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Structural Analysis of Furniture Hardware Industry in Turkey

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Abstract: Furniture hardware plays an important role in the appearance, comfort and function of the furniture. In this study, Turkish furniture hardware companies were examined for their technical and economical characteristics, production materials, standards and surface treating methods, legal structures as well as foreign and domestic trade policies. Altogether, 67 companies accounting for 80% of the hardware production were examined. In addition, imported hardware brands, foreign trade companies and their representatives in Turkey were listed along with their production statistics and export sales by product groups for the years 1996-2000. It is found that the Turkish furniture hardware industry lacks vision and mission. Recommendations were made for sustained industry growth and for becoming competitive in international market.

Key words: Furniture hardware, hardware production, hardware import, hardware export, hardware market

INTRODUCTION

Furniture, which is used for sitting, resting, or storing items, is mostly made from wood-based materials and materials which do not affect its functions directly. Furniture acquires properties such as usefulness, beauty and safety from its design and hardware. Through these properties, furniture gains value and advantage in costumer appreciation. However, hardware that improves the prestige and esthetics of furniture is frequently subject to criticism. Some of the complaints are: doors, drawers and locks which cannot be operated smoothly, legs and arms which are not sturdy, heavy furniture which cannot be moved easily, doors and lids which are noisy and difficult to use, handles and finishes which provide short service life. Therefore, it is important that the hardware provides safety, usefulness and comfort as well as esthetics and prestige[1-3].

Internationally, the most important countries of the hardware market are also important for the furniture market. It is vital to know the level of the main, side and sub industries for international competition[4,5].

DEFINITION AND CLASSIFICATION OF HARDWARE FOR FURNITURE AND BUILDING ELEMENTS

The main functions of hardware for furniture and building elements are to fix various parts of the units, to attach doors and windows, to help move parts operate smoothly and to improve durability, attractiveness and comfort. The hardware comes in a variety of models and types. In this study, they are classified into 7 product groups according to their functions[1,2,6]. These are Hinges, Slides for drawers and gears for sliding door-window and furniture, Handles and knobs, Shutting equipment (locks and latches), Assembly fittings and connecting elements, Underfoot equipment (castors and glides, under frames), Other hardware fittings.

MATERIALS AND METHODS

The companies involved in the production of hardware for furniture and building elements were surveyed. The questionnaire was prepared both for manufacturers and users within the main and side industries. Companies located in regions where the industry has been developed (Istanbul, Ankara, Bursa, Izmir and Kayseri) were surveyed more extensively. Several plants were visited and the administrators were interviewed to verify the survey responses[7-10].

The companies surveyed in this research were chosen using the following sources: Recommendations and the outcomes of past research, Records of Chamber of Commerce in cities where main producers are located, Records of Institute of Statistics, Records of industry foundations, Media records, fair catalogs and internet, Hardware sellers.

General characteristics of the industry: This investigation revealed that there are 128 hardware manufacturing firms in Turkey. Of the 128, 17 firms are diversifying into other industries as well.

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Table 1: Distribution of the firms according to their sizes* and legal structures

Form of ownership		SC	MC	LC	Total Number	Percentage
Joint-stock company		-	10	15	25	37
Limited Liability Company		6	11	11	28	42
Individual proprietorship or simple partnership		11	3	-	14	21
Total	Unit	17	24	26	67	100
	Percentage	25	36	39	100	

* Size criterion is adopted from the most recent census of the industry by the State Institute of Statistics (SIS), Republic of Turkey
SC: Small company (less than 10 workers)
MC: Medium company (10-25 workers)
LC: Large company (25 or more workers)

Table 2: Hardware production of furniture and building elements in Turkey (1996-2000)

Product Group	1996	1997	1998	1999	2000
1- Hinges					
- Furniture hinges (10^3 units)	70.658	94.49	137.187	110.08	114.15
- Door and window hinges (10^3 units)	35	41.3	50.1	48.75	36.7
2- Furniture and Window-door slides (10^3 sets)	18.7	55.5	38.09	62.75	92
3- Drawer Systems (10^3 sets)	47.55	89.45	92.1	85.32	81.85
4- Handles and Knobs					
- Door and window handles (10^3 sets)	185.000	190.5	205.1	192	188.5
- Furniture knobs and handles (10^3 units)	202	278	303.75	250.1	265
5- Locks and Latches (10^3 units)	76.1	78.5	85.6	80.2	85
6- Assembly fittings and connecting elements					
- Wood screws (tons)	3.250	6.6	7.235	7.05	7
- Plastic is connecting elements and knockdown fittings (10^3 units)	81	105.1	125.8	120	125.9
7- Furniture castors, glides and plinth adjusting legs (10^3 units)	63	71.3	78.55	85.25	91.6

Table 3: Foreign trade of furniture hardware for Turkey during 1995-2000 (SIS, 2001)

Years	Import ($)	Export ($)
1995	45,542,155	17,310,770
1996	75,457,586	20,962,103
1997	79,576,980	27,063,426
1998	79,778,451	30,083,514
1999	67,087,588	34,991,137
2000	59,464,480	26,497,103

Approximately, 25% of the companies could be classified as small operations, 36% as a medium and 39% as large operations. Of the total 128 companies, 67 participated in this investigation. It is noted that invariably all the non-participants were small companies, which actually constitutes the majority of the industry. Table 1 exhibits the distribution of the participants in terms of size and legal structures. As seen, 37% of the companies were joint-stock companies, 42% limited liability and 21% individual proprietorship and simple partnerships.

According to the research results and the data of 2000, 40% of the companies work over capacity and 30% work below capacity. It is more likely that large companies work over capacity and small companies work under capacity.

Foreign trade and hardware production in Turkey: Hardware production for building elements and furniture in the last five years (1996-2000) is given in Table 2. As seen, seven product groups were considered. Production amount increased through the years 1996-1999. However, growth stopped after 1999 because of economic crises, earthquake and insufficient capital investment[6].

It is noted that almost half of the Turkish population (≈30 million) was effected from 1999 earthquake. Not only building construction industry came to a total halt but the major producers had to stop production because they were geographically located in the earthquake affected area).

Each of the seven product groups is summarized in each row of Table 2. When interpreting each product group;

As seen in row 1 of Table 2, the production of hinges in general increases from 1996 to 1998, but decreases in the remaining years. The production of door-window hinges follows the same trend, but in terms of volume, it is always less than half of the production of furniture hinges.

It is shown in row 2 that an increasing trend occurs in the production of furniture and door-window sliding mechanisms during 1996-2000. This is due to the fact that the number of companies producing these mechanisms has increased from 3 to 14 in the last couple of years as a response to higher demands for these mechanisms.

Rows 3 to 6 exhibit the same general trend of increasing productions during 1996 to 1998 and either constant or decreasing productions thereafter.

Table 4: Export status of the firms and the countries to which they export

Number of firms	Percentage of export in total production (%)	Countries
1	50<	Germany, USA, Switzerland, İtaly, Russia
3	10-15	Germany, Egypt, Bulgaria, Romania, Azerbaijan, Kyrgyzstan, Kazakhstan, Uzbekistan, Turkmenistan, Lithuania, Macedonia, England, Poland, Russia, UAE, S. Arabia, Lebanon, Jordan, Syria, Hungary, Greece, Spain, İsrael
5	5-10	Egypt, Bulgaria, Romania, Azerbaijan, Lithuania, Moldova, Macedonia, Czech Republic, Poland, Russia, Kazakhstan, Uzbekistan, UAE, Kuwait, Albania, Kyrgyzstan, Turkmenistan, Iran, S. Arabia, Lebanon, Jordan, Morocco, Tunusia, Algeria, Tanzania, Sudan, Syria, Hungary, Greece, Spain, Portugal, Israel, Serbia, Ukrain, Belgium, Italy, Sweden, Australia
10	1-5	Egypt, Bulgaria, Romania, Azerbaijan, Lithuania, Moldova, Macedonia, Czech Republic, Poland, Russia Kazakhstan, Uzbekistan, UAE, Kuwait, Albania, Kyrgyzstan, Turkmenistan, Iran, S. Arabia, Lebanon, Jordan, Morocco, Tunusia, Algeria, Syria, Hungary, Holland, Belgium, Greece, Spain, Portugal, Israel, Serbia, Ukrain,
48	No Export	-

Table 5: Companies exporting to the Turkish market

Company/ Brand	Country	Product Group	Agent
BLUM	Austria	hinges, drawer systems, connecting elements and hangers	Blum GmbH (Contact office)
HAFELE	Germany	all hardware groups	Hafele GmbH (Contact office)
HETTICH	Germany	all hardware groups	TEM İnş. Malz. San. ve Tic. Ltd. Şti.
FRATELLİ	Italy	drawer systems, slide systems	
SIRO	Austria	knobs, door handles, hangers	
GRASS	Austria	hinges, drawer rails, connecting elements	Ulpasan Tic. A.Ş.
HUWILL	Germany	locks, handles, knobs, connecting elements	
SCHOCK METAL	Germany	drawer systems	
FSB	Germany	door and window handles	
SERVETTO	Italy	hanger mechanisms	
AICO. SRL.	Italy	bathroom accessories	
PEKA METALL AG	Switzerland	kitchen furniture mechanisms	
JASMIN	England	kitchen furniture mechanisms	
FGV	Italy	hinges, drawer systems	Top İmpeks A.Ş.
DANCO	Italy	Hinges	
DECONTI	Taiwan	Hinges	
TERNO	Italy	Sliding door and mechanisms	
COSMOV, BM, CORBETTA, CITTERIO, TENTORI, CONFALONIERI	Italy	Handles, knobs	
COSMOV	Italy	Hanger mechanisms	
CIEFFE	Italy	Plinth adjusting legs	
PREMAR, POGGIMARIANI	Italy	Door handles	
ESTAMP, METALORFE, EGOKI	Spain	Handles and knobs	
UNION KNOPFT	Germany	Handles and knobs	
CAS	Italy	Locks	
DERK- FGV	Italy	Wood screws	
FERRARI	Italy	Hinges	Kent Dış Tic. Ltd.Şti.
ESPANSO	Italy	Connecting elements	
LCH	Italy	Drawer systems	
TAIMING	China	Drawer rails	
STAMM, SH	Italy	Hinges	Şarman Mob. Aksesuar Ltd. Şti.
FULTERER	Austria	drawer systems	
DONATI	Italy	Drawer rails	
ARMSTRONG	Taiwan	Lock systems	
BMB	Germany	Lock systems	
CITTERIO	Italy	Hinges	
EUROMID	Italy	Connecting systems	
OLIVARI	Italy	Door handles	
CROWN	Taiwan	Wood screws	
O.G.T.M, POZZI	Italy	Wheels, plinth adjusting legs	
INDAUX	Spain	Hinges, drawer rails	Saraçoğlu Hırdavat
OJMAR	Spain	Door handles, hinges	
OMGE	Italy	Drawer systems	Theta Dış Tic. A. Ş.
TM	Italy	Hinges	
WURTH	Germany	All hardware groups	Würth Oto. ve Mon. San.
MEPLA	Germany	Hinges, drawer systems	
HAWA AG	Switzerland	Slide systems and mechanisms	Möbelti Ahşap Möble San.
EKU AG	Switzerland	Slide systems and mechanisms	
HEKNA	Germany	Lock systems	
HOPPE	Italy	Door and window handles	Teknik Mob. ve Aksesuar Ltd. Şti.
SH, GEM, GUSTI, RDS	Italy	Hinges, handles, door handles	
CINETTO, STEINCO	Italy	Slide systems, wheels, plinth adjusting legs	
LAMA	Slovania	Hinges	Gürdal Tic.
ACCURIDE	England	Drawer rails	Kanca Tic.
KNAPP	Austria	Connecting systems	İstanbul Dış Tic.Ltd.Şti.

This trend can be attributed to the 1999 earthquake, reduced resources of capital investment due to economic stalemate and of course global economic recession.

Row 7 summarizes production statistics for furniture castors, glides and plinth adjusting legs. As seen, there is an increasing trend for the entire period of 1996-2000. This can be explained with the consumer prefers, in recent years, of furniture that can be moved around with ease.

The import and export statistics of furniture hardware for Turkey are given in Table 3[9].

As seen in Table 3, the export increased at a constant rate from 1995 to 1999 until the earthquake. In 2000, export dropped significantly because major producers' plants were damaged by the earthquake.

The import of furniture hardware was constant for Turkey for the period of 1996-1998. The decrease in import during 1999 and 2000 can also be explained by the significant reduction in building construction due to earthquake in affected areas.

An interesting observation from Table 3 is that the import is approximately two to three times higher than export for this industry.

Table 4 shows the percentage of production that the Turkish companies export along with the countries to which they export. As seen, the percentage of exports in total production are rather modest and 48 companies do not export at all.

Despite the fact that the list is long, Turkish companies export mostly to the Middle East, Turkic Republics and to Balkans[11].

Table 5 shows companies and their affiliations, exporting furniture hardware to the Turkish market. As seen the lion's share is taken by Italian and German companies as it is for the rest of the world. Recently though, Chinese and Taiwanese companies are penetrating in the market.

CONCLUSION

This investigation revealed that the majority of the furniture hardware manufacturers is small in size and limited in production capacity. It is observed that the technological knowledge of most companies is inadequate, qualified technical personnel are scarce and marketing skills and resources are insufficient[11,12].

The following recommendations are made for the Turkish furniture hardware industry to capture its share of national and international markets:

* Product development must be encouraged, patents Producers must form a Manufacturer's Association in cooperation with government and universities.
* The Association must develop a well-defined program to educate producers in finance, marketing, international competition and standardization of products.
* The Association must develop, in cooperation with vocational high schools and universities and a well-structured program to train technical personnel.
* The Industry's Chamber must develop an information dissemination network to update the producers on national and international innovations and developments.
* The number of products should be increased, new must be obtained to protect new designs.
* Companies must be informed on new manufacturing systems to improve productivity and the quality.
* Research and development must be encouraged through university, government and industry-supported cooperative projects.

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