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Investment Support and Promotion Agency of Turkey

TURKISH HOME APPLIANCES & ELECTRONICS INDUSTRY REPORT

JULY 2010

Deloitte.

CONTENTS

1. Executive Summary

Turkey has risen to become one of Europe's leading home appliances manufacturers. The white goods sector (the manufacturing of refrigerators, washing machines, dishwashers and ovens) provides jobs for 2 million and has a production capacity of more than 25 million units per annum, which is the second largest capacity in Europe after Italy.[1] The home appliances sector in Turkey earned a revenue of USD 8 billion in 2008. Approximately 16 million units were produced of which approximately 12 million were exported, both in 2008 and 2009. Home appliances are mainly exported to European countries such as the UK, France, Germany and Italy.[2]

The Turkish electronics sector has also grown impressively, reaching a production volume worth USD 9.5 billion in 2009. The exports constitute an important section of the sales in this sector, where export revenues hit USD 4.9 billion in 2009. Imports for the same year was USD 12.2 billion.[3]

The home appliances industry was hit by the global financial crisis in 2009. Exports decreased by 25 percent and domestic revenue decreased by 30 percent within the last quarter of 2009 when the affects of the crisis were significant.[2] The Turkish government countered the crisis with a temporary exemption of the Special Consumption Tax in various sectors including home appliances, electronics and automotive in 2009. The Special Consumption Tax amounting to 6.7 percent on white goods was temporarily lifted between 17 March and 15 June 2009, and was applied at a reduced rate of 2 percent between 16 June and 30 September 2009. Exports were USD 2.6 billion and imports were USD 0.4 billion in 2009.[1] In the first quarter of 2010, exports are observed to have increased by 23% when compared to the first quarter of 2009.[2]

According to EIU, the market demand for home appliances and electronics is expected to continue its growth in Turkey between 2009-2013. The expected CAGR for electrical appliances and white goods is 10 percent whereas the highest growth is expected in household audio & video equipment with a CAGR of 12 percent.[4]

The expected growth is a combined result of the growing population and disposable income, together with a trend towards smaller households which may increase spending on home appliances. The relatively young population in Turkey is the main force behind the increase in PC penetration and audio-video equipment.

Arcelik, Vestel Beyaz Esya, BSH Ev Aletleri, Indesit and Kumtel are the main home appliance producers ranking in the Istanbul Chamber of Industry ISO 500 list in Turkey. The manufacture of white goods takes place predominantly in the Marmara, Aegean and Central Anatolia regions. Casper Bilgisayar, Philips and Vestel Elektronik are among the main consumer electronics producers in Turkey.

[1] Export Promotion Center (IGEME), White Goods Sector 2010

[2] Ministry of Industry and Trade, White Goods Sector Report, April 2010

[3] Turkish Electronic Manufacturers Association (TESID), Electronic Industry Almanac, 2010

[4] Economist Intelligence Unit

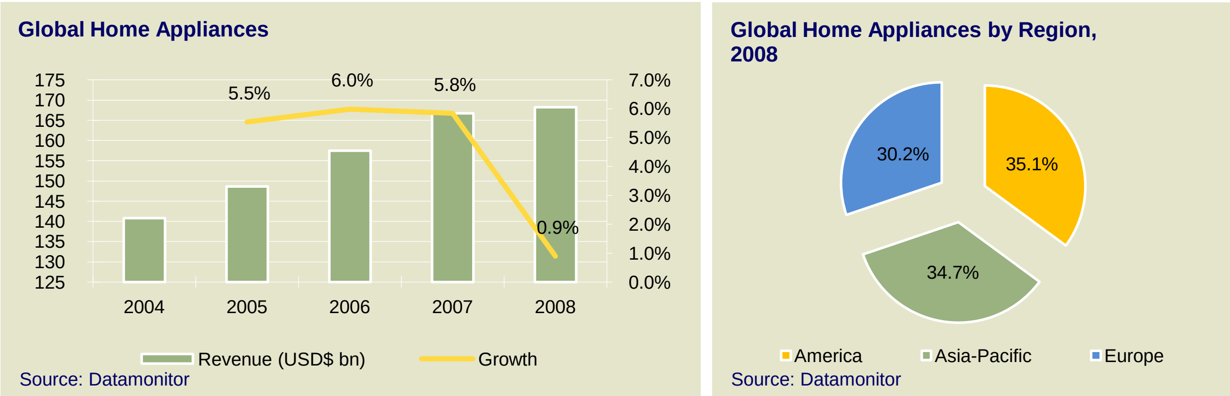
2. Sector Overview

2.1 Global Sector

2.1.1 Home Appliances

The global home appliances sector achieved a total revenue of USD 168.2 billion in 2008 generating a growth between 2004-2008 of 4.5 percent CAGR. The market grew by a CAGR of 2.6 percent in Europe and 4.9 percent in Asia-Pacific, reaching USD 50.8 billion and USD 58.4 billion respectively in 2008.[5] The home appliance market is almost equally segmented between the Americas, Asia-Pacific and Europe as seen in Figure 1.

Figure 1 – Global Home Appliances Revenue & Growth



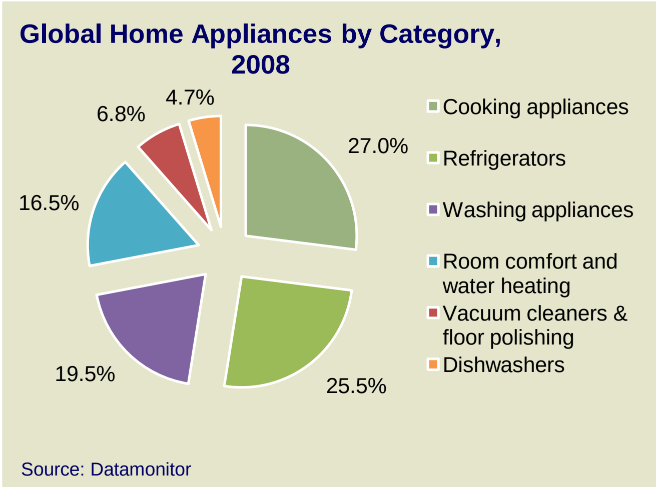
Developing countries showed higher growth in home appliances than the mature economies such as Europe where the number of new homes is less and most homes already own home appliances. The main drivers of demand are the replacement of worn-out appliances, upgrading to products based on newer technologies and increase in the purchasing power of consumers.

Changes in consumer behaviour also affect the growing demand for replacements. For example, energy-efficient products are becoming more attractive by decreasing costs. Thus, consumer expectations are shifting towards new products using less energy and water.

Household appliances mainly comprise refrigerators, washing appliances, cooking appliances and heating appliances. Among these categories, cooking appliances - including ovens, microwaves, cookers, food processors and toasters - is the highest revenue generating category amounting to USD 45.5 billion, followed by refrigerators amounting to USD 42.9 billion in 2008. [5]

[5] Datamonitor, June 2009

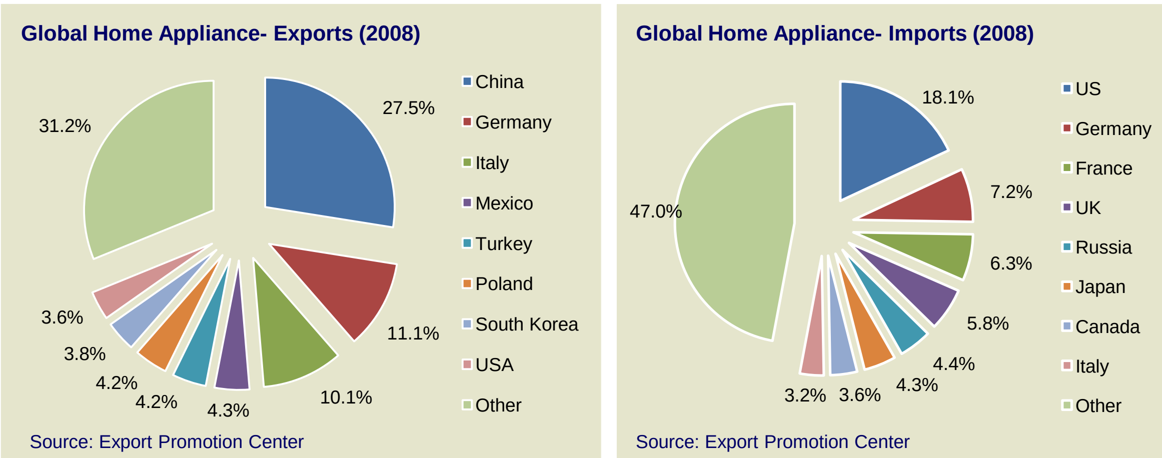
Figure 2 – Global Home Appliances by Category



The main exporter of home appliances is China with approximately 26 percent of total home appliances exports in 2008. Germany and Italy are the next largest exporters following China. Turkey ranked fifth with approximately 4 percent of the total in 2008.

The main importer of home appliances is the US, forming around 18 percent of the total in 2008, followed by Germany and France.

Figure 3 – Global Home Appliances by Category



2.1.2 Electronics

The global electronics industry has grown slowly, with a CAGR of 1.8 percent between 2005-2009, with a total revenue of USD 2,367 billion in 2009. The industry comprises mainly computers, communication devices, electronic equipment and office electronics. The electronic equipment segment formed nearly 70 percent of the total revenue in 2009 followed by computers with 22 percent. The Asia-Pacific region is the main producer of consumer electronics with 51 percent of the production by value, whereas Europe and US each accounted for 23 percent.[6]

[6] Datamonitor, April 2010

Figure 4 – Main Global Companies in Home Appliances

Main Global Players

Company	Headquarters	Revenue (USD m)	# of Employee
Home Appliance			
Whirlpool Corporation	US	17,099	67,000
AB Electrolux	Sweden	14,274	51,058
Haier Group Corporation	China	13,695	50,000
BSH Bosch und Siemens Hausgerate GmbH	Germany	10,424	40,286
GE Consumer Industrial	US	10,000	6,000
Electronics			
Hewlett-Packard	US	114,552	304,000
Nokia	Finland	56,988	123,171
Dell Computer Corporation	US	61,101	76,500

Source: OneSource, Datamonitor

Figure 5 – Global Market Demand Forecasts

Global Market Demand

	2006	2007	2008	2009	2010f	2011f	2012f	2013f
Electrical appliances & houseware (US$ m)	326,043	392,165	454,698	426,049	455,197	490,252	537,385	598,923
Electrical appliances & houseware - *% change*	*12.6%*	*20.3%*	*15.9%*	*(6.3)%*	*6.8%*	*7.7%*	*9.6%*	*11.5%*
Household audio & video equipment (US$ m)	111,726	123,002	134,942	131,452	139,970	148,205	159,600	174,973
Household audio & video equipment - *% change*	*5.2%*	*10.1%*	*9.7%*	*(2.6)%*	*6.5%*	*5.9%*	*7.7%*	*9.6%*
Television sets (stock per 1,000 people)	406	424	443	462	485	511	540	571
Television sets - *% change*	*4.4%*	*4.4%*	*4.5%*	*4.3%*	*5.0%*	*5.4%*	*5.7%*	*5.7%*

Source: Economist Intelligence Unit
Note: f: forecast

According to the EIU, global demand for home appliances and consumer electronics is expected to grow between 2009-2013. The CAGR for electrical appliances & homeware and household audio & video is expected to be approximately 8 percent between 2009 and 2013, whereas television sets per 1,000 people are expected to increase with a CAGR of 5 percent between 2009 and 2013.[7]

2.2 Domestic Sector

2.2.1 Overview

The home appliances sector in Turkey earned a revenue of USD 8 billion in 2008. Total production was 16 million white goods, of which approximately 70 percent were exported.[8] The main destinations of Turkey's exports are France, the UK, Germany and Italy.

The home appliances industry was also affected by the global financial crisis in 2009. Exports have decreased by 25 percent and domestic revenue decreased by 30 percent within the last quarter of 2009 where the affects of the crisis were significant.[8] However, the annual revenue decrease came out to be 19 percent in 2009, as a result of the SCT reductions made in second and third quarters of the year. In the first quarter of 2010, the exports continued to increase by 23% when compared to the first quarter of 2009.[8]

According to EIU, the market demand for home appliances and electronics is expected to continue its growth in Turkey between 2009-2013. The CAGR of electrical appliances and homeware is forecasted to be 10 percent whereas the highest growth is expected in household audio & video equipment with a CAGR of 12 percent.[7]

[7] Economist Intelligence Unit

[8] Ministry of Industry and Trade, White Goods Sector Report, April 2010

This expected growth is a combined result of the growing population and income, together with the trend towards smaller households which is likely to increase the spending on home appliances in the future.

The young population is the main factor behind the expected continuous increase in PC penetration and audio-video equipment.

Figure 6 – Market Demand in Turkey

Market Demand in Turkey

	2006	2007	2008	2009	2010f	2011f	2012f	2013f
Electrical appliances & houseware (US$ m)	8,415	11,048	12,963	10,811	12,004	13,017	14,501	16,032
Electrical appliances & houseware - *% change*	*16.2%*	*31.3%*	*17.3%*	*(16.6)%*	*11.0%*	*8.4%*	*11.4%*	*10.6%*
Household audio & video equipment (US$ m)	2,558	3,293	3,892	3,246	3,639	3,976	4,538	5,136
Household audio & video equipment - *% change*	*18.2%*	*28.7%*	*18.2%*	*(16.6)%*	*12.1%*	*9.3%*	*14.1%*	*13.2%*
Television sets (stock per 1,000 people)	305	308	310	330	350	371	393	415
Television sets - *% change*	*1.3%*	*1.0%*	*0.6%*	*6.5%*	*6.1%*	*6.0%*	*5.9%*	*5.6%*
PCs (units)	6,500	9,500	16,150	18,388	20,745	23,198	25,488	27,780
PCs - *% change*	*30.0%*	*46.2%*	*70.0%*	*13.9%*	*12.8%*	*11.8%*	*9.9%*	*9.0%*

Source: Economist Intelligence Unit
Note: f: forecast

The Turkish government eliminated the Special Consumption Tax ("SCT") in various sectors including home appliances and electronics for 3 months between March-June 2009 and then applied a reduced rate for another 3 months up to 30 September 2009 in order to ease the effects of the financial crisis. In addition, manufacturers cut prices to stimulate demand. As a result, home appliance prices decreased by 30 percent, but total revenue increased by 20 percent during the period of SCT reduction.[9] SCT is now applied at 6.7 percent to these goods.

The manufacturing of these white goods takes place predominantly in the Marmara, Aegean, and Central Anatolia regions. The locations of the main factories are shown on the map on a later page of this report. The sector provides jobs for 2 million and has a production capacity of more than 25 million units, which is the second largest capacity in Europe after Italy.[10]

The Turkish electronics sector, comprising subsectors such as consumer electronics, telecommunication equipment, components, defence electronics and computers, has reached a production volume worth USD 9,537 million in 2009. Exports form an important part of the sector, totalling USD 4.89 billion in 2009. However, imports are higher: USD 12,227 million in 2009.[11]

2.2.2 Home Appliances & Electronics Production

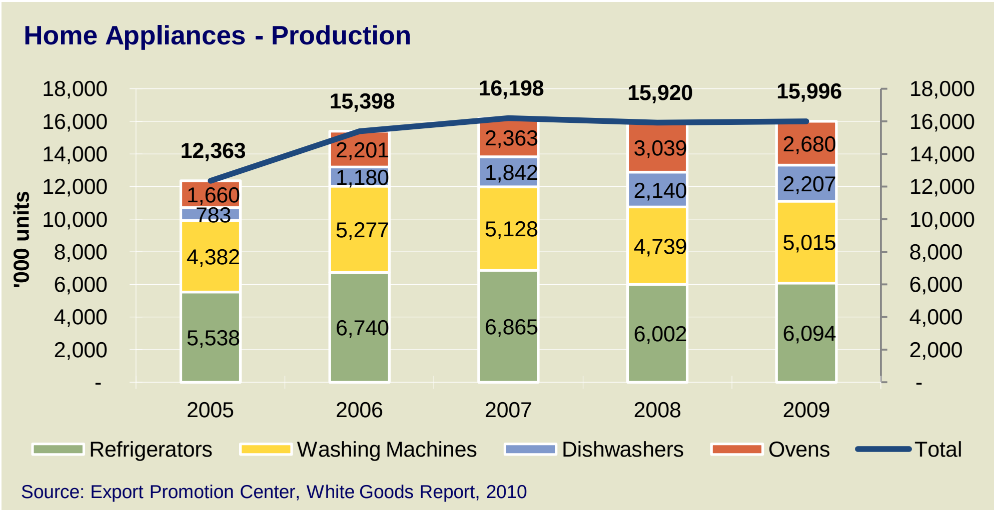
The production of home appliances increased by 0.5 percent in 2009 when compared to 2008. Refrigerators formed 38 percent of the total production followed by washing machines, constituting 31 percent in 2009.[10]

[9] Datamonitor, June 2009

[10] Export Promotion Center (IGEME), White Goods Sector 2010

[11] Turkish Electronic Manufacturers Association (TESID), Electronic Industry Almanac, 2010

Figure 7 – Production of Home Appliances



Production in the electronics industry did not register major changes in 2008 and 2009. Consumer electronics is the main item forming 34 percent of the total production in 2009. It is also the only section in the electronics sector in which the production decreased in 2009, mainly due to the fundamental changes in TV display technologies. Turkey had captured approximately 50 percent of the market share in Europe for CRT (cathode ray tube) TV sets, but with the evolution of plasma and LCD technologies, this dominant position is set to diminish. Being the main component in the consumer electronics category, television production has reached 9.2 million units in 2009, of which nearly 85 percent was exported.[12] Another important subsector in production is the telecommunications equipment, where revenues amounted to USD 1,771 million in 2009, with telecom and fiber-optic cables playing an important role.[12]

Figure 8 – Production of Electronics

Production of Electronics

USD m	2005	2006	2007	2008	2009
Consumer Electronics	4,725	5,268	4,285	3,583	3,266
Telecommunication Equipmen	1,250	1,307	1,507	1,622	1,771
Computers	460	847	964	1,105	1,200
Defence Electronics	450	543	667	840	946
Components	300	353	495	587	598
Other	965	1,164	1,595	1,770	1,756
Total	**8,150**	**9,481**	**9,513**	**9,507**	**9,537**

Source: TESİD, Electronic Industry Almanac, 2010

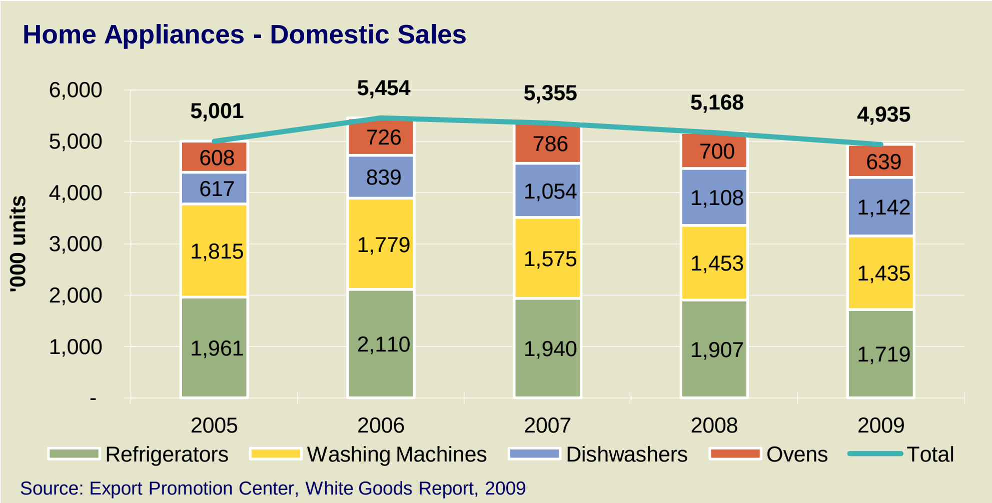
2.2.3 Home Appliances & Electronics Domestic Sales

Domestic sales of home appliances reached 4,935 thousand units in 2009. 2008 total revenues reached USD 8 billion, of which exports amounted to USD 3.4 billion in the white goods sector.[13]

[12] Turkish Electronic Manufacturers Association (TESID), Electronic Industry Almanac, 2010

[13] Ministry of Industry and Trade, White Goods Sector Report, April 2010

Figure 9 – Domestic Sales of Home Appliances



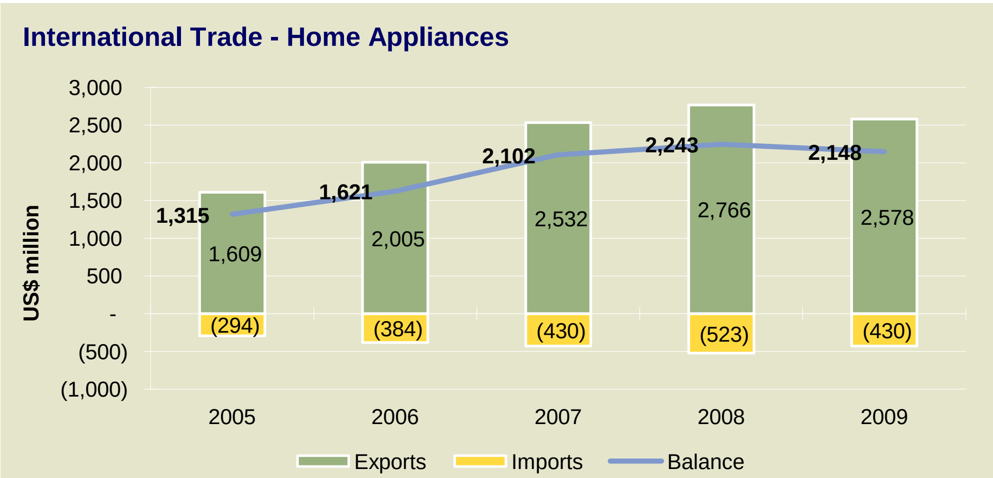
Source: Export Promotion Center, White Goods Report, 2009

Considering electronics sales, computer hardware constitutes an important share amounting to USD 4.5 billion in 2008. AV devices (TV sets, portable media players, DVD players, cameras) and mobile handsets are the other major items and their sales were USD 1.52 billion and USD 1.16 billion respectively. In 2008, 818,000 units of DVD players, 546,000 units of portable media players, 587,000 units of cameras and 7.4 million units of mobile phones were sold in Turkey.[14]

2.2.4 International Trade

Turkey's export volume in home appliances has been gradually increasing through the years 2006-2008. Although there has been a slight decrease in 2009, due to the global economic downturn, the decrease of 7 percent can be considered arising from the decreasing consumer demand in 2009. Turkey mainly exports home appliances to Europe, where the UK is the largest importer of Turkish home appliances, but France, Germany and Italy are also substantial importers.[15]

Figure 10 – Home Appliances International Trade

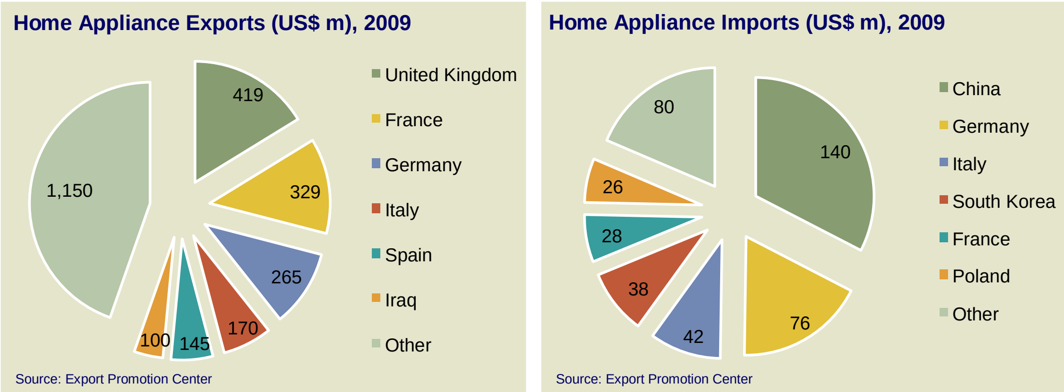


Source: Export Promotion Center, White Goods Report, 2010

[14] BMI, Turkey – Consumer Electronics Report, 2009

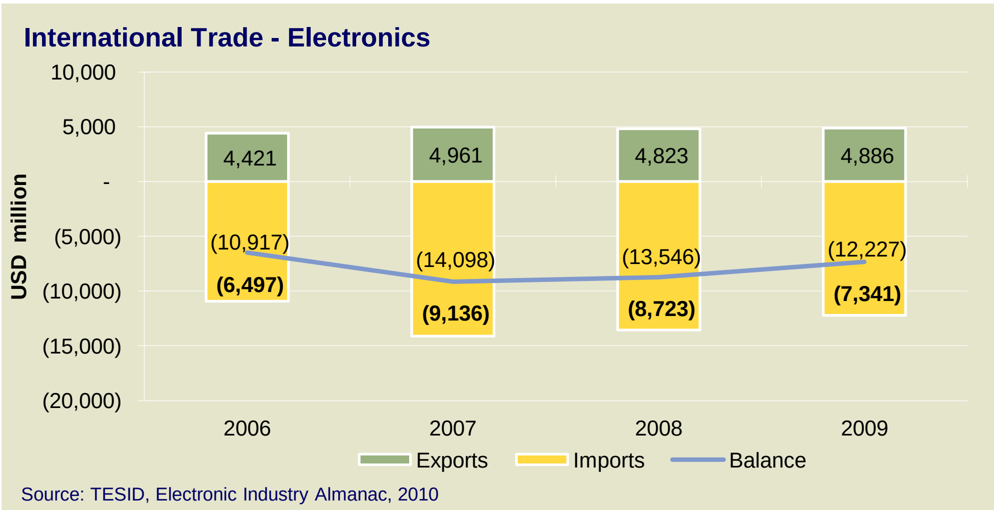
[15] Export Promotion Center (IGEME), White Goods Sector 2010

Figure 11 – Home Appliances Exports & Imports by Country



In electronics, Turkey's imports of telecommunications equipment are very significant amounting to USD 3,228 million in 2009 and forming 26.4 percent of total electronics imports, cell phones constituting the major part of it. The next most important subsectors are computers, components and consumer electronics having import shares of 19.4 percent, 10.8 percent and 10.8 percent respectively. Imports are mainly from China, Germany and the US – these three together supplied approximately 48 percent of total imports in 2009. In exports, consumer electronics are Turkey's main export item forming 38 percent of total exports in 2009 and amounting to USD 1,851 million. Components and telecommunications equipments are also important export items having 18 percent and 31 percent share respectively. Exports are mainly made to the UK, Germany, France, Iraq, Spain and Italy, these six accounting for approximately 47 percent of the total exports in 2009. [16]

Figure 12 – Electronics International Trade



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[16] Turkish Electronic Manufacturers Association (TESID), Electronic Industry Almanac, 2010

2.3 Main Players in Turkey

Main players in the Turkish home appliances and electronics sector are given below.

Figure 13 – Main Players in Turkey's Home Appliances & Electronics Industry

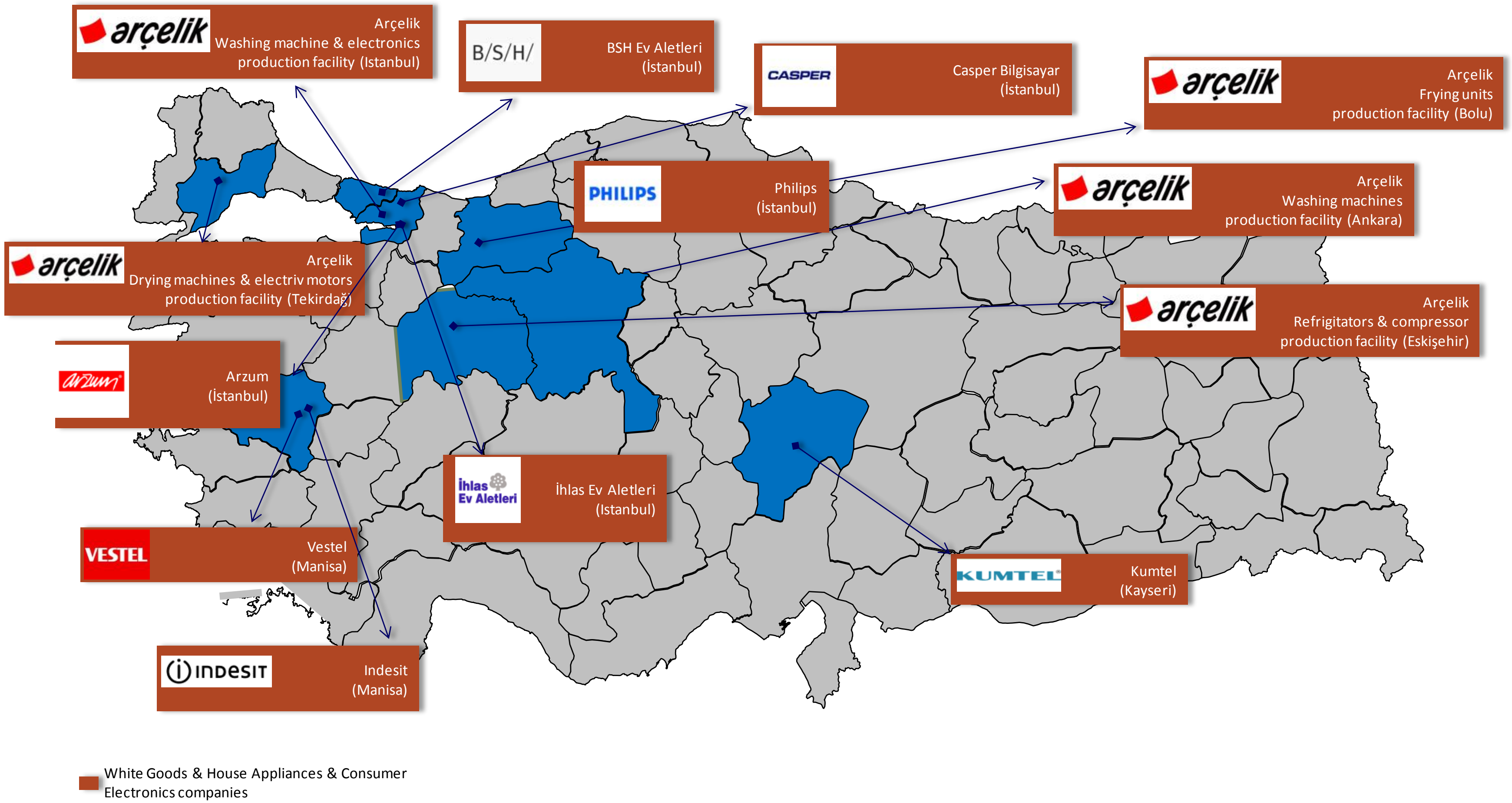
Main Players In Turkey's House Appliances & Consumer Electronics Industry, 2009

Company	Subsector	Sales, TRYmn (*)	Sales, US$mn
Arçelik	w hite goods, electrical equipment & appl.	6,972	4,511
Vestel Elektronik	consumer electronics	4,640	3,002
BSH Ev Aletleri	w hite goods, electrical equipment & appl.	2,292	1,483
Vestel Beyaz Esya	w hite goods	1,410	912
Indesit (**)	w hite goods, electrical equipment & appl.	222	na
Casper Bilgisayar (**)	consumer electronics	198	na
İhlas Ev Aletleri	electric household appl.	100	65
Kumtel (**)	household appl.	100	na
Arzum	household appl.	72	47
Philips	consumer electronics	*na*	*na*

Source: ISI & Capital IQ, Note (*): 2009 USD/TL average rate: 15456(**): most recent amounts in local currencies from Capital IQ

2.4 Positioning Map

The map below summarises the production facilities of key players in the home appliances & consumer electronics sector in Turkey.



2.5 Investment Opportunities

White goods production in developing countries is reaching the quality of products from the most developed countries, but at lower costs. In order to compete, mature markets are investing in R&D for newer technology and the invention of new products. For these purposes, mergers & acquisitions are showing an increasing trend in the sector globally. This trend is also applicable to Turkey.

Production in the Turkish white goods sector has increased significantly in the last decade, ranking 2nd in Europe after Italy with a European market penetration of 22 percent.[17] The main driver for the vast improvement in the white goods sector has been the high quality production and services presented by the component manufacturers to the white goods producers.

Selected M&A transactions in the home appliance and electronics sector in Turkey are presented below.

Figure 14 – Selected M&A Transactions in Turkish Home Appliance & Electronics Industry (2006-2009)

#	Acquirer	Origin	Target	Target subsector	Date	Stake %	Deal Value (USD$ m)
Refrigeration Equipments							
1	Abas AS	Turkey	Safkar	refrigeration & air conditioning	17/02/2009	*57.0%*	6
2	Metalfrio Solutions SA	Brazil	Klimasan Klima Sanayi ve Ticaret A.S.	cooling systems	25/08/2008	*56.7%*	76
3	Frigoglass SAIC	Greece	SFA Sogutma Sanayi Ic ve Dis Ticaret A.S.	coolers & freezers	02/04/2008	*86.0%*	78
4	Bulutoglu Gida ve Lojistik Hizmetleri AS	Turkey	Yalova Soguk Hava Tesisleri	cooling systems	07/08/2007	*100.0%*	12
5	AHT Cooling Systems GmbH; Asia Debt Management Hong Kong Ltd	Austria, Hong Kong	SFA Sogutma Sanayi	commercial refrigeration	30/08/2006	*na*	49
Household Electrical Appliances							
6	Ashmore Private Equity Turkey Man. Ltd	Turkey	Arzum Dis Ticaret ve Pazarlama A.S.	household electr. appl.	12/05/2008	*38.0%*	na
7	Candy Elettrodomestici SpA	Italy	Doruk-Susler	cooking appl.	06/02/2007	99%	na

Source: Mergermarket

[17] Export Promotion Center (IGEME), White Goods Sector 2010

2.6 SWOT Analysis

Strengths

- Turkey has a young population which leads to a high level of setting up of new homes with couples buying home appliances.
- Quality-oriented production in the Turkish home appliance industry has made the sector successful in foreign markets.

Weaknesses

- Lack of government incentives in the sector (although the SCT incentive was given in 2009).
- A significant portion of the population still has low disposable incomes, which leads to a longer usage of home appliances rather than quick replacement.

Opportunities

- Cr-Ni steel used in white goods manufacturing is expected to be produced in Turkey in the future which will reduce the importing of this raw material.
- Technological developments bring along new products. For example, the 3G technology has led to the introduction of 3G compatible devices.
- The demand for energy-efficient products can create a new consumption trend in white goods.

Threats

- The slow recovery from the economic downturn in other countries as well as in Turkey may reduce consumer demand for home appliances such as refrigerators, dish washers, televisions, mobile phones etc. and cause a shift towards primary needs.
- Multifunctional devices may reduce the demand for other portable devices.

2.7 Sector Establishments and Institutions

Figure 15 – Sector Establishments & Institutions

Establishment/ Institution	Code	Description	Contact details
Türkish White Goods Sub-Industry Suppliers Association	BEYSAD	Organization has 176 members. Established in 1993, the Association acts as a medium for members to find new customers both domestically and internationally at the forums and meetings it arranges. The association also deals with the government to pass legislation that benefits the industry	Yeni Hal Yolu Cad. Çayıryolu Sok. Bay Plaza No: 5/7 Kozyatağı 34752 Istanbul Tel: +90 (216) 469 44 64 - 65 Fax: +90 (216) 469 44 67 Website: www.beysad.org.tr
Association of Turkish Small Household Appliances Industrialists and Exporters	KESİD	Organization has 11 members. The Association was created to ensure that the manufacturers' suppliers grow, improve, and achieve proper levels of quality. The association also protects its members against unfair competition and provides the tools necessary for the suppliers to aid in Turkey's industrial growth. The association acts as a liaison between its members and the media, and conducts research and development activities to benefit its members. The association helps regulate the industry so that it can be competitive in foreign markets as well.	Krizantem Sok. No:20 Levent 34330 Istanbul Tel: +90 (212) 282 98 00 Fax: +90 (212) 282 98 09 Website: www.kesid.org
Turkish Electronic Manufacturers Association	TESİD	Organization has 65 member firms. The Association ensures the development of the electronics sector within a competitive environment.	Website: www.tesid.org.tr
Air Conditioning and Refrigeration Manufacturers' Association	ISKID	Organization has 76 member firms. Established in 1993, it was formed to serve as a medium of exchange for its members in the business of manufacturing and distributing air conditioning and refrigeration equipment. The association works to solve its members with financial, legal, adminisrative, technological, and trade problems. It also works with media, helps improve reseach and development activities, and promotes energy saving and environmentally friendly products.	Hal Yolu Cad., Çayıryolu sok. No.5 Bay Plaza Kat:3 İçerenköy, Kadıköy 34752 Istanbul Tel: +90 216 469 44 96 Fax: +90 216 469 44 95 Website: www.iskid.org.tr

LIST OF FIGURES

ABBREVIATIONS

CAGR	Compound Annual Growth Rate
EIU	Economist Intelligence Unit
GDP	Gross Domestic Product
IGEME	Export Promotion Center
ISPAT	Republic of Turkey Prime Ministry Investment Support and Promotion Agency
ISO	Istanbul Chamber of Industry
SCT	Special Consumption Tax
TESID	Turkish Electronic Manufacturers Association
UK	United Kingdom
US	United States
USD	US Dollars

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