % in 1989 to 39 % in 1993. The number of the foreign investments in the automotive sector rose to 99 in 1995 from 13 in 1980. Economic crisis has caused the production to decrease around 39 % in 1994. Workers were being retired and fired, capacity utilization has dropped.

A new period of restructuring started in the Turkish automobile industry following the Customs Unionization agreement signed with the European Union on March 6, 1995. This agreement necessitates the harmonization of administrative and regulatory structure of the industry with EU in 5 years. Quality certification is one of the main concern points.

The industry described itself as being too vulnerable for immediate liberalization. The customs union agreement gives Turkey a five-year transition period before adopting all procedures for exporting to the EU, including standardization, measurement, accreditation, test and documentation. By the year 2000, Turkey is to adopt all EU procedures and rules for the automotive sector. The customs duties are abolished however another tax entitled Private Consumption Tax started to take place.

The same agreement protects Turkish manufacturers from second-hand auto imports during the same transition period. However, the Turkish Government, with a recent change in the law, has permitted the Import of second-hand automobiles, conditional on each importer's depositing DM50 million at the Central Bank for one year. This seems to be affecting both automobile manufacturers and the spare parts sector more negatively than expected. According to the customs union agreement the Japanese cars produced in Turkey will be categorized as produced outside the European Union and high taxes to Japanese cars will continue. Turkish automobile sector is striving to survive on the way to integration with EU.

PRODUCTION AND FOREIGN TRADE

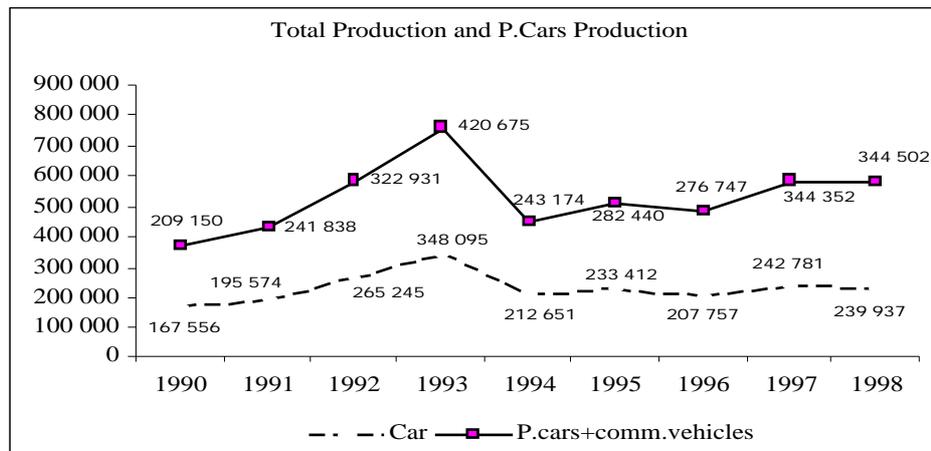
Production

Turkish car industry was relatively small scale during the import substitution period but after 1984, import liberalization policy began to influence the capacity and production. Rapid rise in the production and capacity seen after 1987 were not aiming at foreign markets but the domestic market which reached its peak values as 348,095 in 1993.

After the 94 crisis the sector was not able to recover and return to its bright years. In 1998, the total production of passenger cars is 239,937. This production is 31% lower than the year 1993 and 1% lower than the year 1997. The economic crisis has caused a decline towards the second half of 1988 and continued in the first three months of 1999 with 12,549 cars production, capacity usage being 18 percent.

If we compare passenger cars production with total production (Passenger cars + Commercial vehicles) we see that in comparison with 1997 total production increased 1% and passenger cars production decreased 1%. In 1996, share of the export in total production reached to 13% in automotive industry. Here car export had an important affect. In 1997-1998, the share of the export in the production fell to 8-9 %. When the first three months data of 1999 is compared with 1988 export data of the automotive sector an increase of 94% is seen.

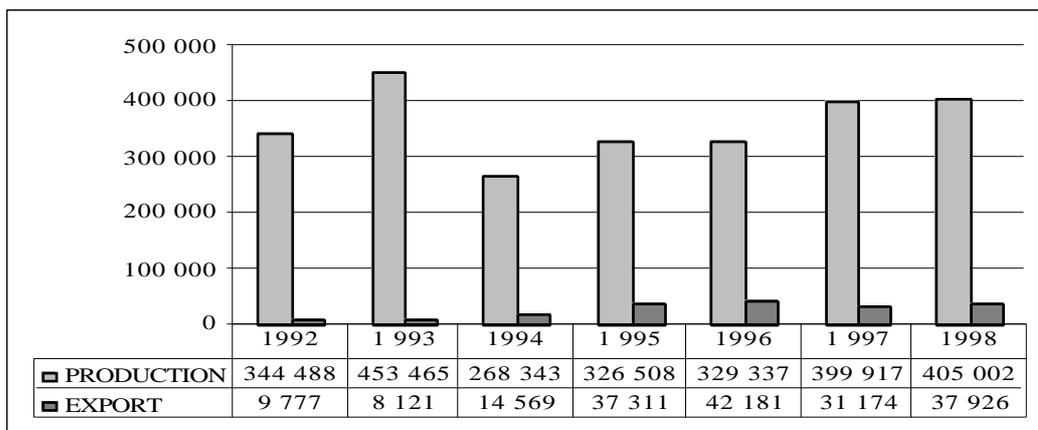
Figure 1. - Total Production and Passenger Cars Production



Source: OSD, Automotive Industry, December 1998

Exports : Exports have been very limited in this sector, only the threat of the customs union during the last two years have made the producers think about the foreign markets.

Figure 2. - Production and Exports of the automotive sector



Source: OSD, Automotive Industry, December 1998

Table 1. - Passenger Cars Exports by Firm

	1997 P.Cars Exports	1998 P.Cars Exports
Tofas	12.240	14.886
Oyak renault	10.132	9.511
Others	186	272
Total	22.558	24.669

Source: OSD, Automotive Industry, Dec. 1998

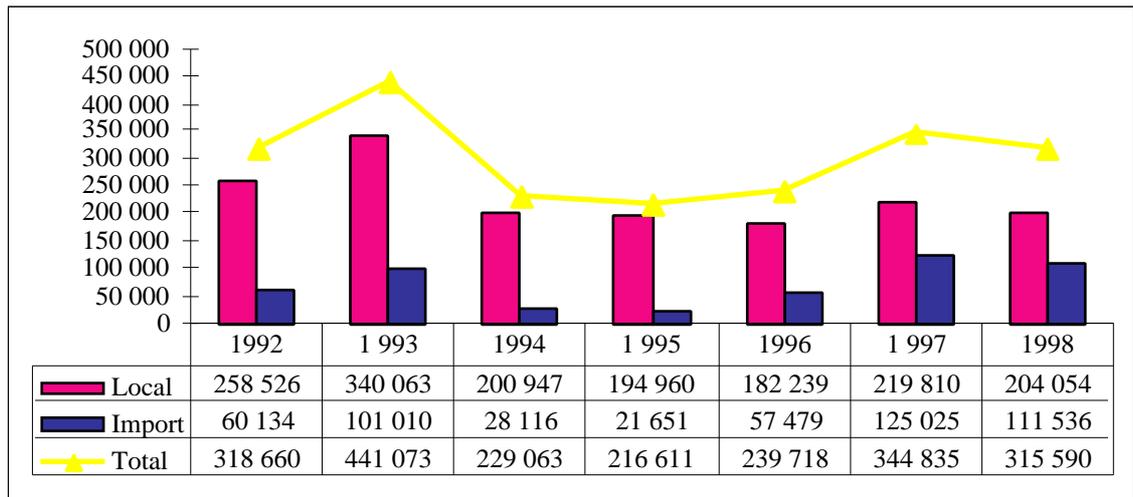
Considering the firms, Tofa_ and Renault had been able to export some of their produced cars. Toyotasa, Ford-Otosan and Opel had exported small numbers around 50-100 cars in 98. Mostly exported countries can be listed as Egypt, Uzbekistan, Turkmenistan, Cossack from Turkish Republics and Russia, France, Germany, Syria,

Iran, Northern Turkish Republics of Cyprus, Spain, Italy, Bulgaria, Israel and Argentina.

Imports

The import of cars rose strikingly after 1990 and continued afterwards. The ratio of imports in total sales was 10-20 percent in 1992-96 period and this ratio has jumped to 35's in 1997 and 1998.

Figure 3. - The comparisons of imports with local car sales



Source : OSD, Automotive Industry, December 1998

There are no significant barriers due to restrictions and regulations for import in the sector. In conjunction with its January 1, 1996 accession to the European Customs Union, Turkey has adopted a new import regime. According to this regime, companies importing vehicles should have service facilities in the seven geographic regions of Turkey, and should keep an inventory of aftermarket parts.

This is to prevent imports of vehicles with no service or spare parts beyond the basic level. This requirement has encouraged domestic producers to offer countrywide service and spare parts guarantees in their sales promotion. Additionally, with the introduction of Toyota and Opel cars to the Turkish market, new plaza-type service stations have been introduced to the automobile service sector.

In 1996 domestic market sales shares of import vehicles increased from 15 % to 25 % in automobile and from 12 % to 24 % in automotive sector from 1995. It is observed that sales shares of other imported vehicles increased in domestic market too. In 1998 total passenger car sales are

decreased 28% relatively to 1998 and decreased 8% in comparison with 1997. And addition to this reduction, in 1998 total local passenger car sales decreased 40% according to 1993.

In 1997 Turkey became one of the favorite import country for Global Automotive Industry. Approximately 38 Global firms took place in Turkish market with 203.000 vehicles. Seven of these also make domestic production; Toyota, Honda, Hyundai, Opel, Fiat, Ford, Renault.

The last four have the 18% share in total imports. 10 importing firms were having 53% in 95 which has increased to 81 % in 97. German and Korea are the leading importing countries. Opel, VW and Hyundai have the 46 % share in imports in 97.

Among those only Eastern European imports were cheaper as a result of the customs duties. However, in 1995 EU and EFTA imports started rising significantly and have gained the 64% of the total imports in 1997 and 74 in 1998.

Table 2. - The Shares of Import Vehicles in Domestic Market Sales (%)

	1993	1994	1995	1996
PASSANGER CAR	23	11	15	25
BUS	9	7	15	19
COMMERCIAL VEHICLES	36	28	30	35
F. TRACTOR	9	0	2	3

Source: OSD and The Representative of Car Importers and D_E Import Statistics

Import units and shares in import automobile sales of major firms in 1995-1996 are given in the table below;

Table 3. - Import Units and Shares in Import Automobile Sales

BRAND	1995	1996	INCREASE 1996/1995		
			UNIT	SHARE	%
OPEL	2.043	15.301	13.528	37	649
VW	769	6.297	5.528	15	719
HYUNDAI	3.190	5.608	2.418	7	76
RENAULT	1.373	3.023	1.650	5	120
FORD	279	2.039	1.760	5	631
DAEWOO	330	2.495	2.165	6	656
MAZDA	1.223	2.654	1.431	4	117
HONDA	1.321	2.541	1.310	4	106
NISSAN	777	2.060	1.283	4	165
PEUGEOT	330	1.025	695	2	211
First 10 Brand Total	11.545	43.043	31.498	88	273
Others(24 Brand)	10.106	14.436	4.330	12	43
Total Import(34 Brand)	21.651	57.479	35.828	100	165
First 10 Brand/Total(%)	53	75			

Source : OSD, 1996

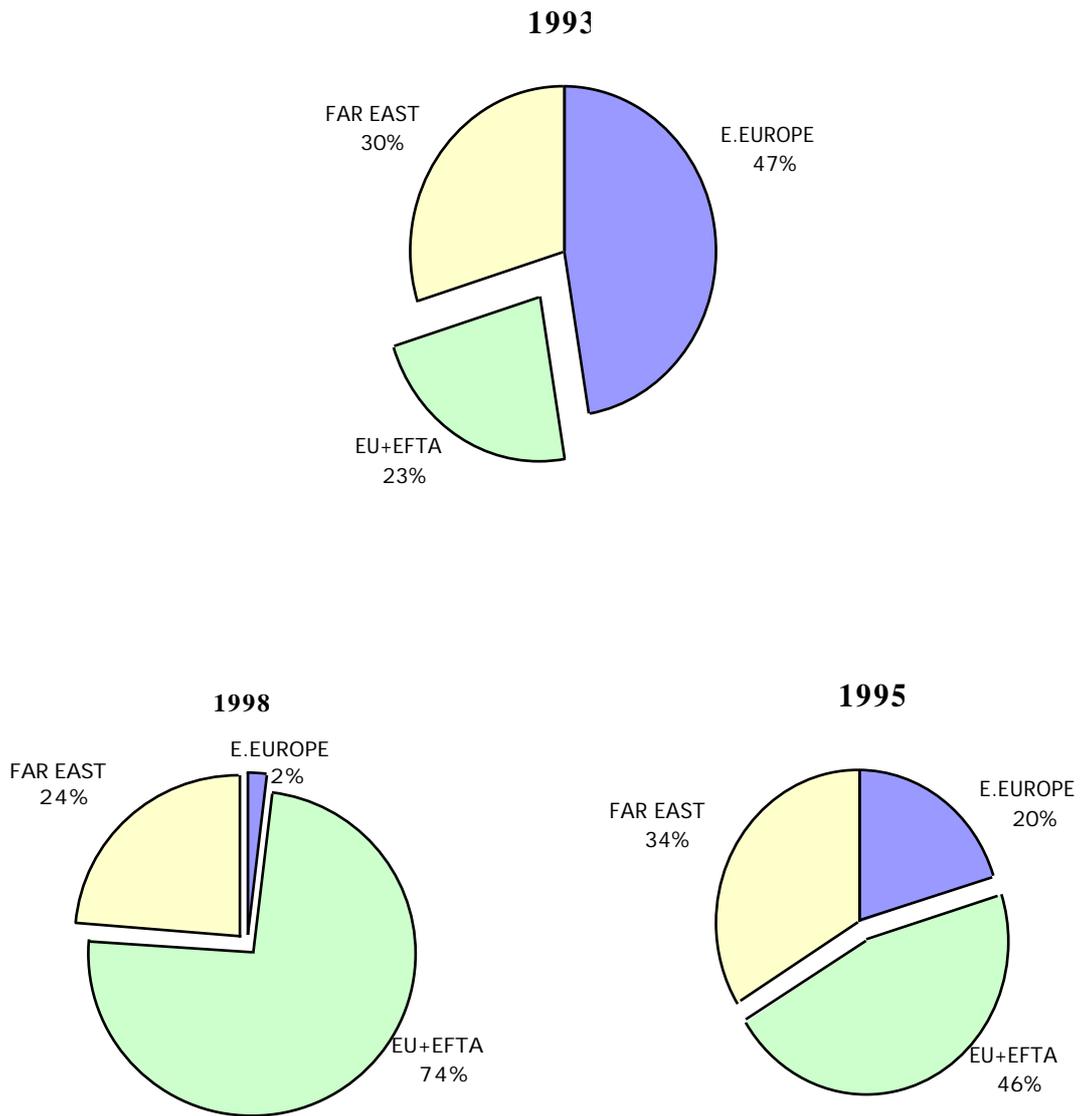
Turkish Car Market structure

With 60 million inhabitants, the market seems unsatisfied with one car per 26.7 people (5.7 in Greece, 1.9 in Italy). Annual production capacity is around 400,000 automobiles. When buses, trucks, and tractors are included to the existing domestic automobile market, nearly 5.1 million vehicles are seen. The life expectancy of automobiles is long in Turkey; the average vehicle life of eight years in Turkey is much

higher compared to the two-year average life in the EU countries. This increases the importance of Turkish automotive aftermarket suppliers. Old cars have a remarkable market share for financial reasons, and automobiles are kept in service for far longer than elsewhere because repair labor is cheap and readily available.

Turkish mechanics are like magicians in devising solutions to keep vehicles on the road.

Figure 4. - Passenger Car Imports By Region



Source: OSD, Automotive Industry, December 1998

The firms in the market

Fiat and Renault has been holding 80-90 percent of the market since 1970's, with the entrance of some other producers as Opel and Toyota, decreased to 81 % in 1995, to 80% in 1997.

Renault is in partnership with OYAK, The Army Mutual Assistance

Organization; Fiat had made agreements with Koç Holding. Both holdings are long lasting industrial family groups in Turkey.

Table 4. - Producer Firms in the Market

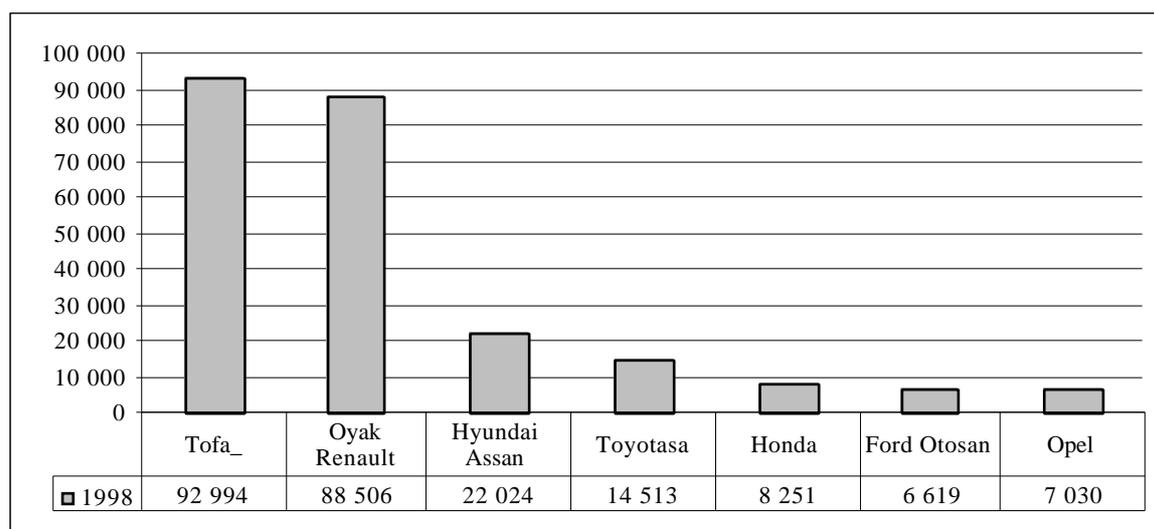
Firms	Start Year	Licence	Share	Capacity 1996	Capacity Usage 1996
Opel	1990	GM	100	25 000	40
Otosan	1959	Ford	41	30 000	32
O. Renault	1971	Renault	51	170 000	37
Toyotasa	1994	Toyota	50	100 000	26
Tofas	1971	Fiat	38	250 000	39
Honda	1997	Honda	50	100 000	-
Hyundai	1997	Hyundai	50	100 000	-

Source : OSD (Turkish Automotive Manufacturers Association).

Honda/Anadolu Endustri Holding (with an annual capacity of 100,000 units), Hyundai/Kibar Holding (annual capacity 100,000 units), have started production recently. Other international companies with Turkish partners such as Kia/Ihlas Holding (annual Capacity 35,000 units, Daewoo/Ulker Group (with an annual capacity of 50,000 Units), and Mazda/no Turkish partner identified yet—have started Investing in Turkey. Japanese Suzuki is also considering establishing a production line in Turkey mainly to export to the

Middle East, former Soviet Union countries, North African and African countries. Volvo is another candidate for investing in the Turkish Market with its local partner, Ulusoy. Volvo is primarily interested in an assembly line stage, importing engines, transmission mechanisms, and differentials, and manufacture the rest of the parts. Ford is planning to invest \$550 million in the coming five years to increase their capacity to 120,000.

Figure 5. - Turkish Automotive Manufacturers producing Passenger Cars(1988)



Source : OSD⁷, "General and Statistical Information Bulletin Of Turkish Automotive Manufacturers", Part1(31), 1998

The three month production of the firms in 1999 have been 30,319 totally when compared with the first three month of 1988, 50% decrease is seen.

Evaluation of the market considering the segments (see Appendix for descriptions of the segments)

Traditionally, Turkish manufacturers have operated in two car segments, lower medium and medium models that have already been phased out in the country of origin. These two segments account for 90 percent of the Turkish market, while these segments represent only 40-60 percent of the market in developed European economies.

Total passenger car production in segment C in Turkey is highest among the segments with 59 % in 95-96 got higher in 97-98. However in this segment, the share of import in total market has increased from 6 in 1995 to 16 in 98 and reached 22 percent in 97-98.

The second important segments that Turkish producers are involved are D and W among the segments as 18-19 % in 95 which has decreased to

15 % in 97-98. The import share have also increased especially in segment D to 34%. Segment B is not very important for Turkish market, domestic production is low, imports are also low however increased from 15 percent in 95 to 56 percent in 98. The market share of the C and D segment cars, which have an important place in the domestic production were 75% in 1995 but it decreased to 68% in 1997.

In segment A and F all car demand is supplied by import. The share of the car in segment A in total is increased by 4% in import. On the other hand in segment E the demand is supplied by import with a ratio of 95%. The total market share of the segments A, E and F were 3% in 1995 where it increased to 11% in 1997.

In segment B there is only one domestic product and the demand is mostly supplied by import. In 1995 the share of the import was 11% but in 1997 it increased to 56%. This segment still constitute the 10% of the market and 17% of import.

96% of demand in Segment W is supplied by the domestic production.(OSD, 1997/9)

Table 5. - Automobile Market Segmentation 1997

Segment	Domestic		Import	1997 / 8 months			Import %
	Unit	Share		Total		Share	
	Unit	Share	Unit	Share	Unit	Share	
A	0	0	2.575	4	2.575	1	100
B	8.833	7	11.042	17	19.875	10	56
C	79.281	63	22.303	35	101.584	53	22
D	18.555	15	9.708	15	28.263	15	34
E	901	1	15.779	25	16.680	9	95
F	0	0	1.489	2	1.489	1	100
W	19.024	15	819	1	19.843	10	4
Total domestic	126.594	100	63.715	100	190.309	100	

Source: OSD, *Import in Automotive Sector, 1997/9*

Investment Trends

The investments of the sector were tripled in 1994 with the threat of growth of imports and new entrances to the industry. Until 1992, only 5 models were making up 80 % of the unit New model and capacity development were the main investment in 1994.

However, investments on new model development have dropped significantly in 1995.

The government supported the investments in 1995, but the contracted market led the firms to prefer playing with financial tools. In 1996 the investments were even lesser than 1995. A small increase is traced in total investments in 1997, focussing mostly in modernization and model development and localization. In contrast there has been quite a decrease in investments in quality and capacity development.

Table 6. - Investments of Turkish car industry (US\$)

Years	1992	1993	1994	1996	1997
Capacity Development	80,862,880	166,122,160	290,400,000	52,000,000	37,000,000
Modernization	25,991,640	89,138,720	109,400,000	41,000,000	79,000,000
New Model Development	51,983,280	97,242,240	225,700,000	42,000,000	71,000,000
Quality Development	5,775,920	16,207,040	43,400,000	28,000,000	19,000,000
Localization	112,630,440	12,155,280	25,300,000	12,000,000	30,000,000
Others	11,551,840	24,310,560	11,900,000	45,000,000	110,000,000
Total	288,796,000	405,176,000	706,100,000	220,000,000	346,000,000

Source : *OSD Bulletins*

The automotive sector attracts many foreign investors. 109 foreign companies have invested in this sector over the last 12 years, importing \$1.1 billion worth of equipment. Germany and Italy have the largest share in automotive foreign investment; United States, France, United Kingdom, Switzerland, and Japan follow. These foreign firms supply various items in the sector, from pumps to diesel engines, from bolts and nuts to rims, from bodies to suspension, from electronic systems to clutches.

A SHORT LOOK TO THE MAIN PRODUCERS

Tofas- Fiat

In 1968, Koç Holding and the leading Italian car manufacturer Fiat came together to establish Tofas. The first product of the Tofas factory which started operating in 1971, was the Murat 124, which became popular as the car "car of the people". In 1976, Tofas started to production of the Murat 131. Finally, the 131 series were succeeded by the Serçe, _ahin and Do_an models. Following this Kartal was developed. During 1990s Tempra, Tipo and Uno models were produced .

Otosan- Ford

Otosan, established in 1959 started its production in 1960. In 1966 Anadol was the first mass produced Turkish designed passenger car In 1978 a licence agreement is signed between Otosan and Ford. In 1993, after Taunus which was the first product of this partnership, Escort started to be produced. Integration of the marketing and manufacturing activities of Ford Otosan with the

world-wide business of the Ford Motor Company was achieved through an agreement signed on June 27, 1997. Ford and Koç now have equal shares in the company, renamed Ford Otosan and is planning to invest \$550 million in a new export-oriented plant in 1998.

Plans to establish a brand new plant outside Istanbul are in progress. In the automobile segment, Ford Otosan manufactures Escort sedans, station wagons and hatchbacks and imports a model line-up that includes Fiesta, Ka, Mondeo, Scorpio and Explorer.

Oyak- Renault

In 1968 Renault Mais is established to produce Volvo automobiles. However in 1970-1971 with Renault 12 entered the market. It has 6 different branches in Turkey; Istanbul, Ankara, Bursa, Izmir, Adana, Diyarbakır. The factory is located in Bursa.

In automobile segment, Oyak-Renault manufactures Renault 12, Broadway, Renault 19 and Megane and imports Twingo, Clio, Laguna, Megane, Safrane.

The views of the firms on competitiveness

Oyak Renault : The firm's marketing assistant declared that automotive sector is affected from the crisis as all sectors in 1988 year and added that firms should be careful about promoting their products because every firm is launching their new products day by day and this is a disadvantage for the companies. It is clearly seen that they have not been used to competition. Oyak-Renault was the leader of 1998 for the first time since 1970. Expectations of Oyak from 2000 were to stay as the leader. Broadway and Renault 12 had no

competitors, until Tofas started to launch Palio and Siena. However in segment B, the biggest rival seen is Volkswagen with its model POLO, then Palio/TOFAS and Corsa/OPEL comes. In segment C and D competitors of Megane and Renault 19 are Bora/OPEL, Astra/OPEL, Corolla/TOYOTA, Escort/FORD and Focus/FORD.

Otosan-Ford : Toyota is seen as a serious competitor. They are thinking to benchmark with Toyota. Besides this, as rivals to "Focus", Astra/OPEL, Bora/OPEL, Golf/VOLKSWAGEN and Megane/RENAULT are declared. The firm's manager declared that "Focus" is going to be represented as a new product in nearest future and adds that it will be a niche in the market and new edge design. According to the fleet sales manager there is a high degree of competition thus to stay in the market firms should be attractive. Especially in the existing crisis period, market is very sensitive so firms must take into consideration two important concepts which are price and advertising. Finally he adds that Focus is aiming to be successful with its clear target that it addresses to young and dynamic people and also young married couples. 2000s are seen as very important because there is a new project considered to be applied in Gölcük. Ford Otosan is going to realise the biggest automotive investment in Turkey and going to spend 550 million \$. The first sample production is expected to be done in 1 January 2000 and export of this automobile that is going to be manufactured in that factory is 1 August 2001. With this project Ford Otosan is targeting 1 billion \$ export.

Tofas : As a result of the competition, the firm choose to promote new models regularly to the market. Thus Palio and Siena are put on the market. Consequently the firm argues that innovation should be a permanent issue in the market since the market becomes more fierce day by day. The firm hopes 2000s to be both economically and politically stable and adds that market is getting harder to compete and this cause firms to be more careful and do the best. Tofas's aim is to gain the leadership again because Renault is the biggest rival of Tofas. Renault Megane filled the empty place in the middle segment very well because of this by the end of the year Tofas hopes to manufacture Brava Sedan and Marea but this will not be 100 % domestic production. After Renault Opel and Volkswagen are mentioned as competitors. Especially Volkswagen's sales are

considered very well although they are imported vehicles. Hyundai, Toyota and Ford comes after. As a producer they do not see any competitor. Just adds that Renault seems to be improving itself

Local content

Oyak-Renault : According to the information that is given nearly 60 % of all models are domestic production. Megane is one example for this. In Broadway and Renault 12 this ratio increases to 90 % and in Renault 19 model it is between 70 % - 80 %.

Tofas : Nearly 100 % of Temptra and Tipo is domestic production and for Siena and Palio models this ratio is going to be nearly 85 % for 1999. On the other hand, Marea and Brava models are imported but prices of Marea and Brava are very high compared to the competitors in their segment.

New investments

Oyak-Renault : The marketing assistant declared that the biggest and the most important investment of the factory is for Megane Wagon. it is only being produced in Turkey and sales are only being done from Turkey to all around the world. Its 1999 export target is nearly 60.000 units and it is a precise number because its all agreements are done and production started. The second investment is going to be Clio Sedan, it is going to be manufactured by the end of the year in November 1999.

Tofas : In the factory unused assembly lines are technologically improved and prepared for the assembly of new vehicles Investments for Siena and Palio Weekend are also done for domestic production. Otosan Ford : The firm declares that Gölcük investment is the biggest foreign capitalised investment. It is 550 million \$. In January of 2000 the first automobile will be produced.

Training activities

Oyak-Renault : The firm has the biggest training school in Kartal. There, both commercial and after-sales programmes are applied to the sales personnel.

Departmentally some training programmes are being applied too but this is not for so long and the marketing assistant adds that human resources concept is started newly.

Tofas : In the factory there is an intensive training programme. Technicians had gone to Brazil which had a good effect on their job.

OtosanFord : OtosanFord has its own "Ford Sales School" in it self. Groups of authorised salesmen goes to intensive training programme. This programme consists of Product, Sales, Finance and After-Sales subjects. The firm also applies training programme to its services. 3S concept (Sales, Service, Spareparts) is important for the company.

On the other hand high level managers and other personnel inside the company have seminars, 3 month training programmes too.

Suppliers

Oyak-Renault : There exists standards for Turkish Supplier Industry. TQM and Quality Circles are important concepts that are applied. Oyak-Renault supplies its components from its own factory but they also work with outside suppliers. Oyak has ISO 9000 certificate also.

Tofas: Tofas is also producing its own components like Oyak. But besides these it has suppliers outside too. Marketing assistant declares also that Tofas works with suppliers who has the certificate of ISO 9000.

OtosanFord : Like others, Ford Otosan is both producing its own components and supplying from outside. ISO 9000 is an important factor for the company in choosing suppliers and it is mentioned that suppliers that the company works with should have training programme. Ford Otosan has ISO 9001.

* * *

The protection years were not exploited by the Turkish automobile sector in establishing the technological infrastructure for the global competition. On the contrary, it has enjoyed the

high profitability and remained in the production of outdated models for the domestic market by the old production and managerial techniques. Globalization, coming with the customs union with EU, threatened the firms and efforts towards new products, microelectronics technologies, new organization methods, quality and ecological movements started.

The main firms have a very solid place in Turkish political and bureaucratic system that has lead EU to give 5 more years to the industry for getting ready for global markets. However the sector is afraid of the import share will be around 50 % in 2000. The exchange rate policy pursued has motivated the imports to enter the market easier. Productivity increase (which is very low, 125 cars per worker at the assembly line compared to 250 in EC), quality improvement and product diversity which have been in turn, important motives for new technologies, investment and increase of capacity are the main outcomes.

Recently Turkey is seen as an emerging market for car industry, the foreign firms uses aggressive market strategy with lower prices in order to enter the market. The competitiveness in the world market have lead the firms to innovate continuously especially in environmental and security aspects which has created a change in the expectation of the Turkish customer.

The sector insists on that it is not possible to reach economic scale and world competition with low demand. High taxes prevent the improvement of automobile sector. Number of producer firms had been increased excessively by unbalanced and mistaken promotions and there is no export obligation.

The sector argues that governments do not really implement the regulations. The competition resulting from the increase in imports has affected the sector and new assembler producers are promoted.

*Lale Duruiz
Université Istanbul
Istanbul - TURQUIE*

BIBLIOGRAPHY

Ansal, H., Technical Change and Industrial Policy: The Case of Truck Manufacturing in Turkey, World Development, Vol. 18, No 11,1990.

Duruiz, L. and Yentürk, N., Facing the Challenge, Turkish Automobile, Steel and Clothing Industries' Responses to the Post-Fordist Restructuring, Ford Foundation,1992.

Rodrik,D, The new Global Economy and Developing Countries: Making Openness Work, ODC, Washington DC, 1999.

Ertürk, B., Automotive Aftermarket, Turkey, Industry Sector Analysis, Tradeport, USA, 1998.

Nedimoglu, F., Evaluation of Suppliers of Automotive sector on the way to Customs Union, paper presented to the Automotive and Suppliers Symposium, 3-4 November 1995.

Tezer. E., Automotive Industry and Customs Union, paper presented to the Automotive and Suppliers Symposium, 3-4 November 1995

TMMOB, Turkish Automobile Industry Productivity Analysis, 1993 Congress of Industry, Nov 1993, Bursa.

REPORTS

Ford Otosan (1997), Ford Otosan Annual Report, Otosan Group

TOFAS (1997), Tofas Handbook

ATAUM, "Specific Report Series", No:1, University of Ankara

GESIAD(1996), "Automotive Report"

IMKB (1995), Industry Research Series

OSD, "Customs Union and Turkish Automotive Industry", Report 1996/10

OSD, "Motor Vehicle Industry in Turkey", Report 1998/10

OSD(1998), "Automotive Industry", December 1998

OSD(1998), "General Situation of the Turkish Automotive Industry by the end of the year1997", Report1998/1

OSD(1997), "Import in Automotive Sector", 1997/9

OSD(1998), "Automotive Industry", January 1998

OSD(1997), "Turkish Automotive Industry", Report 1997/7

OSD(1995), News bulletin, July 1995

OSD(1996), "Automotive Industry Sector Report, evaluation of the year 1996"

OSD(1997), "Automotive Industry Sector Report, evaluation of the year 1997"

OSD(1998), General and Statistical Information bulletin of Turkish Automotive Manufacturers, Part 1(31)

OSD(1995), "Automotive Industry Sector Report, evaluation of the year 1995"

OSD(1997), "Automotive Industry", December 1997

APPENDIX I

Segment A : Engine volume < 1300cc, two - door hatchback type. In this segment there is no domestic production. Examples to import cars are Daewoo/TICO, Renault/TWINGO and Ford/KA (3 models in the market)

Segment B: 1,301cc < engine volume < 1,600, 4door Hatchback type cars. The only domestically produced car is Tofas/UNO. Imported ones are Opel/CORSA, VW/POLO and Renault/CLIO. (9 models in the market)

Segment C : 1,401 < engine volume < 1,600, medium sized Sedan and 4-door Hatchback type cars. Tofas/_AH_N, DOSAN, TIPO; O.Renault/RENAULT

9; Otosan/ESCORT 1,6 are domestic and Opel/ASTRA; VW/POLO-Classic; Hyundai/ACCENT are import. (27 models in the market)

Segment D: 1,601cc < engine volume < 1,800, greater inside volume cars. Domestically produced ones are Tofas/TEMPRA; O.Renault/RENAULT 19; and Toyotasa/COROLLA-1,6. Imports are Mazda/323; Kia/SEPHIA; Opel/VECTRA. (23 models in the market)

Segment E and F : The imported luxury cars and sport cars which have 2,000cc engine volume and greater. (33 models in the market)

Segment W : This segment contains Station Wagon cars. (11 models in the market)