

**T.C.
ISTANBUL AYDIN UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES**



FACTORS INFLUENCING CUSTOMER SATISFACTION LEVEL IN AN E-COMMERCE PLATFORM: A CASE STUDY ANALYSIS OF DIGIKALA IN IRAN

MSc. THESIS

Giti Irantaj

**Department of Business
Business Administration Program**

Thesis Advisor: Assist. Prof. Dr. Farid HUSEYNOV

JANUARY 2018

**T.C.
ISTANBUL AYDIN UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES**



FACTORS INFLUENCING CUSTOMER SATISFACTION LEVEL IN AN E-COMMERCE PLATFORM: A CASE STUDY ANALYSIS OF DIGIKALA IN IRAN

MSc. THESIS

**Giti IRANTAJ
(Y1412.130075)**

**Department of Business
Business Administration Program**

Thesis Advisor: Assist. Prof. Dr. Farid HUSEYNOV

JANUARY 2018



T.C.
İSTANBUL AYDIN ÜNİVERSİTESİ
SOSYAL BİLİMLER ENSTİTÜSÜ MÜDÜRLÜĞÜ

Yüksek Lisans Tez Onay Belgesi

Enstitümüz İşletme İngilizce Anabilim Dalı İşletme Yönetimi İngilizce Tezli Yüksek Lisans Programı Y1412.130075 numaralı öğrencisi Gök İRANTAJ'ın "FACTORS INFLUENCING CUSTOMER SATISFACTION LEVEL IN AN E-COMMERCE PLATFORM: A CASE STUDY ANALYSIS OF DIGİKALA IN IRAN" adlı tez çalışması Enstitümüz Yönetim Kurulunun 08.01.2018 tarih ve 2018/01 sayılı kararıyla oluşturulan jüri tarafından 08/01/2018 ile Tezli Yüksek Lisans tezi olarak Kabul edilmiştir.

Öğretim Üyesi Adı Soyadı

İmzası

Tez Savunma Tarihi :19/01/2018

1)Tez Danışmanı: Yrd. Doç. Dr. Farid HUSEYNOV

2) Jüri Üyesi : Yrd. Doç. Dr. Erdal ŞEN

3) Jüri Üyesi : Doç. Dr. İlkay KARADUMAN

Not: Öğrencinin Tez savunmasında **Başarılı** olması halinde bu form **İmzalanacaktır**. Aksi halde geçersizdir.



*To my beloved parents,
Who are always next to me
No matter what ...*





FOREWORD

This thesis is not only the result of the author's efforts. First and foremost, I would like to express my gratitude to God for His abundant grace that I am able to be what I am today. Then I would like to convey my sincere gratitude to all the Faculty Members of the department of my University for their unique ability to teach me during the whole time that I spent at the Department.

Also I would like to acknowledge my thanks to my supervisor Mr. Farid Huseynov for extending his support, professional contribution and continuing guidance during the entire phase of my research work. Without his invaluable supervision, all my efforts could have been short-sighted and I consider myself blessed to be under his supervision. Finally, I would like to show my heartfelt thanks to my beloved parents who have supported me through my many years of studying and for establishing my foundations abroad.

January 2018

Giti IRANTAJ



TABLE OF CONTENTS

	<u>Pages</u>
FOREWORD	vi
TABLE OF CONTENTS	ix
ABBREVIATIONS	xiii
LIST OF TABLES	xv
LIST OF FIGURES	xvii
ÖZET	xix
ABSTRACT	xxi
1. INTRODUCTION	1
1.1. Background of the Study	1
1.2. Statement of the Problem	4
1.3. Significance of the Study	7
1.4. Purpose of the Study	8
1.5. Research Questions	9
1.6. Thesis Outline	9
2. LITERATURE REVIEW	11
2.1. Introduction	11
2.2. Theoretical Studies	12
2.2.1. Definition of Key Terms and Related Issues	12
2.1.1.1. E-commerce	12
2.1.1.2. Classification of E-commerce	14
2.1.1.3. E-Commerce Information Management	15
2.1.1.4. Unique Attributes of E-commerce	16
2.1.1.5. Customer Satisfaction	18
2.3. Empirical Past Studies.....	20
2.3.1. The Conceptualization of Customer Satisfaction and Prior Studies	20
2.3.2. Prior Literature of E-commerce Customer Satisfaction.....	21
3. CONCEPTUAL FRAMEWORK DEVELOPMENT AND HYPOTHESES FORMULATION	29
3.1. Introduction	29
3.2. Definition of Variables.....	29

3.3. Adapted Research Framework and Stated Hypotheses	30
3.3.1. Website Design.....	31
3.3.2. Information Quality	32
3.3.3. Website Usability	33
3.3.4. Order Fulfillment Quality.....	34
3.3.5. Security and Privacy.....	35
3.3.6. Trust.....	36
3.4. Conceptual Model	37
4. RESEARCH METHODOLOGY	39
4.1. Introduction	39
4.2. Research Design	39
4.3. Population.....	41
4.4. Sample and Sampling Procedure.....	42
4.5. Instrumentation.....	43
4.6. Data Collection	45
4.7. Statistical Techniques	46
5. DATA ANALYSIS	47
5.1. Introduction	47
5.2. Descriptive Statistics	47
5.2.1. Demographic Characteristics of Respondents.....	47
5.2.2. Descriptive Statistics of Variables	50
5.3. Inferential Statistics	51
5.3.1. Normality of Variables.....	51
5.3.2. Reliability and Validity Analysis	52
5.3.3. Confirmatory Factor Analysis (CFA).....	53
5.3.4. Pearson Correlation Coefficient	56
5.3.5. Multiple Regression Assumption Test	57
5.3.6. Results of Multiple Regression Analysis	63
5.4. The Summary of Hypotheses Results.....	66
6. DISCUSSION AND CONCLUSION.....	67
6.1. Discussion of the Findings	67
6.1.1. Website Design as an Independent Variable.....	68
6.1.2. Information Quality as an Independent Variable	69
6.1.3. Website Usability as an Independent Variable.....	70
6.1.4. Order Fulfillment Quality as an Independent Variable.....	71
6.1.5. Security and Privacy as an Independent Variable.....	71
6.1.6. Trust as an Independent Variable	72
6.2. Conclusion.....	73
6.3. Managerial Implications	74

6.4. Suggestions for Future Research.....	76
6.5. Limitations of the Study.....	77
REFERENCES.....	81
APPENDICES.....	94
RESUME.....	117





ABBREVIATIONS

AMOS	: Analysis of a Moment Structures
ANOVA	: Analysis of Variance
B2B	: Business to Business
B2G	: Business to Government
B2C	: Business to Consumer
C2B	: Consumer to Business
C2C	: Consumer to Consumer
C2G	: Consumer to Government
CEO	: Chief Executive Officer
CFA	: Confirmatory Factor Analysis
DV	: Dependent Variable
E-Banking	: Electronic Banking
E-Business	: Electronic Business
E-Commerce	: Electronic Commerce
E-Loyalty	: Electronic Loyalty
E-Pay	: Electronic Payment
E-Satisfaction	: Electronic Satisfaction
E-Transaction	: Electronic Transaction
EDI	: Electronic Data Interchange
E-Store	: Electronic Store
E-Service	: Electronic Service
E-Transaction	: Electronic Transaction
G2B	: Government to Business
G2C	: Government to Consumer
G2G	: Government to Government
ICT	: Information and Communication Technology
ID	: Independent Variable
IQ	: Information Quality
IT	: Information Technology
K-S Test	: Kolmogorov-Smirnov Test
IWS	: Internet World Stats

LAN	: Local Area Network
OECD	: Organization for Economic Co-operation and Development
SET	: Secured Electronic Transaction
SPSS	: Statistical Package for Social Science
TAM	: Technology Acceptance Model
WAN	: Wireless Area Network
WWW	: World Wide Web



LIST OF TABLES

	<u>Pages</u>
Table 2.1: Business Models of E-commerce.....	14
Table 5.1: Demographic Profile of Respondents	48
Table 5.1: Demographic Profile of Respondents (continued).....	49
Table 5.2: Descriptive Statistics of Independent Variables	50
Table 5.3: Descriptive Statistics of Dependent Variable	50
Table 5.4: One-Sample Kolmogorov-Smirnov Test	51
Table 5.5: Reliability Measurement for Research Variables	52
Table 5.6: Model Fit Summary	54
Table 5.7: Pearson's Correlation Coefficient between the Research Variables.....	56
Table 5.8: Durbin-Watson Test for Autocorrelation.....	58
Table 5.9: Tolerance and VIF Test for Multicollinearity.....	59
Table 5.10: Model Summary.....	60
Table 5.11: ANOVA	61
Table 5.12: Coefficients	62
Table 5.13: Summary of Hypotheses Results	66



LIST OF FIGURES

	<u>Pages</u>
Figure 1.1: Level of E-commerce Activity over Time (Source: OECD, 2000C)	3
Figure 1.2: The Growth of E-commerce (Source: Pearson Education, 2014)	4
Figure 1.3: Number of Internet Users in the Middle East as of March 2017, by Country (in Millions). (Source: Statista, 2017)	5
Figure 3.1: Conceptual Framework of the Study	38
Figure 4.1: Research Phases	41
Figure 5.1: The Result of the CFA on Customer Satisfaction	55
Figure 5.2: Histogram of Standardized Residuals	59
Figure D.1: Histogram for Website Design	110
Figure D.2: Histogram for Information Quality	110
Figure D.3: Histogram for Website Usability	110
Figure D.4: Histogram for Order Fulfillment Quality	111
Figure D.5: Histogram for Security and Privacy	111
Figure D.6: Histogram for Trust	111
Figure D.7: Histogram for Customer Satisfaction	112



BİR E-TİCARET PLATFORMUNDA MÜŞTERİ MEMNUNİYETİNİ ETKİLEYEN FAKTÖRLER: İRAN'DA BULUNAN DIGIKALA'NIN VAKA ANALİZİ

ÖZET

Küreselleşme çağında, E-ticaret, yaşamı basit ve herkes için yenilikçi hale getiren büyük bir devrimdir. Online alışverişte, müşteriler yüksek kalitede ürün ve hizmet almayı talep etmektedirler. Buldukları web-sitenin tatmin edici olmadığı şeklinde bir algıları oluşursa, bir başka siteye kolayca erişebilmektedirler. Dolayısıyla, e-ticarettaki müşteri memnuniyeti, müşterilerin ürünleri bizzat gördüğü fiziksel pazardan farklıdır. Diğer ülkelerde olduğu gibi, online alışveriş İran'da da kademeli olarak daha popüler hale gelmektedir ve endüstrideki e-perakendeciler arasındaki rekabet giderek şiddetini artırmaktadır. Dolayısıyla, bu çalışmanın amacı, İran'ın en büyük B2C (işletmeden müşteriye) e-ticaret platformlarından birisi olan Digikala firmasında müşteri memnuniyetini etkileyen anahtar faktörleri araştırmak olarak belirlenmiştir. Bu nedenle web-sitesi tasarımı unsurlarına, bilgi kalitesine, websitesi kullanılabilirliğine, siparişin yerin getirilme kalitesine, güvenliğe ve gizliliğe vurgu yapılmıştır ve aynı zamanda usulüne uygun olarak araştırma modelinin bir parçası olarak altı hipotez oluşturulmuştur. E-posta aracılığıyla alıcılara gönderilen kendi kendine yönetilen anketlere dayalı olarak nitel araştırma yöntemi kullanılmıştır. Veriler, aylık en az dört kez online alışveriş gerçekleştiren 416 alıcıdan toplanmıştır. Elde edilen veriler SPS 18.0 ve AMOS yazılımlarındaki Çoklu Regresyon yöntemi ile analiz edilmiştir. Elde edilen bulgular, belirtilen tüm faktörler ve müşteri memnuniyeti arasında pozitif ve önemli bir ilişki olduğunu ortaya çıkarmıştır. Bu altı önemli faktörden, güvenlik ve gizlilik diğer faktörlere göre daha güçlü bir etkiye sahip olmuştur. Sonuçlara bağlı olarak, değerlendirme, yönetimsel çıkarımlar, öneriler ve kısıtlar ele alınmıştır. Kendi müşterilerinin memnuniyet seviyesini nasıl iyileştirecekleri konusunda e-perakendeciler ve e-ticaret hizmet tasarımcıları bu çalışmanın bulgularından faydalanabilirler ve sonuç olarak müşterilerinin ihtiyaç, istek ve beklentilerine dayalı daha iyi bir anlayışa sahip olarak rekabet avantajı elde edebilirler.

Anahtar Kelimeler: *Online Ticaret, Müşteri Memnuniyeti, E-ticaret*



FACTORS INFLUENCING CUSTOMER SATISFACTION LEVEL IN AN E-COMMERCE PLATFORM: A CASE STUDY ANALYSIS OF DIGIKALA IN IRAN

ABSTRACT

In the era of globalization, E-commerce is a great revolution, which has made life simple and innovative for everyone. In online shopping, customers demand to receive high quality products and services. If they perceive that the current website is unsatisfactory, they move away to another one easily. So customer satisfaction in e-commerce is different from physical market where customers have access to see products. Like other countries, online shopping has gradually become more popular in Iran and competition among e-retailors becomes continuously fierce in this industry. Thus, the purpose of this study was to investigate the key factors that affect the level of customer satisfaction in Digikala Company, which is one of the biggest Iranian B2C e-commerce platforms. For this reason, emphasis took place on the elements of website design, information quality, website usability, order fulfillment quality, security and privacy and also trust. Based on these factors, six hypotheses of the study were developed as part of the research model. Conducted research method was quantitative research, based on a self-administered questionnaire that was sent by email to the respondents. The data was collected from 416 respondents, who had done online shopping at least four times monthly. Acquired data were analyzed with Multiple Regression in SPSS 18.0 and AMOS software. The findings revealed that there was a positive significant relationship between all mentioned factors and customer satisfaction. Out of these six significant factors, security and privacy played a stronger influence than other ones. Based on the results, conclusion, managerial implications, suggestions and limitations were discussed. E-retailors and e-commerce service designers can utilize findings of this study to know about how to improve satisfaction level of their customers and as a result gain competitive advantage based on a better understanding of their customers' needs, wants and expectations.

Keywords: *Online Shopping, Customer Satisfaction, E-commerce*

1. INTRODUCTION

1.1. Background of the Study

By the emergence and presence of Information and Communication Technology (ICT) in the late 1970s, there were enormous changes and evolution in twentieth century's technology and these changes will continue in the future. Web 2.0 that was developed in 1999 enabled people to collaborate and share information online. The growth of the Internet and its advantages boosted this growth in 1990s that Canavan et al. (2007) stated that through the formation of Internet new methods of communication and as a result new types of business transaction has been emerged. One of these changes is called Electronic Commerce "E-Commerce" that has transformed the traditional shopping market into a new and modern market place, which is more efficient. Korkmaz (2002) believed that emergence of e-commerce has caused the needs and wants of economic interdependency among different countries all over the world. Therefore Internet usage is considered not only as a networking channel, but also as means of marketing and transaction.

Since e-commerce has come into play in the business world - thanks to the Internet's World Wide Web (WWW) - the nature and efficiency of world trade have changed and improved. This means that it caused revolution in its methods, practices and also achievements in speed and economization in the best possible way that resulted in changing customers' shopping and buying behavior. As Chen (2005) cited, "Consumers learn how to take advantage and maximize their own benefits in the new business section and the consumer behavior shaped". Online shopping and buying has

become as part of many people's fast-paced lives where day to day they face shortage of time in doing their works and search for their wanted products and services in e-stores.

There are so many reasons that have caused the development of e-commerce, including information technology advances, policies of market liberalization, existence of cheaper Internet access and many free applications for building e-commerce websites, 24-hour and 365 days availability of different products and services that increases purchase rate, easy access to all related information and possibility of comparing prices in so many different e-stores simultaneously with no geographical distance, shopping without having any anxiety, time and space limits, presence of Electronic Banking (E-Banking) for supporting its payment process resulting in significant reduction of transaction costs and duration, having various benefits for shoppers, etc. So almost all the businesses have discovered importance, advantages and effectiveness of e-commerce in the ways of communication between parties that e-commerce is considered as one of the industries that is growing and spreading out around the World rapidly.

Globally Internet usage has increased incredibly over the past few decades. According to Internet World Stats' (IWS) reports there are about 3.8 billion (March 2017) Internet users worldwide. Ho and Wu (1999) believed that each Internet user can be considered as a potential customer to companies in e-commerce. Figure 1.1 presents how time has affected the level of e-commerce activity and expanded its measure.

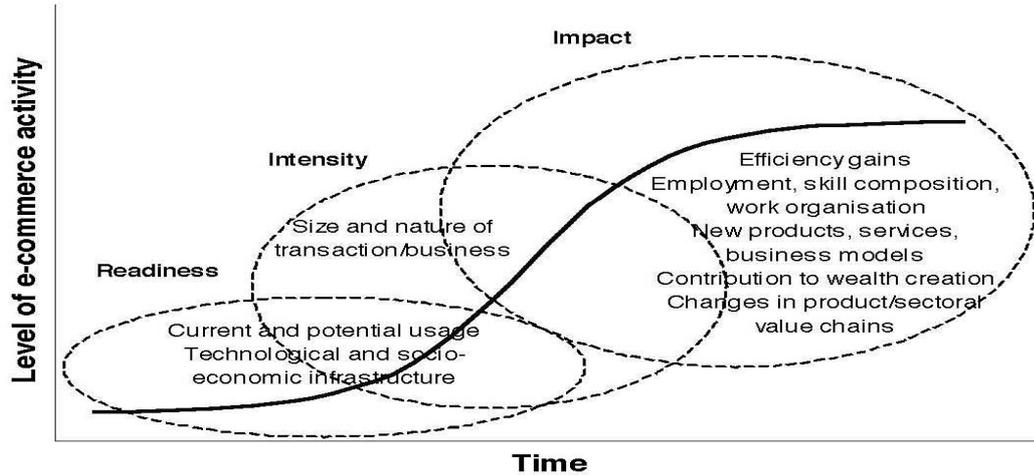


Figure 1.1: Level of E-commerce Activity over Time (Source: OECD 2000C)

So in this fast-moving global growth of e-commerce if businesses want to compete with each other properly and gain competitive advantage, they must use e-commerce to interact with customers. In this highly competitive market not only they exploit its benefits, but also face certain challenges. The market comprises of so many different people with culture diversity that have various viewpoints concerning all aspects. On the other hand, this high competition is because of increase in customers' demands and needs, so there is a need to provide useful and interesting information about the determinants that affect them. One of them is maintaining and developing customer satisfaction because it is an important task for the long-term growth of a business. Having the best financial performance and gaining a high profit are the first and the most important goals of each company and this is the result of satisfied consumers.

In light of the issues raised above, this research was an attempt to, first, explore main factors that influence customer satisfaction in Iranian B2C e-commerce platform; second, determine their relationship and the influencing extents. Conducting studies like the current one can be a great help for businesses to have a better and more effective business methodology and gain competitive advantage in Iran. It means

results of the studies like the present one may help e-commerce service providers and e-retailors to do their best and improve customer satisfaction to retain their customers, attract new ones and as a result expand their businesses.

1.2. Statement of the Problem

The main role of e-commerce in the economic growth of any nation is significant and widely accepted. As it is obvious, in this highly competitive market, the number of e-stores has been increasing all over the World, so the competition among firms grows rapidly and profit margins get lower accordingly. Thus in order to create and sustain competitive advantage, companies must look for new methods of differentiating their services.

According to the below Figure 1.2, since 1996 till 2008 the pace of e-commerce growth was between 12 to 25 percent. After that because of the recession, this growth slowed measurably for one year. But again from 2013, e-commerce has started to expand again by an estimated 12% annually.

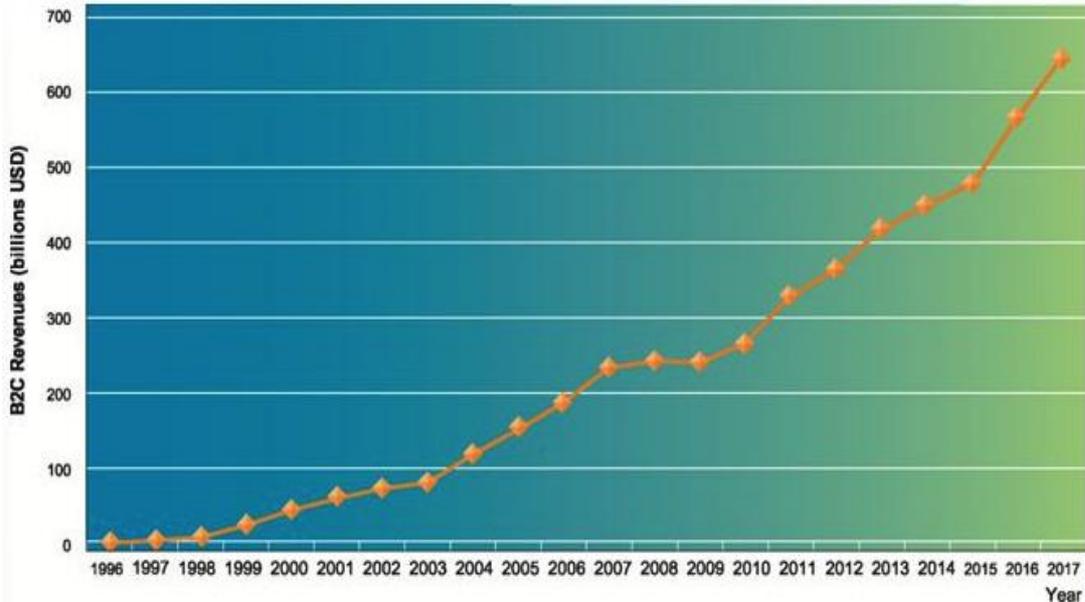


Figure 1.2: The Growth of E-commerce (Source: Pearson Education 2014)

This increased competition is the result of customers' varied demands and needs. For this reason it is necessary to be informative about the factors, which have influence on them. Besides, in recent years the importance of customer satisfaction and the role of managers in directing their own businesses both inside and outside of the organizations have been recognized.

Over the past few decades, Iran as one of the developing countries has experienced noteworthy increase in Internet usage among Middle East countries. According to Statista statistics in Figure 1.3, among the selected countries of Middle East, Iran had 56.7 million Internet users till the end of March 2017. Saudi Arabia and Iraq with number of users 20.81 and 14 placed second and third respectively. As it's clear, there is a significant difference among them.

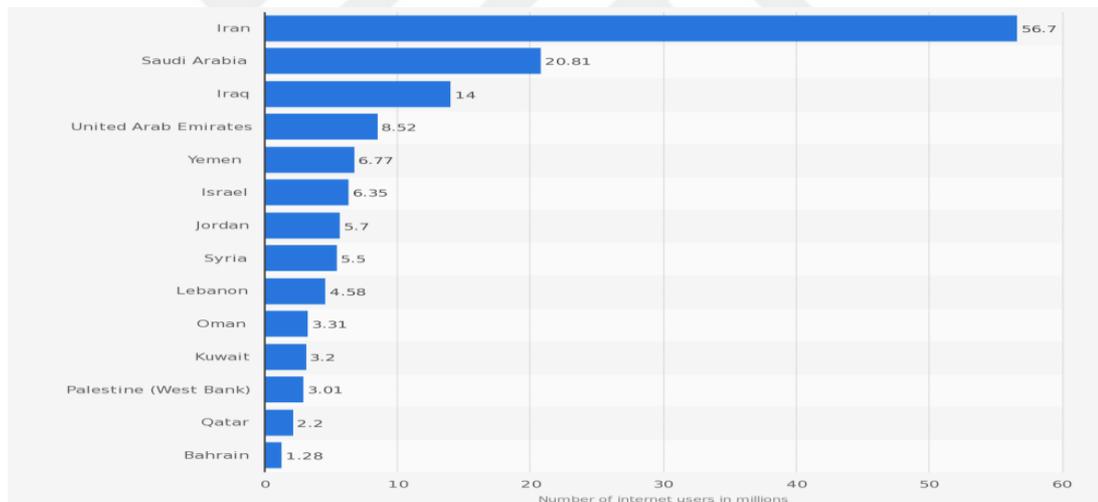


Figure 1.3: Number of Internet Users in the Middle East as of March 2017, by Country (in Millions).
(Source: Statista 2017)

Moreover, IWS's reports show that Internet penetration rate in Iran from the year 2000 till the end of the year 2016 increased about 64.7% (3.8% in 2000, 68.5% in 2016). This shows that in the last two decades Internet usage has experienced a rapid growth in Iran. And this has led to development of Internet into a comprehensive global

marketplace for buying, selling and exchanging goods and services. According to Iranian Deputy Minister Mr. Azari Jahromi (2017), total number of Iranian e-commerce websites was about 24,000 till the end of June 2017 that in compare to the year 2014, it increased about 11,000 (Abedinpour 2017).

The above-mentioned statistics proves the success of e-commerce in Iran and its gained outstanding status since its adoption. Despite many challenges facing e-commerce in Iran, the number of e-retailers and rate of adoption is increasing. The reasons of this impressive rising in the number of e-commerce websites and online shopping are because of existing wide range of products and services to choose from and price comparison in the most convenient way. On the other hand, identifying factors influencing customer satisfaction in an e-commerce platform and conducting appropriate approaches to employ them are considered as important dimensions in improving services provided by B2C organizations. The explosive expansion of online shopping in Iran highlights the noteworthiness of working on customer satisfaction topic, which is considered as a key factor in designing e-stores. Grönroos (1991) found that in the evaluation cycle of usage, shopping, service or product consumption, customer satisfaction plays a crucial role and is a useful tool for inferring customers' responses and ideas in the long-term.

The customers who do online shopping expect too much from the of e-commerce websites regarding all aspects. In the case that those expectations are not met, they will click away and look for substitute websites.

Therefore, understanding the underlying determinants of online customer satisfaction including customers' decision-making behavior, defining their requirements and effective parameters for having satisfactory service can remarkably help e-stores' managers and e-commerce service providers to upgrade their presented service,

modify operational strategies and design satisfying e-commerce platforms in order to satisfy consumers' needs, wants and expectations more and in a better way.

The existing literature mainly is focused on customers' behavioral, decision-making influencers and purchase intentions in an e-commerce setting and mostly done in cross-border online shopping. Meanwhile, online shopping format in European countries and United States is to some extent different from Iran. Regarding the importance of customer satisfaction in Iranian e-commerce platforms, unfortunately few scholars have concentrated on domestic online shopping and very little attention has been paid. Thus the number of related studies that had been done is few and there is little information concerning these factors that are most predominant in increasing customer satisfaction in Iran. So there is a lack of research in this area.

Based on the above-mentioned arguments, in this study we stepped beyond consumers' behavioral factors and tried to shed more light on the factors, which affect satisfaction level of customers in an Iranian B2C e-commerce platform and are important for them when deciding to shop online.

1.3. Significance of the Study

The significance of the study can be described as the following points:

1. The primary objective of this research is to discover the main factors that affect the level of customer satisfaction in an Iranian B2C e-commerce platform and investigate their relationship in order to establish a structure by which the hypotheses can be checked and evaluated for their relationship.
2. It determines factors driving the success of e-commerce in Iran.

3. It may provide some recommendations for Iranian e-stores' managers or owners for understanding customers' perceptions and improving their satisfaction in order to expand their businesses and gain competitive advantage.
4. Findings of the study might encourage relevant Iranian authorities to think seriously about the increase of overall customer satisfaction in e-commerce platform.
5. Whereas majority of the studies in the literature were carried out in customer trust, it was implemented in investigating factors affecting customer satisfaction.
6. Hopefully it will lead to more researches in the area of customer satisfaction in an environment of B2C e-commerce platform in Iran.

1.4. Purpose of the Study

This study aims at investigating and identifying the effect of factors on customer satisfaction and also exploring their relationships and the influencing extent in one of Iranian e-commerce platforms. To meet this end, the researcher chose Digikala Company because it is one of the most famous e-commerce websites in Iran. Through utilizing a questionnaire as an assessment instrument, data were collected from customers of Digikala Company and then were analyzed to finalize the results. This study's findings will help the Iranian e-retailers to understand predominant factors that affect online customer satisfaction in e-commerce. And also some points for improving customer satisfaction are recommended in order to expand their businesses.

1.5. Research Questions

According to the above-mentioned problem, this research tries to answer the following main questions:

Q1. What are the main factors that influence customers' satisfaction level in Iranian B2C e-commerce platforms?

Q2. What is the relationship between these factors and customer satisfaction and also what is their influencing extent?

1.6. Thesis Outline

This thesis is divided into six chapters:

- Chapter 1: This chapter explains the background of the study including the overall overview of customers' satisfaction toward online shopping, followed by statement of the problem giving a focus of the study. Later significance of the study, research objectives and research questions are described.
- Chapter 2: In the first step, all important concepts of the study regarding various definitions of key terms such as e-commerce, customer satisfaction and their related issues are brought out for discussion, like underlying unique attributes of e-commerce, its challenges and also factors that influence customer satisfaction. Later, previous literature including a number of theories and studies of different researchers that were conducted, analyzed and discussed in this field are reviewed.
- Chapter 3: Conceptual model of the study and related proposed hypotheses are provided in this chapter.

- Chapter 4: This chapter aims to propose the research methodology of the study that was used to meet the aims and objectives of this thesis including research design, procedures, study sample, survey instrument, data collection and statistical techniques.
- Chapter 5: Relating to data analysis, the data findings and results that were obtained from a survey questionnaire and later were analyzed by using necessary statistical methods and tools are presented.
- Chapter 6: This chapter summarizes the research findings and thereby providing answers to research questions. Interpretation of the obtained data and discussion of the related outcomes from other studies regarding this research area are presented. And finally, managerial implications, possible suggestions from findings in this field and research limitations are provided.

2. LITERATURE REVIEW

2.1. Introduction

It is important to review related previous studies and develop a theoretical background for the research in order to shed light upon the theoretical and practical framework of this study and understand similar fields thoroughly. Thus the first section, theoretical studies, presents background information about a number of issues of concern, including e-commerce definition and its classification, e-commerce information management, unique attributes of e-commerce and some various definitions of customer satisfaction. The second section, empirical past studies, presents a survey of some previous studies that are related to the current study.

Identifying the factors that have effect on customer satisfaction increase in an e-commerce context is considered as an essential step since it defines the success of business. The review of related literature that is presented in next section, suggests that each study is specific to itself in terms of influence on customer satisfaction. The reason is that each researcher chose and studied the topic based on its best suitability for each circumstance; thus results of every study are varied according to their time and location. In summary, there is no definite factor used for measuring satisfaction, which will finally lead to continuous purchase.

2.2. Theoretical Studies

2.2.1. Definition of Key Terms and Related Issues

In order to simplify the reading and full understanding of the present study, there are some definitions of the terms and description of related issues in the following that are used throughout the study:

2.1.1.1. E-commerce

E-commerce causes the organizations to change their methods in performing their activities. According to Swatman (1996), “In 1970’s e-commerce with its three quite separate methods including business document exchange, logistics management and global networking has emerged in order to make changes in infrastructure and techniques and provide the new and updated ones”.

Both academic and industry sources have supported enormous growth and popularity of e-commerce and also added some points to the historical view of it. Like Zwass (1996) that pointed out that WWW is used in contemporary modern e-commerce where as in traditional one, Electronic Data Interchange (EDI) over proprietary value-added networks was used. And The Economist (1997) mentioned that Internet as a digital network connects about 60 million of people in the worldwide that time and place makes no difference.

E-commerce is defined as conducting commercial, governmental and personal activities with the help of electronic mediums and telecommunications networks that comprises a wide variety of activities involving searching and sharing information, data or value-based exchanges between two or more parties. Commercial activities are considered as buying and selling products and services and also doing banking

transactions through the Internet that maintains customer relationship without face-to-face meeting.

Many researchers (Clarke 1999; Hoffman & Novak 1998; Poon 1998; Riggins & Rhee 1998; Swatman 1996; Wigand 1997; Zwass 1996) described e-commerce in various aspects (as cited in Chan 1999). Barsauskas et al. (2008) defined it as in order to make all phases of business process easy; from the first level of goods production till the end level of their sale and delivery, electronic networks is used.

Many researchers define e-commerce in some different ways. Some of them see it in terms of Internet applications including intranet, extranet, website and email. And some consider it as integration of business processes and Internet technologies like interactions with consumers, manufacturers and suppliers. Although there is no general agreement on a single definition of e-commerce, there is a consensus about its main components including the following: Website, email, intranet, extranet, Local Area Network (LAN) and Wireless Area Network (WAN).

According to Organization for Economic Co-operation and Development (OECD), e-commerce is narrowly defined as online purchasing and selling products or services via computer networks but payment process and product delivery can be carried out off or online. But in broadly defined format of e-commerce, customers can order and receive their orders through any online device that is used to make automated transactions like telephone, Electronic Data Interchange (EDI), Internet applications. So the only difference between these two definitions is that in narrower one telephone, e-mail, or facsimile are not used (OECD 1999a; 2000a; 2000b).

Lynch et al. (2001) found that in general businesses must accomplish three critical steps in an e-commerce setting in order to be successful and get profits from their online selling activities. The first one is attracting potential customers to visit and see

their e-stores. The next is converting them to do their first shopping. And the last one is ensuring that they will come back again and make more online shopping in the near future.

In summary the main advantage of e-commerce over traditional shopping is the convenience of shopping from anywhere, anytime.

2.1.1.2. Classification of E-commerce

E-commerce can be classified into nine categories, from which four of them are the main ones: B2B (Business-to-Business), C2B (Consumer-to-Business), B2C (Business-to-Consumer) and C2C (Consumer-to-Consumer). The parties, which are involved in the business, define the type of e-commerce. Table 2.1 shows different types of e-commerce in details.

Table 2.1: Business Models of E-commerce.

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

According to Table 2.1, nine types of e-commerce business model are presented. The transaction which is done between two businesses is called B2B business model. Like conducting business between manufacturer, wholesaler and retailers. C2B type relates to a commercial transaction that consumer provides and prepares products and services to companies. C2C is the business model that electronic transactions of goods and services take place between customers. B2G presents marketing of goods and services of private organizations to various government sectors. Whereas, G2B relates to the sale of products and services of government to private business organizations.

According to the main objectives of the study, above-mentioned types tend to be superfluous and only B2C online shopping model is considered. B2C is a commercial transaction that sellers give their goods and services to the end-consumers directly without any intermediately over the Internet. This type of website is like online catalogues including offered products and services with their related information storing in a system. This model can also be broader that encompasses travel services, online banking and online health services and information (Chaffey 2009; Malhotra & Singh 2009; Yahia 2005).

2.1.1.3. E-Commerce Information Management

Effective communication and information exchange are the bases of e-commerce business. Throughout the distribution process, digital format of communication transmittance makes the process of capturing and using the information more easily. According to Kleindi and Burrow (2005), the information system must have integration (using in other components), accessibility to channel members including customers (complete their activities) and security (restriction for those who should not have accesses to it).

So features of a complete e-commerce information system (as cited in Rahman & Han 2011) must be as below:

- Customer database
- Updated product inventory
- Order processing
- Order filling and customer notification
- Sales by product and customer
- Customer-business interaction
- Product catalog

- Online ordering
- Payment processing
- Shipping information
- Order tracking
- Channel member interactions

2.1.1.4. Unique Attributes of E-commerce

According to Laudon and Traver (2002), e-commerce has eight unique “Wow” features that are described as below:

Ubiquity: It’s defined as something that occurs everywhere at all times. Internet technology can be accessed everywhere and every time, including businesses, homes, libraries, even airplanes and elsewhere via laptops, mobile devices, etc. for free or quite cheaply. So these features caused market place to be transferred beyond traditional boundaries without considering temporal and geographic location, to a market space with trading globally that results decrease in shopping and transactions costs, reduction in cognitive energy and so enhanced customer convenience. So it makes e-commerce global reach.

Global Reach: Technology has reached beyond national and cultural boundaries that caused the transformation of brick and mortar small stores into online market spaces including billions of customers and millions of businesses in all parts of the World. So with the help of e-commerce the number of business transactions is crossed the country bound seamlessly and encompasses every single type of business for all world’s population.

Universal Standards: Technologies of traditional commerce differ from one country to the other one. Regarding the presentation of the information, technology standards

of the Internet are collected that is universally accepted worldwide, which are called Internet standards. These technical standards that are available all around the World cause significance features of e-commerce like lower market entry cost, reduction in product search cost that product discovery becomes simple, fast and more precise and also all information related to all suppliers, prices and delivery terms of each product are easy to find anywhere any time.

Richness: Delivering millions of rich marketing messages including advertising and marketing to a large number of people via different new methods simultaneously: video ads, audio messages, interactive text options, animation, billboards, signs, etc. that are impossible with traditional media like TV, radio and magazines. E-commerce has encouraged the traditional tradeoff of information from the rich to richness. One example is comparing the products' prices, attributes, services, etc. simultaneously.

Interactivity: This feature allows two-way communication between businesses and consumers. Existing online agents to chat with, giving feedbacks on products or services and possibility of becoming as co-participants for consumers in the process of products delivery to the market are some examples of this feature of e-commerce. We can consider them as a kind of face-to-face experience which are taking place universally.

Information Density: Information in terms of density as well as its quality, accuracy and timeliness, which are available to all participants of the market, are increased while the costs of information processing; collection, storage and communication are decreased. All of these in return cause the advancement in the process of accessing the information and so increased service times and happier customers. Price discrimination, greater price and cost transparency can be considered as best examples.

Personalization/Customization: It can be modified as delivering marketing message to a specific person or group through personalizing the message to their name, interest and also products or services' customization based on their wants, needs, personal characteristics, individual preferences and past purchases. So e-commerce has a facility of online personalization and customization in which anyone can receive any kind of product or service that fits his/her idea of perfection.

Social Technology: It's the feature that promotes user content generation and social networking. Companies use social technologies as a tool to connect to customers in order to build strong and long-term relationships through ratings, reviews, blogs, forums, etc. Existing of websites like Facebook, LinkedIn, Pinterest, Instagram, Twitter and so on, are not only for entertainment and networking but also for collecting needed information about people in order to show types of ads and sites based on their interests.

So as it's clear, these features have made e-commerce as a future method for all businesses.

2.1.1.5. Customer Satisfaction

Bearden and Teel (1983) defined customer satisfaction as an optimistic outcome from the situation in which products or services that were bought by customers, meet their expectations so they become content with them that are provided by the websites. In other words it's the consumer's fulfillment response.

In general if the perceived performance of a specific product or service is better than customer's expectations, he/she will be satisfied and has intention to repurchase that item. Therefore in this situation, as Reibstein, (2002) stated these repetitive purchases make him/her loyal to that e-store that as a result its profitability will increase. Trying

to keep customers satisfied is a best tool to gain competitive advantage against competitors. Also as Gupta et al. (2003) believed customers become excellent external marketers for organizations. If product or service's performance is less than expected, he/she will be disappointed. If the perceived performance of a product or service be same with customer's expectations, he/she will be indifferent or in a neutral state (Lin 2003). So as Parker and Mathews (2001) found consumers usually attempt to find a relationship among their needs, wants, expectations and their perceived evaluation.

Three main factors has impact on customer satisfaction, including:

- *Consumer Need:* Fulfilling a need through a desire to buy a product or service, this is influenced by specific expectations (Parker & Mathews 2001).
- *Consumer Value:* The judgment and reflection of what is essential or valuable in life (Kenny 1994).
- *Consumer Cost:* By considering what matches his/her need and value, the customer decides to pay for a product or service that has worth and that is a reflection of satisfaction (Best 1997, pp. 135-136; Lin 2003).

Customer satisfaction is considered as one of the key elements in determining the success of the market (Khristianto et al. 2012). Good marketing includes not only the Four Ps (Price, Product, Promotion and Place) but also customer orientation and market driven. Trying to know the demands of customers and then fulfilling them in the same way are considered as best tools to develop customer satisfaction and as a result doing good marketing. As Alam and Yasin (2010) mentioned customer satisfaction acts as a criterion for measuring business performance and offering guidelines for future improvement. So identifying the variables of customer satisfaction is vitally important. Besides, online shopping in Iran has been growing

rapidly and as a result this highlights the importance of analyzing customer satisfaction as a vital issue when designing any e-commerce website.

2.3. Empirical Past Studies

The following is a survey of some related studies, which deal with customer satisfaction and affecting variables on it:

2.3.1. The Conceptualization of Customer Satisfaction and Prior Studies

The origination of scientific interest in the area of customer satisfaction can be traced in the studies of Cardozo (1965) and Howard and Sheth (1969) who were the pioneers in exploring the effect of expectations on customers' satisfaction (Campo & Yague 2009).

Swan and Combs (1976) were the first researchers that worked on the product performance and consumer satisfaction and found that a mutual relationship existed between these factors. It means when performance of the product doesn't meet the expectations of the customers and falls short of it, dissatisfaction happens.

In the study by Parker and Mathews (2001), a theory of value percept was designed that according to it an evaluative cognitive process causes an emotional reaction which is called customer satisfaction. That is in contrast with the study of Oliver (1997), which considered customer satisfaction as an evaluative judgment.

Giese and Cote (2000) and also Moliner (2004) believed that customer satisfaction is categorized into two distinct types, including conceptual and referential one. In the first type as conceptual satisfaction, this is the customers' different types or processes of responses, which determine the satisfaction. Second type as referential one, deals with the dimensions of a situation that a response occurs. These two types are not

necessarily mutually exclusive and that the main definitions in the previous researches may highlight complementary and different approaches.

According to research of Devaraj et al. (2002) that was done in the area of B2C channel satisfaction and preference in the e-commerce perspective, it was found out that customer satisfaction was a basic determinant of consumer channel preference. In other words it reflected the amount of customer's positive feeling toward e-stores in e-commerce. So in order to have competitive advantage, e-retailers should understand the customers' vision of their services. Online customers need additional satisfaction when buying from e-stores otherwise they will shift to other e-stores.

In their comparative research, Shankar et al. (2003), investigated the significant differences in the levels of customer satisfaction and customer loyalty in online and offline environments. They found that there was no profound difference between the online and offline-buying methods in terms of customer satisfaction while the level of customer loyalty in online method was more than the offline one. Findings also showed that the existed relationship between customer satisfaction and customer loyalty was reciprocal and each of them had a positive reinforcement on each other.

Gupta and Zeithaml (2006) worked on the factors that had positive and crucial effect on customer satisfaction level on firms in terms of financial performance and identified 5 important ones including customer relationship management, value-added services, availability of products, variety offered and ambience.

2.3.2. Prior Literature of E-commerce Customer Satisfaction

Since e-commerce innovation, researchers have been conducted many studies to clarify the concept of customer satisfaction, different variables by which customers get satisfied and perception of the difficulties that cause the repurchase intention to be

low and as a result prevent the development of online shopping (Jarvenpaa & Todd 1997). The following previous studies suggest different models for customer satisfaction and many of them had tried to identify factors that lead to customer satisfaction.

Davis (1986) by working on Technology Acceptance Model (TAM) described that the way to understand a consumer's adoption of a given information technology could be described through his/her intention to use the service and his/her beliefs toward the system.

Regarding TAM, Childers et al. (2001) study also related to the customer satisfaction and attitude toward online shopping where they referred the effortless using of technology as the "processing of practice the new media while engaging in shopping behavior". Some researchers used and modified the TAM and confirmed that it is a reliable predictor of a user's acceptance of information technology.

In an interesting study by Molla and Licker (2001) a model was provided that was implemented to identify the success of an e-commerce website according to the satisfaction level of customers. This model includes six factors including system and content quality, trust, use, support and service affect customer satisfaction in e-commerce. They defined each concept as: System quality relating to the system performance such as the reliability of the system, ease of use, system accuracy etc.; content quality referring to the presentation of the content in the e-commerce service; trust is the user's attitude towards the security and privacy issues of the e-commerce system and use is the way each user uses the output of the system; and also support and service are the features that are offered by the e-commerce system to the users. Beside these findings, they found that customer e-commerce satisfaction was the main variable for investigating e-commerce success.

Singh (2002) in his study that was about e-services and their role in B2C e-commerce, found that there was a positive relationship between them that caused increase in sales and customer relationship management. Based on his findings, factors like responding quickly to customer feedback, search support, transactions and order placement ease, convenient e-pay system, transparent and efficient e-transaction record and trust by e-assurance were so important to customers that increase their satisfaction.

According to Chen and Dubinsky (2003) findings, quality of the information that are presented on the website was one of the most important factors that had effect on B2C e-commerce and played a vital role in customer satisfaction. The reason is that customers always want complete details and accurate information about the displayed products and services on the websites.

Beside information quality, comprehensibility of it also is an important factor. Gefen and Straub (2003) worked on the user trust area in B2C e-services and concluded that customer trust was one of the most important factors that affect customer satisfaction. Based on their findings when doing business transaction, if the customer meets his/her expectations and will not indulge in any fraudulent or undesirable terms, and everything is understandable for him/her, customer trust happens.

In the Innovation Diffusion Theory by Rogers (2003), cheaper price, convenience and return policy factors were considered as comparative advantages that influence customer's decision to buy and satisfaction.

Christian and France (2005) investigated the factors of customer satisfaction in choosing the website to shop from and results showed that privacy (Technology factor), merchandising (Product factor), convenience (Shopping factor), trust, delivery, usability, product customization, product quality and security were the factors customers were satisfied the most respectively. The reason of placing security

in the last choice was interpreted as it was perceived as a standard attribute in any website.

Rodgers et al. (2005) examined the moderating influence of online experience on the antecedents and consequences of online satisfaction on 836 participants that had high and low online experiences. The results showed that antecedent factors of online satisfaction can have 3 main categorization: 1) Information quality: Informativeness and entertainment 2) System quality: Interactivity and access 3) Service quality: Tangibility, reliability, responsiveness, assurance and empathy.

Zhang et al. (2006) in their empirical study investigated the factors affecting e-service satisfaction. They reported that a website in terms of convenience and security and also skills and experiences of a customer were important and significant factors that influenced e-commerce satisfaction.

In their study Casalo et al. (2007) found that commitment and trust were main variables in maintaining high levels of satisfaction in customers. Because by increasing the levels of commitment and trust of the customers toward a website, customers' information were kept safe and the relationship between them and the company developed. Furthermore, they stated that this amount of increase in the levels of commitment and trust related to reputation of a website.

Lin (2007) carried out a research that was about 'The impact of website quality dimensions on customer satisfaction in the B2C e-commerce context' and emphasized that quality of a website in terms of design and the presented information on it were important factors that had impact on customer satisfaction in B2C e-commerce. Also the results showed that the interactivity factor of the website was another important point in making customers satisfied and loyal in order to motivate them to re-purchase from the same website in the future. Security of the website and presence of the

business in social media were other important factors.

To investigate the effect of website quality on Chinese customer satisfaction and their purchase intentions, Bai et al. (2008) conducted an empirical study. Findings showed that when a customer wants to do the business transaction online, all the processes must have privacy in order to provide satisfaction. In their idea privacy is that a customer's all personal, individual and financial information must be kept safe and handled with care and it must not be made accessible for third parties. He/she should be confident that all above-mentioned information are retained and stored safely and can be used adequately. Thus perceived privacy was considered as one of the key concerns of customers.

Jianchi and Xiaohong (2009) were two other researchers that worked in the area of customer satisfaction in e-commerce websites in order to define important variables that had positive effect on customer satisfaction. According to the results, website design, provided service, information quality, website intelligence and security were defined as five important factors affecting customers' level of satisfaction in an e-commerce environment.

Eid (2011) conducted an empirical study in Saudi Arabia in order to examine the determinants of customer satisfaction, trust and loyalty in B2C e-commerce platform. And also he investigated whether customer satisfaction and trust played a significant mediating role on Saudi consumer loyalty or not. Based on data collection through structured self-administered questionnaire, he worked on the results that were gained from 218 participants accordingly. Results showed that in Saudi B2C e-commerce markets, user interface quality and information quality variables were important determinants of e-commerce customer satisfaction but not perceived security risk and perceived privacy. User interface quality, perceived security risk and perceived

privacy were found to be strong determinants of customer trust but not information quality. Finally customer loyalty strongly and positively influenced by customer satisfaction and also the effect of customer trust on customer loyalty was weak.

Tajzadeh Namin and Etemadi (2011) in their research indicated that design and graphic features of the website influenced the first visit of customers from website. These features included image, text, colors, logo, theme and advertising slogans.

Guo et al. (2012) worked on a study to evaluate factors influencing customer satisfaction in Chinese online shopping platform. According to the results, eight determinants including website design, security, information quality, payment method, e-service quality, product quality, products variety and delivery services were identified.

In a study by Ranjbarian et al. (2012) an attempt was made to investigate different dimensions representing e-satisfaction in 181 Iranian consumers of some Iranian Internet shopping centers. The adopted “e-satisfaction” model included five variables including convenience, merchandising, website design, security and serviceability that except website design, the rest supported their influence on e-satisfaction.

Hila Ludin and Cheng (2014) in their study provided further support for defining influencing factors on customer satisfaction and how customer satisfaction in turn affects e-loyalty towards online shopping among 180 Malaysian young adults. The results showed that among website design, security, e-service quality and information quality factors, there were significant relationships only between e-service quality and information quality factors with the satisfaction level of customers in an online shopping environment. And also customer satisfaction provided positive effect toward e-loyalty.

Studying Chinese product delivery service provider selection and their customer

satisfaction in an e-commerce environment Jie et al. (2015) found out that not only product delivery service providers' system must be consist of hard and soft infrastructure but also in order to satisfy the e-customers there must be flexibility to strengthen the relationship between e-retailers and delivery service providers.

From the mentioned literature, it is obvious that in order to help a company to evaluate its effectiveness, knowing the elements for developing a successful website is not enough and it is a must to consider the elements which are related to higher level of customer satisfaction.





3. CONCEPTUAL FRAMEWORK DEVELOPMENT AND HYPOTHESES FORMULATION

3.1. Introduction

This chapter discusses the related factors that have been considered in this study in order to form related hypotheses according to the research questions and review of the literature. Later an adapted research framework of the study has developed accordingly which is considered as customer increased satisfaction model in one of Iranian B2C e-commerce platform, named Digikala Company.

3.2. Definition of Variables

This study investigates six independent variables as following and one dependent variable, which is customer satisfaction. Following are definitions of each independent variable:

- Website design is defined as characteristics of a website that has creative and attractive design offering customers uncluttered screens, simple search paths, appropriate content and fast presentations that allows them to trust and interact effectively with sellers (Gefen 2000; Pastrick 1997).
- Information quality as one of the key technical factors influencing customer satisfaction and a customer's future purchase decisions is defined by Ahituv (1980) as reviewing and measurement of information accuracy, timeliness, relevance, aggregation, format, etc. of existed outputs in the information system. It refers to the absolute, correct format and most recent

information which is cited on a website.

- According to Davis (1989) website usability is using a particular system without difficulty and great effort. In other words, it is considered as an ability to discover the way around the Web, locating desired information and knowing what to do step by step effortlessly (Nah & Davis 2002).
- Order fulfillment quality which is the one of the major factors of after-sale is defined as the process of starting to place orders of requested items for customers and ends with their received products or services that includes order receipt, shipment, delivery time and flexibility, etc.
- Security and privacy of a website is one of its important features in which individual information of customers are protected from any unauthorized use of information disclosure during the online shopping (Guo et al. 2012). He divided them into two parts: Data and transaction security and authentication of the user.
- Trust as an important notion has been investigated in various fields like economics, psychology and sociology (Kim & Park 2013). Mayer et al. (1995) and Pavlou (2003) defined trust as willingness of a customer to depend on the seller and take action in circumstances where such action makes him/her vulnerable to the seller.

3.3. Adapted Research Framework and Stated Hypotheses

According to the previous study literature and objectives of the study, the adapted research framework as shown in Figure 3.1 is built in order to help us to figure out the influencing factors more and better and also provides an operational relationship between the different variables. It includes six variables namely website design,

information quality, website usability, order fulfillment quality, security and privacy and trust as main variables in the engagement of virtual economic activity among e-commerce customers. Therefore based on the literature, six hypotheses are generated in order to test the influence of each variable on customer satisfaction in one of Iranian B2C e-commerce platform, named Digikala Company.

3.3.1. Website Design

It is one of the features of website quality that can be considered as determiner of consumers' perception toward the related e-store. Also it plays an important role in influencing the customer and his/her satisfaction directly in online shopping, since it provides physical evidence of the organization's competence as well as facilitating effortless use of the service (Park & Kim 2003). E-commerce websites with visually appealing designs cause customers to have pleasurable online shopping experience and high satisfaction that are the result of their need to have epicurean benefits (Wolfenbarger & Gilly 2003; Zeithaml et al. 2002).

As Guo et al. (2012) believed that this perception is so important in imposing the website's reliability mindset for both types of customers including experienced and inexperienced. Well-designed website not only helps customers to access needed information but also is time saver in finding information that causes the reduction of mismatches that leads to acceptance of the site (Luo et al. 2012). According to the results of the study by Cyr (2008), variables of website design are considered as key factors of website satisfaction in Canada, Germany and China. In other studies by other researchers, it's concluded that good design of a website is about good organization and effortless searching (Manes 1997) that adds value to customer's experience and increases the level of customer satisfaction (Eid 2011; Luo et al. 2012). Thus website design is an important driver of customer satisfaction that first hypothesis of the study

can be drawn accordingly:

Hypothesis 1: Website design of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.

3.3.2. Information Quality

In online shopping, customers usually depend on presented information of products or services that are provided by a website (Kim et al. 2008). Providing and presenting enough, proper, correct and updated information about products and services has a direct effect on customers' satisfaction and trust. Moreover, usefulness and appropriateness of the available information helps customers to evaluate products and services properly and be satisfied with their purchase decisions and also websites become trustworthy organizations (Liao et al. 2006). That is why companies consistently are working on the best ways to present the related information to customers on the Internet (Chau et al. 2000).

Therefore, the best solution for compensating lack of physical contact in online shopping is to present proper and well-detailed information. Scholars like Liu et al., (2001) placed a high priority on information quality and considered it as a significant feature of e-business success. Also other researchers discovered that information quality has crucial influence on customer satisfaction (Fung & Lee 1999; Liu et al. 2008; Sadeh et al. 2011; Shanker et al. 2003). Therefore, we proposed the second hypothesis as:

Hypothesis 2: Information quality of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.

3.3.3. Website Usability

Website usability includes five elements:

1. Convenience: To perform tasks on a website easily and smoothly.
2. Information architecture and navigation: Architecture of information, navigation and search engine of a website must be well-designed in order to reach the useful information in easiest way. If online users can't find information easily, it causes them to lose their directions and feel poor impressions.
3. Findability and accessibility: E-stores should be available to various types of browsers and their format must be search engine friendly in order to find it and the presented items easily.
4. Site speed: This factor is so important because if speed of the loading and responses of websites be slow all the time, after some time online customers immediately switch to other websites.
5. Ordering/payment process: Online purchase process must be more efficient and smooth than traditional one; otherwise the number of customers will decrease.

As it's clear from above-mentioned points and also according to some researchers (Davis 1989; Morris & Turner 2001; Venkatesh & Davis 2000) this is a critical factor in terms of customer usage, experience with regard to computer technology and even for customers who are new in this technology (Gefen & Straub 2000). Thus, the third hypothesis is postulated as below:

Hypothesis 3: Website usability of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.

3.3.4. Order Fulfillment Quality

All customers want to receive the right product or service on time with the lowest price in their desired location. So in this situation, order process and receiving the timely message including logistics information relating to their purchased products are so important in e-commerce (Bart et al. 2005).

According to Griffis et al. (2012), in the order fulfillment quality the process of order cycle time matters. Carrying forward the order from the origin place to the destination (customer's end) is done by the logistics that controls the order cycle time. So he believed that customers' perceptions about the quality of order fulfillment are negatively related to order cycle time. So the company must promise its customers that their ordered orders will be arrived on time and without any damage, leading to improvement of overall purchase satisfaction (Boyer et al. 2009; Rao et al. 2011).

To support this idea, Ruby and Miao (2010) believed that beside on-time delivery, which is a prominent factor of order fulfillment, other factors must be brought to strategic level. Because if an online shopping company wants to be successful in the competing process with others, it should not focus only on copying "shipping options" which is a relatively easy choice to access, but also the key tool is to achieve "on-time delivery" which is hard to reach. It is important to know that final delivery and return process have impact on transaction that these make the e-commerce transaction much more different than the traditional one. And also delivery time and physical contact before purchase are disadvantages of online shopping. The solution is to have fast and flexible delivery options, which leads to high satisfaction level in customers.

Therefore, according to above-mentioned points we can conclude that the order fulfillment quality of an e-store can significantly affect consumer satisfaction. And the forth hypothesis hypothesized as follows:

Hypothesis 4: Order fulfillment quality of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.

3.3.5. Security and Privacy

Security and privacy is considered as one of the important factors that users of e-commerce sites are constantly faced with. Scope of security and privacy refers to security of online purchasing environment in terms of hacker attacks, credit card fraud, non-delivery risk, bank information disclosure, post purchase service and keeping personal privacy secure and so on (Wang et al. 1998). Zeithaml et al. (2002) cited that privacy relates to the situation when customers' data are not shared and their credit cards information is secure. The reasons of this important issue can relate to using and passing customers' and visitors' information to the third party without their knowledge or presence of errors in the underlying architecture of the Internet which does not support security sufficiently. Therefore, beside functionality and usability e-stores must pay attention to their security and privacy policies.

While doing online transaction, most of the customers become hesitant to provide their personal information and credit card numbers because of fear of fraud. One of the solutions to reduce this concern is use of encryption technology. As Brendon (2002) stated that in spite of the fact that customers are interested in buying a product or service over the internet, about 67% of them stop transactions by abandoning the website when are asked to provide personal information and credit card details. So credit card security plays a major role in online transaction. Researchers like Evanschitzky et al. (2004), Park and Kim (2003) and also Szymanski and Hise (2000) concluded that positive perception of security and privacy could have a positive effect on online customer satisfaction levels in online environment. Furthermore, Chellapa (2002) believed that security and privacy issues play an important role in developing

trust in the online transaction and/or the website.

These prove the significance of security and privacy in online shopping that causes the customer to make a decision whether to purchase online or not. Thus trusted website with exceptional security, helps customers to be more confident and be satisfied. Therefore, e-commerce platforms play an important role in constructing safe shopping context. The fifth hypothesis is developed as follows:

Hypothesis 5: Security and privacy of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.

3.3.6. Trust

Trust in an e-commerce platform has effect on customer's intention to buy from a specific online platform and continue this process. It is an important factor in online environment because there is the absence of face-to-face contact and in order to compensate it, customers need a lot of reassurance. Trust can help them to overcome their high degree of uncertainties, fear and potential risks and finally share their private information with sellers with more confidence. So it facilitates transactions in e-commerce and as a result is one of the reasons of online business success (Hou 2005).

The reflection of its factors from past purchase experiences and website, is caused trust not only to influence organizations' fixed customers to repurchase but also to absorb new customers. As Anderson et al. (1994) and Zins (2001) believed that higher level of consumer satisfaction is gained through a higher level of trust. Also other scholars found the similar findings in their studies in which the positive relationship between trust and customer satisfaction is supported (Anderson & Srinivasan 2003; Bauer et al. 2002; Flavián et al. 2006; Oliver 1980).

In e-commerce market same as all over the world, there are too many people with

diverse cultures that have variety viewpoints about trust. Also, customer's experience toward online shopping has effects on his/her level of trust. Some believed that online trust is affected by website quality since it presents the service provider's competence (Cyr 2008; Gummerus et al. 2004; Roy et al. 2001). So all of these issues and other ones show that trust as a complex concept, demands more need and caution to study and generalization of the results of the conducted researches is not a good choice (Sun 2011; Valvi & Fragkos 2012). So according to mentioned points our sixth hypothesis can be:

Hypothesis 6: Trust of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.

3.4. Conceptual Model

As depicted in Figure 3.1, the proposed research model, which was developed by the researcher includes all above-mentioned six factors that are considered as constructs of this study. It shows an association between Customer Satisfaction as dependent variable (DV) and Website Design, Information Quality, Website Usability, Order Fulfillment Quality, Security and Privacy and also Trust as independent variables (IDV) of the study.

This model will serve as a basis for this study and help in analyzing and interpreting the empirical results. In other words, their operational relationship will be tested and examined in this research in order to provide an insight into their effect on the level of satisfaction for Digikala Company's customers. The variables influencing Iranian e-commerce B2C customer satisfaction level are diagrammatically as following:

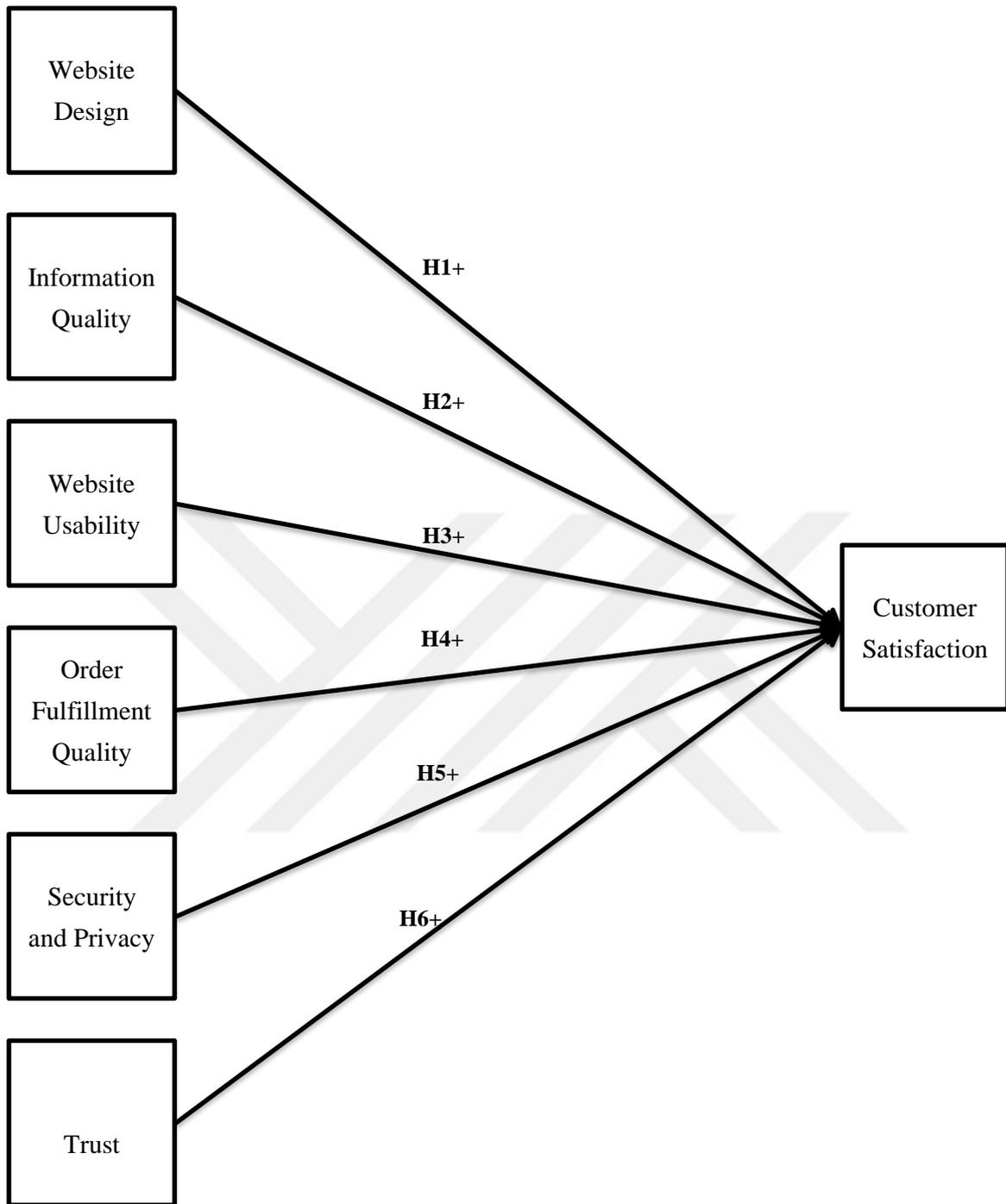


Figure 3.1: Conceptual Framework of the Study

4. RESEARCH METHODOLOGY

4.1. Introduction

Iranian are excited to do online shopping and in addition to searching for lower prices and best quality products like others, they encounter many other factors affecting their satisfaction to repurchase the same product or service. From the literature review, we tried to discover those variables which currently affect customer satisfaction to purchase again in e-stores. To meet this end, we examined the effect of six factors namely website design, information quality, website usability, order fulfillment quality, security and privacy, and also trust on the level of customer satisfaction which were operationalized to test the hypothesized relationships in the proposed conceptual framework for one of Iranian famous e-stores, named Digikala Company.

Thus, this chapter presents and describes detailed idea about which method and procedures were employed for conducting in the present study. It includes: research design, population, sample and sampling procedures, instrumentation and data collection.

4.2. Research Design

This study tries to investigate the determinant factors of customer satisfaction level in an Iranian B2C e-commerce platform. This study requires the collection of data from a wide range of Iranian customers who are currently participating in online shopping. So the current study employed quantitative approach as a research design. As Saunders et al. (2009) cited that quantitative research relates to gathering numerical data from a

large amount of involved participants through which a specific phenomenon or a hypothesis is explained, tested or verified empirically.

Survey method by distribution online self-administered questionnaire was done in order to attain insight from customers' perspective and collect information of all research variables. The result of the research tested to see if all six proposed hypotheses were supported and to what extent each variable influenced customer satisfaction level. In this study, there are six independent variables including website design, information quality, website usability, order fulfillment quality, security and privacy, and also trust; and one dependent variable named customer satisfaction between which possible relationships were investigated.

Research phases of the study are presented in Figure 4.1 below. Research idea was the starting point of this thesis. In the next step relevant previous studies were reviewed. Then questions of the study were generated and based on them conceptual model of the study was created. Later for testing this conceptual model, design of the study was planned and required data were gathered from the study's sample group. In order to find answers for the research questions, data analysis was done. And in the last step, after analyzing the collected data, interpretation of the results and drawing the conclusion were done.

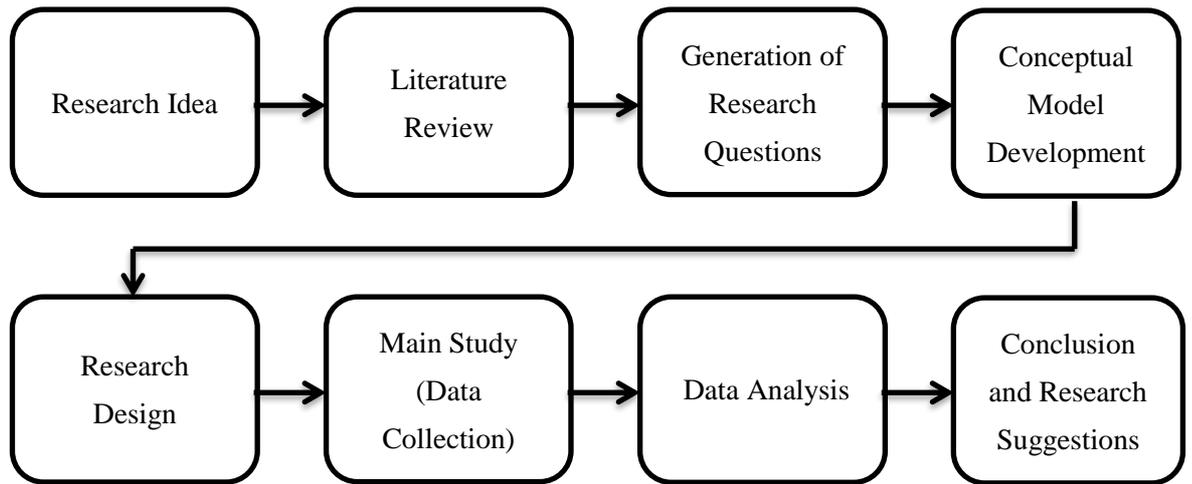


Figure 4.1: Research Phases of the Study

4.3. Population

To achieve the aim of the study, it was necessary to access individuals who had patronized e-commerce platforms. So the population of the study was chosen from all active and unique customers including both male and female who had completed online shopping in Digikala Company at least four times a month during January to June 2017 so they've had enough online shopping experience. This is an appropriate approach because customer satisfaction is limited to individual transactions (Parasuraman et al. 1988). Unique customer here means the one who had registered to the related website formally. According to company's official IT report, during January to June 2017 monthly average number of customers who did purchase was about 392,000, from which approximately 6% of them did purchase at least four times monthly. As a result average number of customers who purchased at least four times monthly (January to June 2017) was 23,520 that formed the population of the study.

The background in choosing this e-store and conducting the survey in this company were as following: It is the first and the most popular e-store in Iran that has founded 12 years ago (July 2006) and according to Alexa statistics it ranked 55th and 3rd place

in the World and Iran accordingly (September 2017). Other reason was that the CEO and sale department's managers of the company were very eager to know and learn about the factors increasing customer satisfaction level in order to expand their business and have competitive advantage comparing to their competitors. So they shared the related IT data to do the research. And as a last one, all active users were from many different cities in Iran, which represented the generalization of the Iranian e-commerce customers.

4.4. Sample and Sampling Procedure

The present study adopted one of the non-probability (nonrandom) sampling procedures known as convenience sampling. Even though this this type of sampling has its own limitations of time, financial resources and no possibilities for statistical generalization, it is the most practical one regarding this research. Saunders et al. (2009) believed that non-probability sampling is a technique, which is quick, low-cost and appropriate for most of the studies.

In this research, the sample specified to the Digikala Company customers, that is one of the biggest online platforms in Iran and its customers were easy to reach via their email addresses. In order to calculate the sample size, Cochran's formula (1977) was used as shown below (4.1).

$$n = \frac{N.z^2.s^2}{N.d^2 + z^2.s^2} = \frac{23520 \times 1.96^2 \times 0.27}{23520 \times 0.05^2 + 1.96^2 \times 0.27} = 408 \quad (4.1)$$

Where;

n = Sample size

N = Population size

Z = Represents confidence; the value is from Z-score table.

If confidence at 95%, $z = 1.96$

s^2 = Variance

d = Sampling error

To efficiently reach the target group, survey was distributed online via e-mail to a total 450 selected customers who were asked to fill the questionnaire by e-mail in November of 2017. Out of these, 421 questionnaires were collected, yielding a 0.93 response rate. After initial data analysis, data screening method was used and in total 5 of returned responses were found to be invalid due to incompleteness or missing values. The reason for applying this criterion is that it causes the error reduction due to memory recall (Dharmesti & Nugroho 2012). Finally, only 416 of responses were acceptable and defined as valid one for further statistical data analysis.

Thereby, the gathered raw data were aggregated according to dimensions under study and multiple regression analysis would be performed to identify the major factors which influencing customers' satisfaction in e-commerce.

4.5. Instrumentation

In order to test the research model and do the data collection to achieve the research objectives, one instrument as a questionnaire survey was prepared. In questionnaire survey method, respondents respond and decide faster than the open-ended questions (Forza 2002). And also coding the data through statistical analyses is much easier. The used instrument is described as below:

Structured self-administered questionnaire was designed to collect data and find

numerous aspects of participants' perception in this research. In the first step the questionnaire was created in English and later translated into Persian language because all of potential respondents were Iranian people. It consisted of two main parts, including cover letter in which the purpose was explained to all readers.

In the first part, there were questions that were relevant to demographic data, recording subjects' demographical data and their general profile in using e-commerce; including questions asking for their gender, age, education level, profession, monthly income, Internet usage frequency, online shopping experience and mostly used device for online shopping. In the second part as the main part, 36 close-ended questions in which rating questions were asked in order to measure the level of their satisfaction and explore factors affecting customer satisfaction.

The questionnaire has items on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) that indicating the extent to which the respondents agree or disagree with a series of statements related to customer satisfaction. The reason for choosing this type of close-ended questions was that respondents quickly and easily with minimal writing activity (Saunders et al. 2009) could select the most appropriate answer which best describes their satisfaction range regarding their shopping experience with the targeted company.

Topic of the thesis and related sample were Internet users and overall number of customers was so high, so setting of the research and distribution of the questionnaire was conducted online in order to be parallel with the essence of the research, which was the online realm of activities. They were easily found via Internet rather than offline.

The items and scales in the questionnaire were adopted from previously validated items of the relevant literature related to the scope of this study, to ensure and increase

the validity of the questionnaire. English and Persian versions of the questionnaire items were prepared by paying careful attention in order not to cause any semantic losses, which could change the actual meaning of the measurement item. Appendices A, B and C provide both English and Persian versions of all questionnaire items and their sources accordingly.

4.6. Data Collection

In general there are two processes of data collection named primary and secondary data. Secondary data relates to collecting data through related theses, journals and articles. Primary one is done through questionnaire distribution. This research was done through primary data.

Before conducting the study, the researcher got the permission of the company manager and unit heads. Participation in the survey was strictly voluntary and anonymous. Overall description of the study, its aims as well as instructions to complete the online questionnaire was presented to all participants through email. They were asked to read questions carefully and to be honest. Also they were assured that the instrument was not a test; therefore, there would be no right or wrong answers. An online survey in an email questionnaire format was done in order to collect the primary data regardless of different cities of Iran. The reason for choosing online format of surveying is that the nature of the research objective is on the Internet and also it is considered as a best and authentic method for assessing online customer behavior (Hoffman & Novak 1996).

The participants were asked to fill out survey questions based on their most recent online shopping experiences related to Digikala Company because it helped to minimize the information errors caused by memory loss. Enough time to complete the

questionnaire was provided to them. The questionnaire completion deadline was 15 days and the answers after this deadline weren't accepted and take into consideration. Because of this reason, every 5 days reminders to those who hadn't previously responded the questionnaire were sent out. Furthermore, in order to boost response rates, they would get up to 5% off promo codes (depending on the price of product) limited to 1 time use per customer till the end of November 2017.

Filling the fields like name and characteristics of participants for the questionnaire wasn't compulsory, so they could fully express their opinions. After completing the questionnaire they sent them back to the researcher through email. Furthermore, with the help of collected data, proposed hypotheses of the study were examined.

4.7. Statistical Techniques

For the purpose of data analysis, Multiple Regression method was adopted and the Statistical Package for the Social Science (SPSS 18.0) and AMOS software were utilized. Data analysis of this study includes descriptive and inferential statistics. Descriptive analysis was employed to explain the basic characteristics of the respondents and also determining the main features of variables (dependent and independent) of the study in quantitative terms. Inferential statistics includes different sections as normality of variables, reliability and validity analysis, Confirmatory Factor Analysis (CFA), Pearson Correlation Coefficient and Multiple Regression analysis for hypotheses testing.

5. DATA ANALYSIS

5.1. Introduction

Analytical results of the quantitative data collecting from 416 questionnaires are presented in this chapter that examines the mentioned hypotheses of the study and verifies their validation for the purposes of the present research. The data collected through the before-mentioned procedure was analyzed from different prospective. Various statistical analyses including descriptive and inferential statistics were conducted. In descriptive statistics, which is considered as preliminary analysis, demographic characteristics of the respondents and also related statistics of the variables are summarized in order to clarify the understanding of the presented data. Furthermore inferential statistics includes normality of variables, reliability and validity test of questionnaire, multiple regression analysis and hypotheses testing. The testing was done with SPSS 18.0 and AMOS software.

5.2. Descriptive Statistics

5.2.1. Demographic Characteristics of Respondents

As talked above, 416 valid questionnaires were collected. This part provides background information and presents the descriptive data of those respondents. The first part of the questionnaire examined the basic characteristics of the participants including gender, age, education level, profession, monthly income, Internet usage frequency, online shopping experience and mostly used device for online shopping. All of them were examined with single-choice questions. Table 5.1 presents the

demographic profile of respondents.

Table 5.1: Demographic Profile of Respondents.

Demographic Profile	Frequency	Percentage (%)
Gender		
Male	297	71.39
Female	119	28.61
Age		
Under 20	50	12.02
20-29	175	42.07
30-39	154	37.02
40-49	29	6.97
Over 50	8	1.92
Education		
High School or Less	19	4.57
Diploma	24	5.77
Associate Degree	49	11.78
Bachelor	196	47.12
Post Graduate or Above	128	30.77
Profession		
Student	58	13.94
Employee	121	29.09
Self Employed	113	27.16
Other	99	23.80
Unemployed	25	6.01
Monthly Income (IRR)		
Less than 10.000.000	17	4.09
10.000.001-20.000.000	83	19.95
20.000.001-30.000.000	137	32.93
30.000.001-40.000.000	104	25.00
More than 40.000.001	75	18.03
Internet Usage Frequency		
Every day	326	78.37
4-5 Times a Week	79	18.99
1-3 Times a Week	11	2.64
Once a Month	0	0

(Continued)

Table 5.1.: Demographic Profile of Respondents (continued).

Demographic Profile	Frequency	Percentage (%)
Online Shopping Experience		
Recently	101	24.28
1-3 Years	137	32.93
4-6 Years	159	38.22
7+ Years	19	4.57
Mostly Used Device for Online Shopping		
Laptop	227	54.57
Smart Phone	154	37.02
Tablet	29	6.97
Other	6	1.44

* Note: The sample size (n) is 416.

**Note: Percentages may not add up to 100% due to missing data.

As it is presented in Table 5.1, the majority number of the respondents relates to male accounting for 71.39%, whereas the number of female respondents is 28.61%. In regards to age groups, most of the respondents aged from 20 to 29 years old (42.07%) followed by the respondents whose age ranged from 30 to 39 (37.02%). As for educational level, the respondents who had bachelor degrees are in the majority (47.12%) followed by post graduate or above (30.77%). The majority percentage of the profession relates to employees with 29.09%. Furthermore, 32.93% of the respondents have monthly income between 20.000.001-30.000.000 IRR. Also majority of the respondents (78.37%) use Internet every day. Regarding online shopping experience, majority of the respondents have the experience between 4-6 years (38.22%) followed by experience between 1-3 years (32.93%). And the last item relating to those who use Laptop most for their online shopping (54.57%) followed by smart phone (37.02%).

As it is clear, most respondents were experienced Internet users who were young and well-educated that had significant online shopping experiences.

5.2.2. Descriptive Statistics of Variables

Descriptive statistics of the dependent and independent variables including mean, standard deviation, skewness, kurtosis, minimum and maximum were computed to determine the main features of the collected data in quantitative terms. All the items of questionnaire, were based on a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree). The details of independent and dependent variables are presented in Table 5.2 and 5.3 accordingly.

Table 5.2: Descriptive Statistics of Independent Variables.

Variable	N	Mean	Std. Dev.	Skewness	Kurtosis	Min	Max
Website Design	416	3.30	0.64	-0.53	0.93	1.00	5.00
Information Quality	416	3.54	0.78	-0.60	0.46	1.00	5.00
Website Usability	416	3.38	0.80	-0.16	-0.51	1.00	5.00
Order Fulfillment Quality	416	3.44	0.77	-0.34	0.22	1.00	5.00
Security and Privacy	416	3.57	0.77	-0.37	-0.27	1.20	5.00
Trust	416	3.55	0.81	-0.38	0.01	1.00	5.00

Table 5.3: Descriptive Statistics of Dependent Variable.

Variable	N	Mean	Std. Dev.	Skewness	Kurtosis	Min	Max
Customer Satisfaction	416	3.46	0.66	-0.07	-0.54	1.80	5.00

Ranging from 1.00 to 5.00, all six independent variables (website design, information quality, website usability, order fulfillment quality, security and privacy and also trust) and one dependent variable (customer satisfaction) with the mean values greater than midpoint 3.00 are showing the significant positive trend. The related histograms of each variable are presented in Appendix D.

5.3. Inferential Statistics

Data were examined using Multiple Regression analysis that it comprises elements of confirmatory factor analysis (CFA) and linear regression, to reveal the causal relationship between the considered factors and customer satisfaction through e-commerce.

5.3.1. Normality of Variables

Some scholars like Royston (1982) and Shapiro and Wilk (1965) believed that population of the sample data should be normally distributed. The reason is that without normality requirement, the results of the analysis will not be accurate. For this research, Kolmogorov-Smirnov (K-S) test was used to be sure about the normality of the variables including independent and dependent. If we assume the test as:

H0: Distribution is normal (Sig \geq 0.05).

H1: Distribution isn't normal (Sig $<$ 0.05).

Table 5.4: One-Sample Kolmogorov-Smirnov Test.

Variable	N	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)
Customer Satisfaction	416	1.216	.213
Website Design	416	1.291	.071
Information Quality	416	1.281	.077
Website Usability	416	1.251	.102
Order Fulfillment Quality	416	1.319	.063
Security and Privacy	416	1.330	.059
Trust	416	1.260	.091

According to Table 5.4, obtained values of all variables are greater than 0.05, which can be concluded that all variables are normally distributed and so H0 is accepted.

5.3.2. Reliability and Validity Analysis

Before carrying out empirical analysis of the research, reliability and validity of the questionnaire must be evaluated (Valli 2010, pp. 103-127). In other words, studying the properties of measurement scales and composed scales of the items is important.

Reliability refers to the stability or consistency of the results. So the researcher implemented Cronbach's coefficient alpha (Cronbach's α), which is the most popular test of reliability used by many researches that would test the reliability of internal consistency of the six variables involved in the questionnaire. Besides, possibility of using the data for further analysis is checked (Hair et al., 1998). The standard value of reliability is 0.7 (Hair et al. 1998, Pallant 2007). The reliability coefficients or in other words Cronbach's alpha of every IV and DV is depicted in Table 5.5.

Table 5.5: Reliability Measurement for Research Variables.

Variable	Number of Items (N)	Cronbach's Alpha (α)
Website Design	5	.880
Information Quality	5	.735
Website Usability	5	.788
Order Fulfillment Quality	5	.744
Security and Privacy	5	.725
Trust	5	.875
Customer Satisfaction	6	.844
Total	36	.885

As it is obvious from the Table 5.5, overall reliability coefficients of all six IVs and DV are strong and above 0.70 ($\alpha > 0.70$) which is considered as the generally accepted criteria and ranged from 0.72 to 0.88. This points out that high internal consistency for all six variables are acceptable to excellent measures. So results show that instrument

which was used for this research is suitable and reliable for further statistical analysis and estimation (Nunnally 1967).

Validity is defined by Ronkainen et al. (2011) as the quality of the research in which data is collected in a proficient manner and the research explains the phenomenon it examines. Regarding validity, previously validated measurements from the previous studies were implemented to ensure the validity of the measurements. So content validity is achieved.

Considering construct validity in terms of discriminant validity test, correlation analysis between the variables was performed. Based on the results in table, the correlations are low, in which the values are not higher than 0.8 (Bagozzi 1994). This indicates that the constructs are distinct from one another and considered as an acceptable level of discrimination.

Likewise, for construct validity in term of convergent validity, confirmatory factor analysis (CFA) was performed. Based on table in Appendix E, almost all of the individual factor loadings are more than 0.50 as recommended by Sanzo et al. (2003). In overall, these results confirm the measurement items of the same construct are highly correlated and convergent validity is achieved. Therefore, in conclusion based on the discriminant and convergent validity test, construct validity was achieved in this research.

5.3.3. Confirmatory Factor Analysis (CFA)

In the first step, Confirmatory Factor Analysis (CFA) was applied through using AMOS software to purify the all six scales with the objective of improving the congeneric measurement properties of them and assess the measurement model of the study (Anderson & Gerbing 1988). According to the results of CFA, the value of

CMIN/DF is 3.53. Value of GFI (goodness-of-fit-index) of model-fit measure is 0.904, which is recommended by Joreskog and Sorbom (1996) thus shows the goodness-of-fit of the proposed model. Values of PNFI (parsimony normalized fit index), TLI (Tucker-Lewis index) and CFI (comparative fit index) are 0.68, 0.91 and 0.81 (is marginal that it close with the cut-off value) respectively, which are considered as another set of statistical goodness-of-fit, supporting the hypotheses model. The value of root mean square error of the approximation (RMSEA) for the proposed model was obtained to identify the appropriate error estimates for the model before the model is acceptable (Hair et al. 2006). The related value is 0.078, which is below 0.08 (Browne & Cudeck 1993). Results are presented in Table 5.6 below:

Table 5.6: Model Fit Summary.

Indices	Value	Criteria	Result
CMIN/DF	3.534	<5	Good
p-value of (χ^2)	.001	>0.05	Bad
Goodness-of-fit index (GFI)	.904	>0.90	Good
Tucker-Lewis Index (TLI)	.910	>0.90	Good
Comparative Fit Index (CFI)	.812	>0.90	Mediocr e
Root Mean Square Error of Approximation (RMSEA)	.078	<0.08	Good
Parsimony Normed Fit Index (PNFI)	.680	>0.50	good

In sum, all of these results confirmed that the measurement model exhibited a fairly good fit based on the collected data of the study.

Appendix E shows factor loadings of observed variables (the questions) that were used in the measurement model. According to Appendix E, factor loadings of all items exceeded the threshold value of 0.4. So none of them was deleted.

Based on these, validity and reliability of the measurement scales of this study has

been proved, so further discussion on analyzing the relationship between the independent variables (website design, information quality, website usability, order fulfillment quality, security and privacy and also trust) and dependent variable (customer satisfaction) will be done.

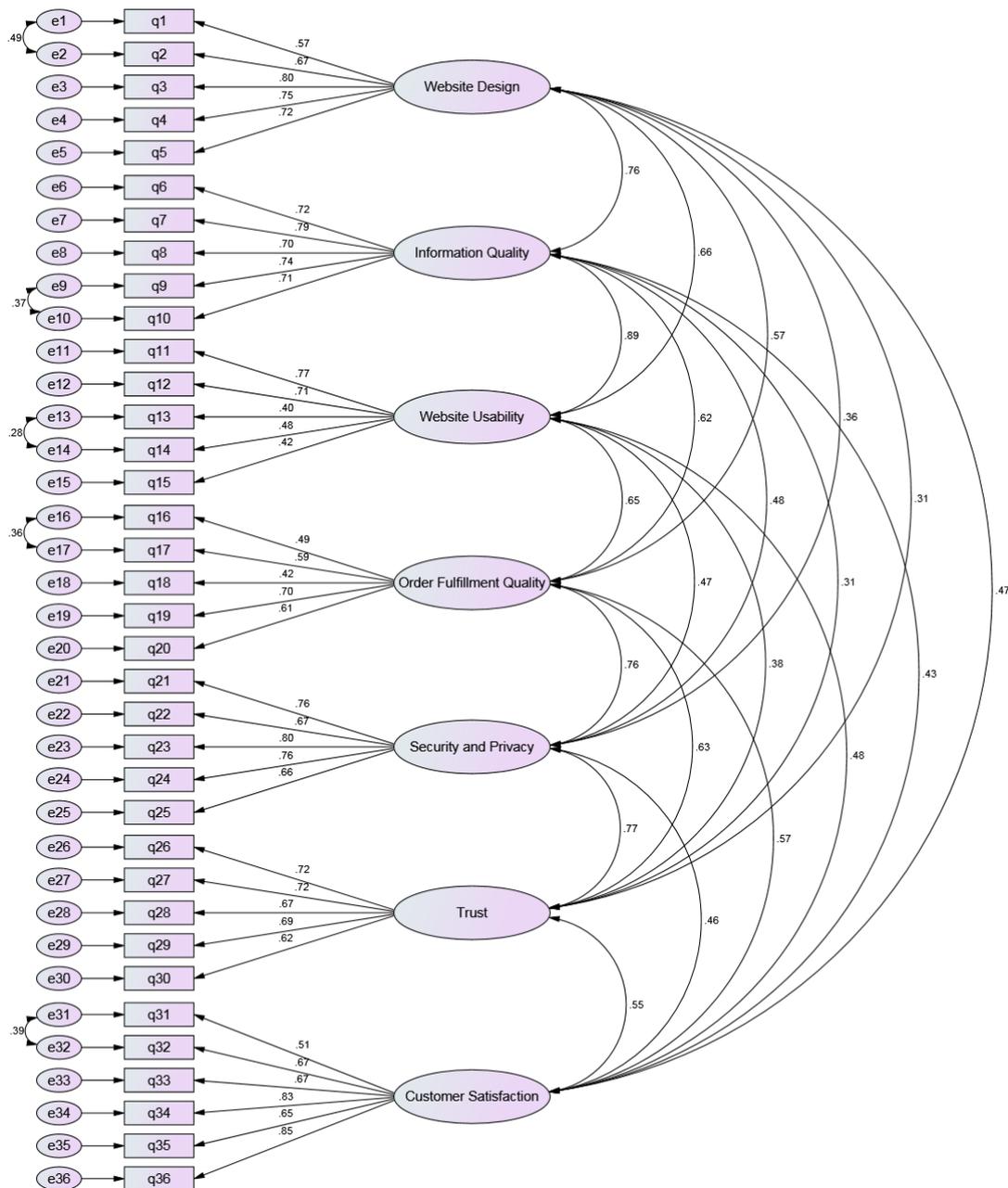


Figure 5.1: The Result of the CFA on Customer Satisfaction

5.3.4. Pearson Correlation Coefficient

Pearson Correlation coefficient analysis was conducted to assess if any correlation between the variables of the study existed (Jahangir & Begum 2008). If the value of correlation coefficient ranges from 0.10 to 0.29, it is considered as weak. Ranging from 0.30 to 0.49 is considered as medium and also ranging from 0.50 to 1.0 is considered as strong (Wong & Hiew 2005). Also if the value of correlation coefficient be below the threshold of 0.8, indicating that none of studied variables have a high correlation with each other.

Table 5.7: Pearson's Correlation Coefficient between the Research Variables.

Variable	Customer Satisfaction	Website Design	Information Quality	Website Usability	Order Fulfillment Quality	Security and Privacy	Trust
Customer Satisfaction	1	.474**	.598**	.548**	.568**	.505**	.554**
Website Design	.474**	1	.346**	.368**	.323**	.192**	.484**
Information Quality	.598**	.346**	1	.477**	.525**	.367**	.532**
Website Usability	.548**	.368**	.477**	1	.464**	.152**	.556**
Order Fulfillment Quality	.568**	.323**	.525**	.464**	1	.284**	.489**
Security and Privacy	.505**	.192**	.367**	.152**	.284**	1	.197**
Trust	.554**	.484**	.532**	.556**	.489**	.197**	1

** . Correlation is significant at the 0.01 level (2-tailed).

According to Table 5.7, all correlation coefficients between study variables were well below the maximum point of 0.8. As it is clear, there is significantly strong correlation between five variables (information quality, website usability, order fulfillment

quality, security and privacy and also trust) as the respective correlations are above 0.5 ($r > 0.5$) and there is a moderate correlation between one variable (website design) as the respective correlation is 0.47 with customer satisfaction. Furthermore, the sig (2-tailed) values are less than 0.05 ($p < 0.05$) indicated that there are statistically significant correlations between all variables (see Appendix F). Additionally, correlation between constructs ranged from 0.152 to 0.598, with the correlations of no pair of measures exceeding the criterion (0.9 and above) (Hair et al., 1998). So all six variables show significant relationship with customer satisfaction that the relationship between six independent variables and customer satisfaction are supported. In other words, increase or decrease in any of six independent variables causes increase or decrease on the level of customer satisfaction.

5.3.5. Multiple Regression Assumption Test

In this study, multiple regression analysis was employed to analyze the factors affecting the level of customer satisfaction in Digikala Company. The reason for choosing this method is that it is broadly applicable to analyze a hypothesis in the behavioral science and business area of study (Cohen et al. 2013). The researcher applied SPSS 18.0 to code, enter and compute the measurements of the multiple regression for the study.

In our research, there are six independent variables (Website Design X1, Information Quality X2, Website Usability X3, Order Fulfillment Quality X4, Security and Privacy X5, and Trust X6) and one dependent variable (Customer Satisfaction Y). Multiple regression is a constructive statistical technique that can provide the interaction between a set of different independent variables and one dependent variable (Hair et al. 2005), which can be shown in the regression model. We assumed an equation as below (5.1).

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \epsilon \quad (5.1)$$

Needed data of this equation including α and β coefficients can be found in the Coefficients Table 5.12. In the first step, linear multiple regression analyze with the method of enter was employed.

Several important values of multiple regression analysis is as following:

a) Autocorrelation Test: For the measurement of the statistical independence of the errors, Durbin-Watson test was applied. As it is shown in Table 5.8, Durbin-Watson is equal to 2.136. It is within the acceptable range of 1.5 to 2.5 (Norusis 1995). Therefore, there is no evidence of autocorrelation in the errors.

Table 5.8: Durbin-Watson Test for Autocorrelation.

Model	R	R Square	Durbin-Watson
1	.786 ^a	.618	2.136

a. Predictors: (Constant), Trust, Security and Privacy, Website Design, Order Fulfillment Quality, Website Usability, Information Quality
b. Dependent Variable: Customer Satisfaction

Furthermore Figure 5.2 presents a histogram of standardized residuals from the multiple regression analysis. We can see that the residuals are approximately normal indicating the acceptance of the normality assumption.

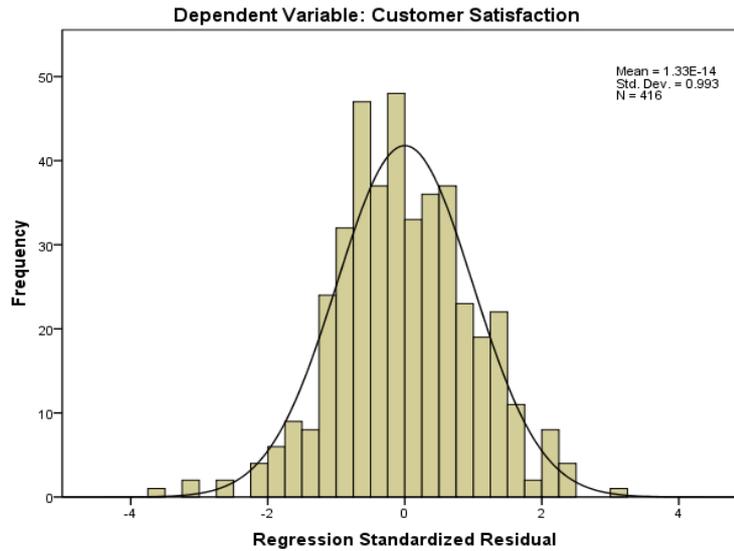


Figure 5.2: Histogram of Standardized Residuals

b) Multicollinearity Test: Multicollinearity is to measure if two or more variables of the model are correlated with each other, which it provides unnecessary information. According to Bruin (2006) if the value of tolerance level be more than 0.1, so multicollinearity does not exist. Because this value presents variance percentage in the predictor that can't be accounted for by other predictors. Also according to Robert (2007), VIF should be less than 10. Results are as below:

Table 5.9: Tolerance and VIF Test for Multicollinearity.

Variable	Collinearity Statistics	
	Tolerance	VIF
Website Design	.739	1.354
Information Quality	.560	1.785
Website Usability	.613	1.630
Order Fulfillment Quality	.627	1.596
Security and Privacy	.845	1.184
Trust	.523	1.912

Based on collinearity statistics that are presented in Table 5.9, tolerance values of all independent variables are greater than 0.1: website design (0.739), information quality

(0.560), website usability (0.613), order fulfillment quality (0.627), security and privacy (0.845) and trust (0.523). The VIF values for these variables are: website design (1.354), information quality (1.785), website usability (1.630), order fulfillment quality (1.596), security and privacy (1.184) and trust (1.912). Thus these results indicate no multicollinearity exists.

c) R Square: With the help of R Square, related data about explanation of the model by independent variables can be presented. It is used to test if the collected data are closely fit to the regression line. R Square ranges between 0 to 1. As the value is near to 1, the more variable the model becomes (see Table 5.10).

Table 5.10: Model Summary^b.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.786 ^a	.618	.612	.40919

a. Predictors: (Constant), Trust, Security and Privacy, Website Design, Order Fulfillment Quality, Website Usability, Information Quality

b. Dependent Variable: Customer Satisfaction

Explanation of changes in dependent variable which is caused by changes in independent variable(s) can be explained via determination of coefficients. In other words, in this research the percentage of variation in the dependent variable (customer satisfaction) is explained by all the six independent variables (website design, information quality, website usability, order fulfillment quality, security and privacy and also trust).

In our model summary presented in Table 5.10, six independent variables of the study that were examined explain 61.8% of variance in customer satisfaction at Digikala Company as represented by the R^2 . In social science, this result is good, since it is so

difficult to predict human behavior and also there are so many other influencing determinants. Therefore, this implies that other factors which were not explored in this study add to 38.2% discrepancy in the dependent variable. So further researches should be done to scrutinize other factors impinge on customer satisfaction in Iran.

d) ANOVA F-value and Significant Value: Assessment of a statistical difference in more than two independent means is calculated by Analysis of Variance (ANOVA) in which every detail regarding levels of variability within a regression model and basis for tests of significance are provided. According to Weisberg (2005) the “F column” provides a statistics for testing the hypothesis that all $\beta \neq 0$ against the null hypothesis that $\beta = 0$. If all independent variables don't have significant impact on a dependent variable, the null hypothesis of ANOVA will be accepted.

Table 5.11: ANOVA^b.

Model		Sum of Squares	df	Maen Square	f	Sig.
1	Regression	110.579	6	18.430	110.073	.000 ^a
	Residual	68.480	409	.167		
	Total	179.059	415			

a. Predictors: (Constant), Website Design, Information Quality, Website Usability, Order Fulfillment Quality, Security and Privacy, Trust

b. Dependent Variable: Customer Satisfaction

Based on results of Table 5.11, ANOVA F-value is 110.073 with the significant value of 0.001, which is less than 0.05. So above-mentioned null hypothesis of ANOVA is rejected. We conclude that there is at least one independent variable among six ones, which has a significant effect on customer satisfaction.

e) P-value

The null hypothesis in the ANOVA test was rejected. So we needed to further study which factor of the six independent variables are influencing the dependent variable. So we looked at the p-value. If a p-value is less than 0.05, we can tell that the independent variable has a significant effect on the dependent variable. As presented in the Table 5.12, all p-values are less than 0.05. That indicates all the independent variables have impact on the customer satisfaction.

Table 5.12: Coefficients^a.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.019	.140		.136	.892		
Website	.166	.036	.163	4.590	.000	.739	1.354
Design				0	0		4
Information Quality	.143	.034	.170	4.154	.000	.560	1.785
Website Usability	.171	.032	.209	5.361	.000	.613	1.630
Order Fulfillment	.156	.033	.185	4.777	.000	.627	1.596
Quality				7	0		6
Security and Privacy	.261	.029	.304	9.134	.000	.845	1.184
Trust	.096	.034	.118	2.801	.005	.523	1.912

a. Dependent Variable: Customer Satisfaction

5.3.6. Results of Multiple Regression Analysis

In this research, multiple regression analysis was conducted to provide pattern of relationship between independent and dependent variables, which developed the hypothesized model. This model included only customer satisfaction as a dependent variable and encompasses six independent variables including website design, information quality, website usability, order fulfillment quality, security and privacy and also trust. The overall fit of the model is acceptable.

The significance of each hypothesis in the research model, in other words the effect of each independent factor on customer satisfaction level in an e-commerce platform named Digikala Company in Iran was examined as following:

From the value Beta of each variable in Table 5.12, the regression equation of the optimal model of customer satisfaction in Digikala Company model can be summarized as below (5.2):

$$Y=0.019 + 0.166X_1 + 0.143X_2 + 0.171X_3 + 0.156X_4 + 0.261X_5 + 0.096X_6 + \epsilon \quad (5.2)$$

The regression equation above has established that all six factors into account be constant at zero, customer satisfaction will be at 0.019. So this includes testing of hypotheses 1 to 6 as below:

Hypothesis 1: *Website design of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.*

In order to test the first hypothesis of the study and identify that the two variables website design and customer satisfaction are related, results of the Table 5.12 shows that there is a significant positive relationship between them (t-value = 4.59 and $p < 0.05$). The data also depicts that a one standard deviation increase in website design

will result to 0.16 standard deviations increase in customer satisfaction. So **H1** is accepted.

***Hypothesis 2:** Information quality of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.*

For the second hypothesis, the relationship of the two variables information quality and customer satisfaction was examined and according to the Table 5.12, there is a significant positive relationship between them (t-value = 4.15 and $p < 0.05$). In other words, a one standard deviation increase in information quality will lead to 0.17 standard deviations increase in customer satisfaction. Therefore, **H2** is accepted.

***Hypothesis 3:** Website usability of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.*

Examining the third hypothesis of the study to identify the existence relationship between two variables named website usability and customer satisfaction, results of Table 5.12 depicted that there is a significant positive relationship between them (t-value = 5.36 and $p < 0.05$). It means that a one standard deviation increase in website usability implies standard deviations increase of 0.21 in customer satisfaction. As a result, **H3** is accepted.

***Hypothesis 4:** Order fulfillment quality of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.*

For testing the fourth hypothesis and identifying the relationship between the two variables order fulfillment quality and customer satisfaction, based on the results of Table 5.12 it was found that there is a significant positive relationship between them (t-value = 4.77 and $p < 0.05$). The data shows that a one standard deviation increase in order fulfillment quality will result to an increase of 0.18 standard deviations in

customer satisfaction. So, **H4** is accepted.

***Hypothesis 5:** Security and privacy of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.*

Regarding the fifth hypothesis and examining to see if there is a relationship that the two variables security and privacy and customer satisfaction, results of the Table 5.12 shows that there is a significant positive relationship between them (t-value = 9.13 and $p < 0.05$). The data also depicts that a one standard deviation increase in security and privacy will lead to 0.30 standard deviations increase in customer satisfaction. Thus, **H5** is accepted.

***Hypothesis 6:** Trust of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.*

In order to test the sixth hypothesis of the study and identify that the two variables trust and customer satisfaction are related, results of the Table 5.12 presents that there is a significant positive relationship between them (t-value = 2.80 and $p < 0.05$). In other words, a one standard deviation increase in trust implies standard deviations increase of 0.11 in customer satisfaction accordingly. So, **H6** is accepted.

As it is presented, all hypotheses were supported. Therefore, the model of the study is statistically significant in predicting how website design, information quality, website usability, order fulfillment quality, security and privacy and also trust influence the customer satisfaction in Digikala Company.

Also, from the value of Beta of Standardized Coefficients (see Table 5.12), it can be concluded that among six variables that have effect on customer satisfaction, Security and Privacy has the greatest influence with beta of 0.304 followed by Website

Usability (0.209), Order Fulfillment Quality (0.185), Information Quality (0.170), Website Design (0.163) and Trust (0.118).

5.4. The Summary of Hypotheses Results

The results of hypotheses testing are presented in Table 5.13, which is achieved through the SPSS testing. And the detailed results will be further discussed in Chapter 6.

According to Table 5.13, the correlation analysis concludes that all independents variables including website design, information quality, website usability, order fulfillment quality, security and privacy and also trust have significantly related to satisfaction level of customers of Digikala Company in Iran.

Table 5.13: Summary of Hypotheses Results.

Hypotheses	Result
H1: Website design of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.	Accepted
H2: Information quality of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.	Accepted
H3: Website usability of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.	Accepted
H4: Order fulfillment quality of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.	Accepted
H5: Security and privacy of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.	Accepted
H6: Trust of the e-store has a positive effect on customer satisfaction level in Digikala B2C e-commerce platform.	Accepted

6. DISCUSSION AND CONCLUSION

6.1. Discussion of the Findings

This section addresses the summary results of the study that includes the theoretical descriptions and analytical points. Determining the influencing factors on customer satisfaction in Digikala Company was the aim of this study. Kotler (2000) believed, “Satisfaction is a person’s feelings of pleasure or disappointment resulting from comparing a product’s perceived performance or outcome in relation to his/her expectations”. So, we conclude that satisfaction of customers is associated with their expectations. Digikala website was chosen for representative purposes only and the results do not necessarily generalize to other websites.

The idea behind this study was to scrutinize the relationship between six independent variables including website design, information quality, website usability, order fulfillment quality, security and privacy and also trust and one dependent variable named customer satisfaction for customers of Digikala Company. Besides, reviewing the literature, which were done on related topic, six hypotheses were proposed based on the mentioned variables and related collecting data was done through online questionnaire.

According to the customer background information of the study, male customers were in the majority, in the age group of 20 to 29; had Bachelor degree that were mostly employee with the monthly income between 20.000.001 to 30.000.000 IRR, they’d used Internet every day and had online shopping experience between 4-6+ years who

had done shopping mostly with laptop. Later SPSS 18.0 and AMOS software were conducted to test the proposed model and draw the conclusion.

The result of multiple regression presented that all hypotheses of the study were accepted that based on it the conceptual model of the study was supported (see Figure 3.1). Therefore, our efforts to uncover the elements were successful. In other words, all six variables (IV) had significant positive effect on customer satisfaction (DV). Based on their influencing degree, we can sort these six variables from the most to the least as: Security and Privacy, Website Usability, Order Fulfillment Quality, Information Quality, Website Design and Trust respectively. Thus, research questions are solved by the following results:

6.1.1. Website Design as an Independent Variable

Based on the findings, design of the presented website was positively related to customer satisfaction in Digikala Company. Website design is considered as one of the vital influencing features, which affects the perception of customer of online shopping (Kamariah & Salwani 2005; Liang & Lai 2000; Shergill & Chen 2005). Because as Zhang et al. (1999) believed it can be a cause of creating positive or negative feelings toward a website. The website of e-store should be readable and the feature of user interface should be visually appealing and tidy that allows customers to use the website without any effort.

This result supports the findings of some conducted studies (Kim et al. 2009; Shankar et al. 2003; Sultan & Uddin 2011; Wolfinbarger & Gilly 2003) which indicated that there is a significant positive relationship between features of website design and customer satisfaction. Whereas some researchers are in contrast with this result (Alam et al. 2008; Hila Ludin & Cheng 2014; Ranjbarian et al. 2012) who found that because of the lack of experience with other websites to compare with, the relationship between

website design and customer satisfaction is not accepted. Based on this study's findings, we conclude that website design has a positive significant influence on online customer satisfaction level in Digikala e-commerce platform.

6.1.2. Information Quality as an Independent Variable

According to the results of the study, it was found that information quality was positively related to the customers' satisfaction of Digikala Company. In other words, as the quality and appropriateness of the provided information and knowledge about products or services presenting on the website become well, the level of online customer satisfaction increases. According to Grabner-Kraeuter (2002), "Information quality is about all the information a customer can get from e-commerce platforms and e-retailers, for example, the product descriptions, the introductions of purchase procedure and the return policies". The presented information in the website must not only match customers' needs but also be accurate, complete, useful and up to date in order to fulfill customers' needs and wants and thus resulting in satisfaction. So information quality is one of the important factors helping to better purchasing decision, which influences customers' satisfaction level (Szymanski & Hise 2000).

Through proper information sharing, great amount of fear and risk of customers decrease and a more pleasing reflections of using e-stores is formed that as a result leads to increase in satisfaction level. Also if qualified online information is displayed, lack of physical contact will be compensated. This result is in line with some researches (Bennett et al. 2005; Chen & Dubinsky 2003; Hila Ludin & Chenge 2014; Kim et al. 2004; Lin 2007; Liu et al 2008; Park & Kim 2003; Sadeh et al. 2011) which were found that well-formed, true and in details presented information about products and services causes positive influence on customers' satisfaction which as a result has effect on their purchasing decision (Delarosa & Susilo 2013). Furthermore, relevance

and straightforwardness of the products and services' information is a must, otherwise customers will be confused and puzzled. Thus, based on above-mentioned issues, feature of the website in terms of information quality perceived by customers of Digikala Company has a positive significant effect on their satisfaction level.

6.1.3. Website Usability as an Independent Variable

It has been seen that usability of the website was another factor that determined customers' level of satisfaction in Digikala e-commerce platform. In other words, navigation functionality and perceived ease of use of the website which helped to access needed information without any effort had positive effect on customer satisfaction. Some researchers (Benbunan-Fich 2001; Kim & Moon 1998; Kuan et al. 2005; Nielson 2000) offered several different approaches for measuring website usability and believed that through this feature the process of acquiring the information for those who are seeking it becomes effortless. So it makes shopping enjoyable and satisfying which also economizes shopping time (Pastrick 1997). An e-commerce website with good design layout guarantees ease of use.

This findings supports the study of Cyr et al. (2008) who determined that customers value usability of a website even if they may not necessarily look for the best quality products or services. Furthermore, Davis (1986), Davis et al. (1989) and Venkatesh and Morris (2000), found that website usability affects the overall customers' satisfaction not only in terms of the use of a website, but also their behavior intentions toward online shopping. Based on results of the study, it can be conclude that website usability is related to the level of customer satisfaction in Digikala e-commerce platform positively.

6.1.4. Order Fulfillment Quality as an Independent Variable

Based on the results, order fulfillment quality had a positive significant effect on customer satisfaction in Digikala Company. In other words, the higher quality of order fulfillment caused the higher level online customer satisfaction among customers of Digikala Company. Order fulfillment quality including options of shipment, delivery speed and flexibility etc. is very important to overall purchase satisfaction so there must be investment in logistics. This indicates that if order fulfillment of an e-store is poor like slow delivery, occasional mistakes, etc., it causes the significant decrease in satisfaction level of its customers. The performance of order fulfillment can be ranged from high convenience to low convenience.

This result is consistent with the studies of Boyer et al. (2009), Rao et al. (2011) and Wolfenbarger and Gilly (2003), who believed that one of the reasons of successful e-commerce and satisfied customers relates to the high quality of the order fulfillment service through which customers feel safe about their ordered products. But the study that was conducted by Hila Ludin and Cheng (2014) is in contrast with this result. Thus, we draw the conclusion that order fulfillment quality is one of the key factors that affects customer satisfaction in Digikala e-commerce platform.

6.1.5. Security and Privacy as an Independent Variable

As it was presented, security and privacy feature of the website had positive significant effect on satisfaction level of customers in Digikala Company. This means one of the reasons of increase in satisfaction level of Digikala's customers was related to the high level of security and privacy in this website. It was mentioned in the fifth chapter that this dimension ranked first place within the six significant influencing factors. So Digikala customers are very suspicious. The cause of this may be related to the raised amount of cheating and fraud on the Internet. And also the existed security and privacy

problems in online shopping are far too different than those in traditional purchasing (Bhatnagar & Ghose 2004; Kim & Park 2013). Verifying this fact that security and privacy is the utmost concern by Digikala customers so they desire for higher protection during the transaction.

When customers fear about the risks of the security and privacy, their tendency to do online shopping reduce (Pavlou 2003; Nepomuceno et al. 2014). So customers will shop online, only when they feel protected (Aiken & Boush 2006). From the literature, it's clear that safe and secured transaction has been in the first place of attention from previous times. For example in 1995, UK launched Fraud free electronic shopping protocol named Secured Electronic Transaction (SET) which was later followed by some other European countries and Singapore.

This result is in line with studies by Koufaris and Hampton-Sosa (2004), Ranjbarian et al. (2012), Sadeh et al. (2011), Szymanski and Hise (2000) and Yoon (2002) who confirmed that security and privacy of a website affect e-commerce satisfaction. Whereas findings of the some studies don't support our findings in which security and privacy were considered as weak determinants of online customer satisfaction (Hila Ludin & Chenge 2014). Like Schaupp and Belanger (2005) who found that the customers perceive security and privacy as a standard feature of e-stores. Also Eid (2011) found that instead of contributing to satisfaction, security and privacy are more related toward trust. Consequently, based on the results the high-level transaction safety and privacy provided to customers will increase their level of satisfaction in Digikala e-commerce platform.

6.1.6. Trust as an Independent Variable

Based on the findings, trust could directly affect customers' satisfaction in Digikala Company. It means if perceived trust by the customers is high, their satisfaction toward

the website will be high. The reason is that online transactions have a high degree of uncertainties associated with them, so when a customer wants to do online shopping, he/she must trust the e-retailer and e-commerce infrastructure. This will happen in a situation when he/she is satisfied with the targeted website.

Some researches support this result, in which higher level of trust causes higher level of customer satisfaction in e-commerce (Gefen 2000; Geyskens et al. 1996; Oliver 1980; Someswar et al. 2002; Uzun & Poturak 2014; Zins 2001). Based on above-mentioned points, it's clear that from previous times up to now customers have considered trust as a key factor in online shopping. However, when compared with other factors, based on the findings of this study, it has not ranked as the most important feature. So it can be concluded that trust has significant positive effect on satisfaction level of customers in Digikala e-commerce platform.

6.2. Conclusion

This thesis was conducted to figure out the factors influencing the customer satisfaction level in one of the best and famous Iranian B2C e-commerce platforms, named Digikala Company. Different steps including implying qualitative and quantitative data collection and online survey application were done in order to assess and evaluate the factors that affect customer satisfaction. Considering these points, we present the following conclusion.

The study's findings attained its objectives. It means all six variables of online shopping features were found to be positive and significant predictors of satisfaction for the customers of Digikala Company. Thus, based on this information, marketers and e-retailors can make decisions in order to achieve customer satisfaction and consequently gain competitive advantage to take the first place in their business. For

some of the variables, results of some previous studies as it was mentioned, don't support this research's findings. The reason can be explained according to the existence of different issues like various cultures, perceptions, demographical differences, etc. that cause differences in preference amongst people. So e-retailors must study every detail of their business environment well so that they will be successful to address customers in a right way, to gain a proper place for their businesses above their competitors and also sustain their businesses in a longer run.

In summary, the study revealed that even though all of the customers were experienced users in online shopping, they valued security and privacy and website usability as the most influential dimensions that made them satisfied. The other factors including order fulfillment quality, information quality, website design and trust should also be considered since these variables supported customers' satisfaction leading to their decision to do online shopping.

6.3. Managerial Implications

Customer satisfaction is one of the important precursors to success for e-retailors. So they must work on enhancing e-commerce features because these features help to increase customers' satisfaction and as a result leading to increase in the percentage of purchasing. Through defining key variables and constructs affecting satisfaction level of online customers, e-retailors may invest more time for understanding them in modern market place, which causes growth all through the stages of their businesses, gain their competitive advantages in related fields, achieve higher performance and consequently avoid serious shortcomings that impede their businesses.

In this study, it was proved that six different independent factors had significant influence on customer satisfaction in Digikala e-commerce platform. Security and

privacy and website usability were the most important variables respectively. The next important ones were order fulfillment quality, information quality, website design and trust subsequently. So effect of each different variable became clear, conceptual model of the study was accepted through which managerial implications can be presented.

A website is considered as the communication tool between customers and businesses, through which with the help of e-commerce relationship between organizations and customers is made. It is e-retailors and e-commerce service designers' responsibility to satisfy their customers' needs and wants (Kennedy et al. 2001). So through careful analysis of the elements and features and also with the aim of satisfying all needs of their customers, retaining them and attracting the new ones, they must present a decent website.

One of the very first features of e-commerce platform is dealing with the security and privacy point of it. In other words, having a secure online shopping environment through building a website which runs state, preventing from attacks and also protecting customers' personal information. This means that e-stores should not misuse their customers' personal information and must keep their credit card information secure in order to gain satisfaction. Otherwise they will leave, never trust and use the website for future transactions. Web developers must pay attention to the quality of the provided information that is considered, as one of the main parts of the pre-sale stage; through which related information of products and services are described in details and accurate format.

Website designers and developers should design websites in a better way by adopting innovative features and offering new online services with high level of usability. Also the quality, efficiency and accuracy of the order fulfillment must be considered. This factor is placed both in-sale and post-sale stages. The in-sale stage includes timely

responding to questions of customers about the offered products or services, finding best and efficient solutions for logistics issues and etc. The after-sale stage is described in a situation that when e-retailers face with aftersales problems, they must have a positive attitude. In summary, they must deliver the right product in the right time and if there is any problem during the shopping process, solve them in order to satisfy their customers. When order fulfillment and consumer support performance aren't provided properly, innovativeness of the website becomes of no importance. Trust is fundamental to adoption of e-commerce and e-stores must act honestly which greatly determines customers' satisfaction level.

Therefore, e-retailors and e-commerce service designers should focus on above-mentioned points and revise possible changes in the e-commerce platforms and services based on their customers' needs, wants and expectations to increase the level of their satisfaction in e-commerce. Good provided services make customers happy and satisfied that cause them to visit the same e-store again to have the same pleasure shopping experience again. In summary, the website which is well-structured, well elaborated, attractive, etc. causes the increase in customers' satisfaction level that not only helps to keep existing customers but also the new ones will be acquired.

6.4. Suggestions for Future Research

Via conducting a study, each researcher wants to achieve his/her scientific objectives through which the whole study will be helpful to related groups. This research can be considered as a pioneer study that concentrated on the new dimension of customer satisfaction in online shopping business model and tried to fill the gap in Iranian B2C e-commerce platform. The presented model is a reasonable starting point for future investigations, which can be considered as motivating force for offering ideas and

guidelines to further research and provide suggestions regarding this area.

In the present research, the conceptual model for factors affecting online customer satisfaction were website design, information quality, website usability, order fulfillment quality, security and privacy and also trust. Review of the previous studies, showed that beside these factors there are many other factors, which affect online customer satisfaction. Thus for the future studies, it is suggested to add or modify another several important factors that can benefit e-commerce business, help to influence and determine online customer satisfaction more and better. Besides, larger samples from richer characters may show different results of the influence of each factor in this model so the sample size of the study can be expanded. Furthermore, the research can be applied on different nationalities in order to improve the reliability of the results more widespread.

Also future research can replicate the findings of this study to other e-business models or cover a range of different markets by evaluating different types of websites. Our findings showed that the security and privacy and website usability had the largest impact, followed by order fulfillment quality, information quality, website design and trust. E-retailors should focus on aligning and developing these factors to increase customer satisfaction, thereby keeping their businesses.

6.5. Limitations of the Study

The current study is related to discovering factors and examining their influence on customer satisfaction in Digikala Company. Although the researcher has already tried her best to do the study, the limitations couldn't be eliminated. Here they are summarized as the following:

1. The sample size was relatively small. Because the data was collected from

those who shopped online at least forth times monthly. Therefore, if future studies consider larger sample sizes, validity and generalization of the study, will be increased for sure.

2. We identified and examined six factors while there may be other factors influencing customer satisfaction in B2C e-commerce platforms.

3. There were time and cost constraints, so the study was done and considered only one e-store in Iran, while customers of other e-stores may have different perceptions and satisfaction levels. Thus it is unclear if the analytical results can be generalized to other online marketplaces or not.

4. The present study was considered and studied factors affecting only one dimension named customer satisfaction.

5. The research was done in Iran and it might be context specific. Due to the demographical backgrounds, cultural differences and various shopping behaviors of the customers, the results may only applicable to certain regions or countries with the same characteristics. So generalizability of the results to other countries might be limited in the area of customer satisfaction.

6. Finally, the presented practical suggestions of this study should be discussed, because maybe the author's interpretation of the findings and her experience during the whole research process exerted influence on the direction practicability and achievability of the these suggestions.

In summary, future researches can be done in larger and wider sample size with more detailed data that can explain more factors influencing customer satisfaction level and other dimensions in varied e-stores. As a result, it is suggested that e-retailers use this information in their decision making process and consider all of these variables in their provided services, including website design, information quality, website usability,

order fulfillment quality, security and privacy and also trust to increase customer's satisfaction and consequently achieve competitive advantage.





REFERENCES

- Abedinpour, AH 2017, *24k E-commerce websites are operating in Iran*. Viewed 27 October 2017, <<http://techrasa.com/2017/07/17/24k-e-commerce-websites-operating-iran/>>.
- Ahituv, N 1980, 'A systematic approach toward accessing the value of an information system', *MIS Quarterly*, vol. 21, pp. 61-75.
- Aiken, KD, & Boush, DM 2006, 'Trustmarks, objective-source ratings and implied investments in advertising: Investigating online trust and the context-specific nature of Internet signals', *Journal of the Academy of Marketing Science*, vol. 34, no. 3, pp. 308-323.
- Alam S, & Yasin, N 2010, 'An investigation into the antecedents of customer satisfaction of online shopping', *Journal of Marketing Development and Competitiveness*, vol. 5, no. 1, pp. 71-78.
- Alam, S, Bakar, Z, & Ismail, H 2008, 'Young customers online shopping: An empirical study', *Journal of Internet Business*, vol. 5, no. 1, pp. 81-98.
- Ali, P, & Sankaran, S 2011, 'Online shopping customer satisfaction and loyalty in norway', *Published by LAP Lambert Academic Publishing*.
- Altun, O 2012, 'Factors affecting the use of Internet banking; The case of Northern Cyprus', viewed 17 September 2017, <<http://i-rep.emu.edu.tr:8080/jspui/bitstream/11129/319/1/OzlemAltun.pdf>>.
- Anderson, EW, Fornell, C & Lehmann, DR 1994, 'Customer satisfaction, market share and profitability: Findings from Sweden', *The Journal of Marketing*, pp. 53-66.
- Anderson, JC & Gerbing DW 1988, 'Structural equation modeling in practice: A review and recommended two-step approach', *Psychological Bulletin*, vol. 103, pp. 411-423.
- Anderson, RE & Srinivasan, SS 2003, 'E-satisfaction and E-loyalty: A contingency framework', *Psychology & Marketing*, vol. 20, pp. 123-138.
- Bagozzi, RP 1994, *Structural equation model in marketing research*, Oxford: Blackwell Publishers.
- Bai, B, Law, R, & Wen, I 2008, 'The impact of website quality on customer satisfaction and purchase intentions: Evidence from Chinese online visitors', *International Journal of Hospitality Management*, vol. 27, no. 3, pp. 391-402.

- Barsauskas, P, Sarapovas, T & Cvilikas, A 2008, 'The evaluation of E-commerce impact on business efficiency', *Baltic Journal of Management*, vol. 3, no. 1, pp. 71-91.
- Bart, Y, Shankar, V, Sultan, F & Urban, GL 2005, 'Are the drivers and role of online trust the same for all websites and consumers? A large-scale exploratory empirical study', *Journal of Marketing*, vol. 69, no. 4, pp. 133-152.
- Bauer, HH, Grether, M & Leach, M 2002, 'Building customer relations over the Internet', *Industrial Marketing Management*, vol. 31, pp. 155-163.
- Bearden, WO, & Teel, JE 1983, 'Selected determinants of consumer satisfaction and complaint reports', *Journal of Marketing Research*, vol. 20, pp. 21-28.
- Benbunan-Fich, R 2001, 'Using protocol analysis to evaluate the usability of a commercial website', *Information and Management*, vol. 39, pp. 151-163.
- Bennett, R, Hartel, CEJ & Mccoll-Kennedy, JR 2005, 'Experience as a moderator of involvement and satisfaction on brand loyalty in a Business-to-Business setting', *Industrial Marketing Management*, vol. 34, pp. 97-107.
- Best, RJ 1997, *Market-based management: Strategies for growing customer value and profitability*, New Jersey: Prentice Hall.
- Bhatnagar, A, & Ghose, S 2004, 'Segmenting consumers based on the benefits and risks of Internet shopping', *Journal of Business Research*, vol. 57, no. 12, pp. 1352-1360.
- Boyer, KK, Prud'homme, AM, & Chung, W 2009, 'The last mile challenge: Evaluating the effects of customer density and delivery window patterns', *Journal of Business Logistics*, vol. 30, no. 1, pp. 185-201.
- Brendon, C 2002, *In E-commerce, customer trust is no longer an option: It is the requirement for success*, Proceedings of the ASQ's Annual Quality Congress, New Orleans, LA.
- Browne, MW, & Cudeck, R 1993, 'Alternative ways of assessing model fit'. In Bollen, KA & Long, JS (Eds.), *Testing structural equation models* Newbury Park, CA: Sage, pp. 136-162.
- Campo, S, & Yagüe, JM 2009, 'Exploring non-linear effects of determinants on tourists' satisfaction', *International Journal of Culture, Tourism and Hospitality Research*, vol. 3, no. 2, pp. 127-138.
- Canavan, O, Henchion, M & O'reilly, S 2007, 'The use of the Internet as a marketing channel for Irish specialty food', *International Journal of Retail & Distribution Management*, vol. 35, pp. 178-195.
- Cardozo, RN 1965, 'An experimental study of customer effort, expectation and satisfaction', *Journal of Marketing Research*, pp. 244-249.

- Casalo, LV, Flavian, C & Guinaliu, M 2007, 'The influence of satisfaction, perceived reputation and trust on a consumer's commitment to a website', *Journal of Marketing Communications*, vol. 13, pp. 1-17
- Chaffey, D 2009, *E-business and E-commerce management: Strategy, implementation and practice*, Prentice Hall Publications.
- Chan, E 1999, *What is E-commerce?*, viewed 1 September 2017, <<http://www.businessit.bf.rmit.edu.au/elsie/whatis/sld001.htm>>
- Chan, E, & Swatman, PMC 1999, 'Electronic commerce: A component model', *3rd Annual COLLECTeR Conference on Electronic Commerce*, 29 November 1999, Wellington, New Zealand.
- Chau, P, Au, G, & Tam, KY 2000, 'Impact of information presentation modes on online shopping: An empirical evaluation of a broadband interactive shopping service', *Journal of Organizational Computing and Electronic Commerce*, vol. 10, pp. 1-22.
- Chellappa, RK 2002, 'Customers' trust in electronic commerce transactions: The role of perceived privacy and perceived security', Emory University, Atlanta.
- Chen, Z 2005, 'Web-based shopping: consumer's attitudes towards online shopping in New Zealand', *Journal of Electronic Commerce Research*, vol. 6, no. 2, pp. 79-94.
- Chen, Z, & Dubinsky, AJ 2003, 'A conceptual model of perceived customer value in E-commerce: A preliminary investigation', *Psychology and Marketing*, vol. 20, no. 4, pp. 323-347.
- Childers, T, Carr, C, Peek, J, & Carson, S 2001, 'Hedonic and utilitarian motivations for online retail shopping behavior', *Journal of Retail*, vol. 77, pp. 511-535.
- Clarke, R 1999, 'Electronic commerce definitions', viewed 7 September 2017, <<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.90.445&rep=rep1&type=pdf>>
- Cochran, WG 1977, *Sampling techniques*, 3rd edn, New York: John Wiley & Sons.
- Cohen, J, Cohen, P, West, SG, & Aiken, LS 2013, *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*, Routledge.
- Cyr, D 2008, 'Modeling website design across cultures: Relationships to trust, satisfaction and online customer loyalty', *Journal of Management Information Systems*, vol. 24, no. 4, pp. 47-72.
- Cyr, D, Kindra, GS, & Dash, S 2008, 'Website design, trust, satisfaction and e-loyalty: The Indian experience', *Online Information Review*, vol. 32, no. 6, pp. 773-790.

- Davis, FD 1986, 'A technology acceptance model for empirically testing new end-user information systems: Theory and results', PhD Thesis, MIT Sloan School of Management, Cambridge, MA.
- Davis, FD 1989, 'Perceived usefulness, perceived ease-of-use, and user acceptance of information technologies', *MIS Quarterly*, vol. 13, no. 3, pp. 319-340.
- Davis, FD, Bagozzi, RP, & Warshaw, PR 1989, User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*, vol. 35, no. 8, pp. 982-1003.
- Delarosa, MD, & Susilo, SN 2013, 'The antecedents of online customer satisfaction and customer loyalty', *Journal of Business and Retail Management Research*, vol. 7, no. 2, pp. 57-68.
- Devaraj, S, Fan, M, & Kohli, R 2002, Antecedents of B2C Channel Satisfaction and Preference: Validating E-commerce Metrics. *Information Systems Research*, vol. 13, no. 3, p. 316.
- Dharmesti, MDD, & Nugroho, SS 2012, The Antecedents of Online Customer Satisfaction and Customer Loyalty. *Paper presented at International Trade & Academic Research Conference*, London, UK.
- Eid, MI 2011, Determinants of E-commerce Customer Satisfaction, Trust and Loyalty in Saudi Arabia. *Journal of Electronic Commerce Research*, vol. 12, no. 1, pp. 78-93.
- Elia, M 2008, *Internet Marketing, Website Design and Consumer Behavior* (Master dissertation, University of Manchester, England). DOI: <https://studentnet.cs.manchester.ac.uk/resources/library/thesis_abstracts/MSc09/FullText/EliaMiranda.pdf>.
- Evanschitzky, H, Iyer, GR, Hessea, J, & Ahlerta, D 2004, 'Online customer satisfaction: A re-examination', *Journal of Retailing*, vol. 80, no. 3, pp. 239-247.
- Flavián, C, Guinalíu, M & Gurrea, R 2006, The role Played by Perceived Usability, Satisfaction and Consumer Trust on Website Loyalty. *Information & Management*, vol. 43, pp. 1-14.
- Forza, C 2002, Survey Research in Operation Management: A Process-based Perspective. *International Journal of Operation and Production Management*, vol. 22, no. 2, pp. 152-194.
- Fung, R & Lee, M 1999, E-commerce Trust: Exploring the Antecedent Factors. *Proceedings of the 15th Americas Conference on Information Systems*, pp. 517-519.
- Gao, X 2013, *The Influence of Mobile Website Quality on Consumer Satisfaction and Behavior*. (MS Thesis). NE: University of Nebraska-Lincoln.

- Gefen, D 2000, E-commerce: The Role of Familiarity and Trust. *Omega*, vol. 28, pp. 725-737.
- Gefen, D, & Straub, DW 2000, The Relative Importance of Perceived Ease of Use in IS Adoption: A Study of E-commerce Adoption. *Journal of Association for Information Systems*, vol. 1, no. 8, pp. 1-28.
- Gefen, D., & Straub, D.W 2003, Managing User Trust in B2C E-services. *E-service Journal*, vol. 2, no. 2, pp. 7-24.
- Geyskens, I, Steenkamp, J.B., Scheer, L.K. & Kuman, N 1996, The effects of trust and interdependence on relationship commitment: a transatlantic study, *International Journal of Research in Marketing*, vol. 3, pp. 303-317.
- Giese, JL & Cote, JA 2000, Defining Consumer Satisfaction. *Academy of Marketing Science Review*, vol. 1, pp. 1-34.
- Grabner-Kraeuter, S 2002, 'The Role of Consumers' Trust in Online-Shopping. *Journal of Business Ethics*, vol. 39, no. 1/2, pp. 43-50.
- Griffis, S.E., Rao, S., Goldsby, T.J., Voorhees, G.M., & Iyengar, D 2012, Linking Order Fulfillment Performance to Referrals in Online Retailing: An Empirical Analysis. *Journal of Business Logistics: JBL*, vol. 33, no. 4.
- Grönroos, C 1991, 'The marketing strategy continuum: Towards a marketing concept for the 1990s', *Management Decision*, vol. 29, no. 1, pp. 7-13.
- Gummerus, J., Liljander, V., Pura, M., & Allard, V.R. 2004, Customer Loyalty to Content-based Websites: The Case of an Online Health-care Service. *The Journal of Services Marketing*, vol. 18, no. 2, pp. 175-186.
- Guo, X., Ling, K.C, & Liu, M. 2012, Evaluating Factors Influencing Customer Satisfaction towards Online Shopping in China. *Asian Social Science*, vol. 8, no. 13, pp. 40-50.
- Gupta, M., Narasimhan, C., Niraj, R., & Foster, G. 2003, Understanding Customer Level Profitability Implications of Satisfaction Programs. Working Paper Series, *Teradata Center for Customer Relationship Management*, Duke University.
- Gupta, S., & Zeithaml, V 2006, 'Customer metrics and their impact on financial performance', *Marketing Science*, vol. 25, no. 6, pp. 718-739.
- Hair, JF, Anderson, RE, Tatham, R.L., & Black, W 1998, *Multivariate Data Analysis*. Fifth Edition. Upper Saddle River, NJ: Prentice-Hall.
- Hair, JF, Black, WC, Babin, BJ, Anderson, R., & Tatham, RL 2005, *Multivariate Data Analysis*. Sixth Edition. New Jersey: Prentice-Hall.
- Hair, JF, Black, WC, Babin, BJ, Anderson, RE, & Tatham, RL 2006, *Multivariate Data Analysis*, New Jersey: Pearson International Edition.
- Hila Ludin, I.HBt. & Cheng, BL 2014, Factors Influencing Customer Satisfaction and E-loyalty: Online Shopping Environment among the Young Adults.

- Management Dynamics in the Knowledge Economy*, vol. 2, no. 3, pp. 462-471.
- Ho, C., & Wu, W 1999, Antecedents of Customer Satisfaction on the Internet: An Empirical Study of Online Shopping. *Proceedings of the 32nd Hawaii International Conference on Systems Sciences*, pp. 1-9.
- Hoffman, DL, & Novak, TP 1996, Marketing in Hypermedia Computer-Mediated Environments: Conceptual Foundations. *Journal of Marketing*, Vol. 60, no. July, pp. 50-68.
- Hoffman, D.L., & Novak, T.P. 1998, Bridging the Racial Divide on the Internet. *Science*, vol. 280, pp. 390-391.
- Hou, Y 2005, *Service Quality of Online Apparel Retailers and Its Impact on Customer Satisfaction, Customer Trust and Customer Loyalty*. Greensboro: UMI Company.
- Howard, JA, & Sheth. J.N 1969, *The Theory of Buyer Behavior*, New York: Wiley.
- Jahangir N & Begum N 2008, The Role of Perceived Usefulness, Perceived Ease of Use, Security and Privacy, and Customer Attitude to Engender Customer Adaptation in the Context of Electronic Banking. *African Journal of Business Management*, vol. 2, no. 1, pp. 32-40.
- Jarvenpaa, S.L., & Todd, P.A 1997, Consumer Reactions to Electronic Shopping on the World Wide Web. *International Journal of Electronic Commerce*, vol. 1, pp. 59-88.
- Jianchi, X, & Xiaohong, C 2009, Customer Satisfaction of E-commerce Websites. *International Workshop on Intelligent Systems and Applications*, 1-5.
- Jie, YU, Subramanian, N, Ning, K, & Edwards, D 2015, Product Delivery Service Provider Selection and Customer Satisfaction in the Era of Internet of Things: A Chinese E-retailers' Perspective. *International Journal of Production Economics*, vol. 159, pp. 104-116.
- Kamariah, MN, & Salwani, AM 2005, *Determinants of online shopping intention*, pp. 167-172.
- Kennedy, MS, Ferrell, LK & Leclair, DT 2001, 'Consumers' trust of salesperson and manufacturer: An empirical study', *Journal of Business Research*, vol. 51, pp. 73-86.
- Kenny, T 1994, From Vision to Reality through Values. *Management Development Review*, vol. 7, pp. 17-20.
- Khristianto, W, Kertahadi, I, & Suyadi, I 2012, The Influence of Information, System and Service on Customer Satisfaction and Loyalty in Online Shopping. *International Journal of Academic Research*, vol. 4, no. 2, pp. 28-32.

- Kim, DJ, Ferrin, DL, & Rao, HR 2008, A Trust-based Consumer Decision-making Model in Electronic Commerce: The Role of Trust, Perceived Risk and their Antecedents. *Decision Support Systems*, vol. 44, pp. 544-564.
- Kim, HB, Kim, TT, & Shin, SW 2009, Modeling Roles of Subjective Norms and E-trust in Customers' Acceptance of Airline B2C E-commerce Websites. *Tourism Management*, vol. 30, pp. 266-277.
- Kim, HW, Xu, Y, & Koh, J 2004, A Comparison of Online Trust Building Factors between Potential Customers and Repeat Customers", *Journal of the Association for Information Systems*, vol. 5, no.10, pp. 392-420.
- Kim, J, & Moon, J 1998, Designing Emotional Usability in Customer Interface. *Interacting with Computer*, vol. 10, no. 1, pp. 1-29.
- Kim, S, & Park, H 2013, Effects of Various Characteristics of Social Commerce (S-commerce) on Consumers' Trust and Trust Performance. *International Journal of Information Management*, vol. 33, pp. 318-332.
- Kleindi, BA, & Burrow, JL 2005, *E-commerce Marketing*. Mason, Ohio: South Western.
- Korkmaz, N. 2002, Sorularla Internet ve E-ticaret Rehberi (Internet and E-commerce Guide with Questions). *Istanbul: ITO Publications*, pp. 52-53.
- Kotler, P 2000, *Marketing management: The millennium edition*. 10th edn, New Jersey, USA: Prentice-Hall.
- Koufaris, M, & Hampton-Sosa, W 2004, The Development of Initial Trust in an Online Company by New Customers. *Information and Management*, vol. 41, no. 3, pp. 377-397.
- Kuan, HH, Bock, GW, & Vathanopas, V 2005, Comparing the Effects of Usability on Customer Conversion and Retention at E-commerce Websites. *Proceedings of the 38th Hawaii International Conference on System Sciences*.
- Laudon, KC, & Traver, CG 2002, *E-commerce: Business, Technology, Society*. Boston, Addison Wesley.
- Leng, J, & Zhang, T 2013, *The Influencing Factors of Customer Trust to Great Discount Online Shops: Based on the Chinese market*. DOI: <http://www.diva-portal.se/smash/get/diva2:641233/FULLTEXT01.pdf>
- Liang, T, & Lai, H 2000, Electronic Store Design and Consumer Choice: An Empirical Study. *Proceedings of the 33rd Hawaii International Conference on System Sciences*.
- Liao, C, Palvia, P, & Lin, HN 2006, The Roles of Habit and Website Quality in E-commerce. *International Journal of Information Management*, vol. 26, pp. 469-483.

- Lin, CC 2003, A Critical Appraisal of Customer Satisfaction and E-commerce. *Managerial Auditing Journal*, vol. 18, pp. 202-212.
- Lin, HF 2007, The Impact of Website Quality Dimensions on Customer Satisfaction in the B2C E-commerce Context. *Total Quality Management and Business Excellence*, vol. 18, no. 4, pp. 363-378.
- Liu, C, Arnett, KP, Capella, LM, & Taylor, RD 2001, Key Dimensions of Web Design as Related to Consumer Response. *Journal of Computer Information Systems*, vol. 42, pp. 47-69.
- Liu, X, He, M, Gao, F, & Xie, P 2008, An Empirical Study of Online Shopping Customer Satisfaction in China: A Holistic Perspective. *International Journal of Retail & Distribution Management*, vol. 36, no. 11, pp. 919-940.
- Luo, J, Ba, S, & Zhang, H 2012, The Effectiveness of Online Shopping Characteristics and Well-designed Websites on Satisfaction. *MIS Quarterly*, vol. 36, no. 4, pp. 1131-1144.
- Lynch, PD, Kent, RJ, & Srinivasan, SS 2001, The Global Internet Shopper: Evidence from Shopping Tasks in Twelve Countries. *Journal of Advertising Research*, vol. 41, no. 3, pp.15-23.
- Malhotra, P, & Singh, B 2009, The Impact of Internet Banking on Bank Performance and Risk: The Indian Experience. *Eurasian Journal of Business and Economics*, vol. 2, no. 4, pp. 43-62.
- Manes, S 1997, Websites: Slow by design? *Informationweek*, (August, 4): 124.
- Mayer, R.C., Davis, J.H., & Schoorman, F. (1995). An Integrative Model of Organizational Trust. *Academy of Management Review*, vol 20, no. 3, pp. 709-734.
- Moliner, B 2004, *La formacio'n de la satisfaccio'n/insatisfaccio'n del consumidor y del comportamiento de queja: aplicacio'n al a'mbito de los restaurantes*, tesis doctoral, Departamento de Direccio'n de Empresas, Universidad de Valencia, Valencia.
- Molla, A, & Licker, PS 2001, E-commerce Systems Success: An Attempt to Extend and Respecify the DeLone and McLean Model of IS Success', *Journal of Electronic Commerce Research*, vol. 2, pp. 1-11.
- Morris, MG, & Turner, JM (2001). Assessing Users' Subjective Quality of Experience with the World Wide Web: An Exploratory Examination of Temporal Changes in Technology Acceptance. *International Journal of Human-Computer Studies*, 54(6), 877-901.
- Nah, F., & Davis, S 2002, HCI Research Issue in E-commerce. *Journal of Electronic Commerce Research*, vol. 3, no. 3, pp. 98-113.

- Nepomuceno, M.V., Laroche, M. & Richard, M 2014, How to Reduce Perceived Risk When Buying Online: The Interactions between Intangibility, Product Knowledge, Brand Familiarity, Privacy and Security Concerns. *Journal of Retailing and Consumer Services*, vol. 21, pp. 619-629.
- Nielsen, J 2000, *Designing Web Usability*, Indianapolis, New Riders Publishing.
- Norusis, M.J 1995, *SPSS 6.1: Guide to Data Analysis*, Englewood Cliffs New Jersey: Prentice-Hall, p. 570.
- Nunnally, JC 1967, *Psychometric Theory*. New York: McGraw-Hill.
- OECD 1999a, *Policy and Regulation Issues for the Network-Based Content Services, Paris: Organization for Economic Cooperation and Development (Working Party on the Information Economy)*, Doc. DSTI/ICCP/IE(96)9/FINAL.
- OECD 2000a, *Electronic Commerce: Existing GATS Commitments for Online Supply of Services, Paris: Organization for Economic Cooperation and Development (Trade Directorate)*, Doc. TD/TC/WP(99)37/Final.
- OECD 2000, *Electronic Commerce: Initial Survey of Unilateral Liberalization and Facilitation Measures, Paris: Organization for Economic Cooperation and Development (Trade Directorate)*, Doc. TD/TC/WP(99)38/Final.
- OECD 2000c, *Quantification of the Costs to National Welfare of Barriers to Trade in Services, OECD Working Party of the Trade Committee Scoping Paper, 4-5 December, Paris: Organization for Economic Cooperation and Development*.
- Oliver, RL 1980, A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions. *Journal of Marketing Research*, XVII, November.
- Oliver, RL 1997, *Satisfaction: A Behavioral Perspective on the Consumer*. New York: The McGraw-Hill Companies Inc.
- Pallant, JF 2007, *A Step by Step Guide to Data Analysis Using SPSS for Windows: SPSS Survival Manual*. Third Edition. England: Open University Press.
- Parasuraman, A, Zeithaml, VA, & Berry, LL 1988, SERVQUAL: A Multiple Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*, vol. 64, pp. 12-40.
- Park, C, & Kim Y 2003, Identifying Key Factors Affecting Consumer Purchase Behavior in an Online Shopping Context. *International Journal of Retail & Distribution Management*, vol. 31, no.1, pp. 16-29.
- Parker, C, & Mathews, B.P 2001, Customer Satisfaction: Contrasting Academic and Consumers' interpretations. *Marketing Intelligence & Planning*, vol. 19, pp. 38-44.
- Pastrick, G 1997, *Secrets of Great Site Design*. InternetUser , pp. 80-87

- Pavlou, PA 2003, Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk with the Technology Acceptance Model. *International Journal of Electronic Commerce*, vol. 7, no. 3, pp. 101-134.
- Poon, S 1998, *Small Business Internet Commerce: A Study of Australian Experience*. Monash University, PhD Thesis, p. 73.
- Rahman, H, & Han, L 2011, *Customer Satisfaction in Ecommerce: A Case Study of China & Bangladesh*. University West, Master Thesis.
- Ranjbarian, B, Fathi, S, & Rezaei, Z 2012, Factors Influencing on Customers' E-satisfaction: A Case Study from Iran. *Journal of Contemporary Research in Business*, vol. 3, no. 9, pp. 257-272.
- Rao, S., Griffis, S.E., & Goldsby, TJ 2011, Failure to Deliver? Linking Online Order Fulfillment Glitches with Future Purchase Behavior. *Journal of Operations Management*, vol. 29, no. 7/8, pp.692-703.
- Reibstein, DJ 2002, What Attracts Customers to Online Stores and What Keeps Them Coming back? *Journal of the academy of Marketing Science*, vol. 30, pp. 465-473.
- Riggins, F, & Rhee, S 1998, Toward a Unified View of Electronic Commerce. *Communications of the ACM*, vol. 41, pp. 88-95
- Rodgers, W, Negash, S., & Suk, K. 2005, The Moderating Effect of Online Experience on the Antecedents and Consequences of Online Satisfaction. *Psychology and Marketing*, vol. 22, pp. 313-331.
- Rogers, EM 2003, *Diffusion of Innovations*. Fifth Edition, Free Press, New York.
- Ronkainen, S, Pehkonen, L, Lindblom-Ylänne, S, & Paavilainen, E 2011, *Tutkimuksen voimasanat*. Helsinki: WSOYpro Oy.
- Roy, MC, Dewit, O, & Aubert, BA 2001, The Impact of Interface Usability on Trust in Web Retailers. *Internet Research*, vol. 11, no. 5, pp. 388-398.
- Royston, P 1982, *An Extension of Shapiro and Wilks's W test for Normality to Large Samples*. *Applied Statistics*, vol.31, pp. 115-124.
- Ruby, R.D., & Miao, Z. 2010, Effects of Online Store Attributes on Customer Satisfaction and Repurchase Intentions. *International Journal of Retail & Distribution Management*, vol. 38, no. 7, pp. 482-496.
- Sadeh, S, Sadeh, E, Mousavi, L, & Asgari, F 2011, 'The effects of website quality dimensions on customer satisfaction in e-retailing system', *Middle-East Journal of Scientific Research*, vol. 10, no. 3, pp. 366-369.
- Saha, P, & Zhao, Y 2005, 'Relationship between online service quality and customer satisfaction: A study in Internet banking, M.A Thesis, Lulea University of Technology.

- Sanzo MJ, Santos ML, Vazquez R & Álvarez LI 2003, 'The effect of market orientation on buyer-seller relationship satisfaction', *Industrial Marketing Management*, vol. 32, pp. 327-345.
- Saunders, M, Lewis, P, & Thornhill, A 2009, *Research methods for business students*, 5th edn, Harlow: Pearson Education Limited.
- Schaupp, LC, & Belanger, F 2005, 'A conjoint analysis of online consumer satisfaction', *Journal of Electronic Commerce Research*, vol. 6, no. 2, pp. 95-111.
- Shankar, V, Smith, AK, & Rangaswamy, A 2003, 'Customer satisfaction and loyalty in online and offline environments', *International Journal of Research in Marketing*, vol. 20, no. 2, pp. 153-175.
- Shapiro, SS, & Wilk, MB 1965, *An analysis of variance test for normality* (complete samples, *Biometrika*, vol. 52, pp. 591-611.
- Shergill, GS, & Chen, Z 2005, 'Web-based shopping: Consumers' attitudes towards online shopping in New Zealand', *Journal of Electronic Commerce Research*, vol. 6, no. 2, pp. 79-94.
- Singh, M 2002, 'E-services and their role in B2C e-commerce', *Managing Service Quality: An International Journal*, vol. 12, no. 6, pp. 434-446.
- Someswar, K, Sam, R, & Sridhar, N 2002, 'A framework for analyzing e-commerce security', *Information Management & Computer Security*, vol. 10, no. 4, pp. 149-158.
- Sultan, MU, & Uddin, MN 2011, 'Consumers' attitude towards online shopping: factors influencing gotland consumers to shop online', Unpublished M.A Thesis, Högskolan på Gotland.
- Sun, T 2011, 'The roles of trust and experience in consumer confidence in conducting e-commerce: A cross cultural comparison between France and Germany', *International Journal of Consumer Studies*, pp. 330-337.
- Swan, JE, & Combs, LJ 1976, 'Product performance and consumer satisfaction: A new concept', *Journal of Marketing*, vol. 40, no. 7, pp. 25-33.
- Swatman, PMC 1996, 'Electronic Commerce: Origins and Future Directions', *1st Australian DAMA Conference*, Melbourne, Victoria.
- Szymanski, DM, & Hise, RT 2000, 'Online customer satisfaction: An initial examination', *Journal of Retailing*, vol. 76, no. 3, pp. 309-322.
- Tajzadeh Namin, A, & Etemadi, G 2011, 'Factors affecting e-fidelity of home internet users compared to travel services websites', *Tourism Management Journal*, vol. 7, no. 16, pp. 91-115.
- Uzun, H, & Poturak, M 2014, 'Factors affecting online shopping behavior of consumers', *European Journal of Social and Human Sciences*, vol. 3, no. 3, pp. 163-170.

- Valli, R 2010, *Kyselylomaketutkimus, ikkunoita tutkimusmetodeihin*, 3rd edn, Juva: WS Bookwell Oy.
- Valvi, AC, & Fragkos, KC 2012, 'Critical review of the e-loyalty literature: A purchase-centered framework, electronic commerce research' (In Press), no. 12, pp. 331-378.
- Venkatesh, V, & Morris MG 2000, 'Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behavior', *MIS Quarterly*, vol. 24, no. 1, pp. 115-139.
- Venkatesh, V, & Davis, FD 2000, 'A theoretical extension of the technology acceptance model: Four longitudinal field studies', *Management Science*, vol. 46, no. 2, pp. 186-204.
- Wang, H, Lee, MKO & Wang, C 1998, 'Consumer privacy concerns about Internet marketing', *Communications of the ACM*, vol. 41, no. 3, pp. 63-70.
- Weisberg, S 2005, *Applied linear regression*, 3rd edn, Hoboken NJ: Wiley.
- Wigand, R 1997, 'Electronic commerce: Definition, theory and context', *The Information Society*, vol. 13, no. 1, pp. 1-16.
- Wolfenbarger, M, & Gilly, MC 2003, 'EtailQ: Dimensionalizing, measuring and predicting etail quality', *Journal of Retailing*, vol. 79, no. 3, pp. 183-198.
- Wong, CC & Hiew, PL 2005, 'Diffusion of mobile entertainment in Malaysia: drivers and barriers', *Journal of Enformatika*, vol. 5.
- Yahia, IB 2005, 'Non-commercial B2C virtual communities: Definition and classification an exploratory qualitative study', *IADIS International Journal on WWW/Internet*, vol. 5, no. 1, pp. 129-144.
- Yin Yee Beh, V 2009, 'A Study on the Determinants of Customer Loyalty Using Internet Banking Website in Malaysia', MA Thesis, University of Malaya.
- Yoon, S 2002, 'The antecedents and consequences of trust in online purchase decision', *Journal of Interactive Marketing*, vol. 12, no. 2, pp. 47-63.
- Zeithaml, VA, Parasuraman, A, & Malhotra, A 2002, 'Service quality delivery through web sites: A critical review of extant knowledge', *Journal of the Academy of Marketing Science*, vol. 30, no. 4, pp. 362-375.
- Zhang, P, Von Dran, GM, Small, RV, & Barcellos, S 1999, 'Websites that satisfy users: a theoretical framework for web user interface design and evaluation', *Proceedings of the 32nd Hawaii International Conference on System Sciences*.
- Zhang, X, Prybutok, V, & Huang, A 2006, 'An empirical study of factors affecting e-service satisfaction', *Human Systems Management*, vol. 25, no. 4, p. 279.

- Zhou, L, Liu, J, & Lu, Y 2016, 'The main influencing factors of customer trust in china's import cross-border e-commerce business model', MA thesis, viewed 20 September 2017, <<http://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-298120>>.
- Zikmund, WG, Babin, BJ, Carr, JC, & Griffin, M 2010, *Business Research Methods*, 8th edn, Mason, HO: Cengage Learning.
- Zins, AH, 2001, 'Relative attitudes and commitment in customer loyalty models: Some experiences in the commercial airline industry', *International Journal of Service Industry Management*, vol. 12, pp. 269-294.
- Zwass, V 1996, 'Electronic commerce: Structures and issues', *International Journal of Electronic Commerce*, vol. 1, no. 1, pp. 3-23.



Internet Resources:

- Url-1**<<https://www.statista.com/statistics/603061/number-of-internet-users-in-middle-east-countries/>>, retrieved date: 24.09.2017.
- Url-2**<<http://www.internetworldstats.com/me/ir.htm>>
- Url-3** <<http://www.alexa.com/siteinfo/digikala.com>>
- Url-4**<<http://slideplayer.com/slide/4910193/>>

APPENDICES

APPENDIX A: Survey Questionnaire (English Version)

APPENDIX B: Survey Questionnaire (Persian Version)

APPENDIX C: Main Survey Items

APPENDIX D: Histogram for Descriptive Statistics of Variables

APPENDIX E: The Result of the CFA on Customer Satisfaction (Factor Loadings and Measures of Research Variables)

APPENDIX F: Correlations

APPENDIX A: Survey Questionnaire

(English Version)

Dear Sir/Madam,

My name is Giti Irantaj and I am a postgraduate student majoring in MBA in Istanbul Aydin University, Turkey. This questionnaire relates to my master thesis with the topic **“Factors Influencing Customer Satisfaction Level in an E-commerce Platform: A Case Study Analysis of Digikala in Iran”**. So in order to complete my thesis I have to make this survey and collect the related data.

This questionnaire contains two parts: the first part includes several questions about your background and the second part includes questions that help to analyze different variables influencing customer satisfaction in Digikala Company. All the answers you make should be based on your shopping experiences accordingly so there is no right or wrong answer. The result from this survey will be used in aggregate and treated with confidentiality and anonymity for academic research purposes. I would appreciate it very much if you could spend a few minutes of your time to answer the questions in the following pages.

Your kind cooperation and participation in the study is valued and highly appreciated.

Regards,

Giti Irantaj

Part I - Demographic Information

Directions: Please read the below and fill out the questionnaire.

1. Gender:

- Male
- Female

2. Age:

- Under 20
- 20-29
- 30-39
- 40-49
- Over 50

3. Education level:

- High School or under
- Diploma
- Associate Degree
- Bachelor
- Post Graduate or above

4. Profession:

- Student
- Employee
- Self-Employed
- Other
- Unemployed

5. Monthly income (IRR):

- Less than 10.000.000
- 10.000.001 - 20.000.000
- 20.000.001 - 30.000.000
- 30.000.001 - 40.000.000
- More than 40.000.001

6. Internet usage frequency (Smart phones, tablets, laptops, ...):

- Every day
- 4-6 times a week
- 1-3 times a week
- Once a month

7. Online shopping experience:

- Recently
- 1-3+ Years
- 4-6+ Years
- 7+ Years

8. Mostly used device for your online shopping:

- Laptop
- Smart phone
- Tablet
- Other

Directions: Please read the below and choose the most appropriate numbers, which present how you feel about these concerns below.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Row	Website Design	1	2	3	4	5
1	The overall design of the website is welcoming and visually pleasing.					
2	The links between the pages are clear.					
3	The website is clearly structured.					
4	As I see the Digikala website, I know that in which area it works.					
5	When interacting with the website, it provides me with tailored information (e.g. product recommendation).					
Information Quality						
6	I am able to find all the needed information.					
7	The information of Digikala website is regularly updated.					
8	The provided information about products and their features are correctly presented in the website.					
9	Texts and content of the provided information are easy to understand.					
10	It is easy to choose and make comparison with other products while shopping online.					
Website Usability						
11	The website is easy to navigate and simple to use.					
12	The website's links are problem free, accurate and pages load quickly.					
13	In the process of purchase, it's easy to master the flow of online shopping.					
14	The website is up and running all the time.					
15	The website's pages don't freeze after I put in all my information.					
Order Fulfillment Quality						
16	Always I've received all my purchased products as the one that I wanted (not with bad quality or different products, ...).					
17	Always I've received all my purchased products without any fracture.					
18	The website contains information on product availability when dealing/transacting.					
19	The website always deliver my orders on time.					

20	Order tracking details are available until delivery.						
Security and Privacy							
21	Digikala website is safe and reliable and won't exceed my account information into the hands of malicious persons.						
22	I consider that communication method of this online shop makes me feel safe.						
23	This shopping website has specific privacy policy.						
24	This website shows care in how it collects my personal information.						
25	While working with this website it does not affect my use of security-related concerns.						
Trust							
26	Based on my experience with this website in the past, I know it is a honest and trustworthy website.						
27	Based on my experience with this website in the past, I know it cares about its customers.						
28	Based on my experience with this website in the past, I know it is not opportunistic.						
29	Based on my experience with this website in the past, I know it is predictable.						
30	I know that Digikala website knows its market well and how to compete with its competitors.						
Customer Satisfaction							
31	In general, I'm satisfied with the design of the Digikala website.						
32	In general, I'm satisfied with the quality of the provided information in the website.						
33	In general, I'm satisfied with the usability of the Digikala website.						
34	In general, I'm satisfied with the quality of order fulfillment process of the Digikala website.						
35	In general, I'm satisfied with the security and privacy of the Digikala website.						
36	In general, I'm satisfied with the trust of the Digikala website.						

Thank you for taking your time to complete this questionnaire.

APPENDIX B: Survey Questionnaire

(Persian Version)

پاسخگوی محترم ،

من گیتی ایران تاج دانشجوی کارشناسی ارشد رشته MBA در دانشگاه آیدین استانبول ترکیه هستم. این پرسشنامه مربوط به پایان‌نامه کارشناسی ارشد با عنوان **تجزیه و تحلیل عوامل موثر بر میزان رضایت مشتریان در وب سایت های تجارت الکترونیک ایران (مطالعه وب سایت دیجی کالا)** است. به منظور تکمیل پایان نامه خود بایستی بعد از جمع آوری داده های مربوطه، به بررسی و تحلیل آن ها بپردازم.

این پرسشنامه شامل دو بخش می باشد: بخش اول شامل چندین سؤال در مورد پس زمینه شما و بخش دوم شامل سوالاتی است که به تجزیه و تحلیل متغیرهای مختلف که بر رضایت مشتریان در شرکت دیجی کالا تاثیر می گذارند مرتبط می شود. بنابراین تمام پاسخ هایی شما بایستی بر مبنای تجارب خرید شما از شرکت مذکور باشد. پس در نتیجه پاسخ درست یا غلط وجود ندارد. نتایج حاصل از این نظرسنجی جمع آوری شده و به صورت ناشناس برای اهداف پژوهشی و آکادمیک مورد استفاده قرار خواهد گرفت. بنابراین نظرات شما تعیین کننده نتایج این پژوهش خواهد بود. بدیهی است توجه دقیق به جملات و پاسخ صادقانه شما بر ارزش این پژوهش خواهد افزود. از اینکه وقت گرانبه‌ای خود را صرف تکمیل این پرسشنامه می فرمایید کمال تشکر را دارم.

با تشکر

گیتی ایران تاج

بخش اول: لطفا جملات زیر را به دقت خوانده و به تمام آن ها پاسخ دهید.

۱. جنسیت:

مرد زن

۲. سن:

زیر ۲۰ سال ۲۰ تا ۲۹ سال ۳۰ تا ۳۹ سال

۴۰ تا ۴۹ سال بالای ۵۰ سال

۳. میزان تحصیلات:

دبیرستانی و کمتر دیپلم کاردانی

کارشناسی تحصیلات تکمیلی

۴. شغل:

دانش آموز/دانشجو کارمند آزاد

سایر موارد بیکار

۵. میانگین درآمد ماهیانه (ریال):

کمتر از ۱۰,۰۰۰,۰۰۰ ۱۰,۰۰۰,۰۰۱ تا ۲۰,۰۰۰,۰۰۰

۲۰,۰۰۰,۰۰۱ تا ۳۰,۰۰۰,۰۰۰

۳۰,۰۰۰,۰۰۱ تا ۴۰,۰۰۰,۰۰۰ بیشتر از ۴۰,۰۰۰,۰۰۱

۶. میانگین کاربرد اینترنت (تلفن همراه، تبلت، لپ تاب و ..):

هر روز ۴ تا ۶ بار در هفته ۱ تا ۳ بار در هفته

۱ بار در ماه

۷. تجربه خرید اینترنتی:

اخیرا ۱ تا ۳ سال ۴ تا ۶ سال ۷ سال و به بالا

۸. بیشترین وسیله الکترونیکی مورد استفاده در خرید آنلاین:

لپ تاب تلفن همراه تبلت سایر موارد

				در زمان خرید آنلاین مراحل خرید به سهولت پیش می رود.	۱۳
				وب سایت دیجی کالا همیشه آماده خدمت رسانی است.	۱۴
				بعد از وارد کردن تمامی اطلاعات خود صفحات وب سایت با هیچ مشکلی مواجه نمی شوند.	۱۵
کیفیت روند تحویل سفارش					
				همیشه تمامی محصولات دریافتی مطابق موارد سفارش شده می باشد (یعنی تا بحال محصولات بی کیفیت و یا متفاوت و ... دریافت نکرده ام).	۱۶
				همیشه تمامی محصولات دریافتی را بدون شکستگی دریافت کرده ام.	۱۷
				همیشه می توان اطلاعات مربوط به موجودی کالا را هنگام خرید مشاهده کرد.	۱۸
				سفارشاتم را همیشه به موقع تحویل می گیرم.	۱۹
				همیشه پیگیری سفارشات تا لحظه دریافت در دسترس می باشد.	۲۰
امنیت و اطمینان					
				وب سایت دیجی کالا قابل اطمینان بوده و اطلاعات حساب من در دسترس افراد سودجو قرار نمی گیرد.	۲۱
				روش ارتباطی این وب سایت از حس امنیت برخوردار می باشد.	۲۲
				این وب سایت از قوانین حفاظتی خاصی برخوردار است.	۲۳
				درخواست جمع آوری اطلاعات شخصی با رعایت قوانین خاصی صورت می گیرد.	۲۴
				استفاده از این وب سایت مسائل امنیتی من را تحت تاثیر خود قرار نمی دهد.	۲۵
اعتماد					
				با توجه به تجربه کار من با این وب سایت از قابل اعتماد بودن آن اطمینان دارم.	۲۶

				با توجه به تجربه کار من با این وب سایت از حمایت آن نسبت به مشتریان اطمینان دارم.	۲۷
				با توجه به تجربه کار من با این وب سایت از سو استفاده گر بودن آن اطمینان دارم.	۲۸
				با توجه به تجربه کار من با این وب سایت از قابل اعتماد بودن آن اطمینان دارم.	۲۹
				با توجه به تجربه کار من با این وب سایت از حمایت آن نسبت به مشتریان اطمینان دارم.	۳۰
رضایت مشتری					
				به طور کلی از طراحی وب سایت دیجی کالا رضایت دارم.	۳۱
				به طور کلی از کیفیت اطلاعات ارائه شده در وب سایت دیجی کالا رضایت دارم.	۳۲
				به طور کلی از سهولت استفاده از وب سایت دیجی کالا رضایت دارم.	۳۳
				به طور کلی از کیفیت روند تحویل سفارش دیجی کالا رضایت دارم.	۳۴
				به طور کلی از امنیت و اطمینان وب سایت دیجی کالا رضایت دارم.	۳۵
				به طور کلی از قابل اعتماد بودن وب سایت دیجی کالا رضایت دارم.	۳۶

از همکاری شما متشکرم.

APPENDIX C: Main Survey Items

Code	Description	Source
Website Design		
WB1	The overall design of the website is welcoming and visually pleasing.	Elia, 2008 Gao, 2013
	طراحی کلی وب سایت مطلوب بوده و از لحاظ ظاهری خوشایند می باشد.	
WB2	The links between the pages are clear.	Elia, 2008
	ترتیب و پیوستگی بین صفحات مشخص می باشد.	
WB3	The website is clearly structured.	
	وب سایت دارای ساختار منظمی است.	
WB4	As I see the Digikala website, I know that in which area it works.	
	به محض ورود به وب سایت دیجی کالا کاملا بدیهی است که شرکت مذکور در چه زمینه ای به فعالیت می پردازد.	
WB5	When interacting with the website, it provides me with tailored information (e.g. product recommendation).	Gao, 2013
	هنگام کار با وب سایت اطلاعات مناسبی (همانند پیشنهاد کالا) در اختیار من قرار می گیرد.	
Information Quality		
INFQ1	I am able to find all the needed information.	Elia, 2008
	دسترسی به تمامی اطلاعات مورد نیاز امکان پذیر می باشد.	
INFQ2	The information of Digikala website is regularly updated.	Yin Yee Beh, 2009
	اطلاعات وب سایت به طور مداوم در حال بروز رسانی است.	
INFQ3	The provided information about products and their features are correctly presented in the website.	
	اطلاعات و ویژگی های ارائه شده محصولات کاملا صحیح می باشد.	

INFQ4	Texts and content of the provided information are easy to understand.	Saha & Zhao, 2005
	ساختار و مفاهیم اطلاعات ارائه شده کاملاً قابل درک است.	
INFQ5	It is easy to choose and make comparison with other products while shopping online.	Sultan & Uddin, 2011
	هنگام خرید آنلاین امکان انتخاب و مقایسه بین محصولات به آسانی امکان پذیر می باشد.	
Website Usability		
WU1	The Digikala website is easy to navigate and simple to use.	Saha & Zhao, 2005
	کاربرد وب سایت به سهولت امکان پذیر است.	
WU2	The website's links are problem free, accurate and pages load quickly.	Saha & Zhao, 2005 Yin Yee Beh, 2009
	لینک های وب سایت بی نقص بوده و صفحات به سرعت و به آسانی بارگیری می شوند.	
WU3	In the process of purchase, it's easy to master the flow of online shopping.	Leng & Zhang, 2012
	در زمان خرید آنلاین مراحل خرید به سهولت پیش می رود.	
WU4	The website is up and running all the time.	Saha & Zhao, 2005
	وب سایت همیشه آماده خدمت رسانی است.	
WU5	The website's pages don't freeze after I put in all my information.	
	بعد از وارد کردن تمامی اطلاعات خود صفحات وب سایت با هیچ مشکلی مواجه نمی شوند.	

Order Fulfillment Quality		
OFQ1	Always I've received all my purchased products as the one that I wanted (not with bad quality or different products, ...).	Ali & Sankaran, 2011
	همیشه تمامی محصولات دریافتی مطابق موارد سفارش شده می باشد (یعنی تا بحال محصولات بی کیفیت و یا متفاوت و ... دریافت نکرده ام).	
OFQ2	Always I've received all my purchased products without any fracture.	
	همیشه تمامی محصولات دریافتی را بدون شکستگی دریافت کرده ام.	
OFQ3	The website contains information on product availability when dealing/transacting.	Yin Yee Beh, 2009
	همیشه می توان اطلاعات مربوط به موجودی کالا را هنگام خرید مشاهده کرد.	
OFQ4	The website always deliver my orders on time.	Sultan & Uddin, 2011
	سفارشاتم را همیشه به موقع تحویل می گیرم.	
OFQ5	Order tracking details are available until delivery.	Zhou et al., 2016
	همیشه پیگیری سفارشات تا لحظه دریافت در دسترس می باشد.	
Security and Privacy		
SP1	Digikala website is safe and reliable and won't exceed my account information into the hands of malicious persons.	Altun, 2012
	وب سایت دیجی کالا قابل اطمینان بوده و اطلاعات حساب من در دسترس افراد سودجو قرار نمی گیرد.	
SP2	I consider that communication method of this online shop makes me feel safe.	Leng & Zhang, 2012
	روش ارتباطی این وب سایت از حس امنیت برخوردار می باشد.	
SP3	This shopping website has specific privacy policy.	
	این وب سایت از قوانین حفاظتی خاصی برخوردار است.	

SP4	This website shows care in how it collects my personal information.	Saha & Zhao, 2005
	درخواست جمع آوری اطلاعات شخصی با رعایت قوانین خاصی صورت می گیرد.	
SP5	While working with this website it does not affect my use of security-related concerns.	Altun, 2012
	استفاده از این وب سایت مسائل امنیتی من را تحت تاثیر خود قرار نمی دهد.	
Trust		
TR1	Based on my experience with this website in the past, I know it is a honest and a trustworthy website.	Sultan & Uddin, 2011 Yin Yee Beh, 2009
	با توجه به تجربه کار من با این وب سایت از قابل اعتماد بودن آن اطمینان دارم.	
TR2	Based on my experience with this website in the past, I know it cares about its customers.	Yin Yee Beh, 2009
	با توجه به تجربه کار من با این وب سایت از حمایت آن نسبت به مشتریان اطمینان دارم.	
TR3	Based on my experience with this website in the past, I know it is not opportunistic.	
	با توجه به تجربه کار من با این وب سایت از سو استفاده گر بودن آن اطمینان دارم.	
TR4	Based on my experience with this website in the past, I know it is predictable.	
	با توجه به تجربه کار من با این وب سایت از قابل اعتماد بودن آن اطمینان دارم.	
TR5	I know that Digikala website knows its market well and how to compete with its competitors.	
	با توجه به تجربه کار من با این وب سایت از حمایت آن نسبت به مشتریان اطمینان دارم.	

Evrak Tarih ve Sayısı: 04/12/2017-7626



T.C.
İSTANBUL AYDIN ÜNİVERSİTESİ REKTÖRLÜĞÜ
Sosyal Bilimler Enstitüsü Müdürlüğü

Sayı : 88083623-044-7626
Konu : Gtı IRANTAJ'ın Etik Onay Hk.

04/12/2017

Sayın Gtı IRANTAJ

Enstitümüz Y1412.130075 numaralı İşletme (İngilizce) Anabilim Dalı İşleme Yönetimi (İngilizce) Tezli Yüksek Lisans programı öğrencilerinden Gtı IRANTAJ'ın "FACTORS INFLUENCING CUSTOMER SATISFACTION LEVEL IN AN E-COMMERCE PLATFORM: A CASE STUDY ANALYSIS OF DIGİKALA IN IRAN" adlı tez çalışması gereği "Conceptual Framework" ile ilgili anketi 22.11.2017 tarih ve 2017/21 İstanbul Aydın Üniversitesi Etik Komisyon Kararı ile etik olarak uygun olduğuna karar verilmiştir. Bilgilerinize rica ederim.

Prof. Dr. Özer KANBUROĞLU
Müdür V.

Evrak Doğrulama İçin : <https://evrakdogrula.aydin.edu.tr/en/VisionDogrula/BelgeDogrulama.aspx?V=BE6EF5L3>

Adres: Beşyol Mah. İnter Cad. No:38 Sefaköy, 34295 Kaçıkçakmece / İSTANBUL
Telefon: 444 1 428
Elektronik Ağ: <http://www.aydin.edu.tr/>

Bilgi için: NESLİHAN KUBAL
Unvanı: Enstitü Sekreteri



APPENDIX D: Histogram for Descriptive Statistics of Variables

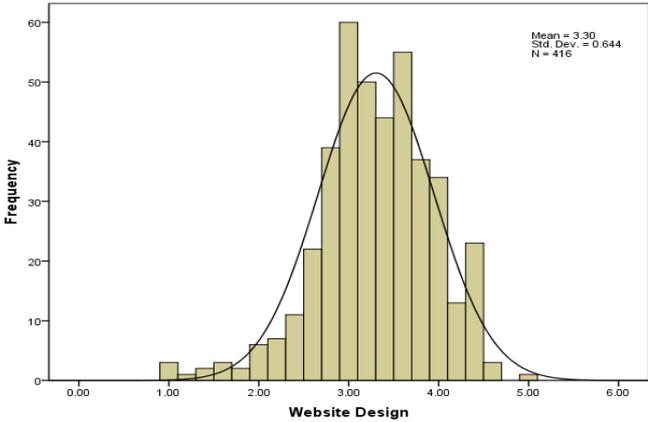


Figure D.1: Histogram for Website Design

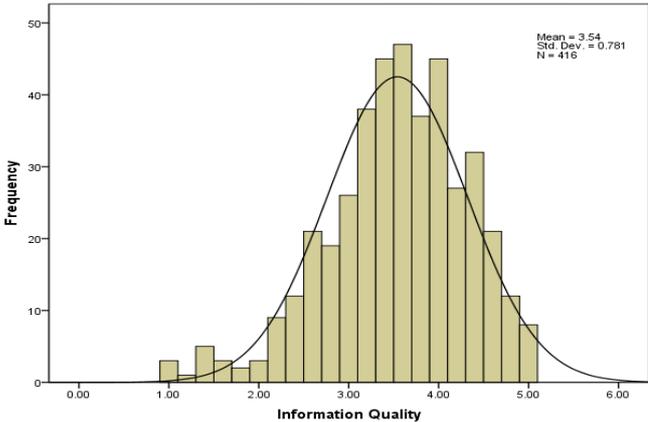


Figure D.2: Histogram for Information Quality

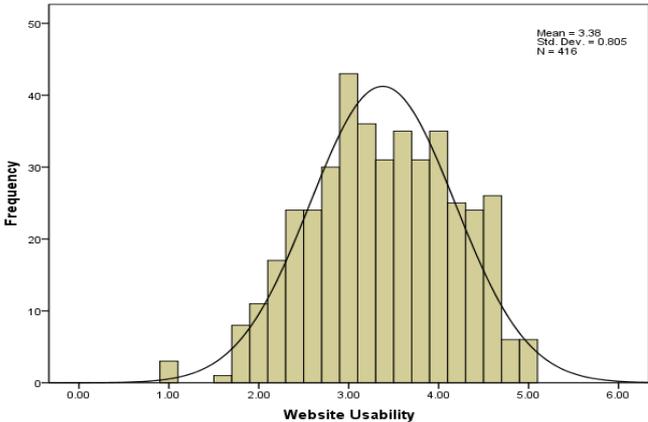


Figure D.3: Histogram for Website Usability

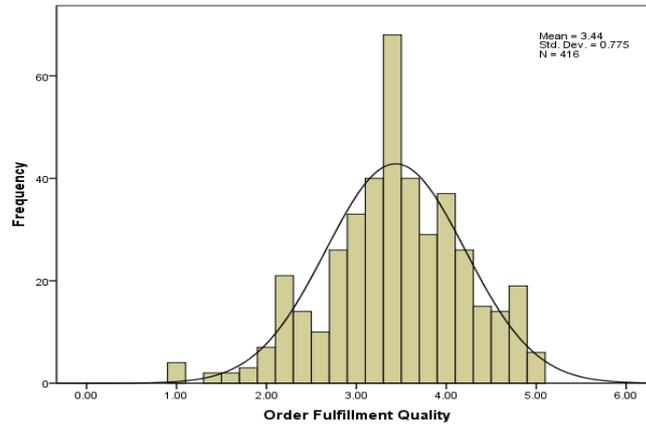


Figure D.4: Histogram for Order Fulfillment Quality

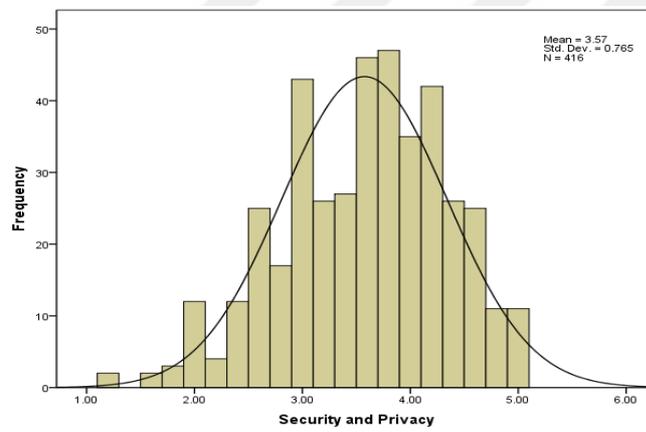


Figure D.5: Histogram for Security and Privacy

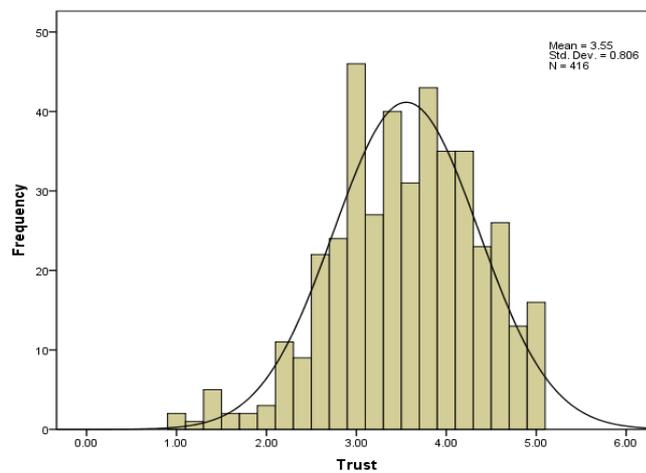


Figure D.6: Histogram for Trust

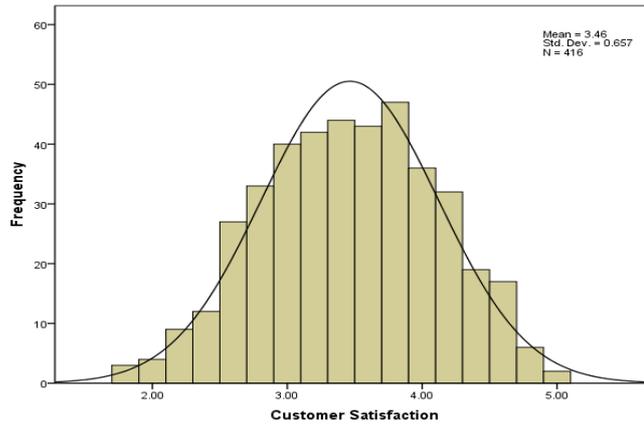


Figure D.7: Histogram for Customer Satisfaction



APPENDIX E: The Result of the CFA on Customer Satisfaction (Factor Loadings and Measures of Research Variables)

Item	Variable	Estimate	S.E.	C.R.	P	Factor Loading
q1	Website.Design	1.000			.001	.570
q2	Website.Design	1.024	.072	14.147	.001	.666
q3	Website.Design	1.274	.113	11.315	.001	.805
q4	Website.Design	1.241	.114	10.908	.001	.749
q5	Website.Design	1.236	.116	10.695	.001	.724
q6	Information.Quality	1.000			.001	.719
q7	Information.Quality	1.131	.075	14.992	.001	.785
q8	Information.Quality	1.027	.076	13.455	.001	.702
q9	Information.Quality	1.128	.080	14.155	.001	.742
q10	Information.Quality	1.057	.078	13.511	.001	.709
q11	Website.Usability	1.000			.001	.765
q12	Website.Usability	.869	.064	13.503	.001	.705
q13	Website.Usability	.489	.065	7.517	.001	.399
q14	Website.Usability	.578	.064	9.008	.001	.475
q15	Website.Usability	.517	.065	8.011	.001	.423
q16	Order.Fulfillment.Quality	1.000			.001	.489
q17	Order.Fulfillment.Quality	1.257	.125	10.026	.001	.592
q18	Order.Fulfillment.Quality	.853	.133	6.425	.001	.417
q19	Order.Fulfillment.Quality	1.370	.159	8.639	.001	.700
q20	Order.Fulfillment.Quality	1.362	.168	8.089	.001	.607
q21	Security.Privacy	1.000			.001	.762
q22	Security.Privacy	.923	.069	13.419	.001	.669
q23	Security.Privacy	1.023	.063	16.280	.001	.799
q24	Security.Privacy	.967	.063	15.420	.001	.760
q25	Security.Privacy	.848	.064	13.285	.001	.662
q26	Trust	1.000			.001	.724
q27	Trust	.951	.071	13.380	.001	.722
q28	Trust	.902	.072	12.490	.001	.671

Item	Variable	Estimate	S.E.	C.R.	P	Factor Loading
q29	Trust	.897	.070	12.790	.001	.688
q30	Trust	.805	.070	11.514	.001	.616
q31	Customer.Satisfaction	1.000			.001	.510
q32	Customer.Satisfaction	1.266	.107	11.783	.001	.669
q33	Customer.Satisfaction	1.377	.146	9.434	.001	.673
q34	Customer.Satisfaction	1.610	.154	10.425	.001	.835
q35	Customer.Satisfaction	1.277	.137	9.289	.001	.653
q36	Customer.Satisfaction	1.644	.157	10.495	.001	.851



APPENDIX F: Correlations

		Customer Satisfaction	Website Design	Information Quality	Website Usability	Order Fulfillment Quality	Security and Privacy	Trust
Customer Satisfaction	Pearson Correlation	1	.474**	.598**	.548**	.568**	.505**	.554**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	416	416	416	416	416	416	416
Website Design	Pearson Correlation	.474**	1	.346**	.368**	.323**	.192**	.484**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	416	416	416	416	416	416	416
Information Quality	Pearson Correlation	.598**	.346**	1	.477**	.525**	.367**	.532**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	416	416	416	416	416	416	416
Website Usability	Pearson Correlation	.548**	.368**	.477**	1	.464**	.152**	.556**
	Sig. (2-tailed)	.000	.000	.000		.000	.002	.000
	N	416	416	416	416	416	416	416
Order Fulfillment Quality	Pearson Correlation	.568**	.323**	.525**	.464**	1	.284**	.489**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	416	416	416	416	416	416	416
Security and Privacy	Pearson Correlation	.505**	.192**	.367**	.152**	.284**	1	.197**
	Sig. (2-tailed)	.000	.000	.000	.002	.000		.000
	N	416	416	416	416	416	416	416
Trust	Pearson Correlation	.554**	.484**	.532**	.556**	.489**	.197**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	416	416	416	416	416	416	416

** . Correlation is significant at the 0.01 level (2-tailed).



RESUME



Name Surname: Giti Irantaj

Place and Date of Birth: Iran, 22 September 1988

E-Mail: giti.irantaj@yahoo.com

EDUCATION:

- **Bachelor:** 2010, Islamic Azad University Tabriz Branch, Faculty of Foreign Languages, English Language Translation.
- **Master:** 2014, Islamic Azad University Ahar Branch, Faculty of Foreign Languages, English Language Teaching (ELT).
- **Master:** 2018, Istanbul Aydin University, Institute of Social Sciences, Business Department, Business Administration.