Chapter 2

E-Commerce & Customer Satisfaction
CHAPTER LAYOUT

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2.1 INTRODUCTION

In 1991 the Internet had less than 3 million users around the world and its application to E-Commerce was non-existent. By 1999, an estimated 250 million users accessed the Internet and approximately one quarter of them made purchases online from electronic commerce sites, worth approximately $110 billion. If the expansion in E-Commerce continues at this rapid pace, as is expected, in four to five years from now, E-Commerce transactions between business (B2B) and between businesses and consumers (B2C) will account for about 5 percent of inter-company transactions and retail sales respectively. Looking forward, the potential for E-Commerce transaction to gain in sizeable share of consumer and business purchases appears to be large, although it is difficult to quantify (Coppel Jonthan, 2000).

The prospect that E-Commerce transactions may gain a sizeable share of overall commerce is only one dimension of why the Internet is generating such interest. The open structure of the Internet and low cost of using it permit the interconnection of new and existing information and communication technologies, and offer businesses and consumers a new and powerful information system as well as a new form of communication. This makes it possible for buyers and sellers to come together in more efficient ways and is creating new marketplace and opportunities for the reorganization of economic processes. It is also changing the way products are customized, distributed and exchanged how business and consumers search, and consumer producers.

In the decades to come, exploiting the full potential of these developments could have profound impacts on individual sectors of the economy as well as for macroeconomic performance and economic policies. At the aggregate level, productivity and economic growth could raise, at least for some time, as a result of more efficient management of supply and distribution, lower transaction costs, low barriers to entry and improved access to information. Moreover, even if the impact of E-Commerce on GDP is small and uncertain it could enhance welfare because, for example, of saved time, greater convenience and access to a wider selection of goods and services more finely tuned to individual needs. Nonetheless, to fully exploit the opportunities much remains to be done to ameliorate user and consumer trust, improve access to the Internet infrastructure and services and to create a stable, predictable regulatory environment. Assessing the potential outcomes and economic impacts
of E-Commerce, the forces underlying its expansion and the possible implications for structural and macroeconomic policy management is the focus of this study. However given, the recent advent of the internet and the fact that only scattered empirical information is available, it needs to be stressed that the policy consequences of E-Commerce can, at this stage, only be speculated about and are, in many respects, distant.

2.2 DEFINITION AND SCOPE OF E-COMMERCE

Digital technology has changed the economy. The primary source of value creation for consumers has shifted from physical goods to services and information. There are several definitions of E-Commerce that are mentioned follow:

In 1998, the World Trade Organization (WTO) argued that “Electronic commerce may be simply defined as the production, advertising, sale and distribution of products via telecommunication”.

The term electronic commerce refers generally to commercial transaction, involving both organizations and individuals that are based upon processing and transmitting of digitized data, including text, sound and visual images and are carried out over open network (Varun, Groves and Teng, 2001).

E-Commerce can be formally defined as follows technology mediated exchanges between parties (individuals or organization) as well as the electronically based intra-or inter-organizational activities that facilitate such exchanges.

E-Commerce basically refers to the buying and selling of products and services electronically. This can be done through a web site, which presents goods and services potentially to anyone around the globe via the internet, or through a site within a larger service with a specific target audience (Xhase, Kate J, 2002).

A typical definition used for E-Commerce is: ‘the buying and selling of products and services by businesses and consumers over the Internet’. The E-Commerce Innovation Centre takes a more pragmatic view, arguing that E-Commerce is much more than selling from a Website. E-Commerce covers any form of business or administrative transaction or information exchange between the company and the outside world, which is executed using any information and communication technology (ICT) (Hon and Hain 2003).

And more definitions for E-Commerce that mention the following:
What Vladimir Zwass in 1996 believed is: "Electronic commerce is the sharing of business information, maintaining business relationships, and conducting business transactions by means of telecommunications networks". Is not very far from what lelassi said in 2005:

"Electronic commerce, or E-Commerce, is more specific than e-business and can be thought of as a subset of it. Electronic commerce deals with the facilitation of transactions and selling of products and services online, i.e. via the Internet or any other telecommunications network." (Tawfik lelassi & Albrecht Enders, 2005).

The internet is the fastest-growing, most user-friendly and most commercially popular technology to date. Anyone with a PC connected to the internet, a browser, and plug-in, can surf the internet and download text, graphics, and even the voice.

In this way customer orders are routed directly to contract manufactures, speeding product delivery and minimizing inventory. The "buy and sell" aspect of internet commerce has attracted more media attention than any other networked activity to date. Many companies provide configurable products on the Internet to satisfy customers’ diversified requirements (Konrad, 2002).

The meaning of electronic commerce has changed over the last 30 years. Originally, electronic commerce meant the facilitation of commercial transactions electronically, using technology such as Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT). These were both introduced in the late 1970s, allowing businesses to send commercial documents like purchase orders or invoices electronically. The growth and acceptance of credit cards, Automated Teller Machines (ATM) and telephone banking in the 1980s were also forms of electronic commerce.

Another form of E-Commerce was the airline reservation system typified by Sabre in the USA and Travicom in the UK. Online shopping was invented in the UK in 1979, by Michael Aldrich [citation needed] and during the 1980s it was used extensively particularly by auto manufacturers such as Ford, Peugeot-Talbot, General Motors and Nissan. From the 1990s, electronic commerce would additionally include enterprise resource planning systems, data mining and data warehousing.
2.3 WHY STUDY E-COMMERCE

Why are there college courses and textbooks on E-Commerce when there are no courses or textbooks on “TV Commerce”, “Radio Commerce”, “Direct Mail Commerce”, “Railroad Commerce”, or “Highway Commerce”, even though these technologies have had profound impacts on commerce in the twentieth century and account for far more than E-Commerce? The reason, as one shall see, is that E-Commerce technology is different and more powerful than any of the other technologies we have seen in the past century.

Prior to the development of E-Commerce, the presses of marketing and selling goods were mass-marketing and sales force-driving processes. Consumers were viewed as passive targets of advertising “campaigns” and branding blitzes intended to influence consumers’ long-term product perceptions and immediate purchasing behavior. Selling was conducted in well-insulated “channels”. Consumers were considered to be trapped by geographical and social boundaries, unable to search widely for the best price and quality. Information about price, costs, and fees could be hidden from the consumer, creating profitable “information asymmetries” for the selling firm. Information asymmetry refers to any disparity in relevant market information among parties in a transaction (Laudon and Traver, 2007).

2.4 WORLD WIDE E-COMMERCE

Recent changes in IT have been followed by significant economic outcome. E-Commerce is an objective consequence of IT enjoying such advantages as globalization of commerce, elimination of time and space limits, reduction of source prices for purchase, increase in purchase rate, easy access to information, significant reduction of transaction costs and reduction of duration of transaction. A common definition of E-Commerce is to provide trade processes through data interchange, transaction of goods and services via computer networks such as the Internet. However, a part of such processes may be carried out electronically.

According to UNCTAD report in 2005, the value of global E-Commerce transactions was close to $6.7 trillion at the end of 2004 and it was estimated that, in the most optimistic state, it would shoot upward to $12.8 trillion by 2006.
E-Commerce growth rate is not the same in different countries. North America is the leader in E-Commerce. According to the Forrester report in 2005, the value of North America’s (number one in the regions) transactions amounted to $3.5 trillion in 2004.

Asia-Pacific, with $1.6 trillion and Western Europe, with $1.5 trillion are respectively second and third in the region. Latin America with $81.8 billion and other regions with $65.6 billion stand at fourth and fifth in the region. The volume of the E-Commerce transactions by regions in 2004 is summarized in table below.

Table 2-1: The volume of E-Commerce Transactions in World Regions (billions of dollars)

<table>
<thead>
<tr>
<th>Region</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>3500</td>
</tr>
<tr>
<td>Asia-Pacific</td>
<td>1600</td>
</tr>
<tr>
<td>Western Europe</td>
<td>1500</td>
</tr>
<tr>
<td>Latin America</td>
<td>81/8</td>
</tr>
<tr>
<td>Other regions</td>
<td>68/8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6750/4</strong></td>
</tr>
</tbody>
</table>

*Source: Secondary Data*

This was an academic definition for E-Commerce, what practitioners believe is: "E-Commerce is often referred to as e-business and it is generally classified into four types: B2B: Business-to-Business; B2C: Business-to-Consumer; C2C: Consumer-to-Consumer; C2B: Consumer-to-Business" (Christian N.Madu and Assumpta A. Madu, 2002).

Most of Business-to-Consumer (B2C) E-Commerce software systems use tree- or wizard-like approaches to guide-customers in configuring a customized product on Internet web pages. However, customers may feel confused while they are selecting components of a product from option lists, since they are usually not familiar with the technical details of these components (Lee et al., 2008).

Therefore web site evaluations (of content, organization, and technology) were posited as affecting the success (involving satisfaction, commitment, and trust) of a multi-dimensional web site.


2.5 KINDS OF E-COMMERCE

2.5.1 Elements of electronic commerce

Some people find it useful to categorize electronic commerce by the types of entities participating in the transactions or business processes. The general electronic commerce categories are business-to-consumer (B2C), business-to-business (B2B), and business processes. The three categories that are most commonly used are:

- Consumer shopping on the Web, often called Business-to-Consumer (or B2C).
- Transactions conducted between businesses on the Web, often called Business-to-Business (or B2B).
- Transactions and business processes in which companies, governments, and other organizations use Internet technologies to support selling and purchasing activities.

To understand these categories better, consider a company that manufactures stereo speakers. The company might sell its finished product to consumers on the Web, which would be B2C electronic commerce. It might also purchase the materials it uses to make the speakers from other companies on the Web, which would be B2B electronic commerce. Businesses often have entire departments devoted to negotiating purchase transactions with their suppliers. These departments are usually named supply management or procurement. Thus, B2B electronic commerce is sometimes called e-procurement.

In addition to buying materials and selling speakers, the company must also undertake many other activities to convert the purchased materials into speakers. These activities might include hiring and managing the people who make the speakers, renting or buying the facilities in which the speakers are made and stored, shipping the speakers, maintaining accounting records, purchasing insurance, developing advertising campaigns, and designing new versions of the speakers. An increasing number of these transactions and business processes can be done on the Web. Manufacturing processes (such as the fabrication of the speakers) can be controlled using Internet technologies within the business. All of these communication, control, and transaction related activities have become an important part of electronic commerce. Some people include these activities in the B2B category; others refer to them as underlying or supporting business processes (Course Thomson, 2007).
Figure 2.1 shows the three main elements of electronic commerce. The figure presents a rough approximation of the relative sizes of these elements. In terms of dollar volume and number of transactions, B2B electronic commerce is much greater than B2C electronic commerce. However, the number of supporting business processes is greater than the number of all B2C and B2B transactions combined.

The large oval in Figure 2.1 represents the business processes that support selling and purchasing activities is the largest element of electronic commerce.

![Figure 2.1: Elements of Electronic Commerce](source: Course, Thomson 2007)

2.5.2 E-Commerce categories

Business-to-Consumer (B2C) E-Commerce focuses on direct businesses between companies and final consumers (Dedhia, 2001; Lawrence, et al., 2000; Riggins and Rhee, 1998; Schneider and Perry, 2000; Ah-Wong, et al., 2001), it has a meaning that, the trading and transactional connection between an organizations website and a user (Dedhia, 2001; Lawrence, et al., 2000; Riggins and Rhee, 1998). Consumers are able to purchase goods and services such as books, computer products, music, at one time that is suitable to the purchaser. One of the key benefits of E-Commerce is convenience i.e. day and night trading, 365 days of the year (Dedhia, 2001; Chen, Ingraham and Jenkins, 2001; Lohse and Spiller,
1998). Despite this benefit of E-Commerce, would-be consumers are still concerned about purchasing over the Internet. Whilst

E-Commerce increases, so too, do trust concerns (Gray and Debreceny, 1998; Cheung and Lee, 2001; Ernst and Young, 1999).

With the advance of Internet technology, e-businesses are striving to reach an unprecedented large population and start to take on new forms. An e-business can be built on top of a wide range of e-business models (Singh, 2002). This paper selects business-to-consumer (B2C) Internet retailers and examines customers’ attitude and patronize behavior towards them. Understanding what motivates customers to adopt and patronize Internet retailers is important because it is the key to Internet retailers’ survival in the intensely competitive market. The competition comes not only from the E-Commerce market, but also from alternative channels such as traditional retailers (Chen et al., 2002). Compared with a traditional retailing environment, enticing customers to an Internet retailing environment is far more challenging. It is because the online environment requires customers to make substantive behavioral changes in adopting and trusting E-Commerce technologies and making informed decisions using technologies (Bhattacherjee, 2000).

According to the Forrester research organization (www.forrester.com), the fast growth of E-Commerce in the developed countries and the value added gained through it, woke up the lagging countries completely and made them revise their marketing and commerce strategies; in order to compete in the world markets, This organization also predicts that E-Commerce in the world will rise from 354 million USD in 2001 to 10 trillion USD in 2005.

2.6 C2C E-COMMERCE

C2C E-Commerce systems and models can be categorized in a number of ways and there is currently no generally agreed taxonomy for the classification. One way would be to classify the models according to their level of "pureness", by analyzing how many outside players other than the buyer and seller, need to be involved in the transactions. Another classification criterion could be location; are the buyer and seller able to meet physically? As we will see later, the level of proximity also has some important implications when tackling both the trust and monetary transaction challenges.
Another categorization can be made by price; whether the price is fixed beforehand or whether there is an active price competition one way or another by auction or reverse auction. There are a number of (more or less) fixed-price models where the price of an item is fixed in advance by the seller. On the other hand, there are also a number of variations on the auction-model where the buyers openly compete over the goods or services for sale. Of course, even with the "fixed-price" models, nobody can prevent any price re-negotiations taking place once the buyer and seller are involved in bilateral communication. In this sense, all C2C commerce models are based on rather flexible pricing.
Table 2-2: Different ways of classifying C2C E-Commerce

<table>
<thead>
<tr>
<th>Classification method</th>
<th>Categories &amp; examples cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity</td>
<td>BUYER AND SELLER FAR APART</td>
</tr>
<tr>
<td></td>
<td>BUYER AND SELLER CAN MEET FACE-TO-FACE</td>
</tr>
<tr>
<td></td>
<td>AN INDIVIDUAL IN FINLAND BUYS AN ITEM IN EBAY</td>
</tr>
<tr>
<td></td>
<td>AN INDIVIDUAL IN FINLAND BUYS AN ITEM IN EBAY</td>
</tr>
<tr>
<td></td>
<td>AN INDIVIDUAL IN FINLAND BUYS AN ITEM IN EBAY</td>
</tr>
<tr>
<td></td>
<td>AN INDIVIDUAL IN FINLAND BUYS AN ITEM IN EBAY</td>
</tr>
<tr>
<td></td>
<td>BIDDING FOR IT AND PAYING WITH A CREDIT CARD (E.G. THROUGH PAYPAL)</td>
</tr>
<tr>
<td></td>
<td>USING SEARCH (E.G. GOOGLE) TO FIND AN ITEM FOR SALE (E.G. IN EBAY)</td>
</tr>
<tr>
<td></td>
<td>TWO MODELS DOMINATE THE CURRENT STATE OF C2C E-COMMERCE; FLEXIBLE-PRICE ONLINE AUCTIONS WITH BUYERS AND SELLERS TYPICALLY GEOGRAPHICALLY FAR APART AND ONLINE CLASSIFIED ADVERTISEMENTS WITH MORE FIXED ASKING PRICES - THE BARGAINING IN THIS MODEL, IF ANY, TAKES PLACE PRIVATELY BETWEEN THE POTENTIAL BUYER(S) AND THE SELLER, UNLIKE IN AN OPEN AUCTION WHERE ALL OFFERS ARE VISIBLE TO EVERYONE. BECAUSE OF THE DOMINATING POSITION THESE TWO MODELS HAVE, THIS ESSAY ALSO PLACES EMPHASIS ON THESE TWO SCENARIOS.</td>
</tr>
</tbody>
</table>

Source: Secondary data

Some of the classifications listed here are also interlinked; for example, for a large-scale system, it is generally a practical impossibility for the buyer and seller to be far apart and yet have no outside players involved - one challenging aspect is the buyer-seller discovery, i.e. the creation of a connection between buyers and sellers.
2.7 THE DIFFERENCE BETWEEN E-COMMERCE AND E-BUSINESS

There is a debate among consultants and academics about the meaning and limitation of both E-Commerce and e-business. Some argue that E-Commerce encompasses the entire world of electronically based organizational activities that support a firm’s market exchanges – including a firm’s entire information system’s infrastructure.

Others argue, on the other hand that e-business encompasses the entire world of internal and external electronically based activities, including E-Commerce (Rayport and Jaworski, 2002).

We think that it is important to make a distinction between E-Commerce and e-business because we believe they refer to different phenomena. For purposes of this study, we will use the term e-business to refer primarily to the digital enablement of transaction and processes within a firm, involving information systems under the control of the firm. For example, a company’s online inventory control mechanisms are a component of e-business, but such internal processes do not directly generate revenue for the firm from outside business or consumer, as E-Commerce by definition, does. It is true; however, that a firm’s e-business infrastructure can also support E-Commerce exchanges (Ravi and Whinston, 2001).

2.8 THE DEVELOPMENT AND GROWTH OF E-COMMERCE

E-Commerce is growing substantially on the internet. Before the end of this decade, millions of companies and individuals will be (i) bidding (ii) buying (iii) selling (iv) brokering (v) advertising and (vi) collaborating on a daily basis, as the internet merges with other branches of the formation highway. The resulting economies of scale will drastically lower the cost of implementing and maintaining a procurement infrastructure. Those who clearly see the opportunity understand the medium and creatively put it to work for them, will definitely succeed in the digital economy of the future.

E-Commerce has been defined by different experts in their own approaches and there is no official definition. The people who are well versed in the field of communication say that it is the transmission of information, products / services or payments through telephone lines, networks or any other medium. From a businessman’s standpoint, E-Commerce has been defined as the use of technology to automate business transactions and work flows. The
service industry experts might say that E-Commerce is a helpful innovation that allows a business to cut costs, enabling it to provide better quality products and a faster delivery time.

In general, people define E-Commerce as the actual buying and selling of goods or services electronically, online. Customers can see the products displayed in an online store, read information about the products, see them on the website and have the option to purchase them online. The products could be anything from pet supplies to automobiles, selling every day from the site. Furthermore, the benefit is that all the principles involved in good practices could be applied here (Murthy C.S.V, 2002).

**2.9 ELECTRONIC DATA INTERCHANGE (EDI)**

Business also has been engaging in a type of electronic commerce, known as electronic data interchange, for many years. Electronic data interchange (EDI) occurs when one business transmits computer-readable that many of the documents they exchanged were related to the shipping of goods e.g. invoices, purchase orders, and bills of lading. These documents included the same set of information for almost every transaction. Businesses also realized that they were spending a good deal of time and money entering this data into their computers, printing paper forms, and then reentering the data on the other side of the transaction. Although the purchase order, invoice, and bill of lading for each transaction contained much of the same information such as item numbers, descriptions, prices, and quantities – each paper form usually had its own unique format for presenting that information. By creating a set of standard formats for transmitting that information electronically, businesses were able to reduce errors, avoid printing and mailing costs, and eliminate the need to reenter the data.

Businesses that engage in EDI with each other are called trading partners. The standard formats used in EDI contain the same information that businesses have always included in their standard paper invoices, purchase orders, and shipping documents. Firms such as General Electric, Sears, and Wal Mart have been pioneers in using EDI to improve their purchasing processes and their relationships with suppliers.

The U.S government, which is one of the largest EDI trading partners in the world, was also instrumental in introducing businesses into EDI. For nine years ending in 2001, the Defense Logistics Agency operated a number of Electronic Commerce Resource Centers
(ECRCs) throughout the country. The ECRCs provided free assistance to many businesses, especially smaller businesses, so they could do EDI with the U.S Defense Department and other Federal agencies. The Georgia Institute of Technology continues to operate one of these centers as the Georgia Tech Electronic Commerce Resource Center, which serves businesses in Alabama, Georgia, and Tennessee.

One serious problem that potential adopters of EDI faced was the high cost of implementation. Until the late 1990s, doing EDI meant buying expensive computer hardware and software and then either establishing direct network connections (using leased telephone lines) to all trading partners or subscribing to a value-added network. A value-added network (VAN) is an independent firm that offers connection and transaction forwarding services to buyers and sellers engaged in EDI. Before the Internet came into existence as we know it today, VANs provided the connections between most trading partners and were responsible for ensuring the security of the data transmitted. The companies that operated VANs have gradually moved EDI traffic to the Internet, but many other companies have developed alternate ways to do EDI types of transactions on the Internet (Course Thomson, 2007).

2.10 FRAMEWORK FOR E-COMMERCE

Successful strategies emerge from a deep understanding of where the market is, and therefore the cash flow will be in both the short term and long term future. The important word in this sentence is ‘Market’. While the market certainly involves the customer, the customer is at the center. A market also includes the buyers and sellers as well as the broader contextual forces that shape the nature of the market place exchange. We argue that there are four critical forces that the E-Commerce manager must know and manage if the online firm is to be successful. These four forces are technology, capital, media, and public policy. We review each of these forces and provide a simple illustration.
1. **Technology Infrastructure**

The technology infrastructure of the internet and websites are both enablers and derivers of change. An infrastructure is defined as “the foundation of a system”. In this case, the technological foundation of the internet and websites enables the running of E-Commerce enterprises. Understanding technology infrastructure is essential to managing a successful online business. Knowing what technology is available (as well as understanding the tradeoffs involved) and being able to make the appropriate choices so that the website can be reflection of the company’s strategy is critical.

2. **Capital Infrastructure**
Where does the money to launch this new business come from? How does the process work, from finding the right managers to building the business plan and seeking funding sources? Finally, how should this venture be valued? Any successful senior E-Commerce manager must understand the capital infrastructure and know how to secure funding for a venture (whether independently or in a global 2000 company) and, subsequently, value that business.

3. Media Infrastructure

Why is the media infrastructure an important issue for all E-Commerce managers, whether they run GE Medical System, USA today.com, or Gameville.com? The answer is that the internet is a mass communication platform just as technology evolution sets the context for technology choices and the capital markets set the context for funding, media convergence providers who run E-Commerce enterprises must learn to manage a staff responsible for design interface, stylistic choices, editorial policies, and most important, content choices associated with this new communication venue. Thus, in addition to all other tasks, the E-Commerce manager is now a publisher of digital content on the web.

4. Public Policy Infrastructure

All decisions related to strategy, technology, capital, and media are influenced by laws and regulations in short, public policy. The Public Policy Infrastructure affects not only the specific businesses but also the direct and indirect competitors. Senior managers must understand the current laws and how the laws may change to hurt or help their business and those around them (Rayport and Jaworski, 2002).

2.11 INFORMATION AND COMMUNICATION TECHNOLOGY INDUSTRY

The ICT industry is one of the world’s largest enterprises and accounts for 22% of developing countries’ exports. ICT companies are comparatively heavy users and beneficiaries of E-Commerce. In the Arab countries, both, the ICT sector and the use of E-Commerce by the sector, is still comparatively low. However, many of the subsidiaries of the ICT companies in the Arab region are also using e-mail and have a website, but comparatively few engage in more complex E-Commerce operations such as offering online catalogues, receiving online orders and handling online payments.
ICT investment from multinationals might make an important contribution to increasing E-Commerce in Arab countries, boost data traffic on the Internet and hence are potentially bringing about cost reductions in telecommunication services. ICT investments in developing Arab countries have also appeared to have positive effects on the local productive sector, which is significantly involved in the production process of the multinationals. However, most ICT multinationals’ investments in developing countries are still heavily concentrated in South and South-East Asian countries; even more so than investments from industries which are more dependent on the availability of natural resources. ICT investment for research and development which offers the best opportunities for transfer of technology is even more heavily concentrated in these regions.

In the Arab region, the local ICT industry must act as a facilitator of the adoption of an E-Commerce culture by the local business community. When the business sector starts adopting new information and communication technologies in its operations, it relies heavily on local or locally available ICT expertise in order to fully realize all the efficiency gains that the Internet makes possible at the level of a single firm as well as at the level of the industry and of the country’s production system as a whole.

2.12 E-COMMERCE IN IRAN

Iran has a population of over 70 million with some 56% of Iranians under the age of 25. This is really a nation of young people though the nation itself is very ancient.

Over 23 million Iranians have access to the Internet and over 45 million own mobile phones. Per Internet penetration and usage, Iran is the first country in the Middle East, in terms of number, as in total there are 57,425,046 users across the region (Alireza Abbasi, 2007).

Today, information and communication technology (ICT) have been the axis of economic, social and cultural development in different countries. E-Commerce is an outcome of ICT revolution in economic fields. The rise of the internet and its commercialization in recent decades has transformed traditional methods of commerce. The development of E-Commerce requires a series of essential activities in technical infrastructure, legal, regulatory and education, private-sector protection, and government support to provide conditions
conducive for economic players, i.e., consumers and business, to make extensive use of E-Commerce.

Internet use in Iran was first promoted by the government to provide an alternative means of scientific and technological advancement during the troubled economic period that followed the Iran-Iraq war. Iran’s domestic internet connections are still based in academics, in the form of the national academic network (IRANET, IPM). Nevertheless, additional outside links have been established by the Iranian Post, Telephone and Telegraph (PTT), which provides services to both commercial agencies and governmental organizations.

In 2005, Iran became the second country in the Middle East to be connected to the Internet. Iran is among the first five countries which have had a growth rate of over 20 percent and the highest level of development in telecommunication.

E-Commerce has a short history in Iran and so much work has to be done to improve the infrastructure of telecommunication. Training human resources and enacting perfect relevant laws and regulations concerning business on line should also be established. Iran must bear in mind that we are witnessing a progressive placement side by side of a virtual and traditional market and E-Commerce which is a fruit borne out of the information technology revolution. It is going to revolutionize the traditional commerce patterns, generate new service modes, cultivate new markets and play a key role in the present global market. Thus, it is necessary to invest heavily in E-Commerce to encourage both public agencies and private sectors, especially small and medium sized enterprises to use E-Commerce to increase their efficiency and capabilities for competition in this virtual world. Alongside with this development, protective, commendable and progressive legal measures to protect consumer rights in E-Commerce transactions are something which must never be ignored.

This protection may include pre contract stage, contract perfection and post contract stage. As a result, consumer protection in E-Commerce can never be overlooked and without the confidence of the e-consumer there seems to be no E-Commerce. The ease of accessing and information circulation through the Internet has pushed both consumers and businesses to E-Commerce. Statistics shown in the table below denotes a steady growth in Internet users.
Table 2-3: Internet Growth and Population Statistics in Iran

<table>
<thead>
<tr>
<th>Year</th>
<th>Users</th>
<th>Population</th>
<th>% Pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>250000</td>
<td>69,442,905</td>
<td>3.8%</td>
</tr>
<tr>
<td>2002</td>
<td>5500000</td>
<td>69,442,905</td>
<td>7.5%</td>
</tr>
<tr>
<td>2005</td>
<td>7500000</td>
<td>69,442,905</td>
<td>10.8%</td>
</tr>
<tr>
<td>2008</td>
<td>23000000</td>
<td>65,875,223</td>
<td>34.9%</td>
</tr>
<tr>
<td>2009</td>
<td>32200000</td>
<td>66,429,284</td>
<td>48.5%</td>
</tr>
<tr>
<td>2010</td>
<td>33200000</td>
<td>76,923,300</td>
<td>43.2%</td>
</tr>
</tbody>
</table>

Source: secondary data

Making a reasonable relation among three spheres of law, E-Commerce and consumers can take place through the formation of a contract. Though explaining this important factor is also necessary. The Islamic Republic of Iran’s Civil Code (IRI CC 1936), as the most perfect legislation, contains the provisions of the formation of contracts and its obligations which does not limit or deny formation of contract via electronic media or the Internet and defines some general rules of formation of a contract. According to article (183) of IRI CC "a contract is made when one or more persons make a mutual agreement with each other or more persons, on a certain thing, and that agreement is accepted by the latter person".

Some of its articles put the conditions and terms of offer and acceptance to the prudence of the contracting parties and allows them to decide. Some authors are of this idea that the normal rules of traditional commerce are equally applicable to E-Commerce contracts (Hart, 2000). While for contracts which are formed through the electronic media, these seem to be no good reason to depart from the usual rules that are applicable to those in the physical world.

Some other authors believe that E-Commerce has raised uncertainties in the formation of a contract without providing conductive solutions for them (Md Abdul Jalil 2004). In Iran, government plays the main role in ecommerce development and has monopoly on ICT infrastructure and procedures. As a result the main step toward E-Commerce must be taken by the government and the main consumer protection activities and conducts also can be done by it (Alireza Abbasi, 2007).
2.12.1 E-Commerce strategy in Iran

The objectives of the ecommerce memorandum ratified by the council of ministers in Iran in 2002 are as follows:

1. To provide main infrastructure and legal and executive set up required for using E-Commerce.
2. To develop training and E-Commerce application penetration;
3. To support the development of non-public sectors, preventing monopoly and creating competition;
4. To remove any discriminatory boundaries in E-Commerce;
5. To expand the use of the internet for E-Commerce purposes in the country;
6. To make essential decisions in relation to the health of its content.

According to this ratified law, the Ministry of Commerce and other Ministries such as Economic Affairs and Finance, Science and Research and Technology, Foreign Affairs, Enterprises and Mines, Communication and Information Technology, Central Bank, High Council of Informatics, and Radio and Television Organization are all subject to specific task and responsibilities.

Theoretical and experimental studies at the international level, which are based on experiences of leading countries in E-Commerce, show that providing infrastructure is a key requirement for E-Commerce development. The task of expansion and maintenance of infrastructure for E-Commerce requires harmonized and coordinated participation of all associated government agencies, as well as the private sector.

2.12.2 Limitation and boundaries of E-Commerce in Iran

It has been many years since E-Commerce has come to Iran. Though the rate of e-shopping is increasing there are still some limitations and problems to be solved. “Trust” is one of the main problems that E-Commerce is facing. Iranian people do not trust suppliers whom they cannot see or talk to, it is difficult for them to pay money online and wait for delivery. Instead going to a shop and getting the goods as soon as they pay the money is satisfying. Other issues which must be considered are as follow:
1. Online payment and fund transfers are not available for most of the people who use debit cards of most of the Iranian banks except for Parsian Bank and Saman Bank.

2. Suppliers/ sellers are not trusted by people as they do not provide satisfactory information about themselves.


4. Low internet connection speed and high prices of connecting to the internet. Although new ISPs (internet service providers) are being introduced every day and broad band connections like ADSL with up to 2 Mb/sec speed are available in recent years, there still are lots of people who have access only to low speed internet connection at high prices which makes the electronic transactions vulnerable.


2.13 SECURITY IN E-COMMERCE

2.13.1 Conceptualizing Security

E-Commerce began with Electronic Data Interchange (EDI) in the early 1980s, when banks and business electronically transferred funds and made payments to one another. With the advent of business-to-consumer E-Commerce and the internet in the 1990s, information security became paramount. Several factors have driven this change: global trading far beyond the scope of EDI, which was confined to U.S enterprises, and online, real-time trading, online, real-time trading means a limited amount of time for consumer and merchant to investigate each other.

The first issue in security is identifying the principals. They are people, processes, machines, and keys that transact (send, receive, access, update, delete) information via database, computers, and network. Security concerns generally involve the following issues.

Confidentiality: knowing who can read data and ensuring that information in the network remains private. This is done via encryption.
Authentication: making sure that message senders or principals are who they say they are.

Integrity: making sure that information is not accidentally or maliciously altered or corrupted in transit.

Access control: Restricting the use of a resource to authorized principals.

Non repudiation: Ensuring that principles cannot deny that they sent the message.

Firewalls: A filter between corporate networks and the internet to secure corporate information and files from intruders, but which allows access to authorized principals (Schneider Gary, 2007).

2.13.2 Dimensions of the E-Commerce Security:

E-Commerce can be simply defined as conducting business over a data network that in some logical way has access to the all-encompassing Internet. The major market researchers have weighed in with revenue projections to push the fervor higher to new extremes. Gartner Group predicted in August 2000 that the year would end with an Internet retail tally in North America up 75% of 1999’s figure of $16.8 billion and 15.7% from 1998. E-Commerce security has six key dimensions:
Dimensions of E-Commerce

Integrity:

It refers to the capability of ensuring the data and information being displayed on a website, or transferred (transmitted or received) over the internet has not been changed by an unauthorized party.

Non-repudiation:

This dimension of the E-Commerce security refers to the ability to create a situation in which none of the E-Commerce participants repudiate or deny their online actions.

Authenticity:

Source: O'brien, James 2003
It is the E-Commerce participant’s ability to identity a person or entity with whom they are dealing on the internet. Someone who claims to be someone they are not is “spoofing” or misrepresenting themselves.

Confidentiality:

Here, the aim is to create the ability to ensure that messages and data are available for authorized parties to view them.

Privacy:

The privacy dimension of E-Commerce refers to the ability to control the use of information a customer provides about himself/herself to an E-Commerce merchant.

There are two concerns related to privacy for E-Commerce merchants:

Establishing an internal policy governing their own use of customer information.

Protecting that information from illegitimate or unauthorized use

Availability:

Ensuring that an ecommerce site continues to function an intended is referred to as availability.

E-Commerce security is designed to protect these six dimensions. When anyone of them is compromised, it is a security issue (Obrien, James A, 2003).

2.14 PAYMENT SYSTEMS FOR E-COMMERCE

Online stores can accept a variety of forms of payment. Credit, debit and charge cards (payment cards) are the most popular forms of payment on the internet. They are ubiquitous, convenient, and easy to use.

A number of companies have faltered in recent years as they attempted to introduce electronic cash to the online world. Electronic cash is especially useful for making micropayments because the cost of processing payment cards for small transaction is greater than the profit on such transactions. Electronic cash shares several benefits with real cash: it is portable, anonymous, and usable for international transactions. Electronic cash can be stored online or offline. A third party, such as a bank, stores online electronic cash, and personal consumer identification. Electronic wallets eliminate the need for consumers to
reenter payment card and shopping information at a site’s electronic checkout counter instead, the electronic wallet automatically fills in form information at sites that recognize the particular wallet software’s technology. One persistent problem with electronic wallets is the lack of an internationally accepted standard.

Stored-value cards, including smart cards and magnetic strip cards, are physical devices that hold information, including cash value, for the cardholder. Magnetic strip cards have limited capacity. Smart cards can store greater amounts of data on a microchip embedded in the card and are intended to replace the collection of plastic cards people now carry, including payment cards, driver’s licenses, and insurance cards.

Banks still process most monetary transactions, and a large part of the dollar volume of those transactions is still done by writing cheques. Increasingly, banks are using internet technologies to process those cheques. Fishing expeditions and identity theft, especially when perpetrated by large criminal organizations, create a significant threat to online financial institutions and their customers. If not controlled, this threat could reduce the general level of confidence that consumers have in online business and hurt the growth of electronic commerce (Schneider Gary, 2007).

2.15 ADVANTAGES AND DISADVANTAGES IN E-COMMERCE

2.15.1 Advantages of E-Commerce:

Some of the key strengths of using the internet for business include the following:

Cost of acquiring, serving and retaining customers: It is relatively cheaper to acquire new customers over the net; thanks to 24/7 operations and its global reach. Through innovative tools of ‘push’ technology, it is also possible to retain customer’s loyalty with minimal investments.

Makes opportunity: Just as E-Commerce increases sales opportunities for the seller, it increases purchasing opportunities for the buyer. Businesses can use E-Commerce in their purchasing processes to identify new suppliers and business partners. Negotiating price and delivery terms are easier in E-Commerce, because the web can provide competitive bid information very efficiently.
An extended enterprises is easy to build: In today’s world every enterprise is part of the ‘connected economy’: as such, you need to extend your enterprise all the way to your suppliers and businesses partners like distributors, retailers and ultimately your end customers. The internet provides an effective (often less expensive) way to extend your enterprise beyond the narrow confines of your own organization. Tools like Enterprise Resource Planning (ERP), Supply Chain Management (SCM) and Customer Relationship Management (CRM), can easily be deployed over the internet, permitting amazing efficiency in time needed to market, customer loyalty, on-time delivery and eventually profitability.

Power to provide the ‘best of both the worlds: It benefits the traditional business side-by-side with the internet tools.

Improved customer service to your clients: It results in higher satisfaction and more sales.

Disintermediation: Using the internet, one can directly approach the-customers and suppliers, cutting down on the number of levels and in the process, cutting down the costs (Awad Elias M, 2007).

2.15.2 Disadvantage of E-Commerce

Some business processes may never lend themselves to electronic commerce, e.g. perishable foods, and high-cost items (such as jewelers, antiques, and the like), may be difficult to inspect from a remote location, regardless of any technologies that might be devised in the future. Most of the disadvantages of electronic commerce today, however, stem from the newness and rapidly developing pace of the underlying technologies. These disadvantages will disappear as E-Commerce matures and becomes more and more available to and gets accepted by the general population. Many products and services require a critical mass of potential buyers who are well – equipped and willing to buy through the internet. Businesses often calculate the return on-investment before committing to any new technology. This has been difficult to do with E-Commerce, since the costs and benefits have been hard to quantify. Costs, which are a function of technology, can change dramatically even during short-lived E-Commerce implementation projects, because the underlying technologies are changing rapidly. Many firms have had trouble in recruiting and retaining employees with technological, design, and business process skills needed to create an effective E-Commerce atmosphere. Another problem facing firms that want to do business on
the internet is the difficulty of integrating existing databases and transactions – processing software designed for traditional commerce into software that enables E-Commerce.

In addition to technology and software, many business face cultural and legal obstacles in conducting E-Commerce. Some consumers are still somewhat fearful of sending their credit card numbers over the internet. Other consumers are simply resistant to change and are uncomfortable viewing merchandise on a computer screen rather than in person. The legal environment in which E-Commerce is conducted is full of unclear and conflicting laws. In many cases, government regulators have not kept up with the trends in technologies (Joesph, S.J, 2008).

2.16 THE FUTURE OF E-COMMERCE

E-Commerce and its underlying technologies are developing so quickly, it is dangerous to guess where they are heading. Nevertheless, some clear trends are apparent. Mobile E-Commerce is a key growth area. Already it is possible to browse the web and buy things with a mobile telephone. How this will pan out and what the removal of the applications will be are not clear now. But businesses and investors are excited about the possibilities and new mobile E-Commerce ventures are popping up every day. More importantly, there are more mobile telephones than PC computers in Europe. So there can be little doubt that in five years time, a European browsing the net is more likely to be doing so via a mobile device than a computer. Indeed, this is already the case in Japan. Clearly, when the consumer is mobile in a Europe without frontiers, there will be some complex regulatory issues in the areas of applicable law, jurisdiction and VAT, that will need resolving.

Ubiquitous Internet and computing is another growth area. This involves devices other than a PC computer connected to the Internet. These devices could be anything from the climate control system of a home which can be controlled from the owner’s mobile telephone, to a rubbish bin that notices when certain food containers are thrown away and reorders from the local supermarket. More elaborately, intelligent agents in a home’s central computer might negotiate with various electrical generation and supply sources to obtain the best electricity deal for the owner.

When household agents negotiate with intelligent agents belonging to an electrical company (or Telecommunications Company or any other service) there are some interesting
liabilities and contractual questions that will need to be resolved. At the same time, many other exciting avenues of e-business are being explored and likely some commonplace technologies of tomorrow have yet to be envisioned today.

In any event, the European Commission is preparing a legal framework for electronic commerce that will ensure consistent laws across the EU, thereby facilitating trade. This should largely be in place in the next few years. Then it will only be a matter of ensuring that legislation keeps up with the technological developments- or at least doesn’t fall too far behind them (Schulze and Baumgartner, 2000).

2.17 THE HISTORY OF THE AUTOMOBILE

The automobile history dates back to the late 18th century. Nicolas Joseph Cugnot, a French engineer is credited with investing the first self-propelled automobile. Cugnot’s vehicle used steam power for locomotion. The vehicle found military application in the French army. Cugnot’s automobile was never commercially sold. In the beginning, automobile industry was dominated by steam – powered vehicles. The vehicles were expensive and difficult to maintain. The incidence of frequent boiler explosions also kept potential purchasers away. Commercial history of automobiles started with the invention of gasoline powered internal combustion engines. The German inventor, Karl Benz constructed his first gasoline powered vehicle in 1885 at Mannheim, Germany. Commercial production of Benz cars started in 1888. Panhar ET Levassor of France was the first company to exclusively build and sell motor cars from 1889.

The early 1900s saw many automobile manufacturing companies coming into existence in a number of European countries and the United States. The first mass produced automobile in the United States was the curved-dash Oldsmobile. It was a three-horsepower machine and sold 5,000 units by 1904. The economics of the US car market was disrupted by the arrival of Henry Ford and his Model T car. The Model T was the world’s first mass produced vehicle – a million units were sold by 1920 – in a space of 10 years.

The history of the automobile actually began about 4,000 years ago when the first wheel was used for transportation in India. Several Italians recorded designs for wind-driven cars. The first was Guido da Vigevano in 1335. It was a windmill-type drive to gears and thus to shells. Vaturio designed a similar car that was also never built. LATER Leonardo da Vinci
designed clockwork-driven tricycle with tiller steering and a differential mechanism between the rear wheels.

In the early 15th century, the Portuguese arrived in China and the interaction of the two cultures led to a variety of new technologies, including the creation of a wheel that turned under its own power. By the 1600s, small steam-powered automobile was created.

In about 1678 a Catholic priest named Father Ferdinand Verbiest is credited to have built a steam powered car for the Chinese Emperor Chien Lung. There is no information about the automobile, only the event. Since James Watt didn’t invent the steam engine until 1705, we can guess that this was possibly a model automobile powered by a mechanism like Hero’s steam engine – a spinning wheel with jets on the periphery.

Although by the mid-15th century the idea of a self-propelled automobile had been put into practice with the development of the experimental car powered by means of springs, clock works, and the wind, Nicolas-Joseph Cugnot of France is considered to have built the first real automobile in 1769. Designed by Cugnot and constructed by M. Brezin, it is also the first automobile to move under its own power for which there is a record. Cugnot’s three-wheeled steam-powered automobile carried four persons and was meant to move artillery pieces. It had a top speed of a little more than 3.2 km/h (2 mph) and had to stop every 20 minutes to build up a fresh head of steam.

Carl Benz and Gottlieb Daimler, both Germans, share the credit of changing the transport habits of the world, for their efforts laid the foundation of the great motor industry as we know them today. First, Carl Benz invented the petrol engine in 1885 and a year later Daimler made a car driven by motor of his own design the rest is history.

Daimler’s engine proved to be a great success mainly because of its less weight that could deliver 1000 rpm and needed only very small and light vehicles to carry them. France too had joined the motoring scenario by 1890 when two Frenchmen Panhard and Leavassor began producing automobiles powered by the Daimler engine, and Daimler himself, possessed by the automobile spirit, went to explode the cylinder gas-the very earlier form of sparking plug. The engines were positioned under the seat in most of the Daimler as well as Benz cars. However, the French, due to Panhard and Leavassor, made a revolutionary contribution, when they mounted the engine in the front of the car under a ‘bonnet’.
Charles Duryea built a car carriage in America with petrol engine in 1892, followed by Elwood Haynes in 1894, thus paving the way for the motor car in that country. For many years after the introduction of automobiles, three kinds of power sources were in common use, steam engines, gasoline or petrol engines, and electrical motors. In 1900, over 2,300 automobiles were registered in New York, Boston, Massachusetts, and Chicago. Of these, 1,170 were steam cars, 800 were electric cars, and only 400 were gasoline cars.

In ten years from the invention of the petrol engine, the motor car had evolved itself into amazing designs and shapes. By 1898, there were 50 automobile manufacturing companies in the United States, a number that rose to 241 by 1908. In that year, Henry Ford revolutionized the manufacture of automobiles with his assembly-line style of production and brought out the Model T, a car that was inexpensive, versatile, and easy of producing and brought out the Model T, a car that was inexpensive, versatile, and easy to maintain. The introducing of the Model T transformed the automobile from a plaything of the rich to an item that even people of modest income could afford; by the late 1920s the car was commonplace in modern industrial nations.

Herbert Austin and William Morris, two different car marketers, introduced mass production methods of assembly in the UK, thus paving the way for a revolution in the automobile industry. Austin Seven was the world’s first practical four-seater ‘baby car’ which brought the pleasures of motoring to many thousands of people who could not buy a larger, more expensive car. Even the ‘bull-nose’ Morris with front mounted engine became the well-loved model and one of the most popular cars in the 1920s. Automobile manufacturers in the 1930s and 1940s refined and improved on the principles of Ford and other pioneers. Cars were generally large, and many were still extremely expensive and luxurious; many of the most collectible cars date from this time. The increased affluence of the United States after World War II led to the development of large, petrol-consuming cars, while most companies in Europe made smaller, more fuel-efficient cars. Since the mid-1970s, the rising cost of fuel has increased the demand for these smaller cars, many of which have been produced in Japan as well as in Europe and the United States. The history of motor cars has surely been a well-traversed one. The automobile, as it progressed, was a product of many hands, of revolutionary concepts, and of simple, almost unnoticed upgrading. In the end, the one who received the most for these challenges and changes was the motorist, whose
interest, money, and enthusiasm have forced the up to-moguls to upgrade, perfect and add to previous achievements in order to stay in the competition.

American automobile manufacturers, however, had failed to crack the Japanese and European stronghold on the Asian market. The market’s close geographical proximity to Japan, the relative unsuitability of American products in Asia (larger car sizes, greater fuel inefficiencies, and higher average retail prices), the need to focus on protecting its share of the North American market from Japanese and European penetration, and rampant protectionism in most Asian countries worked together to weaken the American position. Even in terms of traditional firm competencies, US firms were at a disadvantage. Their strength in consumer driven production, purchase financing, product marketing and product servicing were thwarted by the Asian Markets’ structural characteristics. Production, both in terms of levels and of variety of products, was often state-determined. Financing tools were heavily influenced by host state credit decisions. Dealer networks were strictly controlled, and service networks could not be easily created. Overall, the 1985-1997 Asian market experience for the American automobile manufactures was one of disappointment. Ironically, then, it was the Asian financial crisis that provided the opening in Asia for American auto firms. At first glance, this is surprising because at the height of the crisis, sales fell by over 50% in Thailand, Indonesia, the Philippines, Malaysia and China, and though less dramatic, sales also fell in Korea and Japan. More importantly, however, the crisis put a break on rapid expansion of the automobile sector. Nonetheless, it provided producers with the political bargaining power to push for economic liberalization throughout the region. As we will demonstrate below, American firms were able to use their considerable bargaining expertise in multilateral institutions to press acceleration and a depending of the liberalization process.

2.17.1 The automobile industry in Asia

Although sectoral statistics rarely speak for themselves, the growth potential of the Asian markets for automobiles could hardly have been lost on any of the interested parties, whether they were international automobiles manufacturers, host national governments, or trade unions in the advanced industrial markets. In the 1980s, auto registration skyrocketed and Asia’s share of the global auto production tripled. As the 1990s opened, forecasts for increased sales were bright, and after an initial slump, sales continued to increase even after the financial crisis. As Vaughn Koshkarian, the president of Food China, optimistically stated
at the onset of the 1997 financial crisis, “by 2010 China will have four vehicles per 100 people and a market volume of between 5 and 6 million vehicles, the fourth largest market in the world after North America. Europe and Japan, (additionally) by 2010, after substantial consolidation, this automotive industry will have a highly educated, skilled and industrious workforce. In essence, China will have everything necessary to become a primary, manufacturing nation in Asia”. Robert Buselhofer, a member of the VW’s car management board, underlined this prediction: “in the next five years, the world’s total car market will increase by about two millions cars to about five million cars. Almost two million of them will originate in the Asia-Pacific market, a third in China and two-third in the remaining emerging markets. Within this context, Auto firms recognized first-to –market benefits both in terms of brand awareness and loyalty and in terms of capturing the greatest proportion of market share and establishing a distribution, service and production network. But the Asian market continues to be a difficult one to penetrate: high growth rates, low labor rates and a rapidly growing and consuming middle class came with a high level of state intervention, trade protectionism and a rigid institutional structure. State intervention takes a number of forms, but its most important parameters are two: 1 the host state’s need to support the growth of the localization of content, in order to increase the positive net externalities for increasing automobile production, and 2. The host state’s desire to increase the rationalization of the automobile industry’s components and part suppliers. In both cases, the host state is aiming to increase the local value-added of automobile production and to facilitate corollary industry growth. As AbdulSomad has shown, in the Asian area, no industry has become as politicized as the automobile industry, which is now regarded as vital to their national economic development strategies. What follows is a list of country – specific reviews of automobile industry state intervention practices.

2.17.2 Overall view of Iran’s automobile industry

The first car imported into Iran was a Ford which Mozaffaredin Shah, the King of Qujar, had purchased from Belgium. This car which puffed much smoke was renowned as “smoky chariot”. Following the urbanization process since 1920, the trend of importing cars increased. Most automobiles of the time were brought from the USA and England. The first car manufactured in Iran was called “Paykan”. It was produced by the “Iran National Industrial Corporation” licensed by the British Talbot Company and opened to the market in
1967. Later on, the Iran National Company, on a gradual basis, assumed the manufacture of other vehicles like pick up, minibus and passenger bus. In the same year, two models of American “Rambler” cars locally called “Aria” and “Shahin” were produced by Pars Khodro. However, a year later, in 1968, a model of French Citroen named “Dyane” offered by the SAIPA Company came in to the national market. In 1972, Pars Khodro changed into “Iran General Motoros” and started manufacturing two models of Chevrolet (Opel) 2500 c and 2800 cc as well as three other cars licensed by American General Motors, namely; “Buick”, “Cadillac” and “Chevrolet Nova”. The production of these cars continued until 1982. In the SAIPA Company the production of “Citroen Nova”. The producing of these cars continued until 1981. In the SAIPA Company the production of the ‘Citroen Dyane’ stopped in 1980. However, the manufacture of “Renault” that had already been launched in 1975 went ahead. Later the productions of innovative cars such as “Pride”, “Peugeot 405 and 206”, “Nissan Patrol” and “Mazda 323” started and some have continued till today.

Iran Khodro (or Iran Khodro Industrial Group) is a major Iranian industrial manufacturer; Khodro means “automobile” in Persian the company manufactures cars for the domestic and export markets. Founded in 1962 by two brothers, Ahmad and Mahmud Khayami, Iran Khodro was originally called “Iran national” before the 1979 Islamic Revolution. Iran Khodro produces Iran’s first national car, the Samand, which is based on the Peugeot 405 platform. The firm has a long-term relationship with PSA Peugeot Citroen and assembles a number of Peugeot models under license from the French firm. It also makes trucks and buses under license from Mercedes Benz. For more than 3 decades. Iran Khodro produced the Paykan, (a version, developed over its life, of the Rootes Group’s Hillman Hunter). This car became an iconic figure in Iran and single handedly pulled the Iranian automobile industry from the edges of bankruptcy in the early 1990s. Paykan’s production was discontinued in 2005, almost thirty years after the end of Hillman Hunter production in Britain. A pick-up version is still in production. Iran Khodro is the largest automotive producer in the Middle East, Central Asia and North Africa regions, with an annual production of around 1,000,000 various vehicles including cars, buses, trucks and pickups. This figure also places it as the 20th biggest automotive producer globally.

It was proposed by Manteghi (2005) that ‘under the comprehensive 10-year strategy plan, Iran Khodro has placed its strategies around four fundamental issues based on profit.
Leaders of the market, focusing on development and training of manpower and organization of main strategies of the company have prepared as follows:

- Development of strategic relations with the world leaders of the car market;
- Ability to compete with any new manufacturer in the region:
- Becoming the most suitable base of vehicle industry in the region for developing the investments.

In this regard, long term plans of the product with a view to various sectors of the market have been prepared which include the plan for the development of new products and replacement of the present products. In the field of product technology, the company orientation is toward making products with more variety and from a common platform. In order to provide financial resources needed for investment. A long term fiscal and investment plan taking into consideration the existing limitations has been codified; In addition, cost reduction programs have been included as a basic and vital strategy. Quality strategy is one of the most significant strategies to organize. This strategy is for enhancing the quality of the products up to the standard level, which in turn meets the consumer’s demands. This idea manifests itself within the pivotal strategy of “process enhancement for achieving pure manufacture and production”. Above all, there are marketing and customer – orientation strategies, which focus on gaining more shares in the market and export sector. Iran Khodro’s big family has exceeded mass production and become an automaker by designing and producing the national car, with furthermore plans to become a world – class automaker. With its personnel’s effort and diligence, Iran Khodro continues its leadership in the Iranian industry and achieves high vision of the group.

The Iranian Automotive Industry (IAI) is the second most active industry of the country, the first being its oil and gas industry. Today, Iran is the 12th largest automaker in the world and the largest in the Middle-East, with a total production of 1,295,421 cars, including 35,901 commercial vehicles. In 2011 Iran ranked fifth in car production growth standing next to China, Taiwan, Romania and India.

As of 2007, there were 13 public and privately owned automakers in Iran, of which two - Iran Khodro and Saipa - accounted for 94% of the total domestic production. Iran Khodro, which produced the most prevalent car brand in the country - the Paykan, which has been replaced in 2005 by the Samand, was still the larger with 61% of the market in 2001,
while Saipa contributed 33% of Iranian total production in the same year. The other car manufacturers, such as the Bahman Group, Kerman Motors, Kish Khodro, Morattab, Traktorsazi, Shahab Khodro, Zagross khodro and others together produced only 6%.

Table 2-4: Iranian Automobile Companies

<table>
<thead>
<tr>
<th>No</th>
<th>Company name</th>
<th>Product name</th>
<th>Sales volume 2008 (per)</th>
<th>Sales volume 2008 (no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Iran khodro</td>
<td>Samand, Soren, Sarir, Peugeot 405, Peugeot 206, Peugeot ROA, Logan, Suzuki Grand Vitara</td>
<td>51%</td>
<td>612000</td>
</tr>
<tr>
<td>2</td>
<td>Saipa</td>
<td>Saipa 141, Kin Rio, Citroen Xantia, Citroen C5, Saba, Nissan Maxima, Nissan Xterra, Renault Megane</td>
<td>43%</td>
<td>516000</td>
</tr>
<tr>
<td>3</td>
<td>Bahman Group</td>
<td>Mazda 323, Mazda 3 Volkswagen Gol, Volkswagen Eurovan</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kerman Motors</td>
<td>Sinad</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kish Khodro</td>
<td>Musso, Pazhan, Sasang Yung, Kurando</td>
<td>6%</td>
<td>72000</td>
</tr>
<tr>
<td></td>
<td>Morattab</td>
<td>Renault Bus</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shahab Khodro</td>
<td>Proton Wira, Proton Gen 2, Poroton Impian</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zagross Khodro</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>100%</strong></td>
<td><strong>1200000</strong></td>
</tr>
</tbody>
</table>

*Source: secondary data*

The Iranian manufacturers currently produce six different types of vehicle, including passenger cars, 4WD, trucks, buses, minibuses, and pickup trucks. The sector directly employs about 500,000 people (roughly 2.3% of the workforce), and many more in related
industries. About 75% of local output are passenger cars, with pick-ups the next largest category, accounting for around 15%.

In 2011, it is reported that Iran Khodro accounts for 54 percent and Saipa for 46 percent of the output. Although carmakers are listed on the stock exchange, the government still owns about 40 percent of both companies.

2.18 E-COMMERCE IN THE IRANIAN AUTOMOBILE INDUSTRY

The internet is considered to be an important innovation in the international business environment and acts as a very important tool. It plays a very important role in conducting international business in the twenty-first century. Business models derived from the internet not only act as a key communication channel for customers’ access, but also provides an active method for finding potential customers and maintaining stable relations with current customers. Hence, the companies and consumers cannot ignore these models. On the other hand, the e-business models can be regarded as strengthening tools for the globalization process (Cateora and Graham, 2005). Studying e-business in Iran is so necessary that a plan has been introduced titled as The E-business Development Comprehensive Plan, and all organizations involved are bound to carry out this plan (E–Business Development Comprehensive Plan of Iran, 2009).

The holding companies are one of the most important structures for meeting the objectives associated with moving towards market-oriented economies (Kumar, 1992) and due to their particular characteristics, including synergy in functional, managerial and portfolio aspects (Ansoff and McDonnell, 1990), they can be distinguished from other trade companies.

Only two Iranian reliable automobile manufacturing companies (Iran Khodro and Saipa) have had the highest share of the Iranian automobile market (more than 98 percent of market share of automobile market in Iran), and the backgrounds of these two companies are longer than other companies and they have a holding and chain structure.

In Iran Khodro Co., there are two departments which are responsible for designing the E business models: ‘Organization Strategy’ and ‘Consolidated Planning Administration’ and Product Planning and Strategy and In Saipa, Center for Studies and ‘Strategic Planning’ has the same responsibility.
The year 2004 closes the industrialization period of this sector in Iran, and announces the beginning of a new one: The process of integration to the world market. Therefore, the need for real strong IT bases and utilization of E-Commerce in business to business and consumer to business relationships surfaces and becomes more important for the automotive sector in Iran.

The main objective of the phase of the project is to understand the key sector priorities and the current level of E-Commerce development in the sector. The report will address the extent that E-Commerce can address these sector priorities.

- **Increase industry capacity** – reach the goal of producing one million vehicles per year in 2005, by achieving this balance would be made between supply and demand for the first time in the history of industry in Iran.

- **Qualitative development and competitiveness** – increase the quality of the delivered vehicles and services of the industry to increase-customer satisfaction and loyalty.

- **Improve management and processes** – the concepts of cost reduction, quality control, gains on productivity and competitiveness are newly adopted and prioritized in the sector.

«A second component of the report is to identify the current status of E-Commerce development in Iran within each vertical industry sector. The start point of the analysis is to identify the value chain for the industry sector. The value chain defines the main players within the sector, their function and relationship between them. »

- **No E-Commerce application in use**: The automotive sector is distinguished by the lack of E-Commerce applications for managing electronically any transaction between the 2 tiers of the value chain.

- **Failure of attempts to make use of E-Commerce projects**: Full integrated E-Commerce projects have rarely been approached. They have not working properly for reasons due to the weakness of the country infrastructure: mainly, legal and e-payments problems.

- **The most advanced tiers are**: Centralized purchasing organizations that have previously established or are going to establish systems that connect them to some of
their major suppliers. Dealer companies that have launched or are going to launch systems that connects them to their agents.

- **Weak Business to Consumer E-Commerce:** The promotion and sale of cars through Internet is rarely existent and without any perspective of development in the short or middle term.

  Iran’s automotive sector is one of the major contributors to the Iranian economy; however, the E-Commerce projects in the sector are underdeveloped due to a number of constraints like legal and banking problems.

### 2.18.1 The Impacts of Electronic Commerce on the Car Retail Industry

As there is to date, no known published information on the effects of electronic commerce on car retailing in Australia, discussion at this stage must be limited to a consideration of trends and forecasts in the US. Sales of cars in the US, both new and used, have not escaped the impacts of electronic commerce. By 1998, for example, it was argued that more than 10% of sales of new and used cars were influenced by the Internet. Thus, 2 million purchases of new cars and 4.2 million purchases of used cars were reliant to some extent on electronic commerce (McQuivey et al. 1999). The exact role of electronic commerce and the Internet perhaps need to be clarified however. In retail categories such as software, books and event ticketing, for example, electronic commerce plays an important role in most, if not all, phases of the business transaction.

Thus, information provision, purchase request, financial transaction, and possible delivery of the goods (for software particularly) are all facilitated by the Internet, for example. Typically, this is not the case in the car industry, nor is it predicted to be (McQuivey et al. 1998).

Currently, most car purchasers whose decision making is influenced by the Internet are using it to research vehicle types and features, and to identify and locate vehicles potentially of interest. Thus, some consumers are using service providers such as CarPrices.com and IntelliChoice.com, and the Web sites of various manufacturers, for example, to gather information about various vehicles for comparative purposes. Having made a decision about the make and model of car(s) in which they are interested, typically these consumers then go about transacting the rest of their car purchase in the more
traditional manner. Of the 2.8 million Internet-influenced sales of new cars in 1998, approximately 2 million of these used the Internet for exactly this purpose (McQuivey 1999). Most of the remaining Internet-influenced purchasers used the Internet to locate a dealer stocking the particular type of vehicle they are interested in. Autobytel.com, Autoweb.com and Cars.com are all examples of web sites facilitating the location of potential cars with particular dealers, offering in addition information about the cost of the vehicle and the particular features. The remaining 0.8 million of Internet-influenced new sales resulted from the early stages of the car purchase being informed by the Internet in the manner just described (McQuivey et al. 1999).

At the moment, almost no complete sales were orchestrated over the Internet, nor were additional arrangements such as finance, insurance and additional warranty options generally made over the Internet. Both these areas however, are anticipated to become available by 2000 and to grow substantially by 2003 (McQuivey et al. 1999).

Thus, in America at the moment, comparatively few new car sales are made directly by the car manufacturers to the end consumer. Occupying a far more important role in both the new and used car marketplace are various intermediaries (such as Autobytel.com and AutoConnect.com), who each list many dealers and offer the consumer the ability to search on various parameters, such as car type, price range, geographic location, and so on, in order to locate a smaller cohort of potentially suitable cars within reach of their homes or offices to facilitate further personal enquiry. Consumers have very substantial listings to search through and select from: Autobytel.com, for example, boasts listings of 300,000 vehicles, while other similar sites have inventories of over 0.5 million motor cars. In total, it is estimated that more than 4 million used cars will be listed on these on-line buying services in 1999, some 10% of the used cars that will be purchased this year (McQuivey 1999). These intermediaries offer car dealers a substantial number of referrals each month: the larger and more successful sites may be referring more than 100,000 clients to dealers each month (McQuivey 1999). Thus, in a sense, the Dealers lose some of their independence somewhat, as consumers are empowered to select potential cars for purchase across a number of different dealers. Selection (and hence selling) thus becomes a more information intensive activity than a personal one, at least in its early stages. For the Dealers it represents a change in business behavior, away from the traditional model of individual dealers advertising, having a High St presence, and relying on
the skills of their sales team to close deals with their customers, at least for a subset (a small but growing cohort) of their customers.

It could be argued that the US experience with electronic commerce seems several years in advance of Australia with respect to its acceptance and adoption of on-line retailing, and given reasonable similarities in business trends and culture between the US and Australia, it could provide a useful model for local businesses to consider in order that they can prepare for the future. However, it could also be asserted that there are important differences in the Australian business environment, thus rendering the data and trends from the US unreliable as predictors of trends in Australia. For example, while electronic commerce is reported to be growing exponentially in the US (USIC 1999), Australian small and medium enterprises (SMEs) are reported not to view electronic commerce as core business, and are somewhat hesitant in their approach and uptake of electronic commerce initiatives, despite high levels of Internet connectivity (Poon and Swatman 1997). Thus an important aim of this study was to determine whether for the automobile industry, the US model of a vigorous and rapid uptake of electronic commerce was suggested for the near future in Australia, or whether the relative sluggishness of SMEs generally in Australia with respect to electronic commerce would be mirrored specifically in car dealerships.

2.19 CUSTOMER SATISFACTION

The basis for customer satisfaction or dissatisfaction lies in mankind’s ability to learn from past experiences. Accordingly, consumer preferences are constantly being updated by way of the learning process. Learning theory posits that “… a given response is reinforced either positively or negatively to the extent that it is followed by a reward. Reward, in turn, leads to an evaluation that the purchase was satisfactory… and hence it can exert an effect on brand beliefs and attitudes. The probability of engaging in a similar buying act will be increased if there are positive consequences in the act of purchase and use and vice versa” (Engel, Kollat & Blackwell, 1978, p. 532). A basic tenet of marketing is that customer satisfaction with a product is likely to lead to repeat purchases, acceptance of other products in the product line, and favorable word of mouth.

However, while the idea of post-purchase outcome has been included as a variable in early consumer behavior models (Engel, Kollat & Blackwell, 1978; Howard & Sheth, 1969), the attention until the latter part of the 1970s (Anderson, 1973,. Early attempts to understand
consumer post-purchase response focused on the notion of cognitive dissonance (Festinger, 1962). A number of early studies suggested that CS/D was a more definitive outcome of the post-purchase decision (Engel, Kiollat & Blackwell 1978). In noting that it “would indeed be an understatement” to say that there is no general agreement on how to define satisfaction, Day (1980) asserts that “while everyone knows what satisfaction means, it clearly does not mean the same thing to everyone” (p.593). Early conceptualizations of customer satisfaction view it as a single variable which involves a single evaluative reaction from consumers, which may or may not be related to pre-evaluation concepts. In discussing the conceptualization of customer satisfaction, for example, Hunt (1977b) notes that “…satisfaction is a kind of stepping away from an experience and evaluating it… One could have a pleasurable experience that caused dissatisfaction because even though it was pleasurable, it was not as pleasurable as it was supposed to be. Satisfaction/Dissatisfaction aren’t an emotion; it’s the evaluation of the emotion” (p.39).

Despite extensive research in the years since 1965, researchers have yet to develop a consensual definition of customer satisfaction. Oliver (1997) addresses this definitional issue by paraphrasing the emotive literature, noting that “everyone knows what Satisfaction is until asked to give a definition. Then it seems, nobody knows” (p.13). Based on the perception that satisfaction has been defined, most research focuses on testing models of customer satisfaction (e.g. Mano and Oliver 1993; Oliver 1993; Oliver and DeSarbo 1988, Spreng, MackKenzie, and Olshavsky 1996; Tse and Wilton 1988) while definitional considerations have received little attention. As a result, the literature is replete with different conceptual and operational definitions of customer satisfaction. As Peterson and Wilson (1992) suggest, “Studies of customer satisfaction are perhaps best characterized by their lack of definitional and methodological standardization.

A basic definitional inconsistency is evident by the debate of whether satisfaction is a process or an outcome (Yi 1990). More precisely, customer satisfaction definitions have either emphasized an evaluation process (e.g. Fornell 1992; Hunt 1977; Oliver 1981) or a response to an evaluation process (e.g., Halstead, Hartman, and Schmidt 1994; Howard and Sheth 1969; Oliver 1997, 1981; Tse and Wilton 1988; Westbrook and Reilly 1983). From a general definition perspective, process definitions are problematic in that there is little consistency in the satisfaction process. From an operational perspective, process definitions are plagued by
antecedent constructs included in the conceptual definitions; thus, there is an overlap between the domains of the determinative process constructs and the-customer satisfaction construct.

Most definitions have favored the notion of customer satisfaction as a response to an evaluation process. Specifically, there is an overriding theme of customer satisfaction as a summary concept (i.e. a fulfillment responses (Oliver 1997); affective response (Halstead, Hartman, and Schmidt 1994); overall evaluation (Fornell 1992); psychological state (Howard and Sheth 1969); global evaluative judgment (Westbrook 1987); summary attribute phenomenon (Oliver 1992); or evaluative response (Day 1984). However, there is disagreement concerning the nature of this summary concept. Researchers portray customer satisfaction as either a cognitive response (e.g., Bolton and Drew 1991; Howard and Sheth 1969; Tse and Wilton 1988) or an effective response (e.g. Cadotte, Woodruff,1 and Jenkins 1987; Halstead, Hartman, and Schmidt 1994; Westbrook and Reilly 1983). Furthermore, operational definitions may include behavioral dimensions of satisfaction (e.g. “I would recommend the school to student interested in a business career” (Halstead, Hartman, and Schmidt 1994), although conceptual definitions are void of a behavioral orientation.

A final discrepancy occurs in the terms used as a designation for this concept. Researchers have used discrepant terms to mean satisfaction as determined by the final user; customer satisfaction (e.g., Cronin and Taylor 1992; Oliver 1993; Spreng, MackKenzie, and Olshavsky 1996; Tse and Wilton 1988; Westbrook 1980), customer satisfaction (e.g., Churchill and Suprenant 1982; Fornell 1992; Halstead, Hartman, and Schmidt 1994; Smith, Bolton, and Wagner 1999).Or simply, satisfaction (e.g., Kourilsky and Murray 1981; Mittal, Kumar, and Tsiros 1999; Oliver 1992; Oliver and Swan 1989). These terms are used somewhat interchangeably, with limited, if any, justification for the use of any particular term.

The lack of a consensus definition for satisfaction creates three serious problems for customer satisfaction research: selecting an appropriate definition for a given study; operationalizing the definition; and interpreting and comparing empirical results. These three problems affect the basic structure and outcomes of marketing research and theory testing.

When discussing and testing theory it is critical to explicated the conceptual domain. Part of this process is defining the constructs of interest and explaining why this conceptualization is appropriate. For constructs having a consensus definition, this issue does
not need to be addressed in each and every study. However, if multiple definitions for a construct exist, then researchers must explicitly define and justify the definition selected. Unfortunately, most satisfied researchers do not justify their choice of definition. In some cases, satisfaction is not defined at all. Even if a researcher attempts to define satisfaction, there are no clear guidelines for selecting an appropriate definition for a given context. As a result, the selection of a definition for satisfaction becomes idiosyncratic.

A second problem is the development of valid measures of satisfaction. Defining a construct’s theoretical meaning and conceptual domain are necessary steps to developing appropriate measures and obtaining valid results (Bollen 1998; Churchill 1979; Gerbing and Anderson 1988). If the choice of a customer satisfaction definition, or lack thereof, is not justified, it is unclear whether the measures used are appropriate or valid. As Marsh and Yeung (1999) point out, “the meaning attributed to the items and the underlying nature of the measured… construct are changed by the context within which they appear” (bold added). This problem becomes more serious as the measure becomes more global in nature. Thus, the “chameleon effect” described by Marsh and Yeung (1999) is rampant in satisfactory research. Generally worded, global measures provide no guidance to respondents or other researchers for interpreting the exact meaning of satisfaction. In this situation, respondents will interpret the meaning of “satisfaction” based on the other cues including instructions, other measured constructs, and products being assessed.

Given the lack of a clear definition or definitional framework, developing context specific items becomes difficult and idiosyncratic. For example, Westbrook (1987) defines satisfaction as a “global evaluative judgment about product usage/ consumption” (p.260). This definition provides little guidance for developing context-specific measures. Based on this, definitions provide little guidance for developing context-specific measures. Based on this definition, satisfaction was assessed using an item like the following: how do you feel about the product or product usage? (I feel delighted / terrible). While this item is consistent with the definition, Marsh and Yeung (1999) would argue it is subject to chameleon effects. As they note:

We evaluate support for the chameleon effect that hypothesizes that an open – ended (content – free) item such as those appearing on most esteem seals (e.g., “I feel good about myself, “overall, I have a lot to be proud of”, “overall, I am no good”) takes on the meaning of items with which it appears. For example, if the item “I feel good about myself” appears
on a survey in which all of the other items refer to academic situations, then respondents are more likely to respond to the same item in terms of how they feel about themselves physically.

Similarly, the meaning of the “delighted-terrible” question posed above would change depending on other items and contextual information in the study. Without a consensus definition of satisfaction that can be used to develop context-specific measures, the combination of explicit and implicit (chameleon effect) inconsistencies prevent meaningful conclusions about customer satisfaction.

Perhaps the most serious problem caused by the lack of a consensus definition is the inability to interpret and compare empirical results. Peterson and Wilson (1992) note that differences in results depend on how satisfaction was operationalized. For example, how do expectations influence satisfaction? It is impossible to compare results across studies since differences in the definition and operationalization of satisfaction will influence the role of expectations in the model. Furthermore, expectations may be irrelevant for the particular context in which satisfaction is being determined. A specific concern to managers is that uninterruptible results are essentially results that cannot provide information to make decisions. Thus, a lack of definitional standardization limits the degree to which results can be explained, justified and compared.

Without definitional explication, true satisfactions can be elusive. A brief example may illustrate the relevance of a standardized definition of customer satisfaction. Two automobile purchasers respond to the same seven-point satisfied / dissatisfied scale. Consumer A marks a ‘5’ and Consumer B marks a ‘7’. Most likely, the interpretation is that Consumer B is more satisfied than Consumer A given only this much information. However, it is virtually impossible to interpret what these consumers mean from the number that they have marked. How they define satisfaction is integral to interpreting their response.

In sum, it becomes impossible to create a unified, comparable body of research on customer satisfaction if researchers do not agree on what satisfaction is and cannot base measurement decisions on a consensual definition. Furthermore, it is imperative to define and measure satisfaction according to consumers’ views of the relevant satisfaction situation. For these and other reasons, Yi (1990) concludes. “For the field of customer satisfaction to develop further, a clear definition of customer satisfaction is needed”. The purpose of this
research is to resolve existing inconsistencies by proposing a framework that researchers can use to develop clear and conceptually consistent, context–specific definitions of customer satisfaction, it is impossible to develop generic global definitions. Rather, the definition of satisfaction must be contextually adapted. The proposed framework ensures that the context-specific definition captures the complete domain of satisfaction and is consistent with the conceptual domain of other researchers.

This study will focus on the concept of customer satisfaction. As noted previously, the literature has been lax in distinguishing between customer satisfaction, customer satisfaction, and satisfaction (see Cadotte, Woodruff, and Jenkins (1987) versus Churchill and Surprenant (1982) or Spreng, MacKenzie and Olshavsky (1996) Bolton, and Wagner (1999) for examples). In other cases, neither consumer nor customer is used to qualify the term satisfaction (e.g., Gardial et al. 1994); Mittal, Kumar, and Tsiros 1999). All of these studies, however, tend to be focused on the final user.

2.19.1 Brief history of customer satisfaction measurement

Consumer behavior as a distinct discipline dates only from the mid-1960s. Interest in understanding and tracking specific consumer problems grew dramatically in the late 1970s under the broad label of customer satisfaction / dissatisfaction (CS/D) research. Its growth coincided with a growing interest on the part of government regulators and consumer advocates in making policy formulation more rational and systematic. The earliest comprehensive CS/D studies were, in fact, motivated by the policy planning needs of a public regulatory agency, the Federal Trade Commission (Technical Advisory Research Program 1979), and a private non-profit sector organization, Ralph Nader’s Center for Study of Responsive Law. Most CS/D research from 1975 to 1985 was conducted within product and goods industries. Only after 1980 were initial concepts and models developed to measure-customer satisfaction / dissatisfaction within service industries. Since 1985, two different patterns have emerged. First, there has been a considerable drop in CS/D research from a public policy perspective. At the same time, however, there has been substantial growth in interest in the topic of customer satisfaction research in the private sector. This has been driven primarily by the growth of the service sector of the economy where managers have realized that tracking satisfaction is crucial to success when intangibles such as personal attention and atmospheres are the “product”. A number of private sector satisfaction tracking
services have emerged. Many of these services have made extensive use of earlier methodological development in social policy research.

Most of the early studies were based on survey data. An alternative approach was complaints data, data on the extent to which consumers voluntarily speak up about their dissatisfactions. Such data have the advantage of not requiring field surveys; however, they are typically biased in two important ways. First, some types of problems in some types of industries are more likely to be voiced than others, and some problems are less serious than others, and / or less costly than others. Monopolies, such as some transit systems, are often relatively “immune” to complaining, except from a small elite group. Finally, not all consumers complain. These problems have led researchers in recent years to fall back on the more costly, but more objective, survey research methods. Initial survey research studies on CS/D sought to calibrate the amount and types of dissatisfaction in the marketplace as a basis for policy planning. This body of research was largely descriptive. Wide variation was found across purchase categories. These studies differ widely in the basic measure of dissatisfaction they used. Some focused on more or less objective measures of “problems”, others on subjective feelings of “dissatisfaction”. Some counted any negative experience whatsoever, some only “serious” dissatisfactions, and some only the most recent problem. Also, there was the issue of opportunity for problems. Definitional problems persist today.

2.19.2 Customer satisfaction in automobile industry

Fulfilling customer’s needs and desires are essential for business success. The activities of an automobile manufacturer have to be orientated towards the expectations and satisfaction of customers. Nowadays, needs like functionality, comfort, safety, reliability, as well as a high level of quality, are taken for granted. Design, material quality and their perception, are reflected for example in visual, haptic, smell. As well as acoustics senses are important factors in relating to a vehicle and therein its enjoyment. Besides correct material selection, surface treatment, for example, for decorative or functional reasons, has become increasingly important. Selected examples demonstrate current and future surface treatment methods in automotive engineering. Development related applications together with their advantages and disadvantages are discussed.

Modern automobiles have to consider different customer-criteria that are important to choose a new car. First of all, a car must have an attractive design, for the customer to notice
it and to desire it. The customer wants to experience driving pleasure, which is, for example, dependent on acceleration (torque and output) as well as the handling of the vehicle. Safety (active and passive) also plays an increasing role when purchasing a vehicle. Additionally, a vehicle should have an aura of comfort as far as acoustics, smell and appearance are concerned. When new car models are released, customers always look for innovations and new functionality. However, all of these points have to remain within the customer’s financial possibilities, i.e. financial aspects dictate the customer’s behavior, especially in times of a weak economy. This means that the price of the vehicle, as well as fuel consumption and servicing costs will be of great interest to the customer. A car manufacturer’s image is also heavily influenced by environmental aspects, which is why such efforts have been made to lower emissions (e.g. via direct-injection petrol and diesel engines). Lastly, the customer wants to enjoy his vehicle for as long as possible, which means that longevity is expected of the components and modules, as well as for a good resale value. Simply stated, the causal order of the relationship between service quality and customer satisfaction has been a matter of considerable debate within the marketing literature. Three major positions have been advanced. First, service quality has been identified as an antecedent to satisfaction. Which this causal ordering, satisfaction is described as a “post-consumption evaluation of perceived quality. Rust and Oliver (1994) offer support for this position in their suggestion that quality is “one of the service dimensions factored into the consumer’s satisfaction judgment” as do Parasuraman and Parasuraman who specifically suggest that service quality is an antecedent of customer satisfaction. However, some researchers argue that satisfaction is antecedent to service quality. Bitner (1990), borrowing from Olivers (1980) conceptualization of the relationship between satisfaction, service encounter satisfaction is an antecedent of service quality. Bolton and Bolton, using an algebraic representation of service quality, also provide support for this causal ordering. Finally, Bitner and Hubbert (1994) advocate the satisfaction service quality causal order, based on the premise that service quality is akin to a global attitude and therefore encompasses the more transient satisfaction assessment. There are few industries as large, diverse and influential as the automotive industry. Arguably, the largest single manufacturing sector worldwide, the management practices, organizational forms, and particularly the response to environmental pressures adopted by this industry are important not only in their own right, but also in terms of influencing many other business sectors. The
products of this industry touch our daily lives not only by providing personal mobility for millions, but also by bringing in a wide array of challenges. The deterioration of local air quality in urban areas, along with global issues such as global warming, and the treatment of scrapped vehicles are just a few examples of such challenges. As our introductory paper to this special issue argues (Orsato and Wells), the resolution of environmental issues has to proceed alongside the many economic challenges currently facing the automotive industry; notably over-capacity; saturated and fragmenting markets; capital intensity; and persistent problems with achieving adequate profitability.

In a hierarchically structured market, marketing activities of a product may affect not only the performances of competitive products in the same product category but also that of products in other competing categories. In the automobile industry, advertising for mid-size cars may affect not only the sales of other mid-size cars but also that of full-size cars and compact cars. Market structuring studies typically have focused on identifying the hierarchical structure in the market by grouping most similar or substitutable products into the same subcategories. The automobiles classified in the same category are likely to show more intensive competitive reaction to marketing activities of a product in the category compared to those classified in other subcategories. Analysis of the competitive market structure gives significant insights into positioning of new products and development of competitive marketing strategies. It helps automobile manufactures reduce negative effects of cannibalization. In addition, it can help marketers save marketing budget by helping them allocate the budget more efficiently.

Many researchers incorporated competitive elements in their marketing decision models. Roberts and Samuelson (1988) reported an empirical study on dynamic nonprime competition in an oligopoly market. Erickson (1995) used a dynamic model of oligopolistic advertising decision with salvage values attached to achieve sales in each period. However, these advertising competition models do not incorporate the competitive effects in hierarchically structured markets in India. The process of economic reforms started in 1983, which was followed by fierce liberalization in 1991. The Indian market was opened up for foreign firms and Indian organizations were allowed to compete in the overseas markets with local and multinational organizations. In the wake of globalization of trade, commerce and industry and liberalization of economics of the various countries of the world, it has become mandatory for all the players to have a sound technology base, without which accomplishing
operational and strategic goals business environment calls for a separate management function which looks after corporate interests on the technology front.

Competitiveness of an organization can be assessed from various parameters, the most important of them being technological innovations and breakthrough which organizations realizes or has the potential to realize over a period of time. It may be difficult to measure the impact of adopting an innovation or rejecting the same, but over a period of time overall financial and marketing results can definitely help in drawing conclusions regarding technology based decisions. Technological changes and decisions to adapt to changes in the environment can make or break an organization. Examples of the significant impact of commercializing a technology on the overall performance of the organization are numerous, from the invention of the steam engine to intelligent cars. In the changing global scenario, those organizations that integrate technology related decisions into business strategies have considerably improved their chances of reaping benefits from technological innovations. There is always an element of risk associated with adoption of a new technology. This indicates that technological innovations cannot be adopted without prior analysis in context to particular organizations. Technology involves moderate to high investments, and it also has an effective lifetime, after which the same technology may not remain commercially viable and hence, needs either upgrading or total replacement. Under the circumstances, where total replacement is called for, the previous technology which was in use must generate enough revenues so that the investment for the new one may be either totally or partly funded from operations. Branding has been thought of as a solution to problems between a brand name manufacturer and its dealers. Thus, branding can help to overcome obstacles that make it difficult for a company to successfully create and establish a brand name. For instance, branding may reduce the coordination problems associated with centralized corporate management. But are all franchises successful at offering the benefits of a brand name product? The observation at the heart of this question is commonplace companies that are franchised and those that are not often compete and coexist side by side. Although the scene is familiar, it is disconcerting to entrepreneurs and economics alike. To entrepreneurs who may be considering the option of branding the observation suggests that not all franchise contracts are the same. Some types of franchise contracts may work better than others at establishing and maintaining a brand name. In a competitive environment, the prices of two competing suppliers could differ if the automobiles produced are differentiated.
As long as the automobile offers consumers an important set of benefits above that of a generic supplier, the price charged by a car is likely to be higher than that charged by independent firms. The amount of the price differential is therefore one measure of the magnitude of the benefits offered by the automobile.

2.20 DEFINITION OF SERVICE QUALITY

There are many researchers who have defined service quality in different ways. For instance, Bitner, Booms and Mohr (1994, p.97) define service quality as ‘the consumer’s overall impression of the relative inferiority / superiority of the organization and its services’. While other researchers Cronin and Taylor (1994) view service quality as a form of attitude representing a long run overall evaluation, Parasuraman, Zeithaml and Berry (1985, p.48) defined service quality as ‘a function of the differences between expectation and performance along the quality dimensions’. This has appeared to be consistent with Roest and Pieters’ (1997) definition that service quality is a relativistic and cognitive discrepancy between experience – based norms and performances concerning service benefits.

2.20.1 Defining Service Quality Measurement

Customer satisfaction research literature traditionally agrees that service quality is a measure of how well the service level delivered, matches customer expectations. Delivering quality service means conforming to customer expectations on a consistent basis (Lewis and Booms 1983). However, clearly, the fact that expectations are confirmed is not always sufficient for satisfaction. Generally, a set of discrepancies or gaps exists regarding organizational perceptions of service quality and the tasks associated with service delivery to consumers. These gaps can be major hurdles to attempting to deliver a service that consumers would perceive as being high quality as the following shows the five gap areas identified:

GAP 1: Consumer expectation - management perception gap

These are discrepancies between executive perceptions and consumer expectations. Transit agency executives may not always understand what features contribute high quality to consumer needs, and what levels of performance on those features are needed to deliver high quality service.

GAP 2: Management perception – service quality specifications
There may be constraints (resources or market conditions) which prevent management from delivering what the consumer expects, or these may be an absence of total management commitment to service quality.

GAP 3: Service quality specifications – service delivery gap

There may be difficulty in standardizing employee performance even when guidelines exist for performing services well and treating consumers correctly.

GAP 4: Service delivery – external communications gap

Media advertising and other communications by an agency can affect consumer expectations. Promising more than can be delivered will raise initial expectations but lower perceptions of quality when the promises are not fulfilled. Also, transit agencies can neglect to inform consumers of special efforts to assure quality that are not visible to consumers, thereby affecting consumer perceptions of the delivered services.

GAP 5: Expected service – perceived service gap

This is how consumers perceive the actual service performance in the context of what they expect. The quality that a consumer perceives in a service is a function of the magnitude and direction of the gap between expected service and perceived service. Service quality, as perceived by a consumer, depends on the size and direction of GAP 5 which, in turn, depends on the nature of the gaps associated with the design, marketing, and delivery of services. That is, the magnitude and direction of each gap will have an impact on service quality.

2.20.2 Identifying determinants of service quality

Exploratory investigation suggests that, within most service industries, consumer use basically similar criteria in evaluating service quality (Parasuraman et al. 1985). These criteria seem to fall into 10 key categories labeled “service quality determinants”. These determinants are listed below. Overlap among the 10 determinants may exist.

Determinants of Service Quality

- RELIABILITY: involves consistency of performance and dependability.
- RESPONSIVENESS: concerns the willingness or readiness of employees to provide service. It also involves timeliness of service.
• COMPETENCE: means possession of the required skills and knowledge to perform the service.

• ACCESS: involves approachability and ease of contact.

• COURTESY: involves politeness, respect, consideration, and friendliness of contact personnel.

• COMMUNICATION: means keeping customers informed in language they can understand and listening to them. It may mean that the company has to adjust its language for different consumers – increasing the level of sophistication with a well-educated customer and speaking simply and plainly with a novice.

• CREDIBILITY: involves trustworthiness, believability, and honesty, it involves having the-customer’s interests at heart.

• SECURITY: is the freedom from danger, risk, or doubt.

• UNDERSTANDING / KNOWING THE-CUSTOMER: involves making the effort to understand the-customer’s needs.

• TANGIBLES: include the physical environment and representations of the service.

Research in other service industries indicate consumers “group” a wide array of attributes of service under one of the 10 dimensions noted when judging service quality. However, this research is preliminary and also suggests that it is advisable to determine, within the industry of study, whether identifiable service quality segments exist – and whether, and in what ways, consumer expectations differ across industry segments. Investigating how transit customers aggregate attributes of service into collapsed quality dimensions is important to understanding how customer satisfaction should be measured within an industry.

Gronroos (2001), has considered the service quality of the service encounter as two different dimensions, one being technical or output quality and the other functional or process quality. These dimensions were assessed according to attitudes and behavior, appearance and personality, service mindedness, accessibility and approachability of customer contact
Czepiel et al. (1985) not only pinpointed the process and outcome quality dimensions but also identified three different dimensions of the service encounter, distinguishing between customer perception, provider characteristics and production realities; they listed elements which were then judged along a continuum. The customer perception included purpose, motivation, result, salience, cost, reversibility, and risk. The production realities related more to elements such as technology, location, content, complexity and duration. These two dimensions can be compared to the customer’s perception of a web site of provider characteristics relates to the expertise, attitude and demographic attribute of the staff.

Parasuraman et al. (1988) subsequently reduced these ten determinants to five, the following first three being the original ones and the other seven original ones categories into (4) and (5).

(1) Tangibles; (2) Reliability; and (3) Responsiveness; (4) Assurance (knowledge and courtesy of employees); and (5) Empathy (caring, individualized attention the firm provides its customers). These five determinants were used in their SERVQUAL measurement instrument. Johnson et al. (1990) carried out similar research using empirical data in ten UK services organizations which resulted in 12 determinants of Parasuraman et al. (1985); (1) Access; (2) Appearance/aesthetics; (3) Availability; (4) Cleanliness/tidiness; (5) Comfort; (6) Communication; (7) Competence; (8) Courtesy; (9) Friendliness; (10) Reliability; (11) Responsiveness; and (12) Security.

**SERVQUAL dimensions**

The Met – Expectation Model of customer satisfaction has been applied in the development of an instrument to measure service quality. Known as SERVQUAL, this instrument was developed and refined by Parasuraman, Berry, and Zeithaml in particular response to the fifth gap – that of expected versus perceived service (Parasuraman, Berry and Zeithaml 1985). SERVQUAL is composed of 22-items describing service quality, along five dimensions, as follows:

- **Tangibles:** This quality dimensions involves the appearance of physical facilities, equipment, materials, and personnel of the organization. This is the only dimensions related specifically to the palpable and readily discernible of service provision.
Reliability: This quality dimension involves the consistent, dependable, and accurate delivery of promised services. The actual provision of service is the element in this case.

Responsiveness: This dimension of service quality encompasses those aspects of personnel that demonstrate a willingness of an organization’s personnel to help customer and provide prompt service. The service – orientation of the staff members is the characteristic.

Assurance: This dimension includes the knowledge, skill, and ability of personnel, as well as the level of courtesy and ability to inspire trust and confidence from customers. This relates to the expected and perceived aptitude and abilities of personnel.

Empathy: This dimension of service quality relates to the level of caring, and individualized attention that personnel provides to customers. The “person-to-person” or “people skills” of staff is the question.

The items are arranged as a pair of structured statements related to specific elements of service quality. The customer is asked to rate each statement is terms of expected levels of service and in perceived levels of actual service. Each statement is rated along a five-point like scale that is anchored by “strongly disagree” to “strongly agree” (Parasuraman, Berry & Zeithaml 1985).

2.20.3 Today's view on Service Quality

The construct of service quality as conceptualized in the service marketing literature centers on perceived quality, defined as consumer’s judgment about an entity’s overall excellence or superiority (Zeithaml 1988). As virtually all organizations compete some degree on a basis of service, service quality become significantly important to achieve a genuine and sustainable competitive advantage. Service – based companies are compelled by their nature to provide excellent service in order to prosper in increasingly competitive domestic and global marketplaces. i.e. there is no “tangible” product to equate otherwise to quality. Customer – driven strategies require satisfying customer preferences.

Customer perceptions and expectations of service quality are increasingly used to forecast company profitability and prospect for improved market share. Although many other “quality – focused” initiatives have often failed to enhance company performance, customer perceived service improvement have been shown empirically to improve profitability. The shifts from an industrial to a customer value paradigm places service at the center of
company efforts improve profitability. Many companies intending to employ a customer servicebased strategy find the processes of identifying and measuring customer preferences very difficult, often owing to mistaken business perception of customer wants (Fornell, 1992). Nonetheless, providing superior service quality requires creating a distinct relationship between customer wants and that which the company provides, or a relationship between customer requirements and essential business elements. Service quality literature recognizes expectations as an instrumental influence in consumer evaluation of serviced quality (Parasuraman et al., 1985). Expectations are understood as the desires or wants of customers, i.e. what the service provider should offer (Parasuraman et al., 1988), and studying companies understood to be leaders in various industries i.e. “bench marketing” or “studying the winners”, has become a vital source in identifying gaps that exit between customer expectations and company performance. Quality is found to be measured most accurately through the eyes of the-customer and it is not found to improve unless it is regularly measured (Reichheld and Sasser, 1990). Customers are therefore never mistaken when they say that (service) quality is bad, because if they perceive it so, it necessarily is so .Companies that actively search for and incorporate the best service methods and process to improve the performance, regardless of sources and ultimately the perception of their customers, are found to excel in relation to their competitors. In practice, companies that exceed customer expectations without impairing profit margins have frequently been found to develop a solid foundation of customer loyalty, based on segmented service (Porter, 1980, 1985).

Determining optimum levels of customer service is understood to depend on accurately assessing customer expectations, so that companies are able to meet highly – valued customer expectations and avoid employing those services that customers do not value, regular customer feedback has been determined essential to such successful customer satisfaction strategies. Successful customer service focused company’s measure their service to ascertain how well they are satisfying their customers Peter and Waterman, (1982), and superior companies have been sown to be consistently excellent listeners to their customers.

**2.21 CUSTOMER SATISFACTION AND SERVICE QUALITY**

Recent research found that service quality and customer satisfaction are inarguably the two core concepts that are at the crux of the marketing theory and practice. Researchers found that in today’s world of intense competition, the key to sustainable competitive
advantage lies in delivering high quality service that will in turn result in a satisfied customer. The prominence of these two concepts is further manifested by the cornucopia of theoretical and empirical studies on the topic that have emanated over the past few years. Parasuraman et al. (1994) found that a basic agreement emanating from the wide range of literature on service quality and customer satisfaction is that service quality and customer satisfaction are conceptually distinct but closely related constructs.

The interest in studying satisfaction and service quality as the antecedents of consumer behavioral intentions in this paper has been stimulated, firstly, by the recognition that customer satisfaction does not, on its own, produce-customer lifetime value (Appiah – Adu 1999). Secondly, satisfaction and quality are closely linked to market share and customer retention (Fornell 1992; Rust and Zahorik 1993; Patternson and Spreng 1997). There are overwhelming arguments that it is more expensive to win new consumers than to keep existing ones (Ennew and Binks 1996; Hormozi and Gikles 2004). This is in line with Athanassopoulos, Gounaris and Stathakopoulos’s (2001) arguments that consumer replacement costs, like advertising, promotion and sales expenses, are high and it takes time for new consumers to become profitable. And lastly, the increase of retention rate implied greater positive word of mouth (Appiah- Adu 1999), decrease price sensitivity and future transaction costs (Reichheld and Sasser 1990) and, finally, leading to better business performance (Fornell 1992; Ennew and Binks 1996; Bolton 1998; Ryals 2003). From the based on literature reviewed so far and Customer satisfaction seems to be the subject of considerable interest by both marketing practitioners and academics since 1970s (Churchill and Surprenant 1982; Jones and Suh 2000). Companies and researchers first tried to measure-customer satisfaction and quality ratings obtained from surveys for performance monitoring compensation as well as resource allocation (Bolton 1998) and began to examine further the determinants of customer satisfaction (Swan and Trawick 1981; Churchill and Surprenant 1982; Bearden and Tell 1983). In the 1990s, however, organizations and researchers have become increasingly concerned about the financial implications of their customer satisfaction (Rust and Zahorik 1993; Bolton 1998).

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From the literature that has been reviewed so far, customer satisfaction seems to be the subject of considerable interest to both marketing practitioners and academics, since the 1970s (Churchill and Surprenant 1982; Jones and Suh 2000). Companies and researchers first tried to measure customer satisfaction in the early 1970s, on the theory that increasing it would help them prosper (Coyles and Gokey 2002). Throughout the 1980s, researchers relied on customer satisfaction and quality ratings obtained from surveys for performance monitoring, compensation as well as resource allocation (Bolton, 1998) and began to examine further the determinants of customer satisfaction (Swan and Trawick 1981; Churchill and Surprenant 1982; Bearden and Teel 1983). In the 1990s, however, organizations and researchers have become increasingly concerned about the financial implications of their customer satisfaction (Rust and Zahorik 1993; Bolton 1998).

2.21.1 The Distinction between Service Quality and Customer Satisfaction

A review of the emerging literature suggests that there appears to be relative consensus among marketing researchers that service quality and customer satisfaction are separate constructs which is unique and share a closer relationship (Cronin and Taylor 1992; Oliver 1993). Most researchers in the services field have maintained these constructs as distinct (Bitner 1990; Carman 1990; Boulding et al. 1993; Spreng and Mackenzie 1996). Table 2-6 identifies a number of key elements that distinguish customer satisfaction from service quality.
Table 2-5: The Distinction between Customer Satisfaction and Service Quality

<table>
<thead>
<tr>
<th>Customer Satisfaction</th>
<th>Service Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer satisfaction can result from any dimension, whether or not it is quality</td>
<td>The dimensions underlying quality judgments are rather specific.</td>
</tr>
<tr>
<td>related.</td>
<td></td>
</tr>
<tr>
<td>Customer satisfaction judgments can be formed by a large number of non-quality issues,</td>
<td>Expectations for quality are based on ideals or perceptions of excellence.</td>
</tr>
<tr>
<td>such as needs, equity, perceptions of fairness.</td>
<td></td>
</tr>
<tr>
<td>Customer satisfaction is believed to have more conceptual antecedents</td>
<td>Service quality has less conceptual antecedents.</td>
</tr>
<tr>
<td>Satisfaction judgments do require experience with the service or provider</td>
<td>Quality perceptions do not require experience with the service or provider</td>
</tr>
</tbody>
</table>

Source: Adapted from various sources (Taylor 1993; Oliver 1993; Rust and Oliver 1994; Spreng and Mackenzie 1996; Choi et al., 2004, Giese and O’ Cote 2005).

While satisfaction and quality are different concepts, a relation between the two has been identified. Incidents of satisfaction, over time, result in perceptions of quality in services. This relationship, however, has not been widely tested empirically. The literature on satisfaction, particularly patient satisfaction, shows that satisfaction ratings are derived from satisfaction with various components of their care, and that consumers are able to make summary judgments regarding their care.