

# REVEALING THE SIGNIFICANCE OF USING E-COMMERCE IN THE ORGANISATIONS OF THE FURNITURE SECTOR IN TURKEY

Thesis submitted to the
Institute of Social Sciences
In partial fulfillment of the requirements
For the degree of

Master of Arts

in

**Business Administration** 

by

Mehmet BASTI

Fatih University

January 2005

# © Mehmet Bastı All Rights Reserved, 2005

# Aileme To My Parents



#### The thesis of Mehmet Bastı

is approved by:

Assist. Prof. Nuri Gökhan Torlak (advisor)

Assoc. Prof. Selim Zaim

Assoc. Prof. Ekrem Tatoğlu

Assist. Prof. Mehmet Orhan

Director

#### **AUTHOR DECLARATIONS**

- 1. The material included in this thesis has not been submitted wholly or in part for any academic award or qualification other than that for which it is now submitted.
- 2. The program of advanced study of which this thesis is part has consisted of:
  - i) Research Methods course during the undergraduate study
- ii) Examination of several thesis guides of particular universities both in Turkey and abroad as well as a professional book on this subject.

Mehmet Bastı

January, 2005

#### **ABSTRACT**

#### MEHMET BASTI

January 2005

# REVEALING THE SIGNIFICANCE OF USING E-COMMERCE IN THE ORGANISATIONS OF THE FURNITURE SECTOR IN TURKEY

In this thesis, electronic commerce use in the Turkish furniture sector is analyzed. In this respect, definition of electronic commerce, its development process and the types of electronic commerce are discussed. In addition, the development process of electronic commerce both in the world and in Turkey is investigated.

As a part of the thesis, the furniture sector in the world and in Turkey is examined. In particular the furniture is defined and its types are explained. Then an analysis of the current situation of the furniture sector in the world and particularly in Turkey is made.

A field study concerning the level of electronic commerce use in the Turkish furniture sector is evaluated. In this context, a questionnaire is prepared applied to some selected firms in the Turkish furniture sector and its outcomes are assessed. At the end of this part, inadequacies and problems encountered in the electronic commerce applications are determined, and some suggestions in the form of alternative solutions are made.

## Key words:

Information Technology Internet Web Site

Electronic Commerce Furniture Furniture Sector

#### KISA ÖZET

#### MEHMET BASTI

Ocak 2005

# TÜRK MOBİLYA SEKTÖRÜNDE FAALİYET GÖSTEREN İŞLETMELERDE E-TİCARET KULLANIMININ ÖNEMİ

Bu tez çalışmasında, Türk mobilya sektöründe elektronik ticaret kullanımı incelenmiştir. Bu bağlamda, ilk olarak, elektronik ticaretin tanımı, gelişme süreci ve kapsamı ele alınmıştır. Daha sonra elektronik ticaretin dünyadaki ve Türkiye' deki gelişimi ve mevcut durumu incelenmiştir.

Tezin araştırdığı diğer bir konu da dünyada ve Türkiye' de mobilya sektörüdür. Bu çerçevede, öncelikle, mobilyanın tanımı yapılmış ve türleri açıklanmıştır. Takip eden kısımda, dünyada ve Türkiye'de mobilya sektörünün mevcut durumu incelenmiştir. Bu kısımda ayrıca, elektronik ticaret kullanımının da katkısıyla, mobilya sektörünün gelişme potansiyeli değerlendirilmiştir.

Tezin son kısmında ise Türk mobilya sektöründe elektronik ticaret kullanımının düzeyini belirlemeye yönelik olarak yapılan saha çalışması değerlendirilmiştir. Bu çerçevede, Türk mobilya sektöründeki belirli sayıdaki firmaya anket çalışması uygulanmış ve sonuçları değerlendirilmiştir. Bu bölümün sonunda, elektronik ticaret uygulamalarındaki eksikler ve karşılaşılan sorunlar belirlenerek çözüm önerileri getirilmiştir.

### Anahtar Kelimeler:

Bilgi Teknolojileri İnternet Web Sitesi

Elektronik Ticaret Mobilya Mobilya Sektörü

### **LIST OF CONTENTS**

| ABSTRACTii                                   |
|--|
| KISA ÖZET                                    |
| LIST OF CONTENTSvi                           |
| LIST OF TABLES                               |
| LIST OF FIGURESxi                            |
| LIST OF APPENDICESxii                        |
| LIST OF ABBREVIATIONSxiv                     |
| ACKNOWLEDGEMENTSxv                           |
| INTRODUCTION                                 |
| 1. CHAPTER 1                                 |
| E-COMMERCE IN THE WORLD AND IN TURKEY        |
| 1.1. E-Commerce and Its Development Process  |
| 1.1.1. The Definition of E-Commerce          |
| 1.1.2. The History of E-Commerce             |
| 1.1.3. Tools of E-commerce                   |
| 1.2. E-commerce Models                       |
| 1.2.1. Business-to-Business (B2B) E-commerce |
| 1.2.2. Business-to-Consumer (B2C) E-commerce |
| 1.3. E-Commerce in the World and in Turkey10 |
| 1.3.1. The F-Commerce in the World           |

|     | 1.3.2          | !. E-C   | ommerce in Turkey                               | 13  |
|-----|----------------|----------|---|-----|
| 2.  | CHAF           | PTER 2.  |   | 1,7 |
| TH  | E FURI         | NITURE   | SECTOR  | 17  |
| 2   | 2.1.           | The Def  | inition and the Types of Furniture              | 17  |
| 2   | 2. <b>2.</b> 7 | The Info | ormation about the Furniture Sector             | 19  |
|     | 2.2.1          | . The    | e International Market                          | 19  |
|     | 2.2.2          | . Tur    | kish Furniture Sector                           | 23  |
| 2   | 3. 7           | The E-C  | ommerce in the Furniture Sector                 | .32 |
| 3.  | CHAP           | TER 3.   |   | .37 |
| SUF | RVEY C         | ON USIN  | NG INFORMATION TECHNOLOGY AND E-COMMERCE IN THE | :   |
| TUF | RKISH          | FURNI    | TURE SECTOR                                     | .37 |
| 3   |                |          | s of the Survey                                 |     |
|     | 3.1.1.         | . The    | e Aim of the Survey                             | .37 |
|     | 3.1.2.         | . Lim    | itations of the survey                          | .38 |
|     | 3.1.3          | . The    | Method of the Survey                            | .38 |
|     | 3.1            | .3.1.    | Choosing Main and Sample Groups                 | .38 |
|     | 3.1            | 3.2.     | The Preparation of Questionnaire                | .38 |
|     | 3.1            | .3.3.    | The Data Collection Methods                     | .39 |
|     | 3.1            | .3.4.    | The Data Analysis                               | .40 |
| 3   | .2. T          | The Eva  | luation of Survey                               | .40 |
| 4   | СНАР           | TFR 4    |   | 60  |

| FINDINGS OF THE SURVEY | •••••• | 60 |
|------------------------|--------|----|
| CONCLUSION             |        | 64 |
| APPENDICES             |        | 67 |
| BIBLIOGRAPHY           | ,      | 77 |

# LIST OF TABLES

| Table 1: Tools of E-Commerce                                       | 6  |
|--|----|
| Table 2: E-commerce Models   | 8  |
| Table 3: Internet Users (thousands), Turkey, 2000 – 2002           | 13 |
| Table 4: Internet Users per 10,000 People in Selected Countries    | 14 |
| Table 5: Non - EU Member Furniture Exporters to EU Countries       | 21 |
| Table 6: Furniture Exports in the World (\$1000)                   | 22 |
| Table 7: Furniture Imports in the World (\$1000)                   | 23 |
| Table 8: Main Furniture Centers and Their Production Shares        | 24 |
| Table 9: Turkey Furniture Exports (\$1)                            | 27 |
| Table 10: Turkey Furniture Imports (million \$)                    | 29 |
| Table 11: Production Quantity of Furniture (Billion TL/ 1998)      | 31 |
| Table 12: Capacity Usage Rate of Companies (%)                     | 32 |
| Table 13: US Total and E-commerce Value: 2000 – 2002 (million \$)  | 34 |
| Table 14: Characteristic of Respondents                            | 41 |
| Table 15: Characteristic of Companies                              | 42 |
| Table 16: Usage Degrees of Computer Applications and Equipments    | 44 |
| Table 17: Utilization Rate of Internet for the Kinds of Activities | 46 |
| Table 18: Furniture Companies' Understanding level of Benefits of  |    |
| E-Commerce   | 50 |

| Table 19: Companies' Web Site Capabilities and Its Impact |  |    |  |
|---|--|----|--|
| Table 20: Obstacles to Adapt E-Commerce                   |  | 57 |  |

## LIST OF FIGURES

| Figure 1: Percentages E-commerce Tools With Customers and Suppliers | . 7 |
|---|-----|
| Figure 2: B2B Actions in the World                                  | 9   |
| Figure 3: United States E-commerce Revenues                         | 12  |
| Figure 4: Furniture Categories                                      | 18  |

### LIST OF APPENDICES

| Appendix A: Survey English Version |   | 67 |
|------------------------------------|---|----|
| Appendix B: Survey Turkish Version | • | 72 |

#### LIST OF ABBREVIATIONS

ATM Automatic Teller Machine

B2B Business To Business Electronic Commerce

B2C Business to Consumer Electronic Commerce

CEN European Standardization Organization

DIN German Institute of Standards

DTM Undersecretariat of Foreign Trade

ECOM Electronic Commerce Promotion Council of Japan

E-COMMERCE Electronic Commerce

ETKK Turkish E-commerce Coordination Institution

EU European Union

GDP Gross Domestic Product

IGEME Undersecretariat of the Prime Ministry for Foreign Trade

**Export Promotion Center** 

ISO International Organization for Standardization

IT Information Technology

ITC International Trade Center

KOSGEB Small and Medium Industry Development Organization

MASKO Istanbul Furniture and Woodwork Manufacturer

Cooperative

MOSDER Association of the Furniture Industry

OECD Organization for Economic Co-operation and Development

OMSIAD Association of Office Furniture Manufacturer

SMEs Small and Medium Size Enterprises

TSE Turkish Standards Institute

UNCTAD United Nations Trade and Development Conference

UNICE Union des Industries de la Communauté Européenne

UNICITRAL United Nations Commission on International Trade Law

UNSD United Nations Statistics Division

WTO World Trade Organization

#### **ACKNOWLEDGEMENTS**

I gratefully acknowledge all those who have helped me to apply survey and contributed to the preparation of this thesis.

I would like to special thanks my advisor, Assoc. Prof. N. Gökhan Torlak for his guidance, interest, suggestion, and patience throughout this study.

I am indebted to Mustafa Öztürk and Eyüp Bastı for their help, contributions, and constructive criticism.

#### INTRODUCTION

Information and communications technologies are of widespread interest and their use is rapidly expanding all over the world. As a result of new achievements in information and communications technologies, execute on of trade activities through electronic media have become possible.

Electronic commerce is a phenomenon, which is rapidly remodeling the parameters of trade in a digital dimension. It has the potential to revolutionize the way individuals and organizations interact. It offers efficiency for the companies in the form of increased market access and information, and decreased operating and procurement costs. For consumers, the benefits accrue in the form of enhanced price competition, customization of products, goods and services, increased choice of products, and greater shopping convenience.

Furniture sector is one of the sectors in which the use of e-commerce provides new opportunities for growth. As the increase in supply and intensive competition taken into accounts new opportunities that would be provided by e-commerce facilities are very important for the Turkish furniture companies.

This study aims to investigate how the companies in the Turkish furniture sector use information technologies and e-commerce, enhances their marketing strategies. The thesis is divided into four chapters.

The first chapter describes the use of e-commerce in the world and in Turkey.

The second chapter briefly analyzes the furniture sector in the world and in Turkey and the use of e-commerce in the furniture sector.

The third chapter makes a survey titled "information technologies and using e-commerce in the Turkish furniture sector". The survey draws a general picture of the furniture sector in Turkey. In addition, there are some suggestions in the form of strategies about what should be done in the future. These strategies enable furniture companies to cope with the foreign rivals, to follow technological breakthroughs in the furniture sector in the world, to gain competitive edges, and to follow the improvements in the contemporary world.

In the last chapter, some findings of the survey and conclusions will be given.

Besides offering new opportunities, information technologies, increase the competition among the companies. It is the responsibility of the companies, civil society, and public institutions for making the Turkish furniture sector developed, improved, and sustained in the modern world.

#### **CHAPTER 1**

#### E-COMMERCE IN THE WORLD AND IN TURKEY

In this chapter, I shall argue about e-commerce and its development process, e-commerce models, and e-commerce in the world and in Turkey.

#### 1.1. E-Commerce and Its Development Process

In this subsection I will provide some definitions of e-commerce, give brief descriptive information about its history, and analyze its tools.

#### 1.1.1. The Definition of E-Commerce

Generally e-commerce refers to the ability of entities or individuals to make transactions or trade electronically. There is no full agreement about the e-commerce's coverage and definition. Therefore, there are different definitions of e-commerce.

To be accepted as e-commerce all steps or at least some steps of the trade should be processed in the electronic system. It includes exchange of tangible goods, information, and services. Besides this general definition, every international organisation has its own definition of e-commerce. They are provided below.

The United Nations Commission on International Trade Law (UNCITRAL) which has important works on creating legal environment of the e-commerce prepared "Model Law on Electronic Commerce" in 1996. According to model law, e-commerce is defined as to exchange all data messages in the electronic platform via using both less complicated instruments such as telex, fax and more complicated instruments such as Electronic Data Interchange (EDI), Internet, e-mail (UNCITRAL Model Law on Electronic Commerce with Guide to Enactment, 1997).

Organization for Economic Co-operation and Development (OECD) defined e-commerce as trade operations of individuals and entities via transmission of digital data such as sound, image, and text through open and closed network areas (Definition of E-commerce OECD Policy Briefs, 1997).

According to the World Trade Organization (WTO), e-commerce is to realize production, advertisement, sale and distribution of goods and services through telecommunication networks (Canpolat, 2001).

Turkish E-Commerce Coordination Board (ETKK) has defined e-commerce as follows; e-commerce is to realize production, advertisement, sale, insurance, distribution, and payment of goods and services through electronic system. To be accepted as e-commerce at least one step of each transaction of trade should be processed in the electronic media. It has three

distinct parts. They are advertisement and market searching, order for goods and payment, and delivery (Elektronik Ticaretin Tanımı ve Temel Araçları, 2004).

In light of the above definitions, we can give a general definition of the term e-commerce which is all kind of trade activities in which the parties communicate electronically without the requirement of direct relations or direct physical exchange.

#### **1.1.2.** The History of E-Commerce

The technology of e-commerce goes back to 1960's. It starts with the EDI, which is information exchanges and relations between companies through special group networks and protocols. EDI is still used in business-to-business (B2B) e-commerce today. Moreover, Internet and the World Wide Web have contributed to the improvement of e-commerce (Meyer & Taylor, 2000).

There are two definite instruments in the historical progress of e-commerce. One of them is the improvements in information technology, such as interactive multimedia services, computer, and television. The other one is market liberalization and globalization. Additionally, the increase of economic dependency among countries contributed to the development of e-commerce. These improvements started the restructuring of the way of doing business in industrialized countries through information intensive services. Therefore, the

use of e-commerce has become one of the most important features of information society (Korkmaz, 2002).

#### 1.1.3. Tools of E-commerce

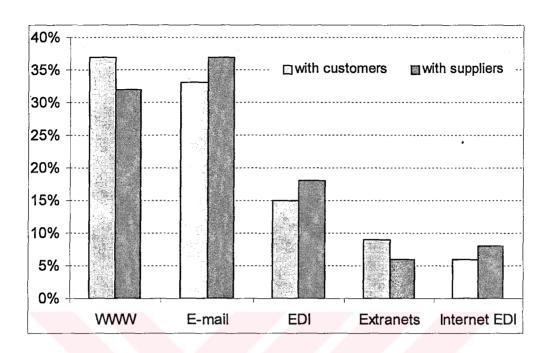
Tools of e-commerce are technological instruments that facilitate activities of two sides of e-commerce. As shown in Table 1, the basic tools are Phone, Fax, TV, Computer, Automatic Teller Machine (ATM), Electronic Fund Transfer (EFT) systems, EDI, Internet, Global System for Mobil Communications (GSM), etc (Kaya, 2002).

In the last two decades computer and Internet have progressed very fast and become very important tools of e-commerce. For these reasons their share has been increasing in the e-commerce as presented in Figure 1.

**TABLE 1. TOOLS OF E-COMMERCE** 

| Traditional Tools   | New Tools   |
|---|---|
| Television  | WWW(World Wide Web)   |
| Radio   | File Transfer Protocol (FTP)  |
| Telephone   | Electronic Mail (E-Mail)  |
| Fax   | Voice Mail  |
| Electronic Payment and Money Systems · (ATM)( Asynchronous Transfer Mode) · Credit Cards · POS machines | Tele Conference Systems  · Tele Conference  · Data Conference  · Video Conference |
| Intranet: Close Computer Networks   | Global System for Mobil Communications (GSM)                                      |
| Electronic Fund Transfer (EFT) Electronic Data Interchange (EDI)  | Short Message Service (SMS) WAP: (Wireless Application Protocol)                  |

Source: Güneş, İ., Elektronik Ticaret ve Kobiler için Yeni Fırsatlar. http://www.bilgiyonetimi.org 18 May 2004.



**FIGURE 1.** PERCENTAGES E-COMMERCE TOOLS WITH CUSTOMERS AND SUPPLIERS (Electronic Commerce Business Impacts Project, EBIP, Chennai, November 2002. http://www.oecd.org 08 Feb 2004).

Until recently, e-commerce was feasible only for large companies. However, new tools offer new facilities for small firms to make e-commerce easily. For example, the Internet and World Wide Web make it possible for small businesses to use EDI as well (Deitel *et al.* 2001). The technological improvements also have been adding new tools to e-commerce activities.

#### 1.2. E-commerce Models

E-commerce is held between two or more parties. Depending on the characteristics of the parties several different e-commerce models can be defined. Although many different e-commerce models can be described, two of

them have much more importance. They are Business-to-Business (B2B) and Business-to-Consumer (B2C) models. In addition, there are consumer to consumer, consumer to business, business to government, government to business, government to consumer and consumer to government e-commerce models as well, which are shown in Table 2.

**TABLE 2. E-COMMERCE MODELS** 

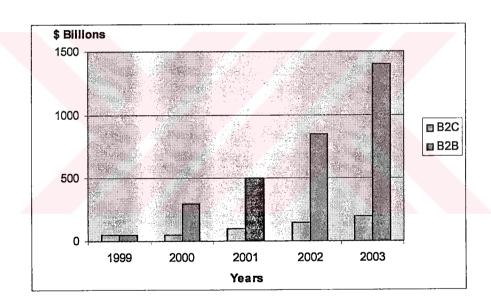
|            | Business | Consumer | Government |
|------------|----------|----------|------------|
| Business   | B2B      | B2C      | B2G        |
| Consumer   | C2B      | C2C      | C2G        |
| Government | G2B      | G2C      | G2G        |

Source: The Economist, 26 Feb 2000

#### 1.2.1. Business-to-Business (B2B) E-commerce

Business-to-business (B2B) e-commerce occurs between two or more firms. Among other activities, business-to-business e-commerce includes purchasing and procurement, supplier management, inventory management, sales activities, payment management, and service and support (Overview of e-Commerce Framework, 2002). B2B e-commerce affects business policy of companies and offers them new business opportunities and marketplaces (Business-to-Business Electronic Commerce Status, Economic Impact And Policy Implications, 1999).

According to research, conducted by some institutions the economic value of B2B e-commerce is about 80 percent of the total amount of e-commerce. Because of the interaction needs among companies, B2B model of e-commerce developed. Companies also could find more possibility to make e-commerce in B2B (Yahyagil, 2001). A comparison of B2B and B2C e-commerce usage is shown in the following figure.



**FIGURE 2.** B2B ACTIONS IN THE WORLD (Forrester Research, The Electricity Journal, June 2000).

#### 1.2.2. Business-to-Consumer (B2C) E-commerce

Business-to-Consumer (B2C) is a well known model which allow firms to sell products and services to consumers online. Its main advantage for consumers is to shop without going out from home. Consumers have many choices to find their needs. Sellers avoid setting high prices for their products. Variety and short delivery time of goods are important (e.g., video, music, news). The online purchasing saves shipment, delivery, and time costs (Sioshansi, 2000:42-49).

Sellers could do many activities in their offices without going any other place. These activities include sales activities, consumer search, answering frequently asked questions, and service and support(Overview of e-Commerce Framework, 2002).

As the number of Internet users increase, B2C e-commerce markets have rapidly grown. In the U.S., the sales of consumer goods on the Internet grew from on \$7.8 billion in 1998 to on \$108 billion in 2003 (E-Commerce and Development Report 2003).

#### 1.3. E-Commerce in the World and in Turkey

E-commerce usage has rapidly grown in the world. Although there is some development, its usage in Turkey is very far from the level of developed countries.

#### 1.3.1. The E-Commerce in the World

The increases in Internet usage, good infrastructure of telecommunication, preventive security precautions, and increases in the number of Web sites contribute to the spreading of e-commerce throughout the world.

Official statistical data concerning e-commerce transactions are available for few countries. In the case of developing countries, such data simply do not exist yet, and even in developed countries the picture is sketchy.

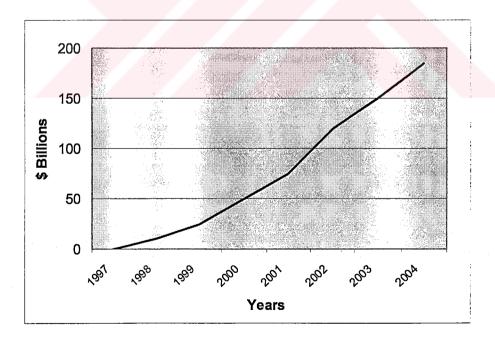
Sources of most of data and statistical evaluations about e-commerce are based on foreign institutions. Although these data are not consistent, they give at least a general idea of the size of global e-commerce (Yahyagil, 2001:16). Forecasts of the value of global e-commerce range between \$1,408 billion and \$3,878 billion in 2003. According to the most optimistic scenario, global volume of e-commerce is expected to increase to \$12,837 billion by the end of 2006 (E-Commerce and Development Report 2003).

Companies are aware of this trend in the world. Therefore, they have big investments to give online purchase services and to adjust their work flow to e-commerce.

There are some legal and technical arrangements for e-commerce in the world. United Nations Commission on International Trade Law (UNCITRAL) enacted a law related to e-commerce which is called Model Law on Electronic Commerce in 1996. This law's main objective is to offer legislators a set of

and a more secure legal environment to be created for e-commerce. It has already been adopted by a number of developing countries (UNCITRAL Model Law on Electronic Commerce with Guide to Enactment, 1997).

The United States is one of the most capable and effective countries of determining the world agenda on e-commerce services. US have the biggest share of total e-commerce in the world (Figure 3). Other countries such as Japan, United Kingdom, Northern European countries and Far East countries (e.g., Singapore and Hong Kong) follow it.



**FIGURE 3.** UNITED STATES E-COMMERCE REVENUES (Forrester Research, The Electricity Journal, June 2000).

European Union, which has determined the information society as one of the primary objectives, has important works on e-commerce. The numbers of e-consumers number is expected to multiply four times in five years in the European Union. The trade volume in e-commerce is expected to multiply 8 times in this term. According to the research of Data Monitor Institute, e-commerce volume will increase from 2,9 billion Euros to 20 billion Euros in 2005 (Civan & Bal, 2004).

#### 1.3.2. E-commerce in Turkey

Although the use of Internet in Turkey does not go much back, it shows rapid increase in all sectors paralleled with an increase of investment on Internet infrastructure. Because of the increase in Internet usage in common life, companies had to make investment in Internet technology (Table 3).

TABLE 3. INTERNET USERS (thousands), TURKEY, 2000-2002

|                   | 2002 | 2001 | 2000 | % change 2001-2002 | % change 2000-2001 |
|-------------------|------|------|------|--------------------|--------------------|
| Internet<br>Users | 4900 | 4000 | 2000 | 22,5               | 100                |

Source: International Telecommunication Union, and UNCTAD calculations. http://www.itu.int/ITU-D/ict/statistics.

Although there is an important increase in Internet usage, the level of internet usage in Turkey is still very low when compared to the Western countries as seen in Table 4.

TABLE 4. INTERNET USERS PER 10,000 PEOPLE IN SELECTED COUNTRIES

|                      | 2002 | 2001 | 2000 |
|----------------------|------|------|------|
| Austria              | 4094 | 3870 | 3325 |
| Denmark              | 4652 | 4295 | 3921 |
| Finland              | 5089 | 4303 | 3723 |
| France               | 3138 | 2638 | 1437 |
| Germany              | 4237 | 3736 | 3015 |
| Italy                | 3011 | 2689 | 2304 |
| Netherlands          | 5048 | 4905 | 4379 |
| Russia               | 409  | 293  | 197  |
| Slovenia             | 4008 | 3008 | 1508 |
| Spain                | 1931 | 1827 | 1367 |
| Sweden               | 5731 | 5163 | 4558 |
| Turkey               | 728  | 604  | 306  |
| United Kingdom       | 4062 | 3296 | 2644 |
| Europe               | 2079 | 1799 | 1391 |
| Developing countries | 391  | 208  | 195  |
| Developed countries  | 3262 | 2914 | 2416 |
| World                | 972  | 812  | 647  |

Source: International Telecommunication Union, and UNCTAD calculations. http://www.itu.int/ITU-D/ict/statistics.

The Table 4 shows that the situation of Turkey is lower than the European countries except Russia. In fact, it is a little bit lower than the world average and lower than average of developed countries.

In recent years, the increase in the use of Internet in Turkey is very hopeful for the future of e-commerce. Private, public, and common uses of Internet contribute to the interest of e-commerce (UNICE Benchmarking Report, 2001).

The financial sector is the leader of e-commerce in Turkey. Almost all financial companies give financial services on Internet. Banks and the other

financial institutions have opportunity to handle the investment and deposit of their customers through Internet. The operation volume of Internet banking was US\$1.2 billion in 1997 and became US\$5 billion in 2001.

Besides Internet usage in the financial sector, many companies in other sectors use e-commerce instruments. However, the use of these instruments is limited to commercials.

New improvements such as Turkey's full membership of the sixth framework which support companies that offer projects on technology, offer big opportunities to the Turkish companies to make e-commerce. Furthermore, Electronic Signature Law, which arranges the technical, legal framework and the use of electronic sign, was accepted in the Grand National Assembly of Turkey (TBMM). As a result, an important infrastructure deficiency was eliminated.

The most popular e-commerce model in Turkey is now B2C model. However, B2B model is more widespread in the world. There are some signs that the direction of e-commerce usage trend will shift to B2B in Turkey as in the world. For example, some companies are directing their relations with their agents and suppliers via telecommunication networks and Internet. According to research, which was done by Merrill Lynch, e-commerce volume in Turkey will reach to \$4 billion in which the share of B2B will be \$2.5 billion and the share of

B2C will be \$1.5 billion by the end of 2005. This estimation also shows that the trend in Turkey is getting closer to the direction of global market.

The lack of skilled people in Information Technology (IT) sector, problems about digital line and Internet speed, the high Internet costs, the avoidance of using credit cards on Internet, and the foreign language problem are some of the obstacles in the development of e-commerce in Turkey. (Yumuşak, 2004).

#### **CHAPTER 2**

#### THE FURNITURE SECTOR

In this chapter, I shall discuss the issues of the definition and the types of furniture, furniture sector, and the e-commerce in the furniture sector.

#### 2.1. The Definition and the Types of Furniture

Furniture is the general name of fixed and modular goods that are used in the activities of daily life such as sitting, sleeping, eating, traveling, resting, working, and keeping or holding of kinds of goods (Guides For The Household Furniture Industry, 1973). The types of furniture include chairs, tables, shelves, cupboards, lighting, and beds (Furniture Definition, http://www.freedefinition.com/furniture.htm).

There are many kinds of raw materials for furniture such as wooden, metal, plastic, synthetic, leather, cloth, bamboo, reed, marble, glass, stone or a composition of these materials (Kayacıklı & Emil, 2003).

Functionally the furniture could be classified as follows:

Upholstery Sitting Groups

- Upholstery Less Sitting Groups
- Bedroom Furniture
- Kitchen Furniture
- Dining Room and Sitting Room Group
- Bookcase, Showcase etc.
- Office Furniture
- Single Furniture
- Seats for motor vehicles

Furniture could be divided in to three categories (Figure 3, Baykan et al., 1997).

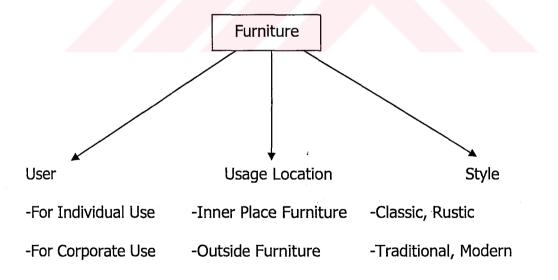


FIGURE 4. FURNITURE CATEGORIES

#### 2.2. The Information about the Furniture Sector

The furniture sector is a basic industry in most of the industrialised countries, representing in general between 2 and 4 percent of the production value of the manufacturing sector, around 2 percent of the Gross Domestic Product and 2.2 percent of the total workforce (The Furniture Industry, http://www.ueanet.com/outlook.htm).

#### 2.2.1. The International Market

The leaders of the furniture sector in the world are European countries. They have big trade volume and technological infrastructure. Furniture sector is one of the important manufacturing industries in Europe and there is high competition among the medium and big companies (The Furniture Industry, http://www.ueanet.com/outlook.htm).

Having half of the world production in furniture sector, EU countries provide work possibilities to 3,5 million people. Almost half of this number is in Germany (1,6 million). Although Germany has large forest areas and has enough technological level, Italy is the world leader in the furniture sector. Germany, Spain, UK and France are also significant countries for furniture production.

EU produced \$82, 2 billion worth of furniture in 2001. Italy and Germany had more than half of the production. Adding France and UK to these countries, four EU countries had 75% of the total furniture production in EU (Furniture, http://europa.eu.int/comm/enterprise/furniture).

Some factors such as technological improvements, changes in customer tastes paralleled with contemporary world, high living standards, and the fashion led the European countries to be the leader of the world in the furniture sector.

EU has half of the world total furniture import volume. Germany, France, and UK are among the five biggest furniture importers. Fifty nine percent of imports of European countries are generally from other European countries. China, Indonesia, Romania, Switzerland, USA, South Africa, Turkey, and Vietnam are some of the countries exporting furniture to EU countries (See Table 5). From 1999 to 2003 the furniture exports of China, Vietnam and Turkey to EU countries dramatically increased. Between 1999 and 2003 the furniture export volume of developing countries to the EU is about 14-17 percent of total import volume of EU. Turkey has 4,5 percent share with their \$369 million export volume (Kayacıklı & Emil, 2003).

Italy is the leader country in the world furniture exports and has 27 percent share with \$8.229.564 million export volume. Canada has the second biggest share of furniture export volume in the world. The export volume of

Canada is \$4,6 billion, constituting 8,7 percent of world furniture export in 2001. In recent years China, Canada, and Poland had significant increases in the world furniture sector. The share of some countries are as follows; Germany 8,7 percent, USA 7,7 percent, China 7,5 percent, Mexico 6 percent. The share of Turkey in the world furniture export was between 0,25 percent and 0, 30 percent in 1998-2001 period (See Table 6).

TABLE 5. NON-EU MEMBER FURNITURE EXPORTERS TO EU COUNTRIES

| Million €    | 1999  | 2000  | 2001  | 2002  | 2003  | share of imports | % growth 1999-2003 |
|--------------|-------|-------|-------|-------|-------|------------------|--------------------|
| Extra-EU25   | 5,671 | 7,148 | 7,193 | 7,492 | 8,237 | 100.0%           | 45.3%              |
| China        | 830   | 1,270 | 1,388 | 1,742 | 2,274 | 27.6%            | 173.8%             |
| Indonesia    | 684   | 841   | 792   | 765   | 785   | 9.5%             | 14.8%              |
| Romania      | 369   | 438   | 495   | 561   | 605   | 7.4%             | 64.2%              |
| Switzerland  | 494   | 526   | 512   | 445   | 438   | 5.3%             | -11.4%             |
| USA          | 633   | 718   | 623   | 499   | 415   | 5.0%             | -34.4%             |
| South Africa | 363   | 390   | 396   | 407   | 407   | 4.9%             | 12.0%              |
| Turkey       | 158   | 193   | 243   | 309   | 369   | 4.5%             | 134.0%             |
| Vietnam      | 134   | 219   | 226   | 255   | 341   | 4.1%             | 154.7%             |
| Malaysia     | 236   | 343   | 317   | 317   | 305   | 3.7%             | 29.4%              |
| Norway       | 274   | 298   | 287   | 284   | 269   | 3.3%             | -2.1%              |

Source: Eurostat, http://europa.eu.int/comm/enterprise/furniture/statistics.htm.

Although the biggest importer of the furniture is EU, the USA is the leader country in the furniture imports. USA imported \$19,4 billion (32,7 percent of the world import) worth of furniture in 2001. Germany, the second biggest

importer, has \$5,3 billion worth of imports which constitutes 10 percent of the world furniture import volume. Other significant importers are France with 7 percent, UK 5,9 percent, Japan 5,2 percent, Canada 4,8 percent (See Table 6) (Yeniçeri, 2003).

TABLE 6. FURNITURE EXPORTS IN THE WORLD (\$1000)

| COUNTRIES      | 1998       | 1999       | 2000       | 2001       |
|----------------|------------|------------|------------|------------|
| Italy          | 8.513.962  | 8.304.932  | 8.321.880  | 8.229.564  |
| Canada         | 4.150.731  | 4.528.166  | 5.103.209  | 4.622.447  |
| Germany        | 4.539.594  | 4.824.139  | 4.528.116  | 4.595.729  |
| USA            | 4.262.397  | 4.200.439  | 4.585.929  | 4.088.481  |
| China          | 2.189.917  | 2.707.812  | 3.565.191  | 3.958.483  |
| Mexico         | 1.782.321  | 2.215.333  | 3.179.057  | 3.166.205  |
| France         | 2.267.128  | 2.323.189  | 2.292.927  | 2.530.830  |
| Poland         | 1.847.936  | 1.882.766  | 2.106.331  | 2.388.024  |
| Denmark        | 1.889.973  | 1.788.755  | 1.713.589  | 1.720.573  |
| Belgium        | J-1        | 1.551.517  | 1.443.362  | 1.455.206  |
| Spain          | 1.416.460  | 1.425.258  | 1.392.245  | 1.424.062  |
| Indonesia      | 354.296    | 1.232.205  | 1.510.384  | 1.416.753  |
| Malaysia       | 1.094.017  | 1.372.644  | 1.564.107  | 1.351.754  |
| Sweden         | 1.246.054  | 1.236.532  | 1.228.824  | 1.085.107  |
| Austria        | 953.997    | 1.009.535  | 973.404    | 1.101.609  |
| Czech Republic | 835.879    | 732.173    | 758.382    | 885.211    |
| Thailand       | 597.451    | 756.685    | 914.684    | 831.243    |
| UK             | 1.515.375  | 1.520.518  | 1.421.393  | 766.768    |
| Netherlands    | 665.522    | 806.168    | 759.822    | 683.991    |
| Slovenia       | 553.854    | 601.362    | 572.673    | 619.194    |
| Switzerland    | 516.139    | 542.111    | 537.014    | 451.331    |
| TOTAL.         | 47.620.705 | 50.873.918 | 54.346.096 | 52.860.677 |

Source: The International Trade Center and the United Nations Statistics Division.

TABLE 7. FURNITURE IMPORTS IN THE WORLD (\$1000)

| COUNTRIES           | 1998       | 1999       | 2000       | 2001       |
|---------------------|------------|------------|------------|------------|
| USA                 | 3.645.409  | 16.846.168 | 19.806.896 | 19.393.284 |
| Germany             | 6.762.490  | 6.619.802  | 5.913.017  | 5.929.341  |
| France              | 3.146.819  | 3.374.667  | 3.471.700  | 4.168.622  |
| UK                  | 2.686.101  | 3.029.650  | 3.331.517  | 3.511.170  |
| Japan               | 2.293.233  | 2.531.429  | 3.115.722  | 3.104.088  |
| Canada              | 2.373.495  | 2.739.550  | 3.031.231  | 2.817.187  |
| Mexico              | 630.956    | 825.283    | 2.068.844  | 2.515.233  |
| Belgium             | ••         | 1.970.497  | 1.826.108  | 1.794.766  |
| Netherlands         | 1.563.946  | 1.833.743  | 1.731.704  | 1.676.759  |
| Switzerland         | 1.535.846  | 1.599.228  | 1.503.818  | 1.446.026  |
| Austria             | 1.292.171  | 1.345.417  | 1.359.834  | 1.393.339  |
| Hong Kong           | 983.156    | 1.123.024  | 1.246.660  | 1.158.826  |
| Spain               | 685.753    | 839.521    | 847.500    | 929.312    |
| Italy               | 742.582    | 879.768    | 914.567    | 911.393    |
| Sweden              | 785.627    | 871.396    | 872.301    | 837.979    |
| Norwegian Norwegian | 708.941    | 676.972    | 664.807    | 661.394    |
| Denmark             | 623.670    | 663.717    | 623.182    | 637.427    |
| Australia           | 447.164    | 547.231    | 669.858    | 548.499    |
| Total               | 48.540.196 | 54.257.815 | 59.462.384 | 59.267.637 |

Source: The International Trade Center and the United Nations Statistics Division.

#### 2.2.2. Turkish Furniture Sector

Companies in the furniture sector are generally Small and Medium Sized Enterprises (SMEs) in Turkey. There has been an increase in the number of large scale companies in the last twenty years. The total number of furniture producers approximately is between 60.000 and 65.000. The foreign investment rate is very low (approximately 1 percent) in furniture sector (Yeniçeri, 2003).

Main furniture centers are in Istanbul, Ankara, Bursa, Eskişehir, Kayseri, Izmir (See Table 8) (Mobilya Sektörünün Değerlendirilmesi, 2002).

TABLE 8. MAIN FURNITURE CENTERS AND THEIR PRODUCTION SHARES

| İstanbul  | 23,3% |
|-----------|-------|
| Ankara    | 19,5% |
| İzmir     | 9%    |
| Adana     | 9%    |
| Bursa     | 5,4%  |
| Eskişehir | 4,5%  |
| Kayseri   | 4,1%  |

Source: Tanyel F., *Küçük ve Orta Ölçekli Mobilya Sektörümüz*, 2000. http://www.kosgeb.gov.tr/yayinlar 22 June 2004.

The rate of capacity usage is not high in the Turkish furniture sector, because of the intensification in the local market. With the rise of furniture exports in recent years, the capacity usage rate has been stepping up.

Large enterprises have been investing in automation and computerisation in order to standardise their production. This requires huge amounts of capital that may be more easily provided by large firms than by smaller ones. Therefore, SMEs in the furniture sector have some problems about increasing production efficiency and standardization. Additionally, the technological inefficiency in the Turkish furniture companies precludes decreasing production costs further. However, some of the European companies operating in Turkey

have expertise at production and employ new technologies in their production facilities. The weaknesses of the furniture sector can be listed as follow:

- Waste of sources in production process
- Lack of expertise
- High cost and high prices
- Lack of qualified workforce
- Designing problems
- Low purchasing power of many customers
- Lack of brands and advertisement
- Unfair competition
- Illegal trade
- Warranty certificate application problems

Trade balance in furniture sector turned to surplus in 2001 and the increase of surplus continued in 2003. The economic crisis in 2001 led companies to pay more attention to the exports because of inner market narration. More than half of the dollar value of exports is channeled to the European countries. Although the furniture sector is a labor-intensive sector, it has a very small share in the total export of Turkey (0,73 percent in 2002).

Turkey's furniture exports, which consist of mainly office furniture, and seats convertible into beds, have had a promising upward trend in the last ten years. The exports of Turkish furniture rose from US\$ 45.6 million in 1994 to about US\$ 404.4 million in 2003 (Yeniçeri, 2003). This is mainly due to the improvements in quality and design. Main export products are seats convertible into beds, seats for motor vehicles, other wooden furniture, and metal office furniture. Some of the furniture exports are directly made by producer companies. However, the most of the furniture exports are made by intermediary foreign trade companies (Kayacıklı & Emil, 2003).

In 1980's, the furniture export of Turkey was limited to the countries in the Middle East. In the last fifteen years, as furniture sector started to make exports to new markets, such as Russian Federation, Central Asian Republics, EU, and some other countries, the export volume has risen. Today, Germany have the biggest share in the export of Turkish furniture sector. The furniture export of the Turkey to Germany was \$31,1 million in 2000, \$47,3 million in 2001 and \$60,5 million in 2002. Although Russia was the most important export market in 1990-1995 periods, the exports to this country have decreased in the following years. There are some signs, such as Russian economic growth and export volume of Turkey to Russia which would make Russia a good market for the Turkish furniture sector in the future (Yeniçeri, 2003). Israel, France, Austria, Netherlands, USA, Saudi Arabia, UK, Greece, UAE, and Azerbaijan also

are important countries for the furniture export of Turkey. Table 9 illustrates Turkey's furniture export 2000-2002 periods.

TABLE 9. TURKEY FURNITURE EXPORTS (\$1).

| COUNTRIES          | 2000        | 2001        | 2002        |
|--------------------|-------------|-------------|-------------|
| Germany            | 39.075.958  | 47.378.793  | 60.469.058  |
| Israel             | 12.943.614  | 14.029.441  | 19.435.851  |
| France             | 9.403.324   | 11.705.384  | 15.583.938  |
| Netherlands        | 10.437.900  | 11.021.736  | 15.571.577  |
| USA                | 6.665.138   | 7.379.498   | 11.343.698  |
| Greece             | 2.256.708   | 4.779.797   | 10.616.292  |
| United Kingdom     | 3.437.383   | 5.062.317   | 9.487.188   |
| Saudi Arabia       | 5.621.899   | 5.072.175   | 8.663.590   |
| Austria            | 6.220.102   | 10.577.281  | 8.447.687   |
| Belgium-Luxembourg | 3.521.241   | 4.760.515   | 5.507.479   |
| U.A.E              | 2.170.406   | 4.410.384   | 5.240.006   |
| Russian Federation | 2.883.897   | 4.041.713   | 4.700.267   |
| Azerbaijan-Nah.    | 2.949.417   | 2.682.183   | 4.430.864   |
| Denmark            | 2.478.319   | 3.421.821   | 3.494.384   |
| Macedonia          | 3.127.992   | 2.556.161   | 3.381.903   |
| Kazakhstan         | 2.444.054   | 1.151.314   | 3.354.628   |
| Romania            | 2.752.313   | 2.194.441   | 3.254.332   |
| Sweden             | 1.129.030   | 1.672.123   | 3.047.552   |
| Turkmenistan       | 3.857.768   | 2.070.132   | 2.965.407   |
| Mexico             | 150.206     | 657.545     | 2.742.446   |
| Others             | 35.737.398  | 29.191.870  | 51.520.232  |
| Total              | 163.923.125 | 180.682.885 | 256.826.584 |

Source: Undersecretaries of Foreign Trade.

Although Turkey exports furniture to more than 150 countries, the export volume is low because the sector structure is based on inner market and there are no modern production lines. The financial problems and limited knowledge about foreign markets also are the problems of furniture sector.

Although there is not sufficient standardization about furniture production, the rises in consumer consciousness and in exports bring about the application of standards.

Market liberalization in 1986 and Customs Union Act between Turkey and EU led the furniture import to increase. The import volume was \$38 million in a year before the Customs Union Act was signed. The import volume reached \$118 million in 2002.

The share of Italy in the Turkish furniture import volume is 27.4 percent. Turkish demands for Italian furniture, which are the best products in the world, imply that there are some people who pay for expensive and high quality furniture in Turkey. Other countries export furniture to Turkey. Their shares are as follows: Germany 18 percent, France 13,6 percent, UK 13,3 percent, USA 5,5 percent, Spain 4,8 percent, China 2,6 percent (Yeniçeri, 2003). In the Table 10, Turkish furniture imports from the first ten countries between 1999 and 2001 are shown.

**TABLE 10. TURKEY FURNITURE IMPORTS (MILLIONS \$)** 

| COUNTRIES      | 1999   | 2000   | 2001   |
|----------------|--------|--------|--------|
| Italy          | 49.380 | 60.056 | 36.043 |
| Germany        | 25.310 | 37.639 | 24.285 |
| France         | 24.631 | 23.394 | 16.166 |
| USA            | 10.576 | 15.732 | 8.386  |
| United Kingdom | 8.603  | 7.142  | 7.155  |
| Spain          | 5.686  | 5.267  | 3.827  |
| Austria        | 2.948  | 2.230  | 2.256  |
| Canada         | 2.750  | 5.016  | 1.707  |
| Netherlands    | 1.933  | 4.649  | 1.567  |
| Belgium        | 1.581  | 1.700  | 870    |

Source: Undersecretaries of Foreign Trade.

Turkish furniture sector has some advantages of in the international markets. These are cheap workforce, nearness to developed countries, Customs Union with EU, dynamic economic activities, and a spirit of entrepreneurship. There are also some weaknesses of Turkish furniture sector in international markets. Lack of expertise in production and marketing, energy and source wastes, solidarity (co-operation) problems of SMEs are some of those weaknesses.

SMEs furniture companies have not enough technical and qualified workforce. In recent years, the qualified workforce requirement doubled because of the globalization in the world, high competition, increasing barriers

to enter foreign market, product standardization, industrial improvements, and an increase in the complexity of production methods (Tanyel, 2000).

Solving qualified workforce problem will result in the following advantages;

- Maximum productivity of sources
- Product standardization
- Customer satisfaction
- Competition advantages in foreign markets.
- Easy adoption of new technologies
- Total quality management approach

Production quality is the combination of quality features such as trust, endurance, and repairability. Quality confidence is that the customer confidently buys furniture and uses it. It takes a long time to build up this confidence (Tanyel, 2000).

Quality confidence is not just the national standards and rules. But if there are no national standards, it is impossible to talk about quality confidence. The customer satisfaction and international standards are important for entering foreign markets. There are several institutions, such as German Institute of Standards (DIN), the European Standardization Organization (CEN), the

International Organization for Standardization (ISO) and the Turkish Standards
Institute (TSE) that have defined the technical quality features of furniture.

Furniture companies are scattered in different regions in Turkey. Bolu and Bursa are important places where both the furnishings and forestry sectors developed. The furniture sector has concentrated on big markets such as Istanbul, Ankara and Izmir (Kayacıklı & Emil, 2003).

The production cost per unit is high in the Turkish furniture sector. The reason for this is making production depending on customer demand and the policy of having minimum input stock. When they need inputs, they buy them with new prices. Table 11 shows that TL value of the furniture production has fluctuated in recent years.

TABLE 11. PRODUCTION QUANTITY OF FURNITURE (Billion TL/1998)

| 2001    | 2002    | 2003*   |
|---------|---------|---------|
| 280 000 | 253 400 | 261 002 |

Source: DPT (State Planning Organization), http://www.dpt.gov.tr

\* Estimation

One of the most important criteria to analyze production numbers is the capacity usage rate (See Table 12). It shows company performance better than production quantity and TL value. Thus, it contributes to making future projections of the company.

**TABLE 12. CAPACITY USAGE RATE OF COMPANIES (PERCENT)** 

|                            | 1998 | 1999 | 2000 | 2001 | 2002 |
|----------------------------|------|------|------|------|------|
| Workplace Number<br>Weight | 61,9 | 57,2 | 66,8 | 58,3 | 64,7 |
| Production Value<br>Weight | 73,4 | 66,5 | 76,6 | 73,6 | 78,8 |

Source: State Institute of Statistics-SIS, http://www.die.org.tr.

Although the size of the Turkish furniture sector and its share in the world is not much, high speed of development in recent years shows that the Turkish furniture sector has an important potential.

#### 2.3. The E-Commerce in the Furniture Sector

The distribution of furniture will be more effective depending on the increase of the use of EDI, internet, and digital catalogue. Via EDI, it is possible to complete lots of work in a very short time that would otherwise last several days because of distribution approvals and payments and use of many papers. In addition, it is possible that the customers make decisions easily through using Web sites and digital catalogues. Web sites and digital catalogues ease shopping by eliminating time consumption for visiting showrooms and comparing prices.

E-commerce usage in the furniture sector consists of design, manufacturing, sales, and marketing of furnitures. These are also the segments that are likely to benefit from the adoption of e-commerce. E-commerce usage

is likely to develop in the coming years as manufacturers increasingly realise that there are significant benefits to be achieved in terms of cost reduction and increased efficiency.

The distribution in the furniture industry is structured in a complex way. Extranets and internet-enabled supply-chain automation solutions should optimise the relationships between manufacturers and dealers. Order management and logistics are two of the areas where e-commerce should prove particularly beneficial to the furniture industry (European Furniture Sector, http://europa.eu.int/comm/enterprise/furniture/ind\_policy.htm).

The furniture sector is sensitive to the fashion. Therefore in order not to lose customers, the furniture companies should follow the fashion. This feature of the furniture sector necessitates updating advertisement catalogues and other advertisement materials frequently. Sending updated catalogues to distributors and customers each time is expensive. The most effective solution for this problem is dynamic and easily updateable Web sites. Even if the furniture companies do not sell their products through Internet, they still need Web sites, because companies that have Web sites can save advertisement and marketing costs, contribute customer satisfaction, and increase their prestige (Furniture Industry Sector Report, 2001).

With the help of Internet, it is possible to gain know-how about furniture and follow trends in developed countries. E-commerce is important to advertise products to the international markets (ABD Mobilya Sektörü Raporu, 2002).

As in other sectors, the USA is the leader of using e-commerce in the furniture sector. According to the data shown in Table 13, the total furniture marketing volume in 2000 was \$75,107 million and the share of e-commerce in this volume was \$8,400 million in the USA. This total volume decreased to \$73,112 million and the share of e-commerce decreased to \$8,082 million in 2002 (Aktrin Furniture Information Center, http://www.furniture-info.com/001-homepage.htm).

There are many companies who market their products through e-commerce in the world. One of the most popular companies is the "furniture.com". It is possible to find various kinds of furniture and sufficient information about each product in this site.

TABLE 13. US TOTAL AND E-COMMERCE VALUE: 2000–2002 (Million \$)

|                                | 2002      |            |           | 2001       |           | 2000       |
|--------------------------------|-----------|------------|-----------|------------|-----------|------------|
|                                | Total     | E-commerce | Total     | E-commerce | Total     | E-commerce |
| Total<br>Manufacturing         | 3.840.319 | 751.985    | 3.970.500 | 724.228    | 4.208.582 | 755.807    |
| Furniture and related products | 73.112    | 8.082      | 72.147    | 9.348      | 75.107    | 8.400      |

Source: U.S. Census Bureau, Annual Survey of Manufactures and 2002 Economic Census. http://www.census.gov/eos/www/ebusiness614.htm. The e-commerce usage in the Turkish furniture companies is at the elementary level. Their e-commerce usage heavily depends on advertisements and communicating with customers through Web sites. However, Web sites prepared for the advertisement of the Turkish companies are not efficient to advertise the companies and their products. The main reason for this is the improper poor of Web sites by inexperienced people.

There is no specific Web sites for furniture sector to sell furniture except general Web pages (kangurum.com, hepsiburda.com, baskuda.com, etc.) that are established to market various kinds of goods such as furniture, textile, In recent years, some companies prepared Web sites to sell furniture. For example, Istanbul Furniture and Woodwork Manufacturer Cooperative (Masko), which are members of the furniture companies union, have started to market furniture through their Web site. Furthermore, some turkmobilya.com, inegolmobilya.com, furniture portals such as mobilyadergisi.com, etc. publish furniture companies' addresses and products. These sites only present the companies and their products on the Web. As a result, e-commerce usage in the Turkish furniture sector is at the beginner level. This situation is caused by some structural barriers. The barriers preventing the improvement of e-commerce usage in the Turkish furniture sector are:

- Lack of guidance by institutions and chambers to furniture companies
- Small-scale companies
- Financial problems
- Lack of information technology adaptation to companies
- Lack of product standardization
- Lack of experienced workforce about information technology

### **CHAPTER 3**

# SURVEY ON USING INFORMATION TECHNOLOGY AND E-COMMERCE IN THE TURKISH FURNITURE SECTOR

The aim of this chapter is to analyze the level of Turkish furniture companies' e-commerce usage. For this purpose a questionnaire is applied to 74 furniture companies were located in Istanbul, Bursa, Ankara, and Kayseri. Answers to the questionnaire are evaluated and e-commerce usage is determined. As the companies selected on a random basis from different cities and companies, it can be said that the analysis represents the general situation of the Turkish furniture sector about information technology and e-commerce usage. In this part, I shall discuss about the characteristics of the survey and give an evaluation of survey.

## 3.1. Features of the Survey

In the following sections scale development, sampling, data collection and data analysis procedures of the study are described.

## 3.1.1. The Aim of the Survey

The aims of this survey are to determine the use of information technologies in furniture sector, aims of Internet usage, level and sources of

information about e-commerce, advantages of e-commerce to companies, how professional, planned and conscious are the companies who use e-commerce and the reasons for not using e-commerce.

## 3.1.2. Limitations of the survey

Application of survey is limited to the big cities such as Istanbul, Ankara, Bursa, and Kayseri because of difficulties in reaching all companies in Turkey.

## 3.1.3. The Method of the Survey

Furniture sector is the main part of the survey. Later on sample part was chosen as some furniture companies located in big cities. Data was collected based on a closed-end questionnaire.

### 3.1.3.1. Choosing Main and Sample Groups

There are about 55.000 small and medium sized companies registered to the Federation of Woodwork. Adding the furniture producers who are the member of the Chambers of Industry and Trade to this number, the total number of the companies reach about 65.000 companies. This survey has been applied to 74 randomly chosen companies.

### 3.1.3.2. The Preparation of Questionnaire

In this study, there were two steps in the preparation of questionnaire. First step was the inspection of surveys on similar studies. The other step was

the literature about how companies use information technology and ecommerce was reviewed extensively.

Although the number of questions were 76, eliminating some of the least important questions, the actual question number has been limited to 67.

Survey was divided into four major sections.

- Information about the company and its staff who answered the survey
- Companies' usage level of information technologies and their aim of using
   Internet.
- Causes of using e-commerce by companies and their application style.
- Causes of company reluctance to using e-commerce.

#### 3.1.3.3. The Data Collection Methods

Data collection method of the study depends on applying questionnaire to some companies in Turkish furniture sector. Some of the companies answered the questionnaire through e-mail. However, face-to-face interviews were made for the majority of the companies. Totally, survey was collected from 82 companies. Of these, 74 were suitable.

## 3.1.3.4. The Data Analysis

Data analysis and survey results installation have been made in computer.

By using Microsoft Excel the frequency, percentage, and cumulative values were calculated for each of the four sections.

# 3.2. The Evaluation of Survey

This part of the study contains the results of the survey. After the initial screening for usability, 74 responses were found to be complete and usable. The results are presented in the following seven Tables.

- Characteristics of Respondents
- Characteristics of Companies
- Usage degrees of computer applications and equipments
- Using rate of internet for the kinds of activities
- Furniture companies' understanding level of benefits of e-commerce
- Companies' Web site capabilities and it's impact
- Obstacles to adapt e-commerce

**TABLE 14. CHARACTERISTIC OF RESPONDENTS** 

|                   | Frequency | Percent (%) | Cumulative (%) |
|-------------------|-----------|-------------|----------------|
| Gender            |           |             | <del></del>    |
| Male              | 68        | 91,9        | 91,9           |
| Female            | 6         | 8,1         | 100,0          |
| Age               |           |             | •              |
| Less than 20      | 0         | 0,0         | 0,0            |
| 20-29             | 22        | 29,7        | 29,7           |
| 30-39             | 31        | 41,9        | 71,6           |
| 40-49             | 17        | 23,0        | 94,6           |
| Over 50           | 4         | 5,4         | 100,0          |
| Computer Skills   |           |             |                |
| Do not know       | 9         | 12,2        | 12,2           |
| Basic Level       | 10        | 13,5        | 25,7           |
| Medium            | 30        | 40,5        | 66,2           |
| Good              | 17        | 23,0        | 89,2           |
| Very good         | 8         | 10,8        | 100,0          |
| Education Level   |           |             |                |
| Primary school    | 5 .       | 6,9         | 6,9            |
| Elementary School | 7         | 9,7         | 16,7           |
| High School       | 31        | 43,1        | 59,7           |
| University        | 28        | 38,9        | 98,6           |
| Master Degree     | 1         | 1,4         | 100,0          |

Table 14 summarizes characteristics of respondents within the surveyed companies. Most people who answered the inquiry are men representing 91,9 percent followed by women (8,1 percent). The furniture sector is one of the sectors which have less women workers because of cultural reasons and work structure.

Evaluation of the demographic situation of the respondents give the following insights. 41,9 percent of the respondents are between 30-39 years old. The respondents with the ages between 20- 29 constitute 29,7 percent of

the total. 40-49 age group has a weight of 23 percent in the respondents. 5,4 percent of the respondents are over 50 years old. It is possible to make an inference that most of the people who work in the furniture sector are young and middle aged.

The education level of respondents are also evaluated. Primary and elementary school graduates have a weight of 16,7 percent. Majority of the respondents are high school graduates. Their weight is 43,1 percent. 38,9 percent of the respondents were graduated from university. Most of them have good computer skills and are aware of the technological possibilities. This situation of respondents is a good reason to be optimistic for the future of e-commerce usage in the Turkish furniture sector.

**TABLE 15. CHARACTERISTIC OF COMPANIES** 

| •                       | Frequency | Percent (%) | Cumulative (%)                        |
|-------------------------|-----------|-------------|---------------------------------------|
| Limits of Activity Area |           |             | · · · · · · · · · · · · · · · · · · · |
| Regional                | 23        | 29,9        | 29,9                                  |
| National                | 28        | 36,4        | 66,2                                  |
| International           | 26        | 33,8        | 100,0                                 |
| Number of Employee      |           |             |                                       |
| Less than 10            | 34        | 47,9        | 47,9                                  |
| 11-25                   | 21        | 29,6        | 77,5                                  |
| 26-50                   | 7         | 9,9         | 87,3                                  |
| 51-100                  | 4         | 5,6         | 93,0                                  |
| Over 100                | 5         | 7,0         | 100,0                                 |
| Foundation Year         |           |             |                                       |
| Less than 5             | 22        | 30,6        | 30,6                                  |
| 6-10                    | 25        | 34,7        | 65,3                                  |
| 11-15                   | 6         | 8,3         | 73,6                                  |
| 16-25                   | 12        | 16,7        | 90,3                                  |
| Over 25                 | 7         | 9,7         | 100,0                                 |

Table 15 summarizes characteristics of companies within the surveyed companies. The companies subject to survey, are small and medium sized, and the large companies, which are local by 29,9 percent, and national by 36,4 percent, and international by 33,8 percent. These data explain the relations of Turkish companies with foreign markets.

Analysis of the workforce capacity of the Turkish furniture companies gives the following results. Nearly half of the companies (47,9 percent) have 10 or less employees. In 29,6 percent of the companies between 11 and 25 employees are occupied. Other companies' percentages based on the number of employees are as follows: Between 26-50 employees are working in 9,9 percent, 51-100 employees are working in 5,6 percent, and over 100 employees are working in 7 percent of the companies. This result shows that the overwhelming majority of the Turkish furniture companies are small and medium sized.

TABLE 16. USAGE DEGREES OF COMPUTER APPLICATIONS AND EQUIPMENTS

| Computers         Fully         22         30,6         30,6           Fairly         15         20,8         51,4           Partially         18         25,0         76,4           Rarely         4         5,6         81,9           None         13         18,1         100,0           Other Equipments (printer, scanner etc.)         22         30,6         30,6           Fully         22         30,6         30,6 | e(%) |
|---|------|
| Computers         Fully       22       30,6       30,6         Fairly       15       20,8       51,4         Partially       18       25,0       76,4         Rarely       4       5,6       81,9         None       13       18,1       100,0         Other Equipments (printer, scanner etc.)         Fully       22       30,6       30,6  |      |
| Fully       22       30,6       30,6         Fairly       15       20,8       51,4         Partially       18       25,0       76,4         Rarely       4       5,6       81,9         None       13       18,1       100,0         Other Equipments (printer, scanner etc.)       5       30,6       30,6         Fully       22       30,6       30,6  |      |
| Fairly 15 20,8 51,4 Partially 18 25,0 76,4 Rarely 4 5,6 81,9 None 13 18,1 100,0 Other Equipments (printer, scanner etc.) Fully 22 30,6 30,6   |      |
| Partially       18       25,0       76,4         Rarely       4       5,6       81,9         None       13       18,1       100,0         Other Equipments (printer, scanner etc.)         Fully       22       30,6       30,6   |      |
| Rarely       4       5,6       81,9         None       13       18,1       100,0         Other Equipments (printer, scanner etc.)         Fully       22       30,6       30,6  |      |
| None 13 18,1 100,0  Other Equipments (printer, scanner etc.)  Fully 22 30,6 30,6  |      |
| Other Equipments (printer, scanner etc.) Fully 22 30,6 30,6   |      |
| <b>etc.)</b> Fully 22 30,6 30,6   |      |
| Fully 22 30,6 30,6  |      |
|   |      |
| Fairly 15 20,8 51,4   |      |
| Partially 16 22,2 73,6  |      |
| Rarely 5 6,9 80,6   |      |
| None 14 19,4 100,0  |      |
| Internet Connection   |      |
| Fully 18 25,4 25,4  |      |
| Fairly 14 19,7 45,1   |      |
| Partially 16 22,5 67,6  |      |
| Rarely 3 4,2 71,8   |      |
| None 20 28,2 100,0  |      |
| Computer based accounting system  |      |
| •   |      |
|   |      |
|   |      |
| Partially 7 9,7 58,3 Rarely 3 4,2 62,5  |      |
|   |      |
| None 27 37,5 100,0  |      |
| Computer based marketing  |      |
| applications  |      |
| Fully 4 5,6 5,6   |      |
| Fairly 8 11,3 16,9  |      |
| Partially 18 25,4 42,3  |      |
| Rarely 11 15,5 57,7   |      |
| None 30 42,3 100,0  |      |
| Computer based production   |      |
| applications  |      |
| Fully 7 10,1 10,1   |      |
| Fairly 4 5,8 15,9   |      |
| Partially 11 15,9 31,9  |      |
| Rarely 5 7,2 39,1   |      |
| None 42 60,9 100,0  |      |
| Computer based human resource   |      |
| applications  |      |
| Fully 4 5,6 5,6   |      |
| Fairly 1 1,4 6,9  |      |
| Partially 10 13,9 20,8  |      |
| Rarely 11 15,3 36,1   |      |
| None 46 63,9 100,0  |      |

Table 16 summarizes usage degrees of computer applications and equipments within the surveyed companies (Bakker *et al.* 2000; Kula *et al.* 2001; Özmen 2003; Polatoglu *et al.* 2001; Yahyagil 2001). There is widespread use of computer in the sector. 30,6 percent of the companies use computer at advanced level. 20,8 percent of the companies' computer usage skills are good. 25 percent of them can use computers partially, and 5,6 percent of them rarely. However, 18 percent of the companies do not have any computer usage skills.

Uses of other equipments are not less than computer utilization. 30,6 percent of the companies are using other computer equipments very well. 20,8 percent of them have good skills at this issue. 22,2 percent of them use computer equipments partialy and 6,9 percent of them use computer equipments just rarely.

The other data about the interest of companies to the information technology is internet usage. 71,8 percent of the companies have internet connection. Remaining 28,2 percent of the companies do not use internet.

Nearly half of companies (48,7 percent) use computer based accounting system. 13,9 percent of the companies rarely use this system. 37,5 percent of the companies do not use computer based accounting system. More than half of the firms (57,7 percent) use computer based marketing applications. 16,9 percent of these companies use computer based marketing applications frequently, 40,9 percent of them use this technological tool rarely. Nevertheless,

the others (42,3 percent) are not interested in using computer based marketing applications.

More than half of the companies (60,9 percent) do not use computers in their production process. The complate use of computer in the production process is only 10,1 percent. These data are related with the sturcture of the Turkish furniture sector in which many of companies consist of labor intensified workshop style units.

TABLE 17. UTILIZATION RATE OF INTERNET FOR THE KINDS OF ACTIVITIES

|   | Frequency | Percent(%) | Cumulative(%) |
|---|-----------|------------|---------------|
| To investigate and find target domestic     |           |            |               |
| and foreign markets                         |           |            |               |
| Fully                                       | 19        | 26,4       | 26,4          |
| Fairly                                      | 14        | 19,4       | 45,8          |
| Partially                                   | 11        | 15,3       | 61,1          |
| Rarely                                      | 9         | 12,5       | 73,6          |
| None  | 19        | 26,4       | 100,0         |
| To spread out the name of the firm and to   |           |            |               |
| advertise your products in international    |           |            |               |
| markets                                     |           |            |               |
| Fully                                       | 14        | 19,4       | 19,4          |
| Fairly .                                    | 8         | 11,1       | 30,6          |
| Partially                                   | 12        | 16,7       | 47,2          |
| Rarely                                      | 5         | 6,9        | 54,2          |
| None  | 33        | 45,8       | 100,0         |
| To publish Web site, to advertise by online |           |            |               |
| operations                                  | 10        | 26 E       | 26 5          |
| Fully                                       | 18        | 26,5       | 26,5          |
| Fairly                                      | 6         | 8,8        | 35,3          |
| Partially                                   | 11        | 16,2       | 51,5          |
| Rarely                                      | 6         | 8,8        | 60,3          |
| None  | 27        | 39,7       | 100,0         |
| To sign up (or subscribe) for electronic    |           |            |               |
| marketplaces                                |           | 0.0        | 0.0           |
| Fully                                       | 6         | 9,0        | 9,0           |
| Fairly                                      | 8         | 11,9       | 20,9          |
| Partially                                   | 10        | 14,9       | 35,8          |
| Rarely                                      | 6         | 9,0        | 44,8          |

| None   | 27              | FF 3        | 100.0        |
|--|-----------------|-------------|--------------|
| None <i>To receive electronic documents and to</i>                 | 37              | 55,2        | 100,0        |
|  |                 |             |              |
| conduct online payments  | 4               | F 7         |              |
| Fully  | 4               | 5,7         | 5,7          |
| Fairly   | 5               | 7,1         | 12,9         |
| Partially  | 16              | 22,9        | 35,7         |
| Rarely   | 8               | 11,4        | 47,1         |
| None   | 37              | 52,9        | 100,0        |
| To contact with customers for marketing                            |                 |             |              |
| purpose  |                 |             |              |
| Fully  | 10              | 14,3        | 14,3         |
| Fairly   | 12              | 17,1        | 31,4         |
| Partially  | 11              | 15,7        | 47,1         |
| Rarely   | 8               | 11,4        | 58,6         |
| None   | 29              | 41,4        | 100,0        |
| To use in receiving the orders                                     |                 | ŕ           | •            |
| Fully  | 7               | 9,9         | 9,9          |
| Fairly   | 9               | 12,7        | 22,5         |
| Partially  | 16              | 22,5        | 45,1         |
| Rarely   | 3               | 4,2         | 49,3         |
| None   | 36              | 50,7        | 100,0        |
| To use in selling operations                                       |                 | 50,         | 100,0        |
| Fully  | 7               | 10,0        | 10,0         |
| Fairly   | 6               | 8,6         | 18,6         |
| Partially  | 16              | 22,9        | 41,4         |
| Rarely   | 7               | 10,0        |              |
| None   | 34              |             | 51,4         |
|  | 34              | 48,6        | 100,0        |
| To solve the problems of customers and to supply technical support |                 |             |              |
| Fully  | 6               | 8,5         | 8,5          |
| Fairly   | 6               | 8,5         | 16,9         |
| Partially  | 12              | 16,9        | 33,8         |
| Rarely   | 10              | 14,1        | 47,9         |
| None   | 37              | 52,1        | 100,0        |
| To use in production management                                    |                 | •           | •            |
| operations   |                 |             |              |
| Fully  | 3               | 4,3         | 4,3          |
| Fairly   | 5               | 7,1         | 11,4         |
| Partially  | 13              | 18,6        | 30,0         |
| Rarely   | 6               | 8,6         | 38,6         |
| None   | 43              | 61,4        | 100,0        |
| To use in supplying raw materials                                  | 1.5             | 01,1        | 100,0        |
| Fully  | 1               | 1,4         | 1,4          |
| Fairly   | 3               | 4,3         | 5,8          |
| Partially  | 3<br>15         | 4,3<br>21,7 |              |
| •  |                 |             | 27,5<br>42.0 |
| Rarely   | 10              | 14,5        | 42,0         |
| None   | 40 <sup>-</sup> | 58,0        | 100,0        |
| To conduct research in determining the                             |                 |             |              |
| quality and the costs  | _               | 7 7         | 7 7          |
| Fully  | 5               | 7,2         | 7,2          |

| Fairly                                     | 4  | 5,8  | 13,0  |
|--|----|------|-------|
| Partially                                  | 10 | 14,5 | 27,5  |
| •  |    |      | 46,4  |
| Rarely                                     | 13 | 18,8 | •     |
| None                                       | 37 | 53,6 | 100,0 |
| Human resource management (to search       |    |      |       |
| for employee needed in the Web, to         |    |      |       |
| receive job applications on Web)           |    |      |       |
| Fully                                      | 3  | 4,3  | 4,3 · |
| Fairly                                     | 1  | 1,4  | 5,7   |
| Partially                                  | 7  | 10,0 | 15,7  |
| Rarely                                     | 12 | 17,1 | 32,9  |
| None                                       | 47 | 67,1 | 100,0 |
| To use for affairs with other institutions |    | ·    | •     |
| and business partners                      |    |      |       |
| Fully                                      | 4  | 5,7  | 5,7   |
| Fairly                                     | 7  | 10,0 | 15,7  |
| Partially                                  | 11 | 15,7 | 31,4  |
| Rarely                                     | 10 | 14,3 | 45,7  |
| None                                       | 38 | 54,3 | 100,0 |
| None                                       | 38 | 54,5 | 100,0 |

Table 17 summarizes utilization rate of Internet for the kinds of activities within the surveyed companies (Bakker *et al.* 2000; Kula *et al.* 2001; Özmen 2003; Polatoglu *et al.* 2001; Yahyagil 2001). Companies generally use Internet for advertisement. The percentage of the companies which use Internet to investigate domestic and foreign markets are as follows: 26,4 percent of the companies use Internet very actively, 19,4 percent of them use it frequently, 15,3 percent of them use it partially, and 12,5 percent of them use it rarely. More than one-quarter of the companies (26,4 percent) do not use Internet for this purpose.

Nearly half of the companies (45,8 percent) do not use Internet to spread out the name of the firm and to advertise their products in the international markets. These data show that the companies in the sector have

not understood the importance of the use of Web site for entering international markets.

The new application of trade on Internet is electronic market places. This gives possibilities to companies to enter new markets and find new customers. Furthermore electronic market places provide with improving relations among companies, and increasing multilateral trade activites. Nevertheless, more than half of the companies (55,2 percent) do not use Internet for this reason.

The result of the search shows that the companies mostly do not apply to receive electronic documents and to conduct online payments. More than half of them did not use it any time (52,9 percent).

The Internet presents opportunities to improve communication as well as to reduce marketing costs. Unfortunately, the rate of using Internet for marketing is not high.

The Turkish furniture companies rarely use Internet to receive electronic document and order, to supply raw materials, to do research about quality, cost, and human resources, to manage their affairs with the institutions and the business partners.

TABLE 18. FURNITURE COMPANIES' UNDERSTANDING LEVEL OF BENEFITS OF E-COMMERCE

|  | Frequency | Percent(%) | Cumulative(%) |
|--|-----------|------------|---------------|
| To what degree your sector is open to      |           |            |               |
| international market?                      |           |            |               |
| Fully                                      | 14        | 19,2       | 19,2          |
| Fairly                                     | 16        | 21,9       | 41,1          |
| Partially                                  | 22        | 30,1       | 71,2          |
| Rarely                                     | 10        | 13,7       | 84,9          |
| None                                       | 11        | 15,1       | 100,0         |
| To what degree your sector has potential   |           |            |               |
| to become open for international market?   |           |            |               |
| Fully                                      | 21        | 28,4       | 28,4          |
| Fairly                                     | 22        | 29,7       | 58,1          |
| Partially                                  | 12        | 16,2       | 74,3          |
| Rarely                                     | 11        | 14,9       | 89,2          |
| None                                       | 8         | 10,8       | 100,0         |
| Is your firm willing to open itself to     |           |            |               |
| international market?                      |           |            |               |
| Fully                                      | 27        | 37,0       | 37,0          |
| Fairly                                     | 21        | 28,8       | 65,8          |
| Partially                                  | 13        | 17,8       | 83,6          |
| Rarely                                     | 5         | 6,8        | 90,4          |
| None                                       | 7         | 9,6        | 100,0         |
| Which one is the below or which ones are   |           |            |               |
| the below your target customers?           |           |            |               |
| Consumer                                   | 12        | 16,7       | 16,7          |
| Retailers and distributors                 | 17        | 23,6       | 40,3          |
| Both of them                               | 43        | 59,7       | 100,0         |
| What is the level of understanding the     |           |            |               |
| benefits of e-commerce in general terms in |           |            |               |
| your firm?                                 |           |            |               |
| Fully                                      | 15        | 20,3       | 20,3          |
| Fairly                                     | 15        | 20,3       | 40,5          |
| Partially                                  | 18        | 24,3       | 64,9          |
| Rarely                                     | 13        | 17,6       | 82,4          |
| None                                       | 13        | 17,6       | 100,0         |
| Does your firm have plan for e-commerce    |           |            |               |
| applications?                              |           |            |               |
| Fully                                      | 12        | 16,2       | 16,2          |
| Fairly                                     | 8         | 10,8       | 27,0          |
| Partially                                  | 11        | 14,9       | 41,9          |
| Rarely                                     | 17        | 23,0       | 64,9          |
| None                                       | 26        | 35,1       | 100,0         |
| What is the source of information about    |           |            | ,             |
| Web sites and e-commerce in your firm?     |           |            |               |
| Special software and hardware firms which  | 16        | 26,2       | 26,2          |
| serve e-commerce solutions                 |           |            |               |

| Undersecretariat of the Prime Ministry For | 3  | 4,9  | <br>31,1 |
|--|----|------|----------|
| Foreign Trade Export Promotion Center      |    |      |          |
| (IGEME)                                    |    |      |          |
| Small and Medium Industry Development      | 6  | 9,8  | 41,0     |
| Organization (KOSGEB) - KOBINET            |    |      |          |
| Undersecretariat of Foreign Trade (DTM)    | 6  | 9,8  | 50,8     |
| Sector Institutions and Chambers           | 6  | 9,8  | 60,7     |
| Ministry of Industry and Trade             | 3  | 4,9  | 65,6     |
| Other                                      | 21 | 34,4 | 100,0    |
| Does your firm have a Web site?            |    |      |          |
| Yes  | 33 | 44,6 | 44,6     |
| No   | 41 | 55,4 | 100,0    |

Table 18 summarizes furniture companies' understanding level of benefits of e-commerce within the surveyed companies(Bakker *et al.* 2000; Özmen 2003; Polatoglu *et al.* 2001; Yahyagil 2001). Nearly half of the companies (41 percent) that answered the survey, assume that the furniture sector is open to international market. Just a few companies (15,1 percent) do not agree with them.

Most of the companies that answered the survey, mentioned about the sufficient sector potentials to enter international markets. For this reason, more than half of the furniture companies (65 percent) are willing to open international market. It is necessary for the companies to give importance e-commerce operations to enter international markets. E-commerce is the cheapest and the easiest way of entering international market.

40 percent of the companies are aware of the benefits of e-commerce.

Nevertheles, only 27 percent of the firms in our survey have formal plans in employing e-commerce technologies.

Several governmental agents are engaged in e-commerce activities in Turkey. For example, KOSGEB supports e-commerce projects and ETKK, IGEME informs companies about e-commerce. But responses to the question about the source of information on Web sites and electronic commerce in their companies shows that they are not aware of the governmental supports and activities.

TABLE 19. COMPANIES' WEB SITE CAPABILITIES AND ITS IMPACT

|  | Frequency | Percent(%) | Cumulative(%) |
|--|-----------|------------|---------------|
| What is the reason you published a Web site?   |           |            |               |
| To provide the accessibility of our products from anywhere and anytime   | 31        | 68,9       | 68,9          |
| To become superior from our competitors  | 3         | 6,7        | 75,6          |
| To reduce the costs (catalog, mail, selling, customer services)  | 5         | 11,1       | 86,7          |
| To contribute customer satisfaction  | 5         | 11,1       | 97,8          |
| Other  | 1         | 2,2        | 100,0         |
| From which sources below have you got support while you have been preparing your Web site?                           |           |            |               |
| Special software and hardware firms which serve e-commerce solutions   | 9         | 23,7       | 23,7          |
| Firms which serve e-marketplace and portal services  | 1         | 2,6        | 26,3          |
| Institutions which buy domain name for your firm by online and prepare your Web site                                 | 16        | 42,1       | 68,4          |
| KOSGEB-KOBINET   | 2 :       | 5,3        | 73,7          |
| Sector Institutions / Chambers   | 1         | 2,6        | 76,3          |
| Other  | 9         | 23,7       | 100,0         |
| In your opinion, is your Web site ready<br>and has your Web site being promoted<br>satisfactorily to your customers? |           |            |               |
| Fully  | 0         | 0,0        | 0,0           |
| Fairly   | 10        | 30,3       | 30,3          |
| Partially  | 14        | 42,4       | 72,7          |
| Rarely   | 7         | 21,2       | 93,9          |
| None   | 2         | 6,1        | 100,0         |
| What have you do to promote your Web site?   |           |            |               |

| <del> </del>                              | <del></del> | <del>.</del>  |       |
|---|-------------|---------------|-------|
| Subscription to search engines            | 19          | 38,0          | 38,0  |
| Online advertisements (internet ads)      | 4           | 8,0           | 46,0  |
| Media and press ads                       | .5          | 10,0          | 56,0  |
| To send information e-mails to the        | 12          | 24,0          | 80,0  |
| customers                                 |             |               |       |
| Other                                     | 10          | 20,0          | 100,0 |
| Which operations can you can do in your   |             | ,-            | ,-    |
| Web site without using technical          |             |               | •     |
| support?                                  |             |               |       |
|   | 12          | 21.1          | 21 1  |
| To add and remove products, to update     | 12          | 21,1          | 21,1  |
| your information in the Web site          | -           | 0.0           | 20.0  |
| To add news and activities into the Web   | 5           | 8,8           | 29,8  |
| site                                      |             |               |       |
| To observe and manage the orders          | 10          | 17,5          | 47,4  |
| To observe the list of customers          | 6           | 10,5          | 57,9  |
| To follow the frequency and statistics of | 6           | 10,5          | 68,4  |
| visitors                                  |             |               |       |
| To send electronic catalog to the         | 10          | 17,5          | 86,0  |
| customers                                 |             |               |       |
| Other                                     | 8           | 14,0          | 100,0 |
| How often do you update your Web site?    |             | ,.            | 200/0 |
| Monthly                                   | 6           | 18,2          | 18,2  |
| Semi-annually                             | 9           | 27,3          | 45,5  |
| ·   | 5           |               | -     |
| Annually                                  | 8           | 15,2          | 60,6  |
| When the new products introduced and      | 0           | 24,2          | 84,8  |
| when the new campaigns are announced      | _           | 45.0          | 400.0 |
| Other                                     | 5           | 15,2          | 100,0 |
| Do you employ an extra employee for E-    |             |               |       |
| commerce and Web site?                    |             |               |       |
| Yes                                       | 4           | 12,1          | 12,1  |
| No .                                      | 29          | 87 <b>,</b> 9 | 100,0 |
| How often do you check the e-mails        |             |               |       |
| related to your Web site?                 |             |               |       |
| Always                                    | 9           | 27,3          | 27,3  |
| Daily                                     | 14          | 42,4          | 69,7  |
| In a couple of days                       | 1           | 3,0           | 72,7  |
| Weekly                                    | 5           | 15,2          | 87,9  |
| Other                                     | 4           | 12,1          | 100,0 |
| Do you get e-mails from customers         | •           | <i>/</i> -    | 200/0 |
| because of your Web site?                 |             |               |       |
| Very much                                 | 4           | 12,1          | 12,1  |
|   | 8           | 24,2          | 36,4  |
| Quite                                     |             |               |       |
| Partially                                 | 12          | 36,4<br>15.2  | 72,7  |
| A few                                     | 5           | 15,2          | 87,9  |
| None                                      | 4           | 12,1          | 100,0 |
| Do you inform your customers about the    |             |               |       |
| newness and campaigns by e-mails?         | _           |               |       |
| Always                                    | 4           | 12,1          | 12,1  |
| Quite                                     | 7           | 21,2          | 33,3  |
| Partially                                 | 8           | 24,2          | 57,6  |

| Sometimes                              | 7      | 21,2 | 78,8  |
|--|--------|------|-------|
| None                                   | 7      | 21,2 | 100,0 |
| Which expenses of your firm have       |        | ,-   |       |
| decreased because of your Web site?    |        |      | •     |
| In marketing expenses                  | 6      | 15,0 | 15,0  |
| In staff expenses                      | 3      | 7,5  | 22,5  |
| In sale expenses                       | 1      | 2,5  | 25,0  |
| In distribution expenses               | 4      | 10,0 | 35,0' |
| In promotion expenses                  | 11     | 27,5 | 62,5  |
| None of the expenses decreased         | 15     | 37,5 | 100,0 |
| Has your business volume increased     |        |      | ·     |
| because of your Web site?              |        |      |       |
| Fully                                  | 0      | 0,0  | 0,0   |
| Fairly                                 | 5      | 15,2 | 15,2  |
| Partially                              | 8      | 24,2 | 39,4  |
| Rarely                                 | 13     | 39,4 | 78,8  |
| None                                   | 7      | 21,2 | 100,0 |
| Has your Web site contributed to reach |        |      |       |
| you new customers in domestic market?  |        |      |       |
| Fully                                  | 0      | 0,0  | 0,0   |
| Fairly                                 | 4      | 12,1 | 12,1  |
| Partially                              | 12     | 36,4 | 48,5  |
| Rarely                                 | 12     | 36,4 | 84,8  |
| None                                   | 5      | 15,2 | 100,0 |
| Has your Web site contributed to reach |        |      |       |
| new customers in the foreign market?   |        |      |       |
| Fully                                  | 2<br>5 | 6,1  | 6,1   |
| Fairly                                 |        | 15,2 | 21,2  |
| Partially                              | 12     | 36,4 | 57,6  |
| Rarely                                 | 4      | 12,1 | 69,7  |
| None                                   | 10     | 30,3 | 100,0 |

Table 19 summarizes furniture companies' Web site capabilities and its impact within the surveyed companies (Özmen 2003; Polatoglu *et al.* 2001; Yahyagil 2001). Most of the furniture companies who have Web sites (68,9 percent) aim to advertise their prouducts on the Internet. However, they do not have enough knowledge about the other facilities of e-commerce and advertising their products.

Advertisement is one of the main factors to realize the aims of Web sites. About 30 percent of the companies think that their Web sites are well promoted. It is important for a company to register proper key words to the search engines which lead potential customers, to their Web site. Many companies(38 percent) that answered the survey are now registered to the search engines. Moreover, the number of companies who inform their customers through e-mail and online advertisements are significant. These works contribute to the level of visiting Web sites, and as a result contribute to the aims of Web sites.

Updating Web sites is an important factor for the success of e-commerce applications. Some research results show that the companies who update their Web sites are more often visited. Most of the companies who answered the survey, always update their Web sites. It is important for the companies to be able to update some items, such as price, product information, etc. in their Web sites. This makes Web sites dynamic and lessens the costs of Internet Service Provider (ISP) services.

Of all surveyed firms, only four companies (12 percent) are understood to employ additional personnel for e-commerce. All of these companies are large scale companies. This result displays that companies, in regard to employing personnel, are not giving necessary importance to e-commerce. Certainly, financial insufficiencies of these firms seem to be contributing to this result.

E-mail is the most commonly used e-commerce technologies in the furniture companies. Over the 70 percent of companies frequently check their e-mail. Additionally, this contributes to the customer satisfaction. Approximately 1/3 of the companies continuously receive e-mails from their customers.

Most of the companies who answered the survey (62 percent), mentioned about the decrease on some company costs. Mainly promotion and marketing expenses were reduced because of having Web sites. However, the costs of some companies (37,5 percent) have not decreased. Perhaps, they could not plan strategically.

Although there is a high increase on the trade volume of some companies (15,2 percent), some of them (21 percent) have no increase. E-commerce has provided more or less increase on trade volume of 78,8 percent of the companies that answered the survey. Although e-commerce has just started in Turkey, these results show that e-commerce benefits to companies.

About 12 percent of the companies have found new customers from the inner market and 21,2 percent of the companies have found new customers from the foreign markets. This result shows that the foreign customers are more ready to e-commerce or the companies use their Web sites mostly to find foreign customers. Another reason could be that the Turkish furniture companies with competitive prices have more opportunity in international markets than in domestic market.

**TABLE 20. OBSTACLES TO ADAPT E-COMMERCE** 

|   | Frequency | Percent(%) | Cumulative(%) |
|---|-----------|------------|---------------|
| The inconvenience of furniture sector for |           |            |               |
| E-commerce                                |           |            |               |
| Fully                                     | 7         | 18,9       | 18,9          |
| Fairly                                    | 12        | 32,4       | 51,4          |
| Partially                                 | 12        | 32,4       | 83,8          |
| Rarely                                    | 2         | 5,4        | 89,2          |
| None                                      | 4         | 10,8       | 100,0         |
| The doubts about the usefulness of        |           | ,          | ,-            |
| Internet and e-commerce for your firm     |           |            |               |
| Fully                                     | 8         | 21,6       | 21,6          |
| Fairly                                    | 9         | 24,3       | 45,9          |
| Partially                                 | 10        | 27,0       | 73,0          |
| Rarely                                    | 7         | 18,9       | 91,9          |
| None                                      | 3         | 8,1        | 100,0         |
| The high costs of establishment and       |           | -,-        |               |
| maintenance of the business               |           |            |               |
| Fully                                     | 4         | 10,8       | 10,8          |
| Fairly                                    | 2         | 5,4        | 16,2          |
| Partially                                 | 17        | 45,9       | 62,2          |
| Rarely                                    | 7         | 18,9       | 81,1          |
| None                                      | 7         | 18,9       | 100,0         |
| The problems about the security on        |           | 20,5       | 100,0         |
| Internet                                  |           |            |               |
| Fully                                     | 9         | 24,3       | 24,3          |
| Fairly                                    | 9         | 24,3       | 48,6          |
| Partially                                 | 11        | 29,7       | 78,4          |
| Rarely                                    | 4         | 10,8       | 89,2          |
| None                                      | 4         | 10,8       | 100,0         |
| The important investments you have        | •         | 10,0       | 100,0         |
| already done other than the Internet      |           |            |               |
| Fully                                     | 4         | 11,1       | 11,1          |
| Fairly                                    | 3         | 8,3        | 19,4          |
| Partially                                 | 11        | 30,6       | 50,0          |
| Rarely                                    | 7         | 19,4       | 69,4          |
| None                                      | 11        | 30,6       | 100,0         |
| The anxiety of easy accessibility to the  |           | 30,0       | 100,0         |
| data about the firm by competitors (data, |           |            |               |
| price, model etc.)                        |           |            |               |
| Fully                                     | 18        | 54,5       | 54,5          |
| Fairly                                    | 8         | 24,2       | 78,8          |
| Partially                                 | 1         | 3,0        | 81,8          |
| Rarely                                    | 2         | 6,1        | 87,9          |
| None                                      | 4         | 12,1       | 100,0         |
| The effects of the persons who resist to  | •         | 16, 1      | 100,0         |
| technological changes                     | •         |            |               |
| Fully                                     | 1         | 2,8        | 2,8           |
| ı uny                                     |           | ۷,0        | 2,0           |

| Fairly                                    | 4      | 11,1  | 13,9  |
|---|--------|-------|-------|
| Partially                                 | 13     | 36,1  | 50,0  |
| Rarely                                    | 6      | 16,7  | 66,7  |
| None                                      | 12     | 33,3  | 100,0 |
| Extreme slowness of Internet              |        |       |       |
| Fully                                     | 2      | 5,6   | 5,6   |
| Fairly                                    | 3      | 8,3   | 13,9  |
| Partially                                 | 3<br>3 | 8,3   | 22,2  |
| Rarely                                    | 3      | 8,3   | 30,6  |
| None                                      | 25     | 69,4  | 100,0 |
| The condition of customers that are not   |        | ·     | •     |
| being ready to use Internet and e-        |        |       |       |
| commerce                                  |        |       |       |
| Fully                                     | 7      | 18,9  | 18,9  |
| Fairly                                    | 10     | 27,0  | 45,9  |
| Partially                                 | 13     | 35,1  | 81,1  |
| Rarely                                    | 2      | 5,4   | 86,5  |
| None                                      | 5      | 13,5  | 100,0 |
| The absence of staff who will set up, use |        |       | ,     |
| and develop the technology in the firm    |        |       |       |
| Fully                                     | 4      | 10,8  | 10,8  |
| Fairly                                    | 4      | 10,8  | 21,6  |
| Partially                                 | 18     | 48,6  | 70,3  |
| Rarely                                    | 7      | 18,9  | 89,2  |
| None                                      | 4      | 10,8  | 100,0 |
|   |        | - 7 - |       |

Table 20 summarizes obstacles to adapt e-commerce within the surveyed companies (Bakker *et al.* 2000; Özmen 2003; Polatoglu *et al.* 2001; Yahyagil 2001). For companies, one of the reasons of not being on the Web is concerned with the hesitation of easy access to the firms' data (price, model etc.) by competitors (78,8 percent).

More than half of the companies (51 percent) without Web sites argued that furniture sector is not suitable for e-commerce. 46 percent of the companies told that they were suspicious about the benefits of e-commerce to their companies.

Because companies perceive e-commerce as an online purchase tool; they are reluctant using e-commerce. This implies that they do not realize different utilities of e-commerce such as advertisement, permanent online services to customers, increasing company prestige etc.

This study also found that customer readiness (the condition of customers that are not being ready to use Internet) and the lack of skilled personnel and knowledge is other barriers to e-commerce adaption to the Turkish furniture companies.

### **CHAPTER 4**

#### FINDINGS OF THE SURVEY

The survey attempted to obtain insights about the extent to which the Internet and e-commerce have been used by the Turkish furniture companies. By evaluating the answers to the questionnaire which is applied to the Turkish furniture sector, we end up with the following findings:

The Turkish furniture sector generally consists of small firms. More than 60 percent of the companies are new companies which have been operating for less than 10 years. This feature shows that there has been an important development in the furniture sector in recent years.

As a result of their new and dynamic structure, most of the companies use computers and computer applications. Half of the companies in the sector have Internet connection and use it effectively. However, in the human resources management and the production areas the use of computer and its applications are limited due to high investment costs.

The companies generally use Internet in order to search for new markets, to publish Web sites, to advertise the company and the products in the international markets and to communicate with their customers. Furthermore, they occasionally use Internet for the recruitment advertisements and investigating raw materials.

Companies who answered the survey accept that the furniture sector has more potential to enter international markets. Most of them have eagerness to enter international markets. However, the companies are still not fully aware of the advantages of the e-commerce utilization in reaching international markets. The share of the companies who are using or planning to use e-commerce is 34 percent. Although KOSGEB prepared the KOBINET project, which provides technical infrastructure and know-how to the companies about e-commerce utilization, companies do not aware of it. Just 10 percent of the companies have taken support from KOSGEB and KOBINET.

Less than half of the companies (44,6 percent) have Web sites. Most of these companies use Web sites to advertise their products. The furniture companies answered that their less important other aims are to decrease costs and increase customer satisfaction through Web sites. This shows that the companies have focused on marketing more than the other areas. Whereas having permanent customers and decreasing costs through the use of Web sites are great advantages for the companies.

Companies that promoted their Web sites by means of some activities such as registering to search engines and making online advertisements benefited from this effort.

Companies that have Web sites are good at updating them. At least 20 percent of the companies update their Web sites by themselves. This requires to

determine a digital dimensioning process in which digital expertise, digital environment, digital direction, digital strategy, and control are highlighted. This ability of companies increases the efficiency of their Web sites.

With the help of Web sites companies can reduce some of their costs. For example, some of the surveyed companies answered that they could decrease advertisement, marketing and distribution costs. However, more than half of the companies (approximately 55 percent) that have Web sites argued that they could not decrease their costs.

By utilizing Web sites, companies could increase their net income. Some of the companies (15 percent) mentioned that their net income increased after they established Web sites. The percentage of the companies that found new customers with the help of Web sites from inner market is 12 percent and from international markets is 21 percent. This result shows that the Turkish furniture companies with competitive prices have more opportunity in the international markets, because they could reach foreign customers without intermediaries.

It is understood that there are some barriers to the developments of e-commerce. Those barriers are explained below. Companies hesitate easy access to their data (price, model etc.) by competitors. Some of the Turkish furniture companies do not believe in the benefits of e-commerce. Some of the other companies think that their products are not suitable for e-commerce. Most of the costumers do not have necessary infrastructure for using e-commerce.

Another important barrier is that the Turkish furniture companies do not have sufficient number of skilled personnel who have technical hardware and software knowledge about the e-commerce.

From the outcome of the survey, it is found that e-commerce can provide with different and important advantages to the Turkish furniture companies in highly competitive and global market. Firstly, companies can find many customers in the local and international markets. E-commerce with avoids expensive conventional marketing strategies such as participating commercial fairs or giving TV and newspapers commercials. It gives efficiency and effectiveness to the marketing plan of companies. It also enhances the customer satisfaction by providing fast, reliable costumer relations management (CRM) tools like e-mail, chatting, frequently asked questions (FAQ), etc. Having a Web site and using e-commerce strengthens the company and building up the brand image.

#### CONCLUSION

With the recent striking developments in the information and communications technologies, a large number of enterprises can now reach the global markets by using the opportunity of e-commerce. With the help of e-commerce, companies can create their own trade networks. Therefore, e-commerce usage decreases the number of intermediaries required for trade.

Having the rapid improvements in recent years, the Turkish furniture sector is one of the important sectors in Turkey. Because of the inner market limitations and supply excesses, the furniture companies had to expand to the international markets. E-commerce is one of the most effective media and offers new opportunuties to the companies to enter international markets.

In this thesis, we have aimed to analyze electronic commerce utilization in the Turkish furniture sector. As a result of the study and the survey, the following findings have been obtained.

- The Turkish furniture sector generally consists of small firms.
- Most of the companies use computers and computer applications.
- Half of the companies in the furniture sector have Internet connection.
- The companies generally use Internet in order to search for markets and for communicating with customers.
- Nearly half of the companies have Web sites.
- Companies aim to advertise their products through their Web sites.

- With the help of Web sites, some companies reduced some of their costs such as advertisement, marketing and distribution costs.
- Web sites provided companies with finding new more customers from the international markets rather than from the inner market.
- Some companies do not use Web sites due to their anxiety of easy access to their data by competitors, and usefulness of Internet and ecommerce for their company.
- Most companies do not determine a digital dimensioning process in the managerial strategy

These findings imply that there are some duties for the sectoral institutions and the government. Following suggestions may help companies adapt e-commerce.

The basic problem of SMEs in the developing countries is to the lack of sufficient expert knowledge and skilled personnel, which prevents e-commerce application from developing and sustaining. The Turkish furniture companies also face similar problems. There is not enough number of skilled personnel to apply e-commerce. Although the furniture companies use Internet for communicating and searching market, they do not use Internet for registering to the electronic marketplace, receiving electronic documents, having payment operations, and searching for raw materials. Companies may be informed for

the benefits of e-commerce. Perhaps, they may be convinced of initiating e-commerce utilization.

The companies in the furniture sector should be assisted in to developing their e-commerce skills. This can be done by the training facilities of sectoral institutions and chambers such as the Association of the Furniture Industry (MOSDER), the Association of Office Furniture Manufacturer (OMSIAD), etc.

Sectoral institutions and chambers can help furniture companies follow technological innovations and consult to the furniture companies, supply qualified workforce and establish industry information and trading portals on the Web.

Governmental institutions can also help furniture companies provide R&D, training, and consultancy support. Although some of these facilities are hold by KOSGEB, companies are not fully aware of these facilities. This condition shows that there is not enough communication between the furniture companies and the public institutions which support the sector. These institutions should inform the companies about their activities and supports more effectively.

# **APPENDIX A**

### **SURVEY ENGLISH VERSION**

# Part I - General Questions

| General information abou                                 | t the firm                                     |  |  |
|--|--|--|--|
| Name of the Firm:  |  |  |  |
| Activity Area:   |  |  |  |
| Limits of Activity Area:                                 | Regional National International                |  |  |
| Sector of Activity:                                      |  |  |  |
| Number of Employee:                                      | Less than 10 11-25 26-50 51-100 Over 100       |  |  |
| Foundation Year:   | ☐ Less than 5 ☐ 6-10 ☐ 11-15 ☐ 16-25 ☐ Over 25 |  |  |
| General information about the person who filled the form |  |  |  |
| Name and Surname:  |  |  |  |
| Gender:  | ☐ Male ☐ Female                                |  |  |
| Age:   | Less than 20 20–29 30–39 40–49 Over 50         |  |  |
| Department :   |  |  |  |
| Title / Status :   |  |  |  |
| Education Level:   | Primary school Elementary School High School   |  |  |
|  | ☐ University ☐ Master Degree                   |  |  |
| Level of Computer  | ☐ Do not know ☐ Basic ☐ Medium ☐ Good ☐ Very   |  |  |
| Knowledge:   | Good   |  |  |
|  |  |  |  |

# Part II – The Use of Internet and Information Technologies

In what degree computer equipments and applications are used in your firm?

|   | Fully | Fairly | Partially | Rarely | None |
|---|-------|--------|-----------|--------|------|
| 1. Computers                                  |       |        |           |        |      |
| 2. Other Equipments (printer, scanner etc.)   |       |        |           |        |      |
| 3. Internet connection                        |       |        |           |        |      |
| 4. Computer based accounting system           |       |        |           |        |      |
| 5. Computer based marketing applications      |       |        |           |        |      |
| 6. Computer based production applications     |       |        |           |        |      |
| 7. Computer based human resource applications |       |        |           |        |      |

| n wh  | at degree internet applications are used in your firm for t  | he a   | activi        | ties      | belo    | w?       |
|-------|--|--------|---------------|-----------|---------|----------|
|       |  | Fully  | Fairly        | Partially | Rarely  | None     |
| 1. To | investigate and find target domestic and foreign markets   |        |               |           |         |          |
|       | o spread out the name of the firm and to advertise your  |        |               |           |         |          |
|       | ucts in international markets  | Ш      | LU.           | ш         | Ш       |          |
| 3. To | publish Web site, to advertise by online operations  | $\Box$ |               |           |         |          |
| 4. To | sign up (or subscribe) for electronic marketplaces   |        |               |           |         |          |
| 5. To | receive electronic documents and to conduct online payments  |        |               |           |         |          |
| 6. To | contact with customers for marketing purpose   |        |               |           |         |          |
|       | use in receiving the orders  |        |               |           |         |          |
|       | use in selling operations  |        | m             | П         |         |          |
|       | solve the problems of customers and to supply technical  |        |               |           |         |          |
|       | o use in production management operations  | П      | m             | $\Box$    |         |          |
|       | o use in supplying raw materials   | 亓      | Ħ             |           | H       | Ħ        |
|       | o conduct research in determining the quality and the costs  | 干      | H             | Ħ         | Ħ       | Ħ        |
|       | luman resource management (to search for employee needed   |        |               |           |         |          |
|       | e Web, to receive job applications on Web)   | Ш      | Ш             | Ш         | Ш       | ╷╚       |
|       | o use for affairs with other institutions and business partners  | П      |               | П         | П       | $\sqcap$ |
| ۱. Ge | eneral Questions   |        |               |           |         |          |
| 1.    | To what degree your sector is open to international marketplace. Fully Fairly Partially Rarely No.                     |        |               |           |         |          |
| 2.    | To what degree your sector has potential to become open for in Fully  Fairly Partially Rarely                          |        | ation<br>None |           | arketp  | olace    |
| 3.    | Is your firm willing to open itself to international market?  Fully Fairly Partially Rarely                            |        | None          | 2         |         |          |
| 4.    | Which one is the below or which ones are below your target customic Consumer  Retailers and distributors  Both of them | stom   | ers?          |           |         |          |
| 5.    | What is the level of understanding the benefits of e-commerce if firm?   | n ge   | eneral        | term      | ns in y | your     |
|       | Fully Fairly Partially Rarely  |        | None          | )         |         |          |
| 6.    | Does your firm have plan for electronic commerce applications?  ☐ Fully ☐ Fairly ☐ Partially ☐ Rarely                  |        | None          | <u>:</u>  |         |          |

| 7. | Wh   | nat is the source of information about Web sites and electronic commerce in your   |  |  |  |  |  |
|----|--|--|--|--|--|--|--|
|    | (IG  | pecial software and hardware firms which serve E-commerce solutions<br>ndersecretariat of the Prime Ministry For Foreign Trade Export Promotion Center   |  |  |  |  |  |
|    |  | Small and Medium Industry Development Organization (KOSGEB) - KOBINET Undersecretariat of Foreign Trade (DTM) Sectoral Institutions / Chambers Ministry of Industry and Trade  |  |  |  |  |  |
| O  |  | Other  |  |  |  |  |  |
| 8. | que  | es your firm have a Web site? (If the answer is yes, continue for B section of the estions; If the answer is no, continue for C section.)  Yes   No  |  |  |  |  |  |
| В. | Ple  | ase answer the questions below, which are related to your Web site   |  |  |  |  |  |
|    | 1.   | Address of your Web site: http://  |  |  |  |  |  |
|    | 2.   | What is the reason you published a Web site?  To provide the accessibility of our products from anywhere and anytime To become superior from our competitors To reduce the costs (catalog, mail, selling, customer services) To contribute customer satisfaction Other |  |  |  |  |  |
|    | <ul> <li>3. From which sources below have you got support while you have been preparing your Web site?</li> <li>Special software and hardware firms which serve E-commerce solutions</li> <li>Firms which serve E-marketplace and portal services</li> <li>Institutions which buy domain name and prepare your Web site</li> <li>Sectoral Institutions / Chambers</li> </ul> |  |  |  |  |  |  |
|    |  | ☐ Ministry of Industry and Trade ☐ Other   |  |  |  |  |  |
|    | 4.   | In your opinion, is your Web site ready and has your Web site being promoted satisfactorily to your customers?   |  |  |  |  |  |
|    |  | ☐ Fully ☐ Fairly ☐ Partially ☐ Rarely ☐ None   |  |  |  |  |  |
|    | 5.   | What have you done below to promote for your Web site?  Subscription to search engines in internet Online advertisements Media and press ads To send information e-mails to your customers Other   |  |  |  |  |  |
|    | 6.   | Which operations below you can do in your Web site without using technical support?  To add and remove products, to update your information in the Web site  To add news and activities into the Web site  |  |  |  |  |  |

|     | To observe and manage the orders To observe the list of customers To follow the frequency and statistics of visitors To send electronic catalog to the customers Other  |
|-----|---|
| 7.  | How often do you update your Web site?  Monthly Semi-annually Annually When the new products introduced and when the new campaigns are innounced Other  |
| 8.  | oo you employ an extra employee for e-commerce and Web site?  Yes No  |
| 9.  | low often do you check the e-mails related to your Web site?  Always Daily In a couple of days Weekly Other   |
| 10. | Oo you get e-mails from customers because of your Web site?  Very much Quite Partially A few None   |
| 11. | o you inform your customers about the newness and campaigns by e-mails?  Always Quite Partially Sometimes None  |
| 12. | Which expenses of your firm have decreased because of your Web site?  In marketing expenses  In staff expenses  In sale expenses  In distribution expenses  In promotion expenses  None of the expenses decreased |
| 13. | las your business volume developed because of your Web site?    Fully   |
| 14. | las your Web site contributed to reach you new customers in domestic market?    Fully   Rarely   None   |
| 15. | las your Web site contributed to reach you new customers in foreign market?    Fully   Rarely   None  |

### Part IV- Obstacles to Adopt E-Commerce

What is the percentage of the factors below that affect the absence of your Website? 1. The inconvenience of furniture sector for e-commerce 2. The doubts about the usefulness of internet and e-commerce for your firm 3. The high costs of establishment and maintenance of the business 4. The problems about the security in internet 5. The important investments you have already done other than the П П internet 6. The anxiety of easily accessibility of data(price, model etc.) about П our firm by our competitors 7. The effects of the persons who resist technological changes 8. Extreme slowness of internet 9. The condition of our customers that are not being ready to use internet and e-commerce 10. The absence of staff who will set up, use and develop of this technology in the firm

### **APPENDIX B**

## **SURVEY TURKISH VERSION**

### Bölüm I - Genel Sorular

| İşletme Hakkında Genel B               | ilgiler  |  |  |  |
|--|--|--|--|--|
| İşletmenin adı :                       |  |  |  |  |
| Faaliyet alanı:                        |  |  |  |  |
| Faaliyet alanının sınırları:           | 🗌 Bölgesel 🔲 Ulusal 🔲 Uluslararası                       |  |  |  |
| Faaliyet gösterdiği sektör:            |  |  |  |  |
| Çalışan sayısı:                        | ☐ 10 kişiden az ☐ 11-25 ☐ 26-50 ☐ 51-100 ☐ 100 ve üstü   |  |  |  |
| Kuruluş yılı :                         | ☐ 5 yıldan az ☐ 6-10 ☐ 11-15 ☐ 16-25 ☐ 25 ve üstü        |  |  |  |
| Formu Dolduran Hakkında Genel Bilgiler |  |  |  |  |
| Adı ve soyadı:                         |  |  |  |  |
| Cinsiyet:                              | ☐ Bay ☐ Bayan  |  |  |  |
| Yaş:                                   | ☐ 20 den az ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50 ve üstü         |  |  |  |
| Çalıştığı departman:                   |  |  |  |  |
| Unvanı / Statüsü:                      |  |  |  |  |
| Eğitim durumu:                         | ☐ İlkokul ☐ Ortaokul ☐ Lise ☐ Üniversite ☐ Yüksek Lisans |  |  |  |
| Bilgisayar bilirlik derecesi:          | Bilmiyor Temel Orta İyi Çok iyi                          |  |  |  |

# Bölüm II - İnternet ve Bilgi Teknolojileri Kullanımı

 İşletmenizde bilgisayar ekipman ve uygulamaları ne derece kullanılmaktadır?

 1.Bilgisayarlar
 Image:

| İşletmenizde internet aşağıdaki faaliyetler için ne derece kullan   | ılma            | ktad    | ir?            |       |          |
|---|-----------------|---------|----------------|-------|----------|
|   | Tamamen         | Oldukça | Kısmen         | Biraz | Hiç      |
| 1. İç ve dış hedef pazarları araştırmak ve bulmak   | $\sqcap$        | Ħ       | T              | T     |          |
| 2. Uluslararası pazarlarda işletmenin adını duyurmak, ürünlerinizi tanıtmak   | 一               | T       |                |       |          |
| 3. Web'de site açmak, online tanıtım işlemleri  | T               | 7,      | Ħ              |       | $\sqcap$ |
| 4. Elektronik pazaryerlerine kayıt olmak  | ΠĪ              |         |                |       |          |
| 5. Elektronik belge kabul etme ve elektronik ödeme işlemleri  | $\Box$          |         |                | Ħ     |          |
| 6. Pazarlama amacıyla müşteriler ile iletişim   |                 |         |                |       |          |
| 7. Sipariş kabul işlemlerinde   | П               | n       | Ħ              |       |          |
| 8. Satış işlemlerinde   | Ħ               | П       |                |       |          |
| 9. Müşteri sorunlarını çözmek ve teknik destek  | Ħ               | Ħ       | T              |       | Ħ        |
| 10. Üretim yönetimi işlemlerinde  | Ħ               | Ħ       | Ħ              | 苘     |          |
| 11.Hammadde tedarik işlemlerinde  | Ħ               | m       | 亓              | Ħ     | Ħ        |
| 12. Kalitenin ve maliyetin belirlenmesi için araştırma yapmak için  | Ħ               | H       | 亓              |       | Ħ        |
| 13.İnsan kaynakları yönetimi (ihtiyaç duyulan personelin internet   |                 |         | <u> </u>       |       |          |
| üzerinden aranması, internet üzerinden iş başvurusu kabul etmek)  |                 | Ш       |                |       | Ш        |
| 14. Diğer kurumlar ve iş ortaklarıyla ilişkilerde   | П               | $\Box$  | T              |       |          |
| A. Genel Sorular  9. Sektörünüz ne derece uluslararasına açık?  | e sah<br>z<br>z | [       | ні<br>ні<br>ні | ç     |          |
| <ul><li>13. İşletmenizde web sitesi ve e-ticaretin genel anlamda yar nedir?</li><li></li></ul>  |                 | ini an  | lama<br>] Hi   |       | eyi      |
| 14. İşletmenizin elektronik ticaret uygulama planı var mı?  Evet Oldukça Kısmen Biraz   |                 | Hiç     |                |       |          |
| <ul> <li>15. İşletmenizde web sitesi ve elektronik ticaret hakkındaki t</li> <li>E-ticaret çözümleri sunan özel donanım ve yazılım firi</li> <li>İGEME</li> <li>KOSGEB-KOBİNET</li> </ul> |                 |         | ynağ           | i?    |          |

| ☐ Dış Ticaret Müs<br>☐ Sektör Kuruluşı<br>☐ Sanayi ve Ticar<br>☐ Diğer  | ları/Odalar   |                             |                      |
|---|---|-----------------------------|----------------------|
| 16. İşletmenize ait we<br><i>bölümüne devai</i><br>Evet   | eb sitesi var mı? <i>(Cevabın</i><br><i>m ediniz.)</i><br>Hayır   | ız Evet ise B Ha            | yır ise C            |
| B. Lütfen Aşağıdaki We  | b Siteniz İle İlgili Sorul  | ara Cevap Verin             | ı <u>iz</u>          |
| 16. Web sitenizin adre  | esi : http://   |                             |                      |
| ☐ Ürünlerimize he<br>☐ Rakiplerimize ü<br>☐ Maliyetleri azalı   | ir web sitesi yaptırdınız?<br>er yerden, her zaman ulaş<br>istünlük sağlamak<br>tmak için(katalog, posta, s | satış, müşteri hizm         | •                    |
| ☐ Müşteri memnı<br>☐ Diğer  | uniyetine katkıda bulunma   | k                           |                      |
| ☐ E-ticaret çözüm<br>☐ E-pazaryeri ve   |   | re yazılım firmaları<br>lar | 1                    |
|   | nazır ve potansiyel müşteri<br>] Oldukça 🏻 🔲 Kısmen   | lerinize yeterince          | tanıtıldı mı?<br>Hiç |
| ☐ Arama motorla<br>☐ Online reklamla<br>☐ Medya ve basır  | ar (internet reklamları)  | ngilerini yaptınız?         |                      |
| hangilerini yapabili  Ürün eklemek-ç  Siteye haber ve  Siparişleri görm  Müşteri listesini  Ziyaretçi trafiği | çıkartmak, fiyatları güncell<br>e duyuru girmek<br>nek, yönetmek  | emek                        | emlerden             |

| 22. | Aylık olarak Altı ayda bi Yıllık olarak                        | r                                 |                              |   |               |
|-----|--|-----------------------------------|------------------------------|---|---------------|
| 23. | Web sitesi ve €  | elektronik ticaret<br>Hayır       | ile ilgili ayrıca bi         | r personel çalıştıı                       | nyor musunuz? |
|     | Sürekli 🗌  | it mailleri hangi s<br>  Günlük   | kaç günde bir 🏻 [            | 🗍 Haftalık 🔲 🛭                            | Diğer         |
| 25. | ☐ Çok  | Oldukça                           | Kismen                       | Biraz                                     | ☐ Hiç         |
| 26. | Yenilikler ve ka<br>bilgilendiriyorm                           | ımpanyalar hakkı<br>ıusunuz?      | nda müşterilerin             | izi e-mail aracılığ                       | ı ile         |
|     | Sürekli  | ☐ Oldukça                         | Kısmen                       | Biraz                                     | Hiç           |
| 27. | Pazarlama g Personel gid Satış giderle Dağıtım gid Tanıtım gid | derlerinde<br>erinde<br>erlerinde | n hangi giderlerii           | nde azalma oldu                           | ?             |
| 28. | Web sitenizden   | dolayı ticaret ha                 | cminizde büyüm               | ne ger <mark>çekleşti m</mark> i<br>Biraz | ?<br>Hiç      |
| 29. | Web siteniz iç ţ<br>☐ Çok                                      | oazarda yeni müş<br>Oldukça       | șterilere ulașmar<br>Kısmen  | nıza katkı sağladı<br>Biraz               | mı?<br>□ Hiç  |
| 30. | Web siteniz yur  | rt dışı pazarlara a<br>Oldukça    | ıçılmanıza katkı s<br>Kısmen | sağladı mı?<br>Biraz                      | ☐ Hiç         |

# C. İşletmenizin web sitesi olmamasında aşağıdakilerin etkenlerin rolü ne orandadır?

|   | Tamamen | Oldukça | Kısmen | Biraz | Hiç |
|---|---------|---------|--------|-------|-----|
| 1. Mobilya sektörünün elektronik ticaret için uygun olmaması                                  |         |         |        |       |     |
| 2. İnternet ve elektronik ticaretin işletmemize fayda sağlayacağı konusudaki şüpheler         |         |         |        |       |     |
| 3. Kurulum ve devam ettirme maliyetlerinin çok yüksek olması                                  |         |         |        |       |     |
| 4. İnternetteki güvenlikle ilgili problemler  |         |         |        |       |     |
| 5. İnternet harici alanlarda zaten yapmış olduğumuz önemli yatırımlar olması                  |         |         |        |       |     |
| 6. Rakiplerimizin firmamızla ilgili bilgilere kolayca ulaşabimesi endişesi (fiyat, model vb.) |         |         |        |       |     |
| 7. Firmada teknolojik değişime direnen kişilerin etkisi                                       |         |         |        |       |     |
| 8. İnternetin çok yavaş olması  |         |         |        |       |     |
| 9. Müşterilerimizin web sitesi ve e-ticaret kullanımına hazır olmaması                        |         |         |        |       |     |
| 10. Firmada bu teknolojiyi kuracak, geliştirecek ve kullancak eleman olmaması                 |         |         |        |       |     |

#### **BIBLIOGRAPHY**

ABD Mobilya Sektörü Raporu, (US Furniture Sector Report), (2002), New York: New York Ticaret Ataşeliği.

Adım Adım E-ticaret (Step by Step E-commerce).

http://www.kobiline.com/eticaret/index.asp (13 January 2004).

Aktrin Furniture Information Center.

http://www.furniture-info.com/001-homepage.htm (26 June 2004).

Business-to-Business Electronic Commerce: Status, Economic Impact And Policy Implications (1999),

http://www.oecd.org (05 April 2004).

Definition of E-commerce, OECD Policy Briefs No.1 (1997).

http://www.oecd.org/publications/Pol\_biref/970\_pol.htm (14 January 2004).

E-Commerce And Development Report 2003 (2003), New York: United Nations Publication pp.17-19.

http://www.unctad.org/ecommerce (22 May 2004).

European Furniture Sector

http://europa.eu.int/comm/enterprise/furniture/ind\_policy.htm (05 May 2004).

E-Ticaret Nedir (What is E-commerce),

http://www.e-ticaretmerkezi.net/nedir.php (07 April 2004)

Elektronik Ticaretin Tanımı Ve Temel Araçları (Definition of E-commerce and Its Instruments).

http://www.e-ticaret.gov.tr/tanim.htm (04 April 2004).

Furniture,

http://europa.eu.int/comm/enterprise/furniture (08 May 2004).

FIRA 2020 Vision a Research and Innovation "Action Plan" for the UK Furniture Industry <a href="http://www.fira.org.uk">http://www.fira.org.uk</a> (22 April 2004).

Furniture Definition,

http://www.free-definition.com/furniture.htm (5 June 2004).

Furniture Industry Sector Report (2001), New York: U.S. Department of Commerce International Trade Administration Publications.

Guides For The Household Furniture Industry (1973),

http://www.ftc.gov/bcp/guides/furniture-gd.htm (22 May 2004).

Mobilya Sektörünün Değerlendirilmesi (Evaluating of the Furniture Sector), Sanayide Yeni Ufuk Dergisi, Eskişehir: Eskişehir Sanayi Odası Yayını, 21: 14-16.

Overview of e-Commerce Framework, Companion E-commerce, (CD-ROM), New York: McGraw Hill.

The Furniture Industry,

http://www.ueanet.com/outlook.htm (11 June 2004).

UNICE Benchmarking Report (2001), Yenilenen Ekonomi (Renewed Economy), Istanbul: MESS Publication, 30.

UNCITRAL Model Law on Electronic Commerce with Guide to Enactment, (1997).

http://www.un.org.at/uncitral/texts/electcom/ml-ec.htm (21 Feb 2004).

Acar, Z. Kazan, H.(2003), İşletmelerde Bilgi Teknolojileri Kullanımının Örgütsel Yapılar Üzerine Etkileri

Arıkan, A., S., (1999), Dünyada ve Türkiyede Elektronik Ticaret Çalışmalarına Hukuki Bir Yaklaşım (A Legal Approach to E-commerce Activities in the World and in Turkey), Ankara:Adalet Bakanlığı Avrupa Topluluğu Koordinasyon Dairesi

Bakker, Cathy (2000), Information and Communications Technologies and Electronic Commerce in Canadian Industry, Ottawa: Statistics Canada.

Baykan, İ., Burdurlu, E., Er, A., Şenay, A. (1997). "Preface" in National Furniture Congress, Ankara: Hacettepe University Press.

http://www.aem.hacettepe.edu.tr/mob-kong (12 June 2004).

Bozkurt, V. (2000), Elektronik Ticaret (Electronic Commerce), Istanbul:Alfa Publications. Brynjolfsson, E. and Kahin, B.,(1999), Understanding the Digital Economy, Cambridge: MIT Press.

http://ecommerce.mit.edu/papers/ude (11 March 2004).

Burnett, R. (2000) "Legal Aspects of E-commerce", Computing & Control Engineering Journal. Canpolat, Ö. (2001), E-Ticaret ve Türkiye'deki Gelişmeler (E-Commerce and Development in Turkey), Ankara: T.C. Ministry of Industry and Trade Publications, 5.

Chen L., Tan J., (2004), "Technology Adaptation in E-commerce: Key Determinants of Virtual Stores Acceptance", European Management Journal, 22 (1): 74–86.

Civan, M. and Bal, V. (2004), "E-Ticaret ve Kobilerin Geleceği" (E-commerce and Future of SME).

http://www.bilgiyonetimi.org (24June2004).

Deitel, H., M., Deitel, P., J., Steinbuhler, K. (2001), "E-commerce Models" in E-Business and E-Commerce for Managers, New Jersey: Prentice Hall, pp.29-30.

Eric Teicholz and Otto Buchholz (2000), E-commerce & Furniture: A New Paradigm.

http://www.efurn.com (11 January 2004)

Kaplinsky, Memedovic, Morris, Readman (2003), The Global Wood Furniture Value Chain: What Prospects for Upgrading By Developing Countries, Vienna: United Nations Industrial Development Organization Publications.

Kaya, H. G. (2002), Türk Tarım Sektöründe E-Ticaret Fırsatları Ve Potansiyel Sorunlar (E-commerce Opportunities in Turkish Agriculture Sector and Potential Problems), Ankara: T.C. Tarım ve Köyişleri Bakanlığı Yayınları, 4.

Kayacıklı, T. and Emil, T. (2003), Dünyada ve Türkiyede Mobilya Sektörü (Furniture Sector in the World and in Turkey), Istanbul: ITO Publication, 7.

Korkmaz, N. (2002), Sorularla Internet ve E-ticaret Rehberi (Internet and E-commerce Guide with Questions), Istanbul: ITO Publications 52-53.

Kula, V. and Tatoğlu, E. (2001). "Kobi'lerde İnternet Kullanımı: Tutum ve Beklentiler Üzerine Bir Değerlendirme" (ed.), I. Orta Anadolu Kongresi:Kobilerin Finansman ve Pazarmala Sorunları, Nevşehir: KOSGEB Press, pp. 253-263.

Meyer A., Taylor P. (2000), "E-commerce an Introduction", Computing & Control Engneering Journal: 107.

Özmen, Ş. (2003), İşletmelerin Bilişim Teknolojilerini Ticari Faaliyetlerinde Kullanmasıyla İlgili Saha Araştırması.

http://suleozmen.marmara.edu.tr/kobianketbt (11 May 2004).

Özmen, Ş. (2003), E-ticaret Gelip Geçici Moda Değil.

http://turk.internet.com/haber/yazigoster.php3?yaziid=8491 (08 May 2004).

Polatoglu V.N., Ekin S., (2001), "An Empirical Investigation of the Turkish Consumers' Acceptance of Internet Banking Services", International Journal of Bank Marketing, 19/4:156-165.

Robb D. , Xie B., (2003), "A Survey of Manufacturing Strategy and Technology in the Chinese Furniture Industry" European Management Journal, 21: 484–496.

Seçen, T. (2002), Mobilyacıların Bir Portalı Var.

http://turk.internet.com/haber/yazigoster.php3?yaziid=5248 (08 May 2004).

Simons, T. (2002), E-commerce Impact Study of Domestic Furniture Sector Final Report. http://www.dti.gov.uk/publications (11 June 2004).

Sioshansi, Fereidoon (2000), "E-commerce and the Energy Sector: The Pioneers May Not Get It Right; The Procrastinators Are Likely to Become History", The Electricity Journal, (June 2000): 42-49.

Tanyel F., (2000), "Küçük ve Orta Ölçekli Mobilya Sektörümüz" ( Small and Medium Sized Turkish Furniture Sector).

http://www.kosgeb.gov.tr/yayinlar (22 June 2004).

Yahyagil, M.Y. (2001), KOBİ'lerde Bilgisayar Teknolojileri Uygulamaları (Application of Computer Technology on SMEs), Istanbul: ITO Publication, 20.

Yeniçeri B. (2003), Mobilya Sektör Raporu (Furniture Sector Report), Ankara.

http://www.igeme.gov.tr (24 May 2004).

Yumuşak, İ.G. (2004), "Elektronik Ticaretin Gelişmekte Olan Ülkelere Etkileri Ve Türkiye Üzerine Bir Değerlendirme" (Effects of E-commerce Developing Country and an Evaluation on Turkey).

http://www.bilgiyonetimi.org (5 June 2004).