

2006

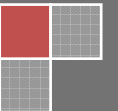
TUSIAD-Sabancı University
Competitiveness Forum

Value Creation by Turkish Enterprises

Sunder Kekre, Elif B. Sarıca,
Gunduz Ulusoy, Nihat Altıntaş

REF Working Paper

02/2006



TUSIAD - Sabancı University Competitiveness Forum

TUSIAD - Sabancı University Competitiveness Forum (REF), is a research center formed jointly by the Turkish Industrialists' and Businessmen's Association (TUSIAD) and Sabancı University in 1 March 2003. Our mission is; to help improve the competitiveness of Turkish private sector in international markets by conducting and supporting research on competitiveness, innovation and technology management and benchmarking. Our general attempt for the research activities are; research in topics of competitiveness which serve for our mission, international levelling and the determination of the best application studies, and being in groups that make these research and studies. We can group our activities in these groups; research activities, dissemination of knowledge and collaboration. The aim of our website and REF Bulletin are to be an information and knowledge-sharing platform on competitiveness and related fields.

© 2006, REF

“All rights reserved. No part of this publication shall be processed/adapted, reproduced, circulated, re-sold, rent, lent, represented, performed, recorded, transmitted with cord/cordless or any technical, digital and/or electronic devices without prior written permission from the author(s)/right holder subject to Article 52 of Law No.4110 amended by Law No.5846 for Intellectual and Artistic Works.”

Value Creation by Turkish Enterprises

Sunder Kekre¹, Elif B. Sarpca¹, Gunduz Ulusoy², Nihat Altintas¹

¹Carnegie Mellon University, Tepper School of Business,
Pittsburgh, PA, 15213

²Sabanci University, Faculty of Engineering and Natural Sciences,
Istanbul, 34956, Turkey

Abstract

This study focuses on the resurgence of the automotive and appliance sectors in Turkey's recent years. The analysis of both these sectors reveals some interesting lessons about technology management and investment strategies for companies to invest in Turkey. We discuss the major changes and project the future in both industries. Turkey seems to be a clear winner though there are some factors that could reverse the trend. The research is a joint field study partnership between Carnegie Mellon and Sabanci Universities.

I- Turkey: The Star of Emerging Markets

Transformation of an Economy

In 2001, Turkey suffered one of the most severe crises in the country's history. Turkish currency depreciated more than 30% in a day. GDP fell 7.5%, the inflation peaked 73%. Shockingly, the decreasing sales and economic instability put tremendous pressures on companies in Turkey to take harsh decisions such as total shut down of their operations. Even, Toyota, which has a billion-dollar investment in Adapazari, was in extreme hardship with barely 1% capacity utilization during the crisis. It was almost at the point of halting production. Today it is a different Turkey. Thanks to the flexible economy, regulatory reforms and increased privatization, Turkey has become one of the remarkable success stories in the history. It recovered from the bad economic plight. According to a recent Deutsche Bank report, Turkey is a rising star of emerging markets and prides itself to be in the top 5 growth centers in the world.

Turkish Economy:

-Among top 5 growth centers

-Most strongly opening economy

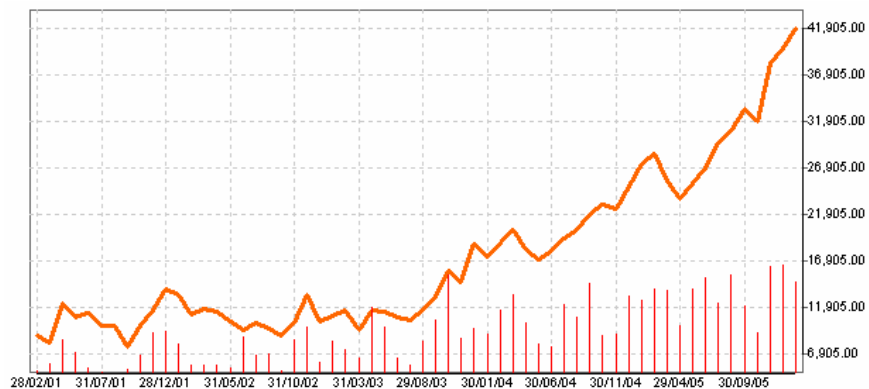
-Star of emerging markets

Deutsche Bank, November 2005[34]

There is positive development on many fronts. In 2005, Turkey

was the 16th largest economy among 30 OECD countries, maintaining a steady record high growth level of 5%-10% in the last four consecutive years [13]. The Turkish Lira is gaining value against foreign currencies and inflation rate is less than 10% in 2005.¹ This bubbling economy is reflected in the state of current Turkish industry. A major indicator, The IMKB (Istanbul Stock Exchange Market) index reached the record high level of 42,000 in January 2006, nearly a five-fold increase from 2001.

**Istanbul Stock Exchange
Market (IMKB) Index
(2001-2005)
with volume [7]**



The factors responsible for the turn around and bounce back merits elaboration from a value creation viewpoint by the large manufacturing companies in Turkey. During the crisis in 2001, given the weak local market conditions, Toyota made a strategic decision to concentrate on exports and invested heavily to increase its capacity. This was a bold move given the bleak situation. The strategy paid off. In 2004 Toyota reached record production levels of 150,000 achieving 100% capacity utilizations [9]. Toyota Turkey factory is now the best quality Toyota factory in the world and happens to be the first Toyota factory with “No Defects” in Toyota’s history. During the past four years, Turkish

Toyota Turkey:

**“...the best quality
factory among all the
factories of Toyota all
over the world...”**

Toshimitsu Hosoya,

**Chief Operating Officer of
Transportation Logistics Group,
Toyota [8]**

¹ The statistics in this report are combined from several resources including State Institute of Statistic, Undersecretariat of Prime Ministry of Foreign Trade unless stated otherwise.

companies such as Toyota Turkey and others, combined scale with reliability and technology to improve the image of “Made in Turkey” products in the foreign markets.

Outline of Our Analysis

The goal of this study is to take a closer look at the manufacturing industry in Turkey which is among the top 5 growth centers in the world. We first discuss the economic conditions in Turkey. We then examine the drivers of value creation in Turkish enterprises and focus on two major sectors (automotive and appliance) Within these sectors, we look at a diversified set of manufacturers (Japanese, US, German and Turkish) to understand the drivers of value creation in the sectors, and market focus.

All the companies in our sample had sales numbers of over \$1 billion. In the auto sector, we examine Toyota, Ford, Benz to juxtapose Japanese, American and German manufacturers. Likewise, in the appliance sector, we analyze Vestel and Bosch Turkey.

**4 Companies
under Study**

	<i>Sales</i>	<i>Global Achievement</i>
<i>Toyota Turkey</i>	\$2-3 bn	<i>Best Quality</i> Toyota Factory
<i>Ford Otosan</i>	\$4-5 bn	<i>Best Ford Factory</i> for four consecutive years
<i>Vestel</i>	\$2-3 bn	The <i>largest TV manufacturer</i> in Europe
<i>Mercedes-Benz</i>	\$1 bn	The most <i>modern bus factory</i> in the world
<i>Bosch Turkey</i>	\$1-2 bn	Bosch’s <i>manufacturing land</i>

II- Turkey at a Glance

A closer look at the economy

Map of Turkey



Being a bridge between east and west, Turkey has been an important trading center over the centuries. The country has an advantage of

being neighbor to the European, Balkan and Middle Eastern countries as well as the Central Asia. Proximity to the mature large European market and providing low cost, high quality manufacturing makes

Turkey an attractive export hub for international companies. Turkey also provides an opportunity for the companies to enter the growing east European, Middle East and Central Asia market. Besides



its geo-strategic position, Turkey has other advantages which most of the other emerging markets lack such as a large domestic market and well established legal-regulations.

Turkey: At the intersection of major markets, Europe, Russia, Middle East and Central Asia

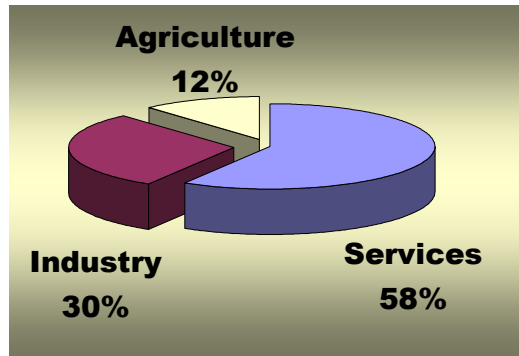
2001 Economic Crisis

The crisis hit a major blow in February 2001. Political instability and problems in the banking system triggered one of the most severe crises in Turkish history. The results were high inflation, devaluation of currency, massive debts and dramatic increases in the interest rates. To tackle the gravity of the situation, the government adopted a large economic program, including a very tight [fiscal policy](#), enhanced structural reforms, and sought unprecedented levels of IMF lending [5]. Slowly the situation started to show positive trends again. In 2002 and 2003, the reforms began to show results. Despite the Iraq war, inflation and interest rates fell significantly, the currency stabilized, and confidence began to return. The government still follows a reformist policy to strengthen the economy and keep the pace of growth.

Statistics about Turkey²	2003	2004	2005*
Population	70.8 million	71.3 million	71.9 million
Growth Rate	5.9%	9.9%	7.3%
GDP , \$	481 billion	553 billion	590 billion
(PPP Adjusted)			
GDP per capita, \$ (PPP Adjusted)	6740	7700	8200
Turkey Leads European Union in Economic Growth			
Inflation Rate	18.4%	%9.3	7.7%
Import, \$	65.2 billion	97.2 billion	115 billion

Export, \$ 51.2 billion 62.8 billion 73 billion

Distribution of the Economy



Today, Turkey accounts for 1% of the world's trade. In 2005, 11 Turkish companies made it to the Forbes Magazine's top companies list [3]. The distribution of

Turkish economic output is changing as the economy is getting stronger. Agricultural production is decreasing, while industry and service sectors are getting bigger in the economic portfolio. The percentage of sectors in the economy is as follows; Service industry 58%, industry 30% and agriculture 12%.

GM took the developments in the Turkish market as an example for its global operations and transformed its South Korean Plant [12].

Huge Business Potential

Lately, an increasing number of international companies are investing in Turkey. Today, more than 4600 enterprises with foreign partnership are operating in the country. Among them, one can find familiar names such as Toyota, Honda from Japan, Ford, P&G, Philip Morris from USA, Renault, Cement Franchise from France, Bosch, Mercedes, Siemens from Germany, Pirelli, Fiat from Italy and the list is growing. These companies are just some of the many international firms poised to take advantage of Turkey's favorable investment policies. The leading investors in Turkey are France, USA,

Factors that attract companies to invest in Turkey:

- a) Strong Domestic Market
- b) Integration to Global Market
- c) Well-established infrastructure

- d) Investment friendly environment
- e) Highly-skilled laborforce

Netherlands, Germany, Switzerland, United Kingdom, Italy and Japan [4].

The domestic market is strong

“Turkey has a larger population than every European country except Germany... The Turkish market represents a major growth opportunity.”

Arun Sarin

CEO, Vodafone

(After acquiring Telsim,

a wireless telecommunication provider in Turkey) [39]

Fully integrated to global market

European Union (EU) accession talks started in October 2005.

Turkey is among the largest 20 economies in the world and is among the top five emerging markets. Moreover, the domestic market is not saturated and there is high potential for new investment. Having a population of around 70 million, there is a huge number of consumers, who are potential customers with pent up demand for a wide range of products. Nearly 47% of the population is below 25 years old.

Turkey is both a significant customer and seller in international trade. This year, Turkey is expected to have a total of nearly \$120 billion of imports and \$80 billion of exports. The share by European countries is 64% of the export and 62% of the imports. The European Union (EU) accession talks that started in October 2005 will hopefully lead to Turkey becoming a full member by 2015. At the time of full membership, Turkey is expected to improve its total trade with Europe Union by several multiples. Currently, total trade with EU members accounts for 52% of the exports and 42% of the imports. Turkey's existing strong relationship with Europe is clearly a plus for companies who want to enter into the European market. Another factor driving this is proximity to Europe. Increasing transportation charges are also forcing international companies to invest in countries which are close

to their end market. Therefore, Turkey is becoming a major export hub for automotive and appliance manufacturers.

“Turkey plays an important role in multiple geographical regions — the Balkans, the Caucasus, the Black Sea, the Mediterranean, and the Middle East — that are critical for the EU’s economic and political interests...”

...Since European countries also do not want to put all their eggs in Russia’s basket, Turkey becomes a key connection between the EU and abundant energy resources of central Asia.”

**Serhan Cevik,
Vice President
Morgan Stanley**

Asian countries including Russia are also critical neighboring markets for Turkey. The other former Soviet republics and Middle East are potential export locations. The percentage of the exports to Asia increased from 16% in 2004 to 18% in 2005 of the total exports. Turkey therefore has a strong position in the growing Middle East and former Soviet Republic markets due to its geo-political location. According to Serhan Cevik, vice president at Morgan Stanley, Turkey plays an important role in this region [33]. Cevik mentions Turkey’s strategic location, economic and military might, and socio-cultural influence as the main reasons for this role. He concludes that Turkey’s accession process would bring synergy to the EU and make the Turkish model a beacon of stability and development in the region. The recent natural gas crisis proves Cevik’s concerns about Russia. Despite its market potential, Russia lacks the political stability to become the major export hub of Europe compared to Turkey.

Well-established supplier network, energy sources, banking sector and logistics

The role played by the supplier network in Turkey also needs to be highlighted in light of value creation. Suppliers provide the building blocks of the value chain for manufacturers in key sectors such as automotive and appliance. Turkey established a strong supplier network. The automotive sector is an outstanding example of the success of Turkish suppliers. Turkish automotive suppliers recently have demonstrated competencies in building all the major subassemblies of a car. Turkey is also a leading producer of steel and

several chemical products which are essential for several manufacturing processes. Turkey is also completing a major transportation and energy project to provide further boost to the economic turn around.

The commercial and banking achievements also need to be mentioned. Turkey built up a strong banking sector which, provides several financial tools to the investors. Banking sector in Turkey is currently under a major restructuring process. Major global financial corporations such as Fortis, Unicredito, HSBC, BNP and GE acquired financial corporations in Turkey with multi-billion dollar deals. Another important factor of the economic policy is the attractive credit opportunities provided to investors due to decreasing interest rates.

Recent Acquisitions in Turkish Banking Sector

- 1- Unicredito-Italy, Kocbank
- 2- Fortis-Netherlands, Disbank
- 3- BNP-France, Disbank
- 4- GE-USA, Garanti
- 5- Robobank-Netherlands, Sekerbank
- 6- HSBC-UK, Demirbank

Investment friendly environment

Turkey considers the foreign capital flow as an essential element to be one of the top economic powers in the world. The country provides generous incentives to reach this goal and attracts foreign companies from all around the world. Exemption from taxes, duties and fees is just one of them. In general, most sectors are open to foreign as well as domestic investors. In addition, there is no limitation in participation ratios of local and foreign partners; a company can be 100% foreign owned. Similarly, there is no minimum capital requirement within this friendly investment policy. Turkey also

adopted legislation which allows free trade within custom unions and WTO. European Union laws have been incorporated into Turkish system including patent regulations, international dispute settlement and antitrust laws.

According to the new Foreign Direct Investment Law, entry conditions for foreign investors establishing a company in Turkey are the same as for comparable local companies [10]. Key aspects of the Law include:

“There is strong ongoing interest in Turkish assets, which is expected to result in significant inflows in the following years.”

**PricewaterhouseCoopers,
2005/2006**

- Elimination of bureaucratic details with regard to screening, approval, share transfer and minimum capital requirements
- Reassurance of existing guarantees to foreign investors of their rights
- Redefinition of “foreign investor” and “foreign direct investor” in line with international standards
- A policy shift from “control” to a “promotion and facilitation” approach
- Guarantees for investor rights
- Equal rights and treatment between Turkish companies and foreign companies established in Turkey

Highly Skilled

Labor Force

The role played by educational institutes and centers of learning cannot be understated. There are several Turkish institutes and universities which create a well educated labor force. Turkey has the youngest population in Europe. Companies hire this young talented labor force with much lower cost compared to other European countries. The graduates of highly ranked universities such as

Bogazici, Bilkent, Metu, Sabanci and Koc assume important responsibilities in the growing companies. Turkey thus provides a large labor pool which can satisfy the human asset needs of the companies at all levels of the organization.

The Turkish culture also plays a critical role in the success of the companies in Turkey. During the 2001 crisis, Turkish workers collaborated with the management and accepted several concessions from their employers to alleviate the pain on the company.

Flexible labor force

2005-The year of privatization

In 2005, Turkish economy started to attract large amount of direct capital investment from both foreign and local investors. The privatization including public bids and the Turkish Savings Deposit Insurance Fund (TMSF) sales exceeded \$30 billion in 2005. This is the highest number of privatization a country has ever achieved in the world annually. It is an indicator of the high expectations of investors for the future of the Turkish Economy.

“... now things are really happening and previously cynical investors are flocking to Turkey, as one potentially lucrative enterprise after another is sold off.”

The Economist [2]

III- Automotive Sector in Turkey

An industry growing rapidly

Automotive Exports

In 2005 (\$ billion) [11]

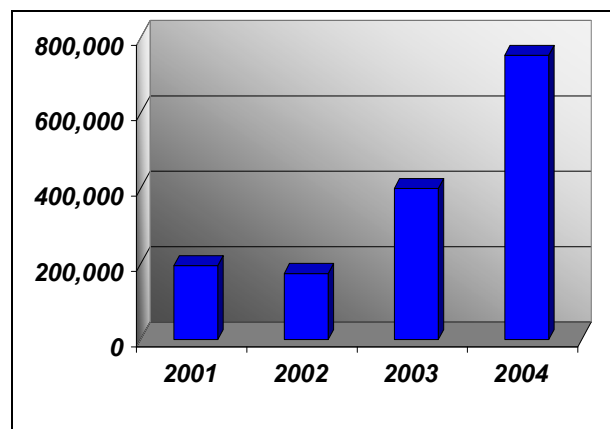
Passenger Cars	4.368
Auto Parts	3.658
Trucks	2.424
Ships	1.015
Buses	0.886
Other	0.293
Total	12.7

The automotive sector is a major driving force of the Turkish economy with all its sub-sectors. During mid-1950s, investments in transportation increased the demand for vehicle manufacturing. Turkish automotive sector was born. Today there are 19 companies in production of which 5 are automobile producers and 14 are commercial vehicle producers [1]. Automotive sector exports are among the primary export sources of Turkey and have reached \$12.7 billion in 2005.

“In all, Turkey has grown in a relatively short period of time to become a major center for automotive manufacturing and design. For Ford Motor, Turkey is another key to global success.”

Mike Thomas,
ford.com [38]

The automotive companies in Turkey produce for both domestic



and international markets. Several international automotive companies from Italy, Germany, France, Japan, USA and S. Korea have important investments in

Turkey. Besides huge domestic market revenue, these companies position

Turkey as their export hub for the European and other neighboring

Total car sales in Turkey

countries. Especially during crisis period, exports helped these companies to generate revenues. Low cost of production (compared to other European countries), proximity to major markets, high quality production are some of the major advantages leading to Turkish automotive sector growing as rapidly.

“In the near future, Turkey will be the world's 'alternative production centre of vehicles and parts.’”

Erkut Ozerman, Chairman, ULUDAG Automotive and Sub-Industry Exporters Union [14]

Turkish automotive sector exports are increasing steadily (350 %) during the last ten years. With the presence of strong automotive manufacturers and suppliers, the automotive sector in Turkey has become an integral part of the global auto network. This sector alone totally employs workforce around 500,000 people.

Automotive Suppliers

“With total factor productivity (TFP) at 109 percent of the US level, modern (automotive) suppliers in Turkey are already more productive than US benchmarks. This is largely because modern suppliers are either themselves global best practice players or are exposed to global best practice through competition in domestic and/or export markets.’”

McKinsey & Company [31]

Since the automotive supplier sector operates on a global basis, Turkey has a highly developed automotive part and components sector which provides products supporting brands such as GM, Mercedes- Benz, BMW, Opel, Toyota, Ford, VW etc... At present there are 20 private and large-scale enterprises under foreign licenses operating in the Turkish vehicles sector, having close relationship with the multinational automotive companies (such as with Fiat, Toyota, Ford, Renault, Hyundai for passenger cars; Mercedes-Benz and MAN for buses). There are also 3480 small and medium sized companies. Many of the companies in this sector have modern machinery, the latest technology, foreign license/foreign equity, capital intensive production and the best in quality control. The ability to manufacture products quickly in different mixes and volumes (process flexibility) to feed the worldwide assembly plants of the OEMs is a significant advantage of Turkish automotive suppliers [41].

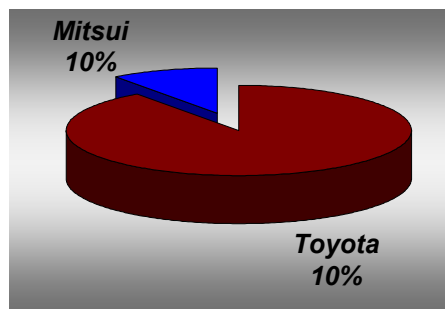
The total exports of Turkish automotive suppliers are today over \$3 billion. These companies supply major European producers such as GM, VW and Ford. Of the total automotive exports from Turkey, 69% are destined for the EU and the leading importing countries are France, Germany, Italy and UK. Foreign investors are showing increasing interests in Turkish automotive suppliers due to the huge export potential as well as needs of the local market.

Companies Reviewed

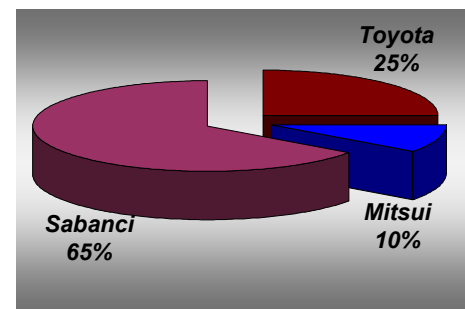
In our study, we will focus on four major automotive manufacturers in Turkey to understand the drivers of value creation. We selected Toyota, Ford and Mercedes as the automotive manufacturers and Bosch as the automotive supplier in this sector. Together, they represent various key foreign players in this sector.

Toyota-Turkey: Best Quality Toyota Factory in the World

“Toyota Turkey, the leading supplier of Toyotas to Europe, ... has stimulated great developments from a production and financial point of view,”



Shareholders of Toyota Turkey



Shareholders of Toyotasa

Manufacturing

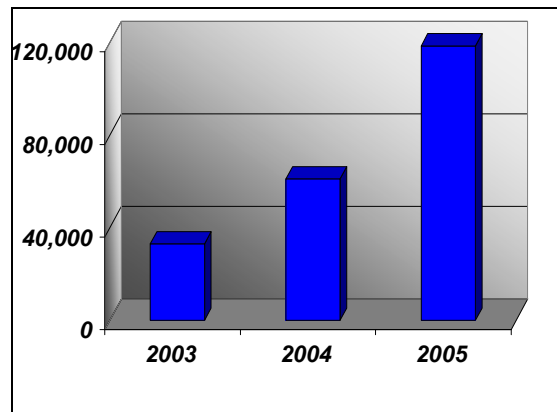
Shinichi Sasaki
 Toyota Motors Europe
 Chairman and CEO

The head of the pack is Toyota-Turkey. It was established in 1990 as a joint venture of Toyota and Sabanci groups. Production started in 1994. After 2000, the company underwent several changes in the shareholder structure. Currently, the manufacturing plant is owned by the

Toyota Group (90%) and Mitsui Group (10%). Marketing and sales are operated by ToyotaSa which is owned by Sabanci Group (65%), Toyota (25 %) and Mitsui (10%).

As discussed earlier, during the 2001 crisis, Toyota-Turkey suffered from low sales numbers. It pushed Toyota to the edge of almost shutting down its operation in Turkey. However, Toyota-Turkey made a strategic decision to invest, which has now turned out to be a big success story! In 2002, Toyota-Turkey expanded its operations in Turkey and started exporting cars to Europe. Turkey became the export hub of Toyota for Europe market. The total investment was around \$700K with 3000 employees in its Adapazari plant.

Number of exports
in the last three years



The current capacity is 150,000 cars annually. In 2004 Toyota became the largest exporter of Turkey at \$1.85B, which is nearly \$1 B increase from 2003. In 2005, Toyota-Turkey is expected to

make more than \$2 B of exports. The spectacular growth speaks highly of Toyota Turkey as a strong player in global auto capacity.

Ford-Otosan: Best Ford Factory in the World

This company is a partnership of 41% Ford Motor Company and 41% Koc Group partnership. Ford Otosan produces light commercial vehicles (vans, minibuses, pick-ups). The total number of employees is 7,725. Ford-Otosan produced 243,000 vehicles in 2005, up from 206,615

“According to Ford performance metric, Ford-Otosan is the best Ford factory in the world in 2005. Ford-Otosan has the highest score in Ford’s history [35].”

in 2004, an increase of nearly 18%. The company has a turnover of \$4.6 billion, of which \$2 billion is generated from exports of 162,000 units this year. Recently, Ford shutdown its plant in Belgium and moved its Belgium operations to Turkey. Despite shutting down some plants all over the world, Ford committed to investing \$375 million through 2007 for additional production at its plants in Turkey. The move will raise the capacity of the Kocaeli commercial-vehicle plant to 280,000 units annually in 2007 from the current 240,000 [15].

Mercedes-Benz Turk: Technology Center of Mercedes-Benz

Mercedes-Benz is a joint venture of DaimlerChrysler and other local partners. The shareholders of Mercedes-Benz Türk are DaimlerChrysler (66.91%); Overseas Lending Corporation (18.09%); Koluman Holding (7.04%); Türk Silahlı Kuvvetlerini Güçlendirme Vakfı (5.00%) and Makina ve Kimya Endüstrisi Kurumu (2.96 %). Turkey is one of DaimlerChrysler’s main global centres for the manufacture of city and inter-city buses that are assembled in two factories (Hosdere and Davutpasa) in Istanbul [16]. In its Aksaray plant, Mercedes-Benz Turk produces light and heavy duty trucks. When the Hosdere facility was established in 1999, DaimlerChrysler called Hosdere “the most modern bus factory in the world.” [17].

Bosch-Turkey: Manufacturing Center of Bosch

Bosch has operated in Turkey starting since 1910. There are roughly 6,000 associates working at the companies 3 manufacturing sites: Bursa (automotive), Manisa (thermotechnology), Cerkezköy (household appliances). In 2004, the Bosch Group generated sales of \$750 million in

“Everybody is pointing to Turkey as a model country”

Dr. Till Becker, Chairman and CEO of DaimlerChrysler Northeast Asia

the Turkish market. Bosch Fren manufactures several brake systems for the automotive companies, and has a monopoly with a 90% share of the Turkish automotive brake market. Bosch also expanded diesel production in Turkey.

IV- Appliance and Electronics Sectors in Turkey

A pathway to success in Europe

Turkey is a major manufacturer and exporter of appliance and electronics in the world. The sector is dominated by a small number of big firms in Turkey. The major firms are Vestel, Arcelik and Bosch (BSH-Profilo). Arcelik spans both sectors and have a total of US\$3.1bn sales in 2004 [19]. Turkish firms are increasing their investment in research and development.

In the electronics group, television sets are the most important item. Most of the televisions are exported to Europe. Turkey is the largest manufacturer of television sets in Europe. Exports of television sets have skyrocketed during the last ten years. The total number of television sets was under 2 million until 1995. This number shot up to 17.5 million in 2004, while 2.5 million were produced for the domestic market [20]. The sector mostly benefits from low cost manufacturing, better quality and better custom access to Europe compared to East Asian competitors.

Export is also dominating the appliance sector. Since the 2001 crisis, the appliance sector exports most of its output. In the last three

Turkey now produces more than half of the televisions sold in Europe [18].

years, the domestic market also provided significant sales gains. The reasons were improved consumer confidence, delayed consumption, low interest rates and competition. This resulted in 30-40% annual expansion [22]. In 2005, the sector boosted output by 5.3 pct to 11.28 million units. Turkey's white goods exports rose 5.73 % to 7.05 million units, while imports fell by 6.24% to 382,057 units [23].

Prominent companies in the white goods sector Electrolux, Whirlpool and Merloni are turning from Italy to Turkey to obtain parts and supplies... [21]

Companies Reviewed

In our study, we will focus on Vestel and BSH (Bosch) in order to understand the value creation in Turkish appliance and electronics sectors.

Vestel: The largest TV manufacturer of Europe

Vestel is Turkey's largest consumer electronics, digital technologies and white goods manufacturer, comprised of 17 companies operating in technology development, manufacturing and marketing. It offers a variety of products including CRT TV, flat TV, TFT-LCD TV, Hard Disc TV, TV DVD Combo, plasma TV, Integrated Digital TV, DVB-T Receiver, DVB-S Set Top Boxes, Analog Satellite Receiver, DVD Recorder, DVD Player, refrigerator, air conditioner and washing machine. Vestel exports 96% of its production to 103 countries, leading with EU members [24]. Vestel's television and monitor plant at Manisa is one of the largest in the world, with a capacity of 8 million units per year. Vestel exported \$2.2 billion worth of products in 2005 and expects to reach \$2.5 billion in 2006.

Vestel's key strategy is supplying high quality products with internationally competitive prices.

Vestel has a very strong research group which develops new technologies. Vestel responded early to the digital revolution and became the market leader in digital technologies in Europe. Currently, Vestel is the market leader in Europe with 18 % in TFT-LCD and plasma TV's. They expect to gain 25% of the market in 2005 [25].

BSH (Bosch)

BSH is a joint venture between Bosch and Siemens and is a multinational group posting annual sales in excess of 6,8 billion euros. BSH is the market leader in Germany, the number one in Western Europe and is one of the world's leading domestic appliance manufacturers. BSH has invested half a billion euros (\$ 650 m) since its founding in 1992 to become the largest foreign capital-based home appliance producer in Turkey. BSH in 2006 also will invest to expand production in its existing plants, including the production of new products, 95 percent of them being designed for the American market. The plant in Çerkezköy provides several examples of quality production and is used as a benchmark for the firm's 43 plants worldwide.

“Turkey has proved to be an ideal manufacturing location for large home appliances. There is a well trained labor force, capable of producing high quality home appliances, transport connections with the whole world and a domestic market experiencing dynamic growth.”

Norbert Klein

CEO, BSH Profilo [26]

Conclusion

Discussion of the Results

Factors to Invest in a Country

When international companies decide on their global footprint in terms of manufacturing/assembly locations, they consider several factors. The potential to tap local and global market opportunities from a location undoubtedly plays a big role in this process. The lure of serving customers in fast growing local markets is huge. Hence, the domestic market size, many times is a driving factor in a company's investment decision. However, in other situations, companies see the global potential and invest heavily in a country to tap the export potential from that location. They also enjoy at the same time the attractiveness of the location's low cost structure relative to their home country. In such situation, export potential is the driving force behind foreign direct investment in emerging markets.

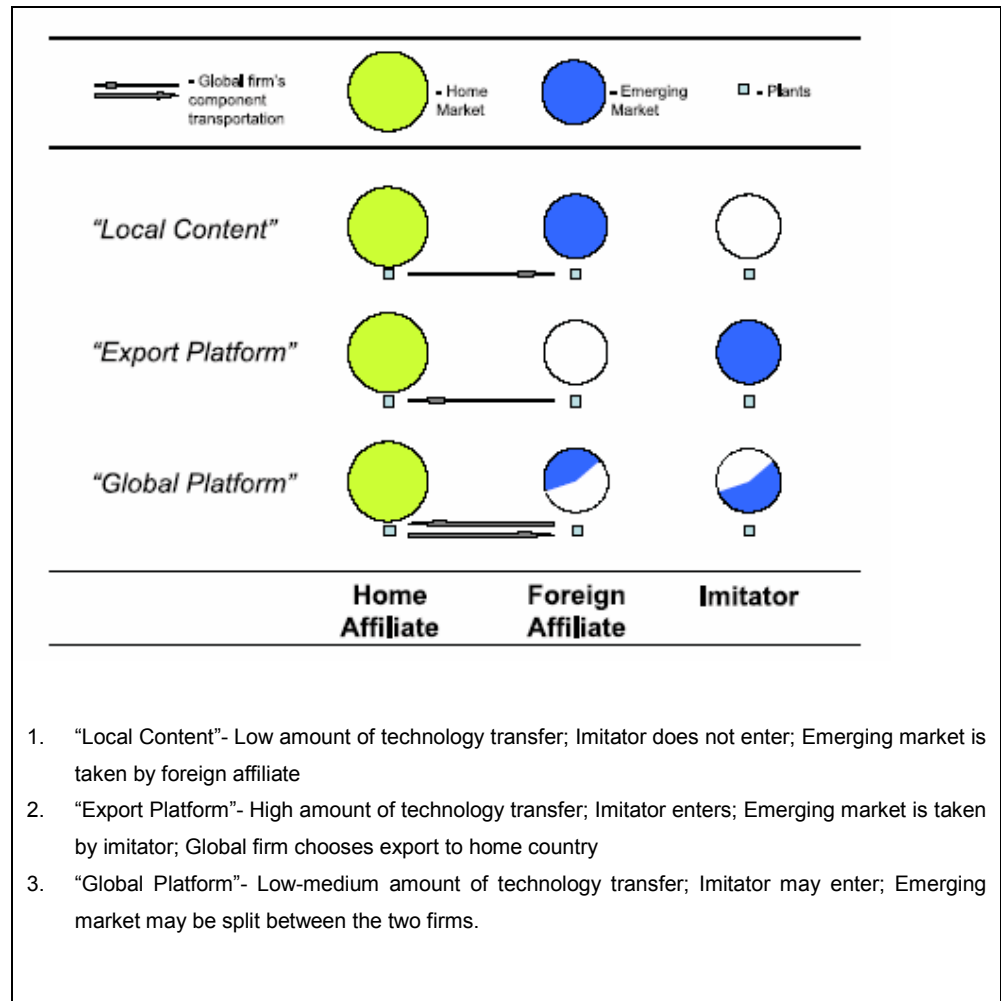
Another factor for a country selection is the attraction of low cost and quality of labor force in a country. Labor costs include both line workers as well as white collar workers in engineering and product development. Additional advantages can be accrued by exploiting both shop floor as well as engineering capabilities in locations such as India, China and Turkey. These regions thus become attractive for serving both local as well as export market. They make best use of the human assets and provide a favorable labor culture that promotes advancement and employment opportunities. Foreign multinationals draw the best talent

and can move their technological capability speedily to these regions. However there are two aspects that can negate some of the advantages of these promising locations.

First is the trade restrictions and added cost of transportation, duties that can be levied on the exports from these cost attractive locations. With spiraling oil prices in recent years, the transportation costs have recent years grown 6% annually. Therefore, locating investment close to the export markets especially for the bulky products such as automobiles is becoming very attractive. Another major downside is the poor IP protection in some of these locations. Global companies give special priority to legal regulations of a country when they consider investing. Imitation of proprietary technology is one of the major concerns. According to the World Customs Organization, counterfeiting is expected to account for 5 to 7 percent of global merchandise trade, equivalent to lost sales of as much as US\$512 billion last year [27]. At the industry level, phony car parts cost the automotive companies roughly US\$12 billion a year. Imitation of technology especially poses a high risk in China. In one Chinese city, an estimated 80 percent of automotive parts are said to be counterfeit. Likewise, the pharmaceutical industry estimates 10 percent of medicines circulating in the world market today are counterfeit. Last year alone, China confiscated 85 million counterfeit publications, from books and movies to computer discs. According to the Business Software Alliance, more than 90 percent of PCs in China are using pirated operating systems [28]. This makes the technology transfer choice to these locations vulnerable to technology predators. They can reverse engineer product and process designs, and position themselves

aggressively in both local and export markets. What makes matters even worse, is the intrinsic advantage local companies have to better exploit labor and other factors of production than multinationals. The latter often commit mistakes while getting familiar with the local terrain. They also end up paying premium wages and have high turnovers with the multinationals competing with each other for the best talent.

All the above issues when considered together, present themselves as alternative strategies for companies building global footprints in emerging markets. According to a recent study “Imitative Competition: Implications for Strategic Sourcing and Technology Transfer” by one of the co-authors, companies can be grouped into three clusters based on their technology transfer and global sourcing strategies [37]. These are “Local Content” strategy in which global firm transfers a low amount of technology and imitators decide not to enter, “Export Platform” strategy in which a global firm transfer a high amount of technology, allowing imitator to enter and capture the emerging market, and finally “Global Platform” strategy. This is a hybrid of Local Content and Export Platform strategies. In the light of this framework, we examine the stand taken by automotive and appliance manufacturers in Turkey while considering both sourcing and market opportunities.



Where does Turkey Stand? Turkey is an ideal manufacturing location for both automotive and appliance sectors. As we discuss in Section 2, high quality production is achieved to serve a growing domestic market. Ease of transport connections with the other markets in Europe also is an added plus. Therefore, combined with the geographical factors such as proximity to Europe, Russia, Central Asia and Middle East, Turkey becomes a smart choice for investors to place their manufacturing assets. There are several industrial locations in Turkey. Each location has a well-established connection with the European transport network and provides a large network of logistics companies. This is critical for just-in-time manufacturing and the delivery of finished products to other markets. Turkey has also a healthy legal regulation environment to create

investment friendly climate including the European Union laws for patent regulations, international dispute settlement and antitrust issues.

The last four years have been a blessing in disguise for Turkey as a manufacturing hub. The 2001 crisis had a large negative impact on Turkish economy. Before the crisis, the domestic market in Turkey was large enough to generate substantial revenue for companies. However, during the crisis, Turkey suffered high inflation rates, devaluating currency and instable interest rates. Appliance and automotive sectors responded heavily to the shrinking economy and sales plummeted nearly to zero. While the government took reformist actions to stabilize the economy, manufacturers in Turkey desperately started to look for alternative markets to prop sales and remain profitable. Devaluating Turkish currency had a positive side effect: decreasing prices in other currencies.

The automotive and appliance sectors leveraged this opportunity and targeted exports heavily. For example, Toyota reached an export amount of \$2 billion in three years from zero exports in 2001. In 2004, when the economy turned back to normal, Toyota had already combined efficiency with scale and could still remain profitable despite the more valuable Turkish Lira. A crisis was converted to an opportunity to build a strong export platform to the European market. The global platform strategy had paid off.

GM shut down its plant in Turkey during the crisis. GM has recently announced plans to reopen its factory in Turkey.

"We are now sorry that we shut down our factory in Turkey. Because it is actually now that country's star has begun to shine... Turkey has a young population and a hungry market...If we are not successful in Turkey, we will not be successful in Eastern Europe"

Rick Wagoner

CEO, General Motors [29]

In our analysis, we mainly focus on two major sectors in Turkey, namely automotive and appliance sectors in light of post 2001 crisis. Both the sectors generate significant revenue in local and foreign markets.

**Partnership Structure
of Major Automotive and
Appliance Companies in
Turkey**

	Local	Joint Venture	Foreign
Automotive		Fiat Ford Mercedes Renault Honda Hyundai	Toyota Bosch
Appliance	Vestel Arcelik/Beko Teba		Bosch Merloni

The automotive sector in Turkey can be classified as a *global platform*. Turkey provides automotive companies a strong local market as well as an export hub for the European market. Turkey is the fourth largest market in LCV and eight largest market in automobiles in Europe according to 2006 sales [36]. Proximity to Europe and a reputation for high quality production is a great advantage for export oriented

“...the manufacturing industry in Turkey bases its competition strategy mainly on low price, although there

is a growing trend towards increasing emphasis on product differentiation. Quality and quality related issues constitute the top priority issues for the manufacturing industries in Turkey. “

Gündüz Ulusoy
Sabancı University [40]

companies. Turkey combines low-cost large scale production, good use of technology to offer the highest quality. Turkish automotive sector creates a benchmark for quality. Toyota and Ford in Turkey are the best quality plants in the history of both companies. This indeed is creditable. While shutting down plants in several other countries, Ford initiated a \$375 million investment in its Turkish plant in addition to its previous \$1.2 billion investment [30]. When we look at the Appliance industry, Turkey became the manufacturing land for Europe. Turkish companies have gain significant market shares in Europe. The major competitive advantage of Turkish appliance industry is to combine high quality products with low price.

Some further comments on the two sectors are noteworthy. As we can see from the above table, Turkish automotive industry is comprises of firms which are joint investments of local and global companies. Both sides of the partnerships bring different strengths to the table for the joint investment. Major automotive manufacturers in the world have followed a “*Foot in the Door Strategy*” to enter in Turkish market. They have established joint ventures with local groups. At the beginning of the investment, the global company provides design and engineering and technological expertise, while the local company establishes a supplier network and labor force, and eliminates any barriers to entry. The global partner has brand power and generates export potential for the joint venture as well. The local partner creates an efficient sales network and aftermarket service. Since the technology does not diffuse quickly in automotive, we do not see any major automotive manufacturer owned solely by Turkish capital.

There are two major strategies in Turkish automotive sector. As a result of the economic crisis and the huge export potential, companies start to change structure over the years as they gain foothold. The global partners of the joint ventures are looking for growing strategies in European market and acquire a major control of the operations to eliminate any incentive misalignment. We call this “*Empire Strategy*”. Toyota Motor Manufacturing Turkey which started as a joint venture between Toyota and Sabanci group, changed the shareholder structure in 2002 and is now solely owned and controlled by Toyota group only. Therefore, we can see horizontal moves in the shareholder structure depicted in the table below.

	Local	Joint Venture	Foreign
Automotive		Foot in the Door Strategy	Empire Strategy
Appliance	Watch Your Penny Strategy		Brand is King Strategy

In the appliance industry, the companies can be also classified as “Global Platform”. However, the dynamics of the appliance sector are slightly different from the automotive sector. Appliances are becoming

Flexibility of Labor Force: A Distinguishing Character

Turkish labor force provides lot of flexibility to the manufacturers in terms of

overtime working hours,
less automation, adaptation
to changes in the
production line and
cooperating unions during
the crisis.

commodity products. The cost and quality are the main drivers influencing customer choice. Another difference is the diffusion of the technology. Appliance is a fast clock industry and a new technology can be replicated by a competitor in a short amount of time. Products get obsolete quickly and new feature introduction are very common to bring in new customers. Companies who adapt new technologies rapidly can be successful in the sector. Factors such as fast technology diffusion make joint ventures in appliance sector not very attractive in Turkey. The local companies follow a “Watch Your Penny Strategy”, which centers on aggressively cutting cost and gain a pricing advantage over the competitors. Foreign companies follow “Brand is the King Strategy”. Horizontal movements are quite common within the industry. Arcelik, a Turkish appliance manufacturer, acquired Grundig to leverage the latter’s brand in shaping to growth strategy. Bosch acquired Profilo, a local appliance manufacturer, to increase its market share in Turkey [6].

Our Predictions for the next 10 years

Appliance industry in the world centers on contract management. Brand domination will command loyalty from customers and premium dollars. The battle appears to be to acquire the best brands by both foreign and local Turkish companies. The identity of the ownership structure will be overshadowed by the brand power exhibited in both European and American markets. We predict that in the appliance sector, the Turkish companies will dominate the European theater while the Chinese manufacturers such as Haier Group will make headways in the American markets. Turkish appliance manufacturers such as Arcelik and Vestel are likely to become one of the largest players in the world, if they

keep steadily investing in new technology and keep their products fresh. Combining low cost with high quality provides them a unique advantage. There are however dark clouds in the horizon: One is the political instability in middle east and the other is the strengthening Turkish Lira. Both of these factors could hamper the progress made by these Turkish giants in the appliance sector.

Europe: The Battleground for the auto-giants

However in the automotive sector, the dynamics are not arising from brand domination, but by leveraging scale using export platforms and at the same time differentiating products in diverse markets. In the automotive industry, we expect to see the companies to fight more aggressively for the European market. The winners shall be manufacturers who excel in mass customization. On one hand, the global platform will allow sourcing of common components from countries such as Turkey to leverage low cost factors. At the same time, the proximity to European markets and the availability of talented development engineers will foster innovation to offer personal-choice cars. The battle with the European competitors shall become fierce as Japanese and American companies will make assaults on Europe with Turkey as the launching pad. Clearly, Europe will be the next battleground for the auto-giants. American automotive manufacturers, who fell behind in the American market, now seek revenge in the European market. To some extent, there will be cooperative competition between American, European and Japanese manufacturers in Turkish bases. It is still most likely the European market will not end up in a winner takes all strategy.

We anticipate two phases in this automobile war: Foot in the door in the first phase, followed by conquer the European market strategy in

the second phase. In the first phase, the battle will be restricted to the domestic market in Turkey. Manufacturers will develop competencies to penetrate these new markets. This translates to sound logistics and distribution strategies to manage the channel. It also involves development of reliable sources for material supply. Turkey thus has proven to be a good staging ground for automotive war in Europe. Turkey provides several advantages in terms of location, availability of skilled personnel, favorable domestic market and IP protection. All these advantages translate to attractive sites to position assembly facilities. In this phase, there will be collaboration among the OEM's to develop supplier base and logistics system. The second phase in the war is developing an assault plan for capturing European customers. Global companies such as Ford and Toyota will use Turkey as a base camp to launch production and build up manufacturing capability close to the European market. The second phase appears to have begun now as massive investments and capacity build up occurs in Turkey.

Turkey is definitely benefiting from this economic warfare as assets are piled up in Turkey and the workforce elevates itself to higher technological capability. This by no means suggests that the war will be easy. Other countries such as Russia and Czech Republic have also geographical advantages. Toyota plans to open a new plant in northeastern Russian region of St. Petersburg in 2007 [33]. From a supply standpoint, Turkey and Russia seem to be competing for sources of supply to the European market. Neither of the two location players, Turkey or Russia, has a clear advantage over the other. Toyota seems to have hedged by placing assets in both countries to minimize its risk.

In conclusion, both these sectors are of critical importance to Turkey. In the appliance sector, marketing and brand acquisition strategies will play a key role. In the automotive sector, logistics and global platform capabilities with effective new product deployment to win the European customers will be critical. Turkey appears to be destination of choice for American, Japanese and European manufacturers. In any event, Turkey is clearly the winner!

REFERENCES

- [1] Anonymous, "About the Turkish Automotive Industry", World Wide Web, <http://www.wbr.co.uk/autoturkey/turkey.pdf>
- [2] Anonymous, "Business: Flocking to Bosphorus; Turkey", The Economist, London, Sep 17, 2005, Vol 376, Iss. 8444; pg. 72
- [3] Anonymous, "Forbes Global 2000: 2005 List", 2005, Forbes Magazine
- [4] Anonymous, "Foreign Investment in Turkey", Under Secretariat of the Prime Ministry for Foreign Trade, World Wide Web, <http://www.dtm.gov.tr/English/doing/iginvest/invest.htm>
- [5] Anonymous, Habergazete, World Wide Web, <http://www.habergazete.com/Arsiv/12-12-2005/turkey.htm>
- [6] Anonymous, "Arcelik Discusses Brand Strategy, Market Status", Jul 22, 2005, World Wide Web, <http://www.appliancemagazine.com/news.php?article=8884&zone=0&first=1>
- [7] Anonymous, Milliyet Finance, World Wide Web, <http://finans.milliyet.com.tr>
- [8] Anonymous, "Speech of Mr. Hosoya", "Case Study of Japanese Investors in Turkey-Mitsui", World Wide Web, <http://www.deik.org/genel/london2004/Hosoya-speech.pdf>
- [9] Anonymous, Toyota Press News, World Wide Web, <http://www.toyotatr.com/eng/press.asp>
- [10] Anonymous, "From Beijing to Budapest- Winning Brands, Winning Formats, 2005/2006", PricewaterhouseCoopers, pages 339-251

- [11] Anonymous, Hurriyet, World Wide Web, <http://www.hurriyetim.com.tr>
, January 3rd 2006
- [12] Anonymous, Turkishweekly, World Wide Web <http://www.turkishweekly.net/news.php?id=6303>
- [13] Anonymous, Turkish Treasury, 2005
- [14] Anonymous, "Turkey's auto part sector targets Mid East in USD10 billion export drive", World Wide Web, <http://www.ameinfo.com/36983.html>
- [15] Anonymous, "Ford will invest \$375 million to expand production in Turkey", World Wide Web, <http://www.WardsAuto.com>, Dec 22 2005
- [16] Anonymous, "Light at the end of the tunnel: Turkey", FDI magazine, April 2, 2002
- [17] Anonymous, Turkish Press Review, World Wide Web, <http://www.byegm.gov.tr/YAYINLARIMIZ/CHR/ING2003/06/03x06x27.HTM#%2010>
- [18] Anonymous, "Turkey switches on to TV market", Jan 17, 2005, World Wide Web, <http://www.CNN.com>
- [19] Anonymous, "Household durables and consumer electronics", [EIU Business - Industry Overview, The Economist Intelligence Unit Limited](#), June 8, 2005
- [20] Anonymous, "Turkey Jan-Nov 2005 White Goods Sales Rise 2.47 Pct Y/Y", Business Digest, All Data Processing Ltd., December 30 ,2005
- [21] Anonymous, "Choice of White· Good Giants", [Gozlem Gazetesi](#), August 8, 2005
- [22] Anonymous, [EIU Business - Industry Overview, The Economist Intelligence Unit Limited](#), June 8, 2005
- [23] Anonymous, [Business Digest, All Data Processing Ltd.](#), December 30, 2005
- [24] Anonymous, "OpenTV Core Middleware to be Deployed by Set-Top Box Manufacturer Vestel", World Wide Web, http://www.all-aboutmonitors.com/opentv_core_middleware_to_be_deployed_by_set_top_box_manufacturer_fci.jsp
- [25] Anonymous, [Dünya İletişim Ajansı - Haberler, Dünya Gazetesi](#), January 2, 2006
- [26] Anonymous, BSH Group Annual Report, 2004
- [27] Anonymous, "Fakes!" BusinessWeek Online, World Wide Web, <http://businessweek.com>, 28 January 2005
- [28] Anonymous, "Staying Ahead of China's Counterfeiters", Executive Agenda, ATKEARNEY, Ideas and Insights for Business Leaders, Volume VIII, Number 2, 2005, World Wide Web, <http://www.atkearney.com/main.taf?p=5.1.1.115.2> ,
- [29] Anonymous, "GM plans to bring Opel production back to Turkey", Hurriyet, November 3rd 2005
- [30] Anonymous, "Ford Turkey increases production capacity", World Wide Web, <http://WardsAuto.com>, Dec 22 2005

- [31] Anonymous, "Turkey, Making the Productivity and Growth Breakthrough", McKinsey Global Institute, February 2003
- [32] Arvedlund, E. E., "Europe: Russia: Toyota To Build Factory", New York Times, New York, NY, April 27, 2005
- [33] Cevik S., "Turkey: Irreversible", Global Economic Forum, Morgan Stanley, April 24, 2004
- [34] Neuhaus, M., "Opening Economies Succeed", Deutsche Bank Research, Frankfurt Am Heim, Germany, November 11, 2005
- [35] Ozpeynirci, E., Hurriyet, January 6, 2006, World Wide Web, <http://www.hurriyetim.com.tr>
- [36] Sandik, U., March 3, 2006, Sabah Gazetesi
- [37] Sun, J., L. Debo and S. Kekre, "Imitative Competition: Implications for Strategic Sourcing and Technology Transfer", Carnegie Mellon University, Tepper School of Business, Working Paper, 2006
- [38] Thomas M., "Turkey Powers into Global Automotive Business", Ford Communications Network, World Wide Web, <http://www.ford.com>
- [39] Timmons H., "Vodafone to Buy Turkish Phone Company", New York Times, New York, NY December 14, 2005, page C.10
- [40] Ulusoy G., "Competitive manufacturing strategies for the manufacturing industries in Turkey", Sabanci University Working Paper, March 2003
- [41] Ulusoy, G., A. Ozgur, T. Bilgic, A. R. Kaylan and E. Payzin. "A study on technology management process: The parts and components suppliers in the Turkish automotive industry." Technology Management, Vol. 5, No. 4, 245-260, 2001