

T.C.
MARMARA UNIVERSITY
INSTITUTE OF SOCIAL SCIENCE
DEPARTMENT OF BUSINESS ADMINISTRATION
DISCIPLINE OF QUANTITATIVE METHODS

**THE EFFECT OF PERCEIVED RISK ON ONLINE
SHOPPING IN TURKEY**

Master of Science Dissertation

RECEP ÖZSÜRÜNÇ

İstanbul, 2017

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SUPERVISOR: PROF. DR. BERİL DURMUŞ

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T.C.
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ÖZET

TÜRKİYE’DE, ALGILANAN RİSKİN İNTERNET ALIŞVERİŞİ ÜZERİNDEKİ ETKİSİ

Bu çalışma, Türkiye’deki müşterilerde, algılanan riskin online alışveriş yapma üzerindeki etkisini belirlemek amacıyla yapılmıştır. Literatüre bağlı olarak algılanan risk; Finansal Risk, Ürün Riski, Zaman Riski, Teslim Riski ve Bilgi Güvenliği Riski olarak kategorize edilmiştir. Daha önce internet alışverişi yapmış olan 321 müşteriden oluşan bir örneklem üzerinde anket yapılmıştır. Anket analizi için SPSS 20 ve AMOS 18 kullanılmıştır. AMOS üzerinden yapılan Doğrulayıcı Faktör Analizi bize literatüre göre yapılan nitelendirmenin modelimize uymadığını göstermiştir. SPSS üzerinden Faktör analizi yapılarak algılanan riske yönelik sorular yeniden kategorize edilmiş ve yeni faktörler Güvenlik Riski, Ulaşılabilirlik Riski, Ürün Riski, İade ve İptal Riski ve Güven Riski olarak nitelendirilmiştir.

Analiz sonuçları, Güvenlik ve Ulaşılabilirlik Riski’nin İnternet Alışverişi üzerinde negatif bir etkisinin olduğunu göstermektedir. Bu demektir ki müşterilerin Güvenlik ve Ulaşılabilirlik Risk algısı arttıkça, müşteriler İnternet alışverişinden kaçınmaktadır. İade ve İptal Riski ile ilgili beklenmedik bir sonuç elde edildi. İade ve İptal Riskinin internet alışverişi üzerinde pozitif bir etkisi olduğu gözlemlendi. Artan İade ve İptal Riski internet alışverişinde bir artışa neden olmaktadır. Bu sonucun birçok sebebi olabilir fakat muhtemelen en önemlisi müşterileri internet alışverişine iten sebeplerin, İade ve İptal Riskinin gözardı edilmesi sonucunu doğurmasıdır. Diğer bir deyişle, müşteriler İade ve İptal Riskine rağmen internetten alışveriş yapmaya devam ediyorlar. Ölçtüğümüz diğer iki risk algısı türü olan Ürün ve Güven Riski’nin internet alışverişi üzerinde bir etkisi görülmemiştir.

Bu çalışma algılanan riskin müşterilerin online alışverişlerine etkisini göstermekte, firmaların bu riskleri bertaraf etmek için nerelere odaklanması gerektiğini ortaya çıkarmaktadır. Böylece firmalar bu risk algısını ortadan kaldırıp satışlarını arttırabilir.



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ABSTRACT

THE EFFECT OF PERCEIVED RISK ON ONLINE SHOPPING IN TURKEY

This study aimed to determine the effect of perceived risk on online shopping behaviour of customers live in Turkey. Perceived risk is categorized as Financial Risk, Product Risk, Time Risk, Delivery Risk and Information Security Risk based on literature review. A survey is conducted with a sample size of 321 people who previously used the internet for online shopping. SPSS 20 and AMOS 18 are used for analysis of the results. After CFA analysis on AMOS it is seen that categorization based on literature does not fit to our model. A new categorization of Perceived Risk is done based on a Factor Analysis conducted in SPSS and new factors are: Security Risk, Accessibility Risk, Product Risk, Returning and Cancellation Risk, and Trust Risk.

The study revealed that Security and Accessibility Risks have a negative effect on online shopping. That means the more consumer perceive Security and Accessibility Risk, the more they avoid shopping online. An unexpected result has occurred. Returning and Cancellation Risk has a positive relation with Online Shopping. That means high level perceived risk causes an increase on online shopping. This result is probably about online shopping decisions of customers. High level Return and Cancellation Risk perception doesn't affect their Online Shopping decision. In other words, consumers (participants) continue shopping online even they perceive that type of a risk. Product and Trust Risks don't have an effect on online shopping.

The study is important to show how perceived risk affect online shopping behaviours and it provide marketers to make necessary adjustments to prevent perceived risk to increase and online shopping to decrease.

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1. INTRODUCTION

Online shopping, as known E-Commerce technically, was invented by Michael Aldrich in 1979. It enables online transaction between Customers and Businesses or between two Businesses. Online Shopping platforms were not that common decades ago because of limited access to the internet in the world but, nowadays it is very important for search, select and buy a product because both the internet access has increased and new web platforms for Online shopping has arised. Ecommerce Foundation, 2016 indicate that 5.563 million people are older than15 in the world and 2.520 million of them use the internet (45%). 1.436 million of that internet users are e-shoppers (26%). Average spending per e-shopper is \$1.582 and the estimated share of online goods in total retail of goods is %7. That refers to %3.11 share of e-commerce out of Total GDP of \$73.106 billion. These are huge numbers and these numbers increases day by day.

Customers have different reasons for using online shopping platforms. To find cheapest products, save their time and money, it is easy to access and use, it is available for 24 hours are some of these reasons. Online shopping platforms are not just corporate websites. Also small firms and personal suppliers have their own platforms on internet especially on social media. These small firms and personal suppliers can serve special designed products to the customers. These special designed products mostly are not available on pysical stores so that leads customers to online shopping platforms. Another good reason for customers to shop online is that they can sell and buy second hand products.

Not only customers but also producers have similar reasons for selling their products online. They can serve their products cheaper on internet than a pysical store thus they can earn more money with less effort. Their products are available for all customers who use internet, and customers don't have to be in the same city with the producer. So internet allow companies to expand their businessess. Companies also use internet to cut their marketing costs thus they reduce price of their products and they stay ahead in competitive markets. Companies communicate and stay in touch with their customers via internet. Nowadays social media accounts of companies assume that mission.

There is a major diffculty about online shopping that products can not be tangible and it is too difficult to undertand products' quality visually. On the other hand customer perceive some risks about internet shopping such as security, delivery or quality risk. They may want to

physically contact with the products to understand if it is exact product that he /she wants. They may worry about using their credit cards because of insecure internet platforms. They may worry about product delivery after their payment. Especially in traditional cultures face-to-face communication is very important. It increase customers' trust and they become confident about the product. As this is not possible on internet, their perceive risk may be higher.

In this research we wanted to determine which perceived risk factors are most effective on online shopping. Literature categorize perceived risk as financial risk, convenience risk, performance risk, physical risk, quality risk, delivery risk, health risk, after-sale risk, physiological risk, social risk and time risk. (San Martín and Camarero, 2009; Tsai and Yeh, 2010; Almousa, 2011; Moshrefjavadi, Rezaie Dolatabadi, Nourbakhsh, Poursaeedi, and Asadollahi, 2012; Zhang, Tan, Xu, and Tan, 2012; Masoud, 2013; Pi and Sangruang, 2011). In literature review part you can see details about perceived risk types. Although perceived risk is categorized under different names in literature, some basic categorizations contains almost all types of categorizations. In our research we consider the most important perceived risk types as Financial Risk, Time Risk, Product Risk, Delivery Risk and Information Security Risk. After factor analysis of our questionnaire we made a new categorization and labeled them as: Security Risk, Accessibility Risk, Product Risk, Return and Cancellation Risk and Trust Risk.

2. LITERATURE REVIEW

2.1. Perceived Risk

The term perceived risk was first introduced to the literature by Bauer, 1960. He claim that the action of the consumer will produce consequences which include uncertainty and also some part of these consequences are likely to be unpleasant. Perceived risk theory is about trying to understand consumers' behaviours via answering questions about consumer decision making (Pi and Sangruang, 2011). Fields, 1986 define perceived risk as a psychological feeling of consumers during their decision making in an uncertain situation. Customers' mind may not be clear about online shopping and that time they can not be sure to shop online or not. This uncertainty cause a high perceive risk for customers and they think their purchase decision may not be true (Goodwin, 2009).

Among different components of perceived risk, Jacoby and Kaplan, 1972 and Peter and Tarpey, 1975 categorize perceived risk as physical, social, product, convenience, financial, and psychological risks.

The following studies suggest that perceived risk has a significant negative impact on online shopping. Adnan, 2014; Almousa, 2014; Bhatnagar, Misra, and Rao, 2000; Bianchi and Andrews, 2012; Boyle and Ruppel, 2006; Hsin Chang and Wen Chen, 2008; Clemes, Gan, and Zhang, 2014; Doolin, Dillon, Thompson, and Corner, (2005); Hsu, 2012; J. Kim and Lennon, 2010; Kim and Byramjee, 2014 ; Kuhlmeier and Knight, 2005; Leerapong and Mardjo, 2013; Liao and Cheung, 2001; Featherman and Pavlou, 2003.

Effect of perceived risk on online shopping is denoted in many studies (Bhatnagar and Ghose, 2004; Lu, Hsu, and Hsu, 2005; Eggert, 2006) but there is no consequences about which perceived risk types have the most important effect on online shopping. For example Bhatnagar and Ghose, 2004 and Lu et al., 2005 indicate that product and financial risks have a significant negative effect on online shopping intention. Bhatnagar and Ghose, 2004 also claim that product risk has a significant effect on online shopping because consumers can not get enough information about the product on internet. Eggert, 2006 found privacy risk had greater impact on online shopping comparing to the product risk. Dai, 2007 reveal in his study that three types of perceived risk; product, financial and privacy risks have influence on customer's online shopping intentions for different product categories. The possibility of negative outcomes about different perceived risk types such as financial, physical, social or performance risk may be

identified by the customers (Goodwin, 2009). Thakur and Srivastava, 2015 find performance, time and social risk are more important risk factors for the customers comparing to privacy and security risk. Almousa, 2014 make a research on Arabian customers and he concluded in his research that privacy risk factor is the most significant factor affecting online shopping and right after, financial risk follow it among the determined six dimensions. Al-Rawad, Al Khattab, Al-Shqairat, Krishan, and Jarrar, 2015 determine that perceived financial and functional risk are the most important risk factor in online shopping and social risk is the least important one after a wide literature investigation. Gozukara, 2014 made an empirical study and they found that customer's perceived risk is a moderator variable between their hedonistic motivation and their purchasing behaviour.

Previous literature show that perceived risk perception of consumers effect all buying decisions in different levels so that is also mean perceived risk perception guide consumers about their purchase behaviours. (Bauer, 1960; Bettman, 1979; Chaudhuri, 1997; Cunningham, 1967; Mitchell, 1999). Consumers avoid online shopping because of high perceived risk (Settle and Alreck, 2002; Forsythe and Shi, 2003; Garbarino and Strahilevitz, 2004).

Online shopping is predicted to grow in the future and it has many advantages over traditional shopping but beside that advantages, there are some critical disadvantages related to online shopping (Y. Chen and Barnes, 2007). Consumers perceive higher risk on online shopping than traditional shopping ways (Lee and Tan, 2003).

2.2. Perceived Risk Types

2.2.1. Product Risk

Product risk is defined as the difference between customers' intention about the product and original performance of the product that customer experienced (Peter and Tarpey, 1975).

Consumers' belief increase or decrease perceived risk about the product because they don't know whether the product will function according to their expectations or not. Perceived risk is greater if the product is something technologically complex, if it is an ego-related product, if its price is high or such situations like these. Also for the products that feel, touch and experience is important such as fashion products, the risk will also be higher (Bhatnagar et al., 2000).

Product risk perception may cause due to the high expectation of consumer toward the product because consumer can't physically access and test the product (Settle and Alreck, 2002; Garbarino and Strahilevitz, 2004). Also shoppers may not accurately evaluate the product in terms of its quality, shape or colour. That will also increase product risk perception. (Bhatnagar et al., 2000).

2.2.2. Financial Risk

Online shopping is significantly growing and there is not only just a positive outlook for the future of online shopping but also scientific indicators forecast a great expand for internet purchasing. Despite these positive side of online shopping there are negative attitudes toward buying online because of risk perceptions. For example, consumers still think that internet is not secure enough to use their credit cards or to share their personal information with the companies. Online buyers worry about credit card frauds. (Paul, 1996; Caterinicchia, 2005). Thus they perceive a financial risk when they shop online. Financial risk perception contain consumers' sense of insecurity about online shopping that they can lose some amount of money or a certain amount of money may require to work the product properly. Loosing money is not just about credit card or other frauds, consumer may loose because the product they bought may not perform as they expected. Also other costs than product cost such as shipping and handling is a loss for customers (Maignan and Lukas, 1997)

Most of the studies found that financial risk is negatively related to online shopping intention. (Dai, Forsythe, and Kwon, 2014; Khan, Liang, and Shahzad, 2015; Masoud, 2013; Al-Rawad et al., 2015; Almousa, 2014; Moshrefjavadi et al., 2012)

2.2.3. Time Risk

Bauer, 1960 define time risk as perceiving risk about loosing time, convenience or effort if the purchased product is repaired or replaced. Fortsythe, Sandra; Liu, Chuanlan; Shannon, David; Gardner, 2006 add that, problems occured during online transaction resulted in delays are also a type of time risk. Thus we can say that time risk is evaluated in two different aspects. The first one is that loosing time when trying to find the product or product details on internet. Website design or slow connection may cause time loss when trying to find the exact product and product details. (Thakur and Srivastava, 2015; Journal and Social, 2013; Lim, 2003). The second reason of time loss occuring is delay of the product or return and cancellation process of a defective product. Perceived time risk will increase if the customers are in an urgent

situation about the delivery of the product. (Mathur, 2015; Amin and Mahasan, 2014; Cheng, Liu, and Wu, 2013)

2.2.4.Delivery Risk

Delivery risk is defined by Yu, Dong, Liu, and Yuan, 2007 as product lost, damage and sent to the wrong place may occur after online purchasing and this situation create a perception of risk. Definition of Zheng and Favier, 2012 for delivery risk is as follow “Not receiving the product on time, long delivery time, or product being damaged during delivery.” Delivery risk is negatively associated with online shopping. The more consumer perceive delivery risk, the more they avoid shopping online (Moshrefjavadi et al., 2012).

2.2.5.Social Risk

Social risk is about not being appreciated by social environment (family, friends, co-workers etc.) after purchasing a product online (Li and Zhang, 2002). Social risk also contain losing status in social environment due to the negative aspect to the purchased product or online shopping (Stone and Grønhaug, 1993).

Thakur and Srivastava, 2015 express that social risk vary from person to person. Online buyers share their purchase experience with their family, friends or colleagues. The positive or negative attitude of that social environment may change the buyer’s purchasing behaviour. Lim, 2003 imply that social risk occur when purchased product is not accepted by the social environment of the buyer. To reduce the social risk, consumers take advices of their friends, family or other social environments that are important for them (Masoud, 2013).

Researches show different results about effect of social risk on online shopping. Masoud, 2013 found in his research that social risk is not effective on online shopping while Pi and Sangruang, 2011 found a great effect of social risk on online shopping.

2.2.7. Information Security Risk

Information security risk refers to think about store and transmission of personal and private information and having a secure payment system when shopping online (Kolsaker and Payne, 2002). Consumers perceive security risk as loss of money (Aldás-Manzano, Lassala-Navarré, Ruiz-Mafé, and Sanz-Blas, 2009). Consumer can understand the value of products through internet via website features. The quality of product information, service quality, ability of on time delivery can be learn on the website of the company. If the website of the companies don't serve information security mechanisms, purchase intention will decrease. Information security can be provide by companies depends on their ability to meet consumers' expectations. (Hsin Chang and Wen Chen, 2008)

Studies found security risk as a key dimension for the perception of the customers toward online shopping. If customers can be sure about the security of their credit card and personal information, they will have tendency to purchase more on internet. (Kunze and Mai, 2007; Polatoglu and Ekin, 2001; Suh and Han, 2002).

Similar to other perceived risk types, some studies (Featherman and Pavlou, 2003; Masoud, 2013, Tsai and Yeh, 2010) find information security risk as a significant dimension for online shopping, and some of them find it insignificant (Yang, Pang, Liu, Yen, and Michael Tarn, 2015).

2.3. Internet Usage

2.3.1. Usage of Internet in the World:

Internet allow people and companies to be in contact all over the world. Emergence of mobile internet usage and social media increase rate of internet usage to very huge numbers. According to InternetLiveStats.com there are 3.636.702.239 people using internet in the world. That means 40% of the world use internet. That rate was below 1% in 1995. Increasing number of internet form 1999 to 2013 is about tenfold. In 2005 it increased to 1 billion, in 2010 to 2 billion and in 2014 to 3 billion. In the following figure the trend of internet users can be seen.

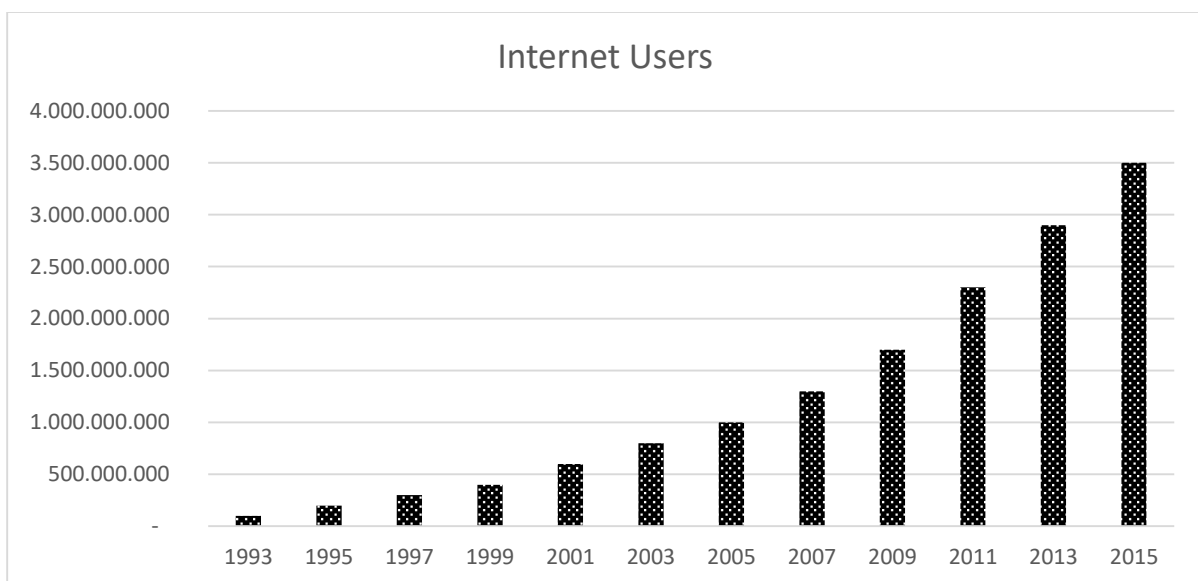


Figure 1. Trend of Internet Users in the World

Source: *Internet Live Stats* (www.InternetLiveStats.com)

World population and penetration of internet users can be seen in the following table. The table show us how fast internet usage increase in the world. As online shopping is depend on internet usage, the increasing trend of internet usage will also increase online shopping rates.

Table 1. Penetration of Internet Users

Year	Internet Users**	Penetration (% of Pop)	World Population	Non-Users (Internetless)	World Pop. Change
2016*	3,424,971,237	46.1 %	7,432,663,275	4,007,692,038	1.13 %
2015*	3,185,996,155	43.4 %	7,349,472,099	4,163,475,944	1.15 %
2014	2,956,385,569	40.7 %	7,265,785,946	4,309,400,377	1.17 %
2013	2,728,428,107	38%	7,181,715,139	4,453,287,032	1.19 %
2012	2,494,736,248	35.1 %	7,097,500,453	4,602,764,205	1.2 %
2011	2,231,957,359	31.8 %	7,013,427,052	4,781,469,693	1.21 %
2010	2,023,202,974	29.2 %	6,929,725,043	4,906,522,069	1.22 %
2009	1,766,403,814	25.8 %	6,846,479,521	5,080,075,707	1.22 %
2008	1,575,067,520	23.3 %	6,763,732,879	5,188,665,359	1.23 %
2007	1,373,226,988	20.6 %	6,681,607,320	5,308,380,332	1.23 %
2006	1,162,916,818	17.6 %	6,600,220,247	5,437,303,429	1.24 %
2005	1,030,101,289	15.8 %	6,519,635,850	5,489,534,561	1.24 %
2004	913,327,771	14.2 %	6,439,842,408	5,526,514,637	1.24 %
2003	781,435,983	12.3 %	6,360,764,684	5,579,328,701	1.25 %
2002	665,065,014	10.6 %	6,282,301,767	5,617,236,753	1.26 %
2001	502,292,245	8.1 %	6,204,310,739	5,702,018,494	1.27 %
2000	414,794,957	6.8 %	6,126,622,121	5,711,827,164	1.28 %

* Estimate for July 1, 2016

Source: *Internet Live Stats* (www.InternetLiveStats.com)

Global internet penetration can be seen visually in the following figure. The data obtained from Ecommerce Foundation, 2016.

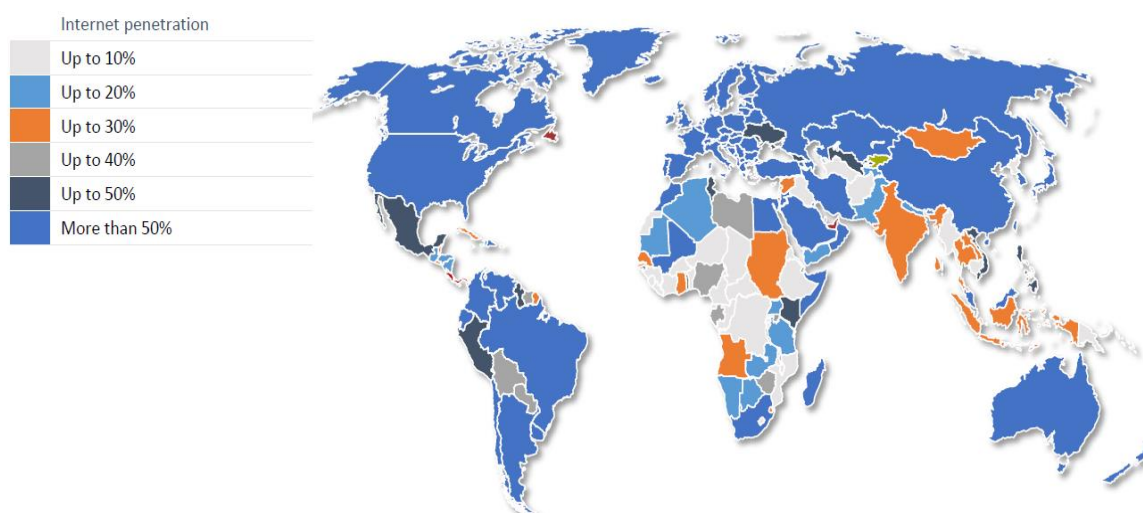


Figure 2. Global Overview Internet Penetration

Source: E-Commerce Foundation, 2016

In Figure 3 the increasing rate of internet population can be seen visually. The rate of increasing is also increase in the years. If that trend continue in the future, almost all the world population will have internet access in 15-20 years.

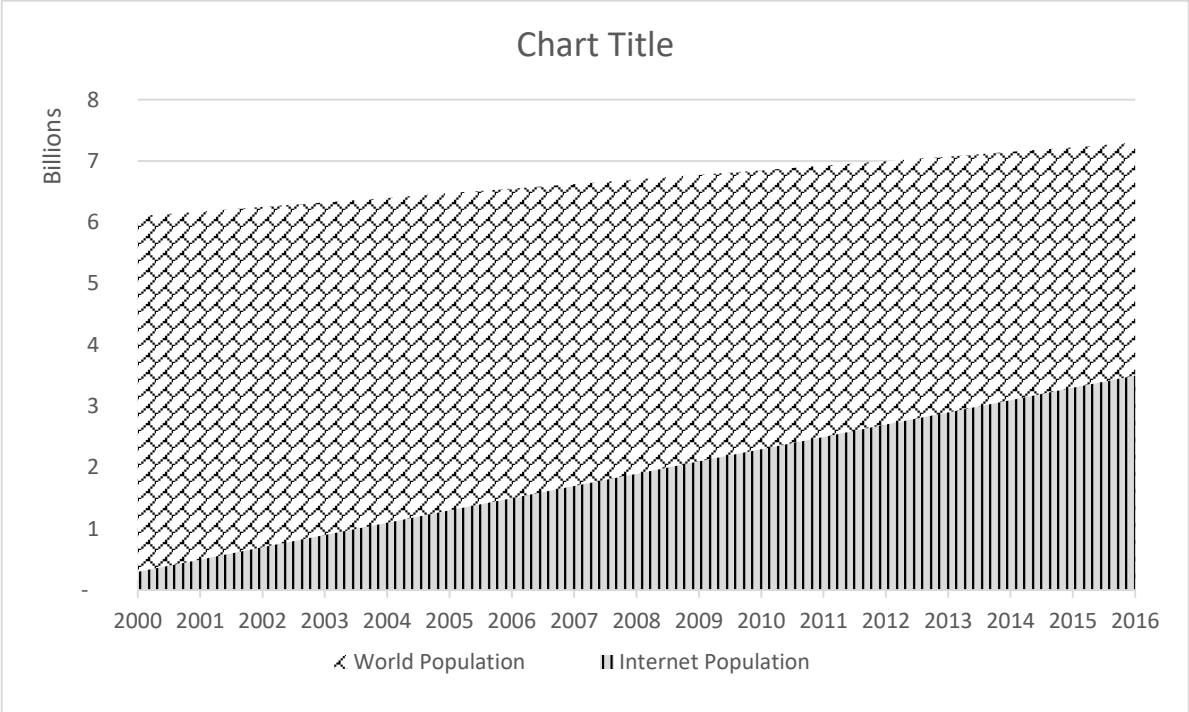


Figure 3. Rate of Internet Population In The World

Source: Tusiad, n.d.

2.3.2. Usage of Internet in the Turkey

There are 46,196,720 internet users in Turkey. This is 58% of the population which is a high rate for internet penetration. Turkey is 14. in the world rank for the usage of internet. In the following table it can be seen that the first 15 countries ordered in internet usage based on users.

Table 2 The First 15 Countries in Internet Usage

Number	Country	Internet Users	Penetration	Population	Non-Users
1	China	721,434,547	52.2 %	1,382,323,332	660,888,785
2	India	462,124,989	34.8 %	1,326,801,576	864,676,587
3	U.S.	286,942,362	88.5 %	324,118,787	37,176,425
4	Brazil	139,111,185	66.4 %	209,567,920	70,456,735
5	Japan	115,111,595	91.1 %	126,323,715	11,212,120
6	Russia	102,258,256	71.3 %	143,439,832	41,181,576
7	Nigeria	86,219,965	46.1 %	186,987,563	100,767,598
8	Germany	71,016,605	88%	80,682,351	9,665,746
9	U.K.	60,273,385	92.6 %	65,111,143	4,837,758
10	Mexico	58,016,997	45.1 %	128,632,004	70,615,007
11	France	55,860,330	86.4 %	64,668,129	8,807,799
12	Indonesia	53,236,719	20.4 %	260,581,100	207,344,381
13	Viet Nam	49,063,762	52%	94,444,200	45,380,438
14	Turkey	46,196,720	58%	79,622,062	33,425,342
15	Philippines	44,478,808	43.5 %	102,250,133	57,771,325

Source: *Internet Live Stats* (<http://www.internetlivestats.com/internet-users-by-country/>)

With 68% internet usage rate, age group between 18-24 is the most active internet user group in Turkey. This group is followed by age group between 25-34 with 59% internet usage rate. Internet usage rate begin to decrease after 35 years old. When we look at the internet usage based on educational level, as it is guessed the highest usage rate is in master graduates and above that educational level. 90% of that educational level group use internet actively, this rate is 72% for high school graduates and it decrease to 54% for primary school graduates.

Turkish internet users use internet mostly for social media. Watching online videos and reading news are the other internet usage reasons for Turkish people. 65% of internet users who use internet for the last three months denote that they use internet to get information about a product or service.

2.4. Online Shopping

2.4.1. Content of Online Shopping

Online shopping is a way that allow users to directly purchase from sellers without any other dealer. Online shopper can buy goods or services from internet directly and online shopping became popular in 1999-2000. Actually the process of online shopping is similar with traditional ways (Ting-Peng Liang and Hung-Jeng Lai, 2000). The difference is online shoppers can't touch the product and they just use information that given in the website of the company. Their intention to purchase can turn into behaviour of purchasing based on the assumption that consumers decide rationally considering the information that available to them. (Pavlou and Fygenson, 2006). They can use any device to make online purchasing. Cellphones, computers, tablets and other devices can be used for purchasing. They just need to be able to connect to the internet.

Online shopping is easier in many ways than physical stores because internet allow them to have more control and to bargain with the seller. Customers can reach required information about products from internet easily and they can compare with the other products and other sellers. The benefits of online shopping can be shown in a table to be seen visually. The table below show the advantages of online shopping (Katawetawaraks and Wang, 2011).

Table 3 The Advantages of Online Shopping

Convenience	Customers can shop for 7 days a week and 24 hours a day. They don't have to contact with someone for shopping and they don't need to wait for any assistance to purchase a product or service. (Hofacker, 2001)
Available Information	Customers can reach any information about the product via the website of the company or directly from internet. Other customers' comments about the product or service give more valuable information than they can find from websites.
Accessing All Types of Products	Online Shopping offer any type of a product to customers. They can reach to any colour or size or priced products and compare it with another.
Efficiency (Cost and Time)	Online retailing websites help customers to find very different products with very different choices and prices in a short time. (such as hepsiburada.com, n11.com, sahibinden.com in Turkey). Customers don't need to go outside, stuck in traffic, visit many different shopping centers.

Online shopping has many advantages but comparing to physical stores it has also disadvantages that make customers avoid online shopping. In online shopping customers can only reach information about the product and some pictures about the product but they can't

use their feelings there. No see, touch, smell or hear is available on online shopping. There is also no face-to-face connection. Customers perceive high risk in that situations because there are lack of trust for them on internet. Some significant development can increase the rate of online shopping by encouraging customers. Consumers should understand that they have a better deal on online shopping than traditional shopping channels (Keeney, 1999). This understanding can eliminate the disadvantages of online shopping.

2.4.2. Online Shopping in the World

According to Ecommerce Foundation, 2016, in 2015, 1.4 billion of 7.3 billion world population had online shopping at least once time to buy a product or service. They spent \$2,272.7 billion for online buying and this means \$1,582 per e-shoppers. Asia-Pacific area is the strongest region on online shopping in the world with \$822.8 billion spent in 2014 and \$1,056.8 billion in 2015. North America, Europe and Latin America follow it with \$572.5bn, \$446.0 bn, \$25.8 bn respectively for 2014 and \$644.0 bn, \$505.1bn, \$33.0 bn respectively for 2015. MENA (Middle East and North Africa) are the smallest online shopping markets for both 2014 and 2015. Detailed numbers can be seen in the table below.

Table 4 E-Commerce Turnover of the Global Regions, 2014-2015

Region	2014	2015	Growth*
World	\$1,895.3bn	\$2,272.7bn	+19.9%
Asia-Pacific	\$822.8 bn	\$1,056.8 bn	+28.4%
North America	\$572.5bn	\$644.0 bn	+12.5%
Europe	\$446.0 bn	\$505.1bn	+13.3%
Latin America	\$25.8 bn	\$33.0 bn	+28.0%
MENA (Middle East and North Africa)	\$21.7 bn	\$25.8 bn	+18.6%

* Growth rate based upon national currencies

Total online shopping numbers for the world between 2012 and 2016 can be seen in the following figure. We can see that online shopping has an increasing trend.

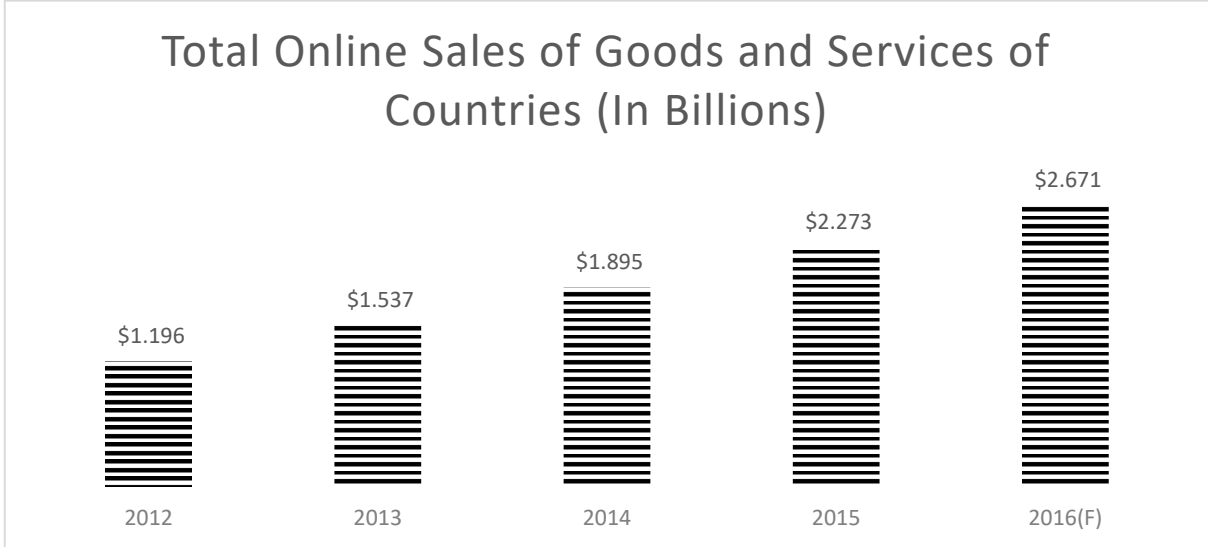


Figure 4 Total Online Sales of Goods and Services of Countries, 2012 -2016
 Source: E-Commerce Foundation, 2016

Increasing Percentage change in online shopping reach the highest value in 2013 with %28.5. As expected, the percentage change number decrease after it reached the highest value in 2010 but still it has a big number increase in online shopping over years.

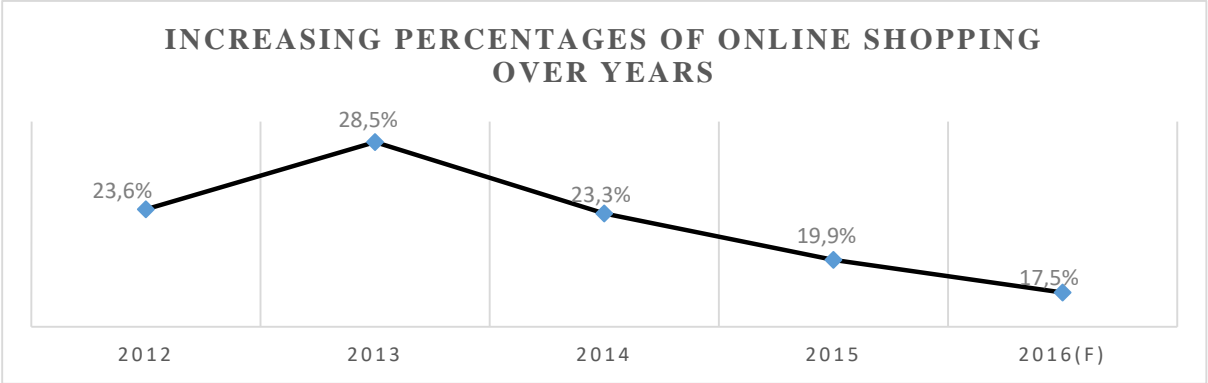


Figure 5. Increasing Percentages of Online Shopping Over Years
 Source: Ecommerce Foundation, 2016

2.4.3. Online Shopping In Turkey

There is a fast increasing in internet penetration in Turkey according to Tusiad, n.d. published in 2017. That report indicate that in 2012, the internet penetration rate was 45% and it increase to 58% in 2016 with a high rate of increasing. There are currently 46.2 million internet users in Turkey. The previous report published in 2014 and in 2 years we can see that

users increase about 6.6 million. Forecasting for 2020 reveal that there will be 62 million users and the internet penetration will increase to 76%.

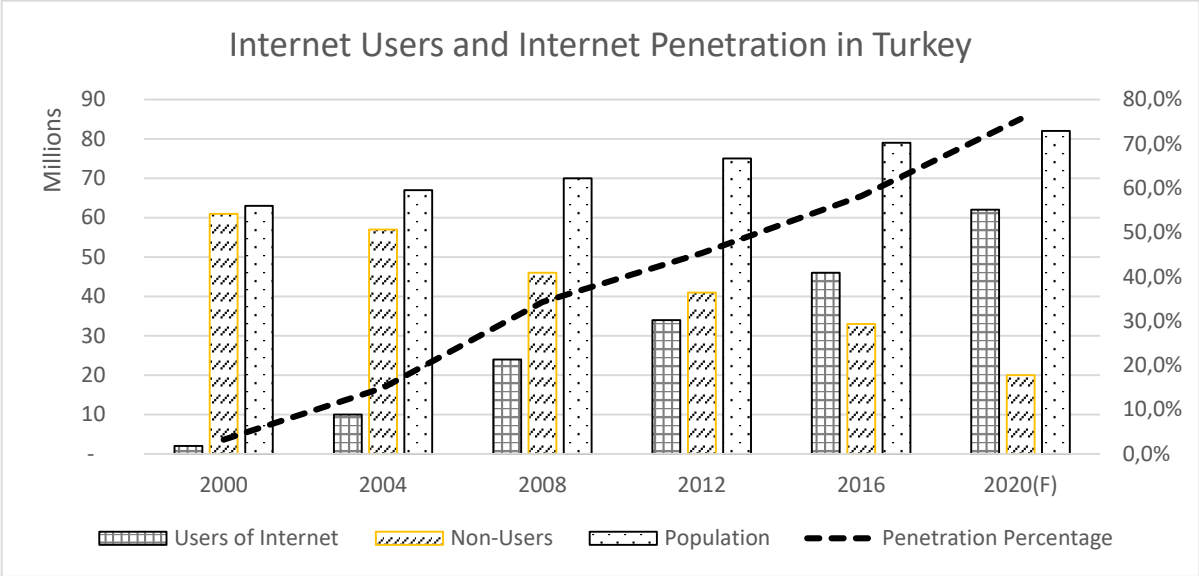


Figure 6 Internet Users and Internet Penetration in Turkey

Source: Statista, TUIK

With 6% of smart phone penetration, Turkey was dramatically behind the world average which was 9.6% but the increase in the last six years carry Turkey’s percentage 5 point above the world average with 65% of penetration. 16 million new smart phones are sold since 2014 and it is expected that 84% of population will be smart phone user in 2021. In the following figure smart phone penetration of Turkey and the World can be seen visually.

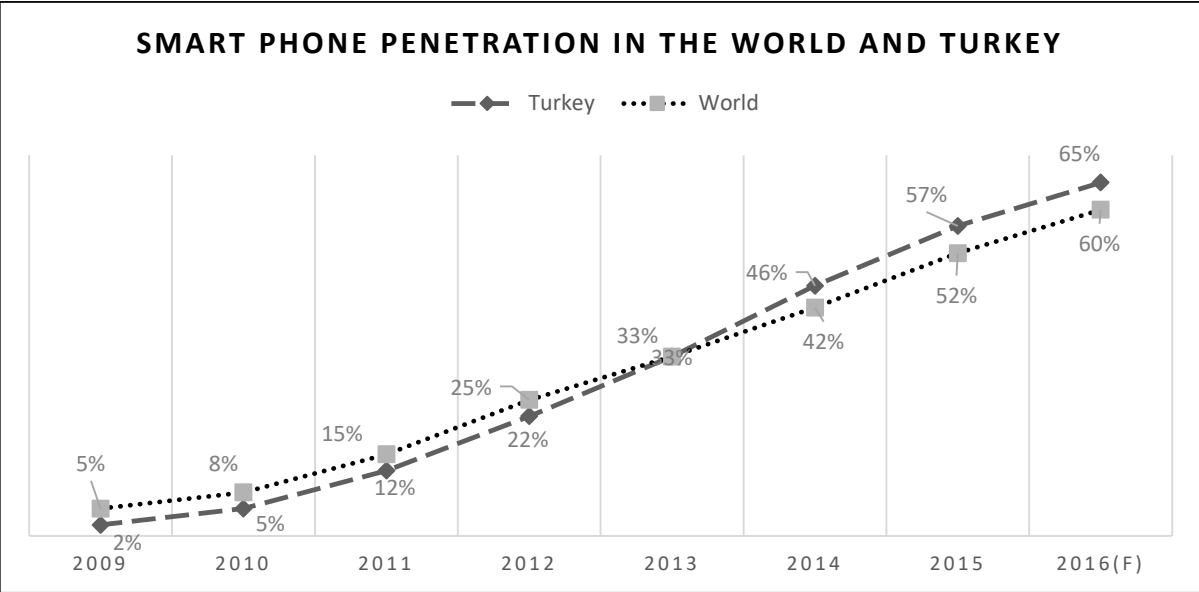


Figure 7 Smart Phone Penetration In The World And Turkey

*Source: Forrester, Global Smartphone Forecast 2016 to 2021

Smart phone penetration based on different age groups can be seen in the following figure. Turkey comes after China with 81% penetration of 18-34 years old group and 39% of 35+ years old group. Penetration of older age groups is still low in Turkey but when production of smart phones finish the other type phones, the penetration rate will increase dramatically.

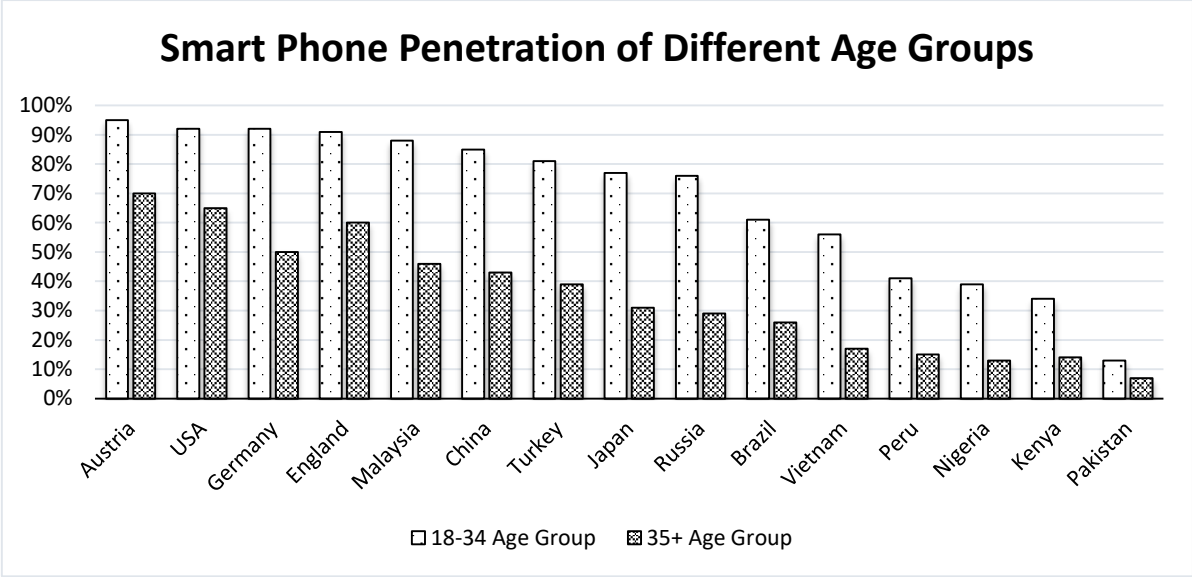


Figure 8 Smart Phone Penetration Of Different Age Groups

Increasing usage of smart phones changed the type of purchasing as well as it starts to affect sale number of computers. Since 2011 smart phone sales pass computer sales and computer usage superseded by smart phones. In 2016, sale of computers decrease to its lowest level for the last years with 258 million sale numbers. According to research company IDC (Lund and Morales, 2014), sale number of computers will decrease about 1.9% for each year and the sale volume which was 315 million for 2013 will decrease to 250 million in 2020.

Contrary to decrease in sales of computers, smart phone sales continue to increase. Sales of smart phones increase about 26% for each year between 2012-2015 and it reach to 1.5 billion sales volume. After 2015 growth rate begin to decrease and it is forecasted that 4% increase will occur till 2020 (Lund and Morales, 2014). The most important factor of decreasing is market saturation especially in developed countries. Intensive regions of non-users of smartphones are niche areas for the sector. For example, India’s smart phone penetration is about 17% (Perrin, 2015) and cell phone sales are still based on normal phones without smart usage functions. This make India a very critic market for the producers. (betanews.com)

According to cooperated survey of TÜBİSAD and Tusiad, n.d., online shopping market size reach 30.8 billion TL in Turkey as per 2016 via increasing internet and smart phone

penetration. Retailing reach 17.5 billion TL from 7.3 billion TL with an average increase of 34% per year from 2013 to 2016.

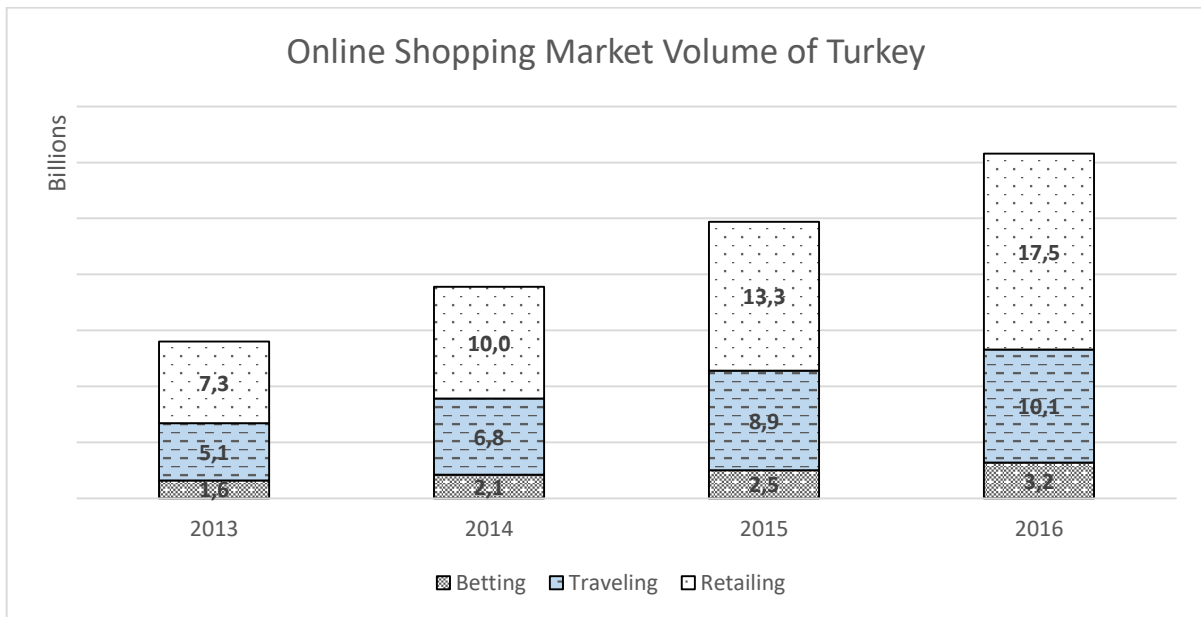


Figure 9 Online Shopping Market Volume of Turkey

It is presumed that market places that just sell from online channels and online websites with various categories, vertical websites which majored on special sectors, special shopping websites are about 70% of all the retailing online shopping volume which is 17.5 billion TL. The rest 30% are formed by traditional retailing companies which are also sell online.

According to research of Tuik made on 2016, 34% of internet users use internet to shop online. The rate of individuals who shop online is 20% for the last three months and this rate is 28% for the last year. When we look at Europe to compare, we can see that 66% of internet users indicate that they shop online. The rate of online shopping for Turkish customers look dramatically less than Europe’s average.

The research made by research company Insider in 2016, put interesting results about e-Commerce sector of Turkey. According to that resarch, consumers visit a webpage for 4.57 times in average before they purchase a product from that website. A very low rate of that visits turn into purchasing which is 1.16%. In other words, online shopping websites can only sell to 1 person out of 90 people who visit their website. When we look at the device which is used for internet access, purchasing rate is lower in mobile and tablets. Purchasing rate for mobile is 0.71%, for tablet is 0.81% and that rate increase to 1.76% for laptops and desktops. That also means internet users in Turkey, use their mobile phones and tablet for gathering information

about the product or service rather than purchasing the product or service there. When they decide purchasing, they choose a bigger screen.

According to BKM data, online shopping basket amount was 255 TL in 2015 and it increased to 279 TL with a 9% increase rate in Turkey. This amount is 86\$ (about 300 TL) in USA and 63 Euro (About 250 TL) in Europe so it looks that Turkey's basket amount is not less than developed economies.

When we look at the online shopping hours, it starts from 9am on desktops in weekdays and it reaches to peak values in that hours and visit traffic decrease fastly after 4pm. Mobile and tablet usage for online shopping starts after 4 pm (Insider, 2016)

In current situation, it is possible to say that online shopping reached a maturity despite some deficiencies but customers are not satisfied about purchasing process especially for aftersale. According to results of Household Usage of Information Technologies Research made by Tuik, 25% of the customers had problems about online shopping in 2015-2016 period. Main complaints about online shopping are "slow delivery than it is specified" and "wrong or damaged product or service" with 45% and 42% respectively. According to the research, the most important 8 complaintments about online shopping can be seen in the figure below.

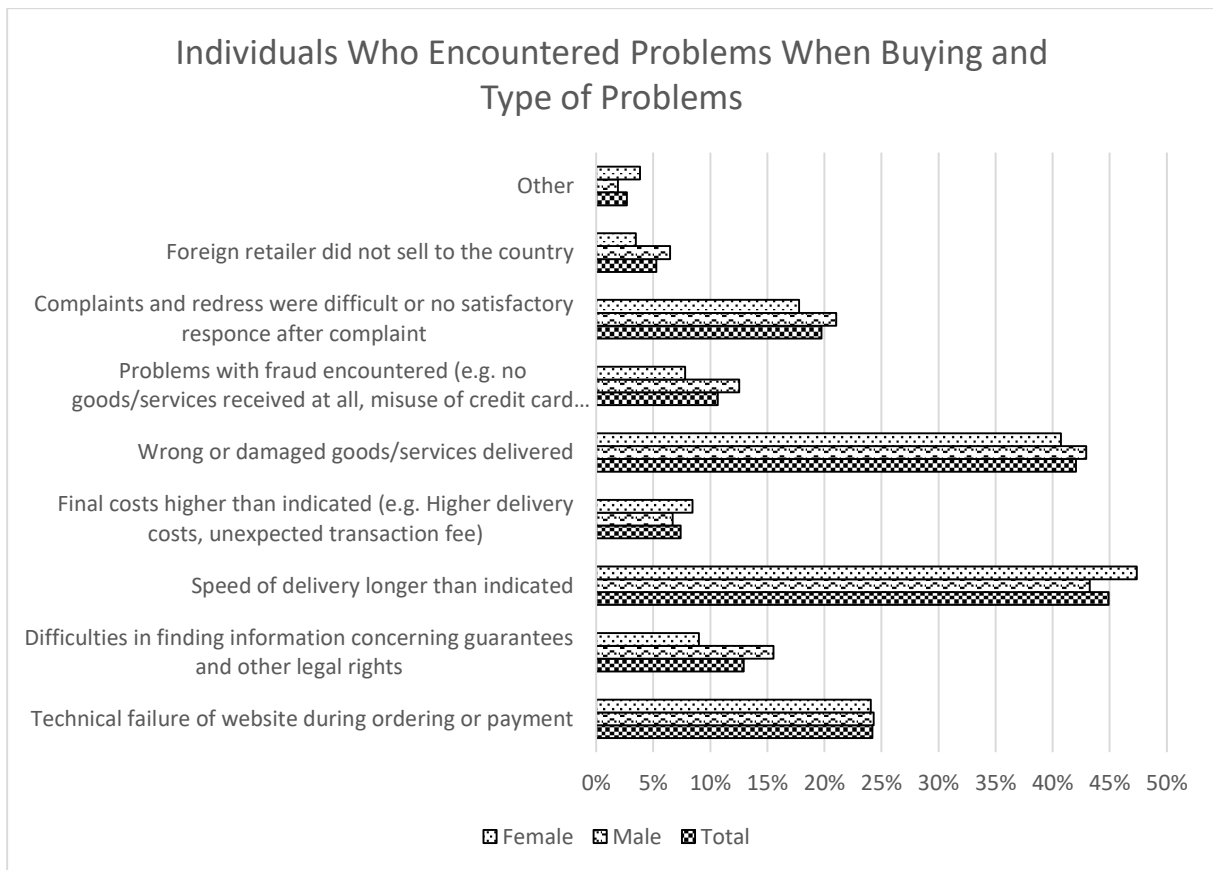


Figure 10 Problems When Buying and Type of Problems

*Source: Tuik, Individuals who encountered problems when buying or ordering goods or services over the the Internet in the last 12 months and type of problems, 2016

Even if online shopping show a fast increasing trend in Turkey, this growth is not enough to increase the rate of online shopping in retailing sector. Turkey is not much different than other growing countries infrastructurally, even it is in front of China, India, South Africa according to internet and smartphone usage but still share of online shopping in retailing sector seems inadequate respectively. According to Euromonitor, share of online shopping in retailing for countries can be seen visually in the following figure. We see that Turkey’s share of online shopping in retailing increase from 1.7% to 3.5% from 2012 to 2016 but it is behind the average of the world.

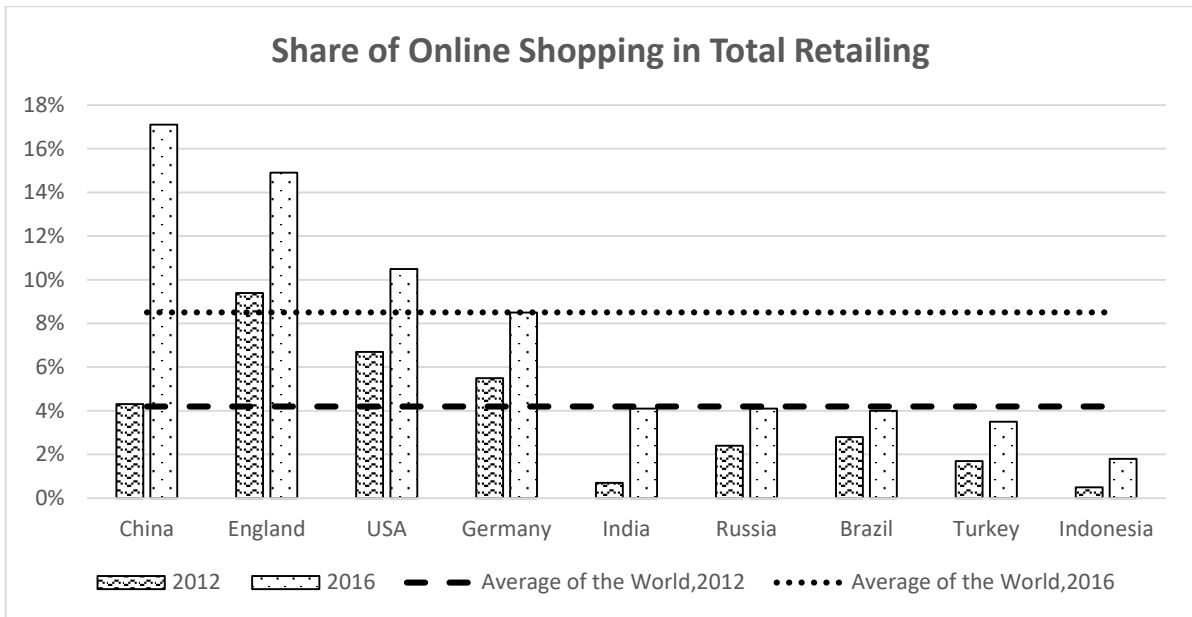


Figure 11 Share of Online Shopping in Total Retailing According to Countries

*Source: Euromonitor

2.4.4. Main Reasons for Online Shopping

The main difficulties of the firms for online shopping is that they can not strongly recommed that price is not the only advantage of online shopping but also diversity, easiness, information and share are also advantages of online shopping.

Finding cheap products are main motivation for Turkish customers according to research made by PwC in 2016. Brazil and Austria seems to have same reasons but for the other countries “easiness” is the main factor. In the following figure, details can be seen visually.

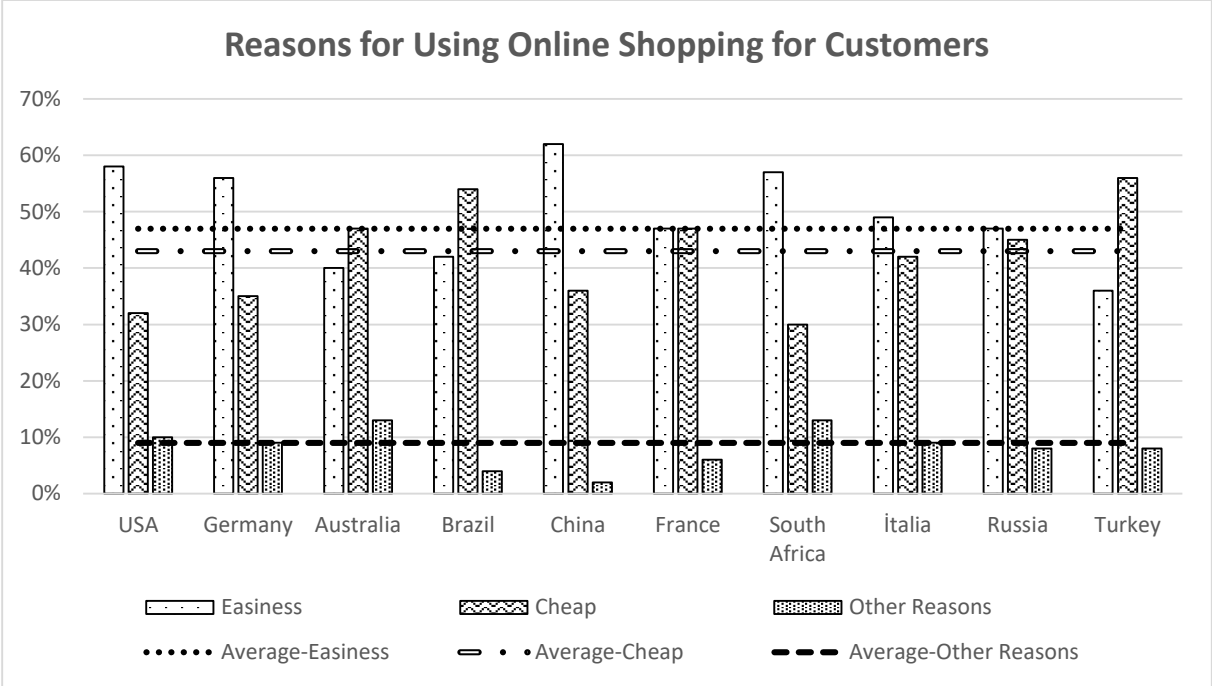


Figure 12 Reasons for Using Online Shopping for Customers

3. METHODOLOGY

3.1. Research Model and Aim:

The aim of this research is to examine the effect of independent variables (which are determined based on literature) and demographic variables on Online Shopping. Independent variables are Perceived Financial Risk, Product Risk, Delivery Risk, Time Risk and Information Security Risk. A survey was conducted based on these independent variables and also questions about Online Shopping and demographic variables are added to the survey. The questions of the survey are adopted from the research of Masoud, 2013. Some questions are directly translated and some of them are changed. Demographic questions are determined considering Turkish social structure and it is thought to discover the most important demographic variables that can be effective on Online Shopping. Questions of Dependent (Online Shopping) and Independent (Perceived Financial Risk, Product Risk, Delivery Risk, Time Risk and Information Security Risk) variables and their labels can be seen in the tables below.

Table 5 Questions and Labels of Dependent Variable

Questions	Labels
It is extremely easy to shop online	Eshop1
I shop online because i don't want go out	Eshop2
Shopping online is not appropriate for my lifestyle.	RevEshop3
I shop online because i can get any detail about the product	Eshop4
I have too many different product choices on online shopping.	Eshop5
Online shopping enable to compare prices of products easily.	Eshop6
I can think to decide about a product as much as i want on online shopping.	Eshop7

Table 6 Questions and Labels of Independent Variables

Questions	Labels
Products are more expensive than the retail market on online shopping.	RevFinRisk8
Online shopping prevent waste of money	FinRisk9
It is extremely secure to use credit cards on online shopping.	FinRisk10
Visual and real product is totally same on online shopping (the size, quality, colour etc.)	FinRisk11
Webpages are extremely secure for online shopping.	FinRisk12
It is difficult to understand the quality of the product on online shopping.	RevProRisk13
I'm not delivered a different product than the purchased product on online shopping.	ProRisk14
It is not problem for me not to see, touch or check the product on online shopping.	ProRisk15
It is extremely easy to prove the size, number, measure of a product on online shopping. (for clothes, shoes etc.)	ProRisk16
It is not problem for me not to able to try the product on online shopping.	ProRisk17
It is extremely easy to find the right webpage on online shopping.	TimeRisk18
It is extremely easy to find the right product on online shopping.	TimeRisk19
Online shopping waste my time.	RevTimeRisk20
It is not problem for me not to have the product just after the purchasing on online shopping.	TimeRisk21
It is extremely easy to contact with seller on online shopping.	TimeRisk22
Ordering process is extremely easy on online shopping.	TimeRisk23
The ordered product is exactly deliver on online shopping.	DelRisk24
Possibility of wrong delivering of the product is extremely high on online shopping.	RevDelRisk25
The ordered product is absolutely deliver on time that they specified.	DelRisk26
It is extremely easy to cancel/return the order on online shopping.	DelRisk27
The cancellation/return process is extremely short on online shopping	DelRisk28
Webpages protect all my special information.	InfoSecRisk29
I think that online shopping webpages are risky to use.	RevInfoSecRisk30
I extremely take comfort in searching webpages for online shopping.	InfoSecRisk31
Webpages contain all necessary information about products and processes. (product information, purchasing, return, cancellation, delivery etc.)	InfoSecRisk32
I extremely trust webpages about shopping online there.	InfoSecRisk33

The survey was conducted online and 321 people who have previous online shopping experiences are participated. Demographic information for the participants can be seen in the following tables. The scale type of demographic variables are nominal and ordinal except “Age”. It is interval scale so the demographic variable “Age” is categorized here in order to be understood the general information of participants about their age. In the analysis “Age” is evaluated as an interval scale variable.

3.2. Demographic Information of Participants

3.2.1. Age

More than half of the participants of our survey are under 35 years old. Although there is such a result, age average of the participants is over 35 which is about 38. One of the four of our participants' age is over 45 and that means online shopping is not just related to young generations. Actually this result is probably about education level of our participants because almost 97% of the participants are university graduates or have higher education level. The importance of the age for online shopping is highlighted in study of Akar, 2015. A literature review is done in that study and it determine that age has an impact in the following studies. Bhatnagar et al., 2000; El Ansary and Roushdy, 2013; Calık and Ersoy, 2008; Clemes et al., 2014; Doolin et al., 2005; Gong and Maddox, 2011; Hernández, Jiménez, and José Martín, 2011; Koyuncu and Lien, 2003; Lian and Yen, 2014; Punj, 2011; Stafford, Turan, and Raisinghani, 2004; Thamizhvanan and Xavier, 2013; Slyke, Comunale, and Belanger, 2002 and this impact is significant in all studies except Doolin et al., 2005; Thamizhvanan and Xavier, 2013; Slyke et al., 2002.

Table 7 Age

Options	Age		
	Number	Average	Std. Dev.
Under 25	25		
Between 25 and 35	140	37.89	11.25
Between 35 and 45	77		
Above 45	79		

3.2.2. Gender

We have 44% of female participants and 56% of male participants. Studies also found that there is a difference between male and female consumers. The following studies determine a significant impact of gender on online shopping as Akar, 2015 show in her study which is about literature review of demographic variables.

Studies that determine a significant impact of gender on online shopping are Settle and Alreck, 2002; Boyle and Ruppel, 2006; Calık and Ersoy, 2008; W.-J. Chen and Chuan, 2005; Clemes et al., 2014; Doolin et al., 2005; El Ansary and Roushdy, 2013; Fan and Miao, 2012; Girard, Korgaonkar, and Silverblatt, 2003; Gong and Maddox, 2011; Koyuncu and Lien, 2003; Lian and Yen, 2014; Rodgers and Rodgers, 2016; Saprikis, 2013; Stafford et al., 2004;

Thamizhvanan and Xavier, 2013; Vaidehi, 2014; Slyke et al., 2002; Wang, Gu, and Aiken, 2010.

Table 8 Gender

Gender	
Options	Number
Female	141
Male	180

3.2.3. Marital Status

About 65% of our participants are married. Marital status has a significant impact on online shopping according to Clemes et al., 2014 and Gong and Maddox, 2011 but Koyuncu and Lien, 2003 found in their study that marital status doesn't have a significant effect on online shopping Akar, 2015.

Table 9 Marital Status

Marital Status	
Options	Number
Married	206
Single	115

3.2.4. Education

Educational Level of participants seems very high as can be seen in the table. About 97% of the participants are above university graduation. 53% of the participant are doctorate graduates. This result is about social environment that i send the survey to participate. Most of the candidate of the participants were academicians. For educational level the following researches indicate that it has a significant impact on online shopping. El-Ansary and Roushdy, 2013; Calık and Ersoy, 2008; Clemes et al., 2014; Girard et al., 2003; Gong and Maddox, 2011; Koyuncu and Lien, 2003; Punj, 2011; Saprikis, 2013; Thamizhvanan and Xavier, 2013.

Table 10 Education

Education	
Options	Number
Primary School Graduated	3
High School Graduated	6
University Graduated	71
Master Graduated	71
Doctorate Graduated	170

3.2.5.Total Income per Month

When we look at the income level of participants we can see that average of income is about 5000 TL which is very high comparing to Turkey's average. Average income in Turkey is about 1350 TL according to Tuik, 2016 report. This result is about the educational level of the participant. Most of them have a higher educational level than university graduation so their income are also high.

Table 11 Total Income per Month

Total Income per Month	
Options	Number
Less Than 2000 TL	12
Between 2001-3000 TL	34
Between 3001-4000 TL	35
Between 4001-5000 TL	68
Between 5001-6000 TL	37
Between 6001-7000 TL	36
More Than 7001 TL	99

3.2.6.Internet Usage Rate

Most of the participant use internet between 1 and 5 hours (64%). Also 30% of them use internet more than 5 hours which is actually a very high rate of usage. Online shopping is related with internet and level of internet usage may have an impact on online shopping. The studies that prove internet usage rate have a significant impact on online shopping are Bhatnagar et al., 2000; Calık and Ersoy, 2008; Cho, 2004; Citrin, Sprott, Silverman, and Stem, 2000; Doolin et al., 2005; El Ansary and Roushdy, 2013; Gong and Maddox, 2011; Koyuncu and Lien, 2003; Kuhlmeier and Knight, 2005; Liao and Cheung, 2001; Nysveen and Pedersen, 2004; Park, 2002; Punj, 2011; Saprikis, 2013; Katawetawaraks and Wang, 2011 and the following researches indicate that internet usage rate doesn't have an impact on online shopping, Thamizhvanan and Xavier, 2013; Slyke et al., 2002.

Table 12 Internet Usage Rate

Internet Usage Rate	
Options	Number
Less Than 1 Hour in a Day	16
Between 1-3 Hours in a Day	106
Between 3-5 Hours in a Day	101
Between 5-8 Hours in a Day	56
More Than 8 Hours in a Day	42

3.2.7. Job Sector

209 participants out of 321 are in public sector in our survey. Public sector workers rate is about 13% according to data published by Turkey Statistic Foundation for 2017. The impact of job sector on online shopping can be directly related to sector itself or it can be about payment rates of different sector.

Table 13 Job Sector

Job Sector	
Options	Number
Private Sector	100
Public Sector	209
Half-Private Sector (Such as Türk Telekom, THY)	12

3.2.8. Internet Usage Platforms

Most of the participants access internet at their work via a laptop or tablet. Internet access rate for work and home is almost same. That also means internet access is also widespread at home for Turkish people. Decades ago, it was about 20% of internet users access internet at home and that rate increase to 76% (Tuik, 2017). Mobile internet access is also high with 25% for our participants.

Table 14 Internet Usage Platforms

Internet Usage Platforms	
Options	Number
At Home- Laptop or Tablet PC	75
At Home- Mobile	63
At Work- Laptop or Tablet	139
At Work- Mobile	20
Other (Please Denote)	24

4. ANALYSIS

4.1. Factor Analysis of Independent Variables

For the analyses of the data, SPSS 20.0 and AMOS 18.0 were used. Explonatory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) are used for Factor Analysis. Even the literature categorized perceived risk types and some part of these types of perceived risks are used in our analysis it is known that perceived risk is uncertain and it can change person to person or country to country etc. So an EFA is made before CFA to categorize and label perceived risk types. Also as Online Shopping is explained with 7 items, an EFA is made for Online Shopping too.

In this research, 5 types of perceived risk which are Financial Risk, Product Risk, Delivery Risk, Time Risk and Information Security Risk are determined and each of them is asked by 5,5,6,5 and 5 questions respectively. Principle Component Analysis method and Varimax Rotation are used as the extraction method.

4.1.1.KMO and Bartlett's Test of Sphericity Results:

If the value of KMO Test is less than .5 it can not be accepted. The result higher than .8 is an excellent result. (Durmuş, Yurtkoru, & Çinko, 2011) KMO is larger than .5 (see Table 15) so we can say that the set of variables which is going to be used in PCA is homogeneous. The assumption of having a homogeneous set of variables is satisfied.

Bartlett's Test is about testing the significance of correlation matrix which is used as an input data for PCA. The result is significant (see Table 16) so correlation matrix can be used as an input data for PCA.

4.1.1. Factor and Realiability Analysis Results of Independent Variables

There are 5 components after the anaylsis and their factor loadings can be seen in the table. Items with less than .5 factor loadings are extracted from the components and rest of the components are categorized and labeled based on content of the questions of the items.

After performing PCA, new multiitem instruments are created in our modified research model. The new components with their labels and contents can be seen in the table

below. Total percentage of explained variance is over 50%. This is a good result for the research.

Table 15 Result of Factor Analysis for Independent Variables

Factor Name	Factor Items	Factor Loadings	% of Variance	Reliability
Security Risk	It is extremely secure to use credit cards on online shopping.	.834	19.042	.883
	Webpages are extremely secure for online shopping.	.818		
	I extremely trust webpages about shopping online there.	.751		
	I extremely take comfort in searching webpages for online shopping.	.659		
	Visual and real product is totally same on online shopping (the size, quality, colour etc.)	.645		
Accessibility Risk	It is extremely easy to find the right webpage on online shopping.	.794	16.942	.845
	It is extremely easy to find the right product on online shopping.	.784		
	Ordering process is extremely easy on online shopping.	.736		
	The ordered product is exactly deliver on online shopping.	.614		
	The ordered product is absolutely deliver on time that they specified.	.613		
Product Risk	It is not problem for me not to see, touch or check the product on online shopping.	.860	13.333	.862
	It is extremely easy to prove the size, number, measure of a product on online shopping. (for clothes, shoes etc.)	.798		
	It is not problem for me not to able to try the product on online shopping.	.727		
Returning & Cancellation Risk	It is extremely easy to cancel/return the order on online shopping.	.871	10.691	.855
	The cancellation/return process is extremely short on online shopping	.834		
Trust Risk	Products are more expensive than the retail market on online shopping.	.778	9.353	.564
	Possibility of wrong delivering of the product is extremely high on online shopping.	.764		
	Online shopping waste my time.	.614		
		Total	69.361	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				.897
Bartlett's Test of Sphericity		Approx. Chi-Square	2891.640	
		df	153	
		Sig.	0.000	

When we examine the model, we must identify the number of instruments and characteristics of them to be used in measuring variables in the model. Reliability analysis can be perform with multiitem instruments as well as single item instruments. The main purpose of the Reliability Analysis is to show the reliability level of each instruments. If we can not prove

the reliability of the instruments for a particular variable in the model, that variable must be removed from the model as well as from the analysis.

The results of Factor Analysis for independent variables can be seen in the table above. The variables which has a Cronbach's Alpha value over .7 means, that variable's instruments are reliable. This result is valid for all independent variables except "Trust Risk".

As "Trust Risk" variable has 3 items, Cronbach's Alpha if Item Deleted result should be considered. It is seen that Cronbach's Alpha value is not increasing by deleting any instrument. So the independent variable "Trust Risk" will be totally removed from the model.

Table 16 Cronbach's Alpha if Item Deleted for Trust Risk

Item-Total Statistics	
	<u>Cronbach's Alpha if Item Deleted</u>
RevFinRisk8	.449
RevDelRisk25	.399
RevTimeRisk20	.548

After Trust Risk removed from the model, the new components and their factor analysis results are as follow.

Table 17 Result of Factor Analysis for Independent Variables

Factor Name	Factor Items	Factor Loadings	% of Variance	Reliability
Security Risk	It is extremely secure to use credit cards on online shopping.	.834	19.042	.883
	Webpages are extremely secure for online shopping.	.818		
	I extremely trust webpages about shopping online there.	.751		
	I extremely take comfort in searching webpages for online shopping.	.659		
	Visual and real product is totally same on online shopping (the size, quality, colour etc.)	.645		
Accessibility Risk	It is extremely easy to find the right webpage on online shopping.	.794	16.942	.845
	It is extremely easy to find the right product on online shopping.	.784		
	Ordering process is extremely easy on online shopping.	.736		
	The ordered product is exactly deliver on online shopping.	.614		
	The ordered product is absolutely deliver on time that they specified.	.613		
Product Risk	It is not problem for me not to see, touch or check the product on online shopping.	.860	13.333	.862
	It is extremely easy to prove the size, number, measure of a product on online shopping. (for clothes, shoes etc.)	.798		
	It is not problem for me not to able to try the product on online shopping.	.727		
Returning & Cancellation Risk	It is extremely easy to cancel/return the order on online shopping.	.871	10.691	.855
	The cancellation/return process is extremely short on online shopping	.834		
		Total	69.361	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				.902
Bartlett's Test of Sphericity		Approx. Chi-Square		2738.143
		df		105
		Sig.		0.000

4.2. Factor Analysis Of Online Shopping

Online Shopping is asked by 7 questions. Principle Component Analysis method is used as the extraction method. Results of EFA can be seen below.

4.2.1.KMO and Bartlett's Test of Sphericity Results:

KMO is larger than .5, so we can say that the set of variables which is going to be used in PCA is homogeneous. The assumption of having a homogeneous set of variables is satisfied.

Bartlett's Test is about testing the significance of correlation matrix which is used as an input data for PCA. The result is significant so correlation matrix can be used as an input data for PCA.

4.2.2. Factor and Reliability Analysis Results of Dependent Variable

After PCA, the table below is derived. 2 components are appeared and their factor loadings can be seen in the table. Items with less than .5 factor loadings are not exist. The components are categorized and labeled based on content of the questions of the items.

After performing PCA new multiitem instruments are created in our modified research model. The new components with their labels and contents can be seen in the table below. Total percentage of explained variance is over 50%. This is a good result for the research.

Table 18 Factor and Reliability Analysis Results of Dependent Variable

Factor Name	Factor Items	Factor Loadings	% of Variance	Reliability
Product Details	Online shopping enable to compare prices of products easily.	.858	40.458	.847
	I can think to decide about a product as much as i want on online shopping.	.851		
	I have too many different product choices on online shopping.	.826		
	I shop online because i can get any detail about the product	.612		
Easy Shopping	Shopping online is not appropriate for my lifestyle.	.835	25.154	.590
	I shop online because i don't want go out	.649		
	It is extremely easy to shop online	.579		
		Total	65.612	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				.855
		Approx. Chi-Square		829.587
Bartlett's Test of Sphericity		df		21
		Sig.		.000

As “Easy Shopping” variable has 3 items, Cronbach's Alpha if Item Deleted result should be considered. It is seen that Cronbach's Alpha value is not increasing by deleting any instrument. So the variable “Easy Shopping” will be totally removed from the model. Dependent variable which is online shopping is constructed by 4 items.

Table 19 Cronbach's Alpha if Item Deleted for Easy Shopping

Item-Total Statistics	
	Cronbach's Alpha if Item Deleted
Eshop1	.423
Eshop2	.508
RevEshop3	.552

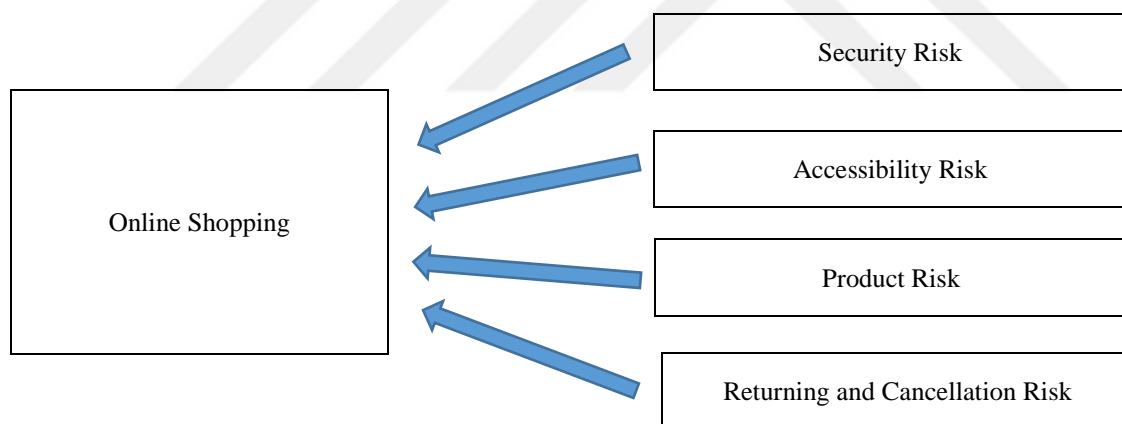
The variables which has a Cronbach's Alpha value over .7 means, that variable's instruments are reliable. This result is valid for Product Details but it is invalid for Easy Shopping.

Cronbach's Alpha value for "Product Details" is over .7 so all the items of that variable will be kept in the model and also "Product Details" is our only dependent variable with 4 items. In that point with dependent variable we mean a variable with 4 items which is "Product Details".

4.2.3. Conclusion of PCA and Reliability Analysis

After PCA and Reliability analysis, one dependent variable (Product Details-Online Shopping) with 4 items (observed variables) and four independent variables (Security Risk, Accessibility Risk, Product Risk ve Returning and Cancellation Risk) with 5,5,3 and 2 items (observed variable) arised respectively.

4.2.4. Final Model Before CFA



4.4. Confirmatory Factor Analysis (CFA) on AMOS

After EFA on SPSS, the final model is analysed with CFA on AMOS and with Structural Equation Modeling (SEM), it is determined which independent factors (Perceived Risk Types) has an effect on Online shopping ordinarily. The effect of demographic variables is analysed on SPSS and final model of effective perceived risk types and demographic variables is occurred. Before Path analysis on AMOS, AVE and CR values of independent variables and Inter-item Correlation Matrix are created. Fornell and Larcker, 1981 and Hair, Black, Babin, Anderson, and Tatham, 2006 explained in their research about conditions of Discriminant Validity and for our research, Discriminant Validity is provided as can be seen from the table below. Composite Reliability (CR) values are greater than .7 which are .860, 0.843, .847 and .845 for Security, Accessibility, Product and Return and Cancellation Risk respectively. Average Variance Extracted (AVE) values are greater than .5 with .554, .520, .650 and .731 respectively. Square root of AVE values are greater than inter-item correlations. These results show that we can continue with path analysis.

Table 20 Discriminant Validity Table

Factor	CR	AVE	Security Risk	Accessibility Risk	Product Risk	Returning and Cancellation Risk
Security Risk	0.860	0.554	0.742			
Accessibility Risk	0.843	0.520	0.596	0.721		
Product Risk	0.847	0.650	0.610	0.478	0.806	
Returning and Cancellation Risk	0.845	0.731	0.471	0.458	0.460	0.854

4.4.1. Path Model to be Analysed

It is concluded in the final stage of PCA and Reliability analysis that 4 latent variables may have effect on Online shopping. That model is built on AMOS as can be seen in the following figure.

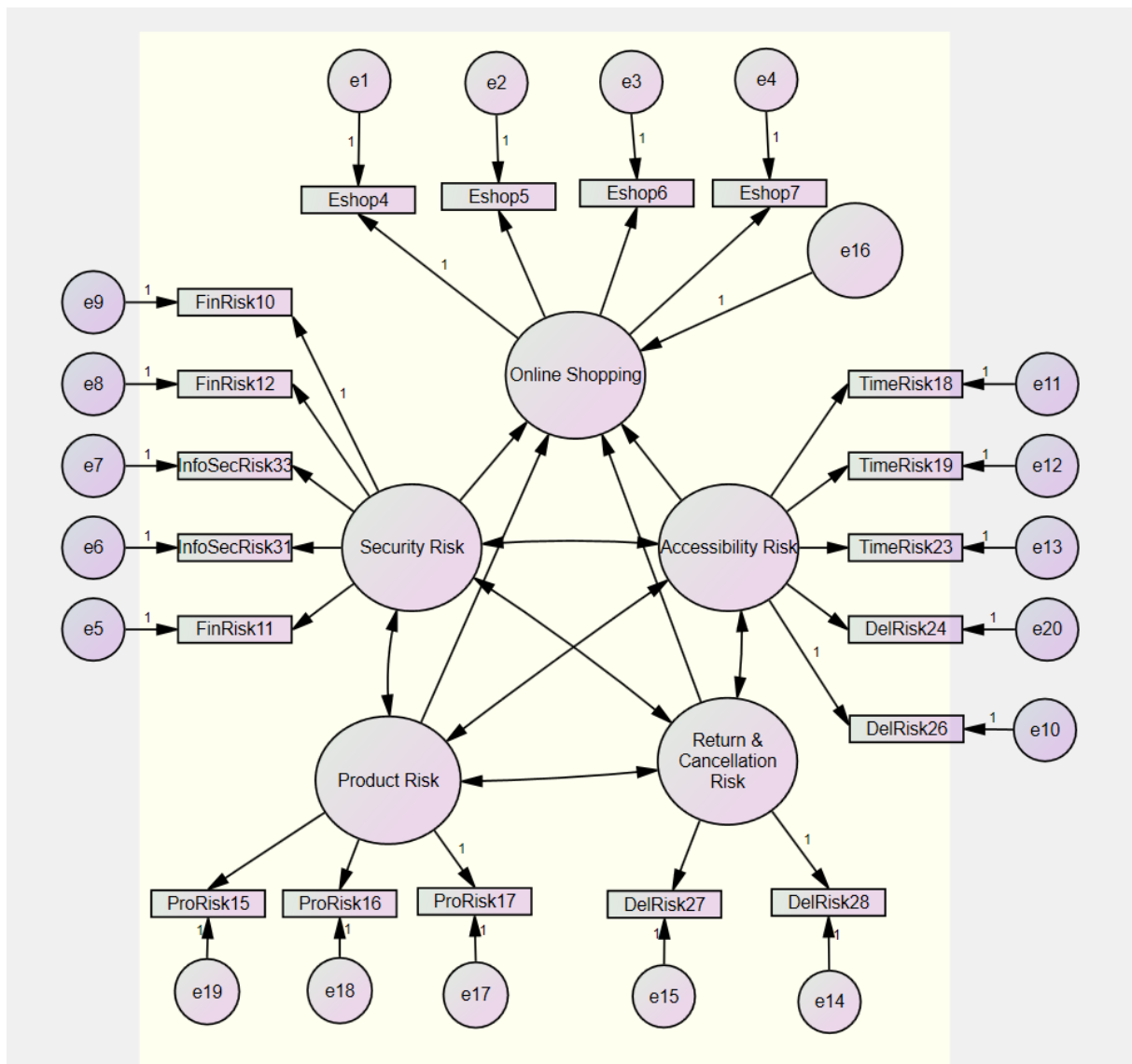


Figure 13 The Built Path Model on AMOS

The model is run. Output table of the model gave the following regression weights of independent variables. From the table below we can see that “Product Risk” doesn’t have a significant effect on Online Shopping. Before looking model fit results we extract “Product Risk” from the model and run the model again.

Table 21 Regression Weights of Independent Variables on Online Shopping

			Estimate	S.E.	C.R.	P	Label
Online Shopping	<---	Security Risk	.262	.083	3.143	.002	par_21
Online Shopping	<---	Accessibility Risk	.622	.098	6.344	***	par_22
Online Shopping	<---	Return and_Cancellation_Risk	-.166	.062	-2.675	.007	par_23
Online Shopping	<---	Product Risk	-.059	.061	-.967	.333	par_27

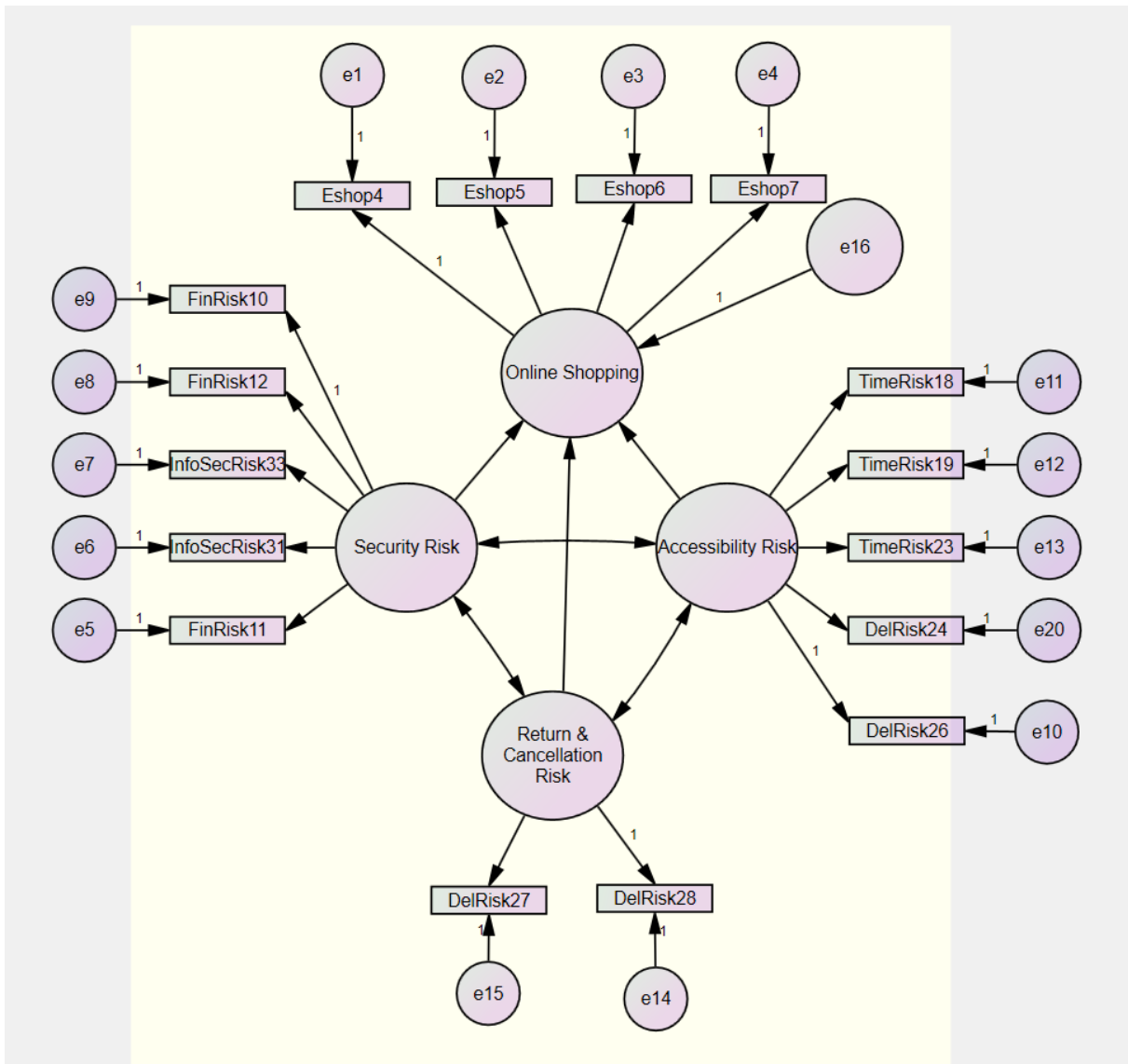


Figure 14 The Path Model on AMOS Without "Product Risk"

The model run and the result of Chi_square is $\chi^2 = 303,810$, $df = 126$, $p < 0.000$, so model fit can not be proved by Chi-Square result. We will look at the “GFI, AGFI, TLI, NFI” and “CFI” and “RMSEA” results.

Table 22 Computation of degrees of freedom (Default model)

Number of distinct sample moments:	171
Number of distinct parameters to be estimated:	45
Degrees of freedom (171 - 45):	126

Regression weights for independent variables show that the remaining independent variables in the model have significant effect on online shopping. None of the variables should be removed from the model. Their estimate values show the way and power of the effect of

independent variables. “Return and Cancellation Risk” negatively and others positively effect online shopping. In other words the more consumer perceive low security and accessibility risk the more they shop online. Effect of “Security Risk” is higher than “Accessiblity Risk”. In the following table the details can be seen.

There is a problem about “Return and Cancellation Risk”. Results show that the more consumer perceive risk about “Return and Cancellation Risk”, the more they shop online. This is logically not a desirable result, so it can be said that there are some reasons about having such a result. The first reason maybe understanding of survey questions. Participants may misunderstand the questions of that independent variable. When we look at the questions we can see that questions are very clear to be understood so the other reasons are probably real reasons for that negative correlation. The other reason maybe that participants shop online even they perceive high risk about return and cancellation. Other independent variables may influence them to ignore “Return and Cancellation Risk”.

As a next step we will look at goodness of fit measures. If all conditions are satisfied then we can conclude that our model is valid and the remaining independent variables significantly affect Online Shopping.

Table 23 Regression Weights of Independent Variables

		Estimate	S.E.	C.R.	P	Label
Online Shopping <---	Security Risk	.594	.090	6.616	***	par_21
Online Shopping <---	Accessibility Risk	.285	.085	3.346	***	par_22
Online Shopping <---	Return &_Cancellation_Risk	-.136	.054	-2.549	.011	par_12

For the goodness of fit there are some specific measures. In the table below there are some metrics that should be reported and their acceptable values are also shown in the table. Goodness of fit is reversely effected by sample size and also number of the variables in the model. Thus, the table below is just a guideline. For more details, see Table 12-4 in Hair et al., 2006 on page 654. The listed table is from Hu and Bentler (1999).

Table 24 Goodness of Fit Measures

Measure	Threshold
Chi-Square/df (cmin/df)	< 3 good; <5 Sometimes Permissible
p-value for the Model	> .05
CFI	> .95 Great; > .90 Traditional; > .80 Sometimes Permissible
GFI	> .95
AGFI	> .80
SRMR	< .09
RMSEA	< .05 Good; .05-.10 Moderate; > .10 Bad
PCLOSE	> .05

*Source: <http://statwiki.kolobkreations.com/index.php?title=File:GOFMetrics1.png>

Model Fit Summary results reveal that our model is fit. **GFI, NFI and CFI values are over .9, AGFI value is over .8 and RMSEA value is less than .8.**

Table 25 Model Fit Summary Results

Model	NPAR	CMIN	DF	P	CMIN/DF	GFI	AGFI	CFI	NFI	RMSEA
Default model	45	303.810	126	.000	2.411	.904	.870	.945	.911	.066

There is also no problem about correlation results of independent variables. All correlation values are less .7.

Table 26 Correlations of Independent Variables

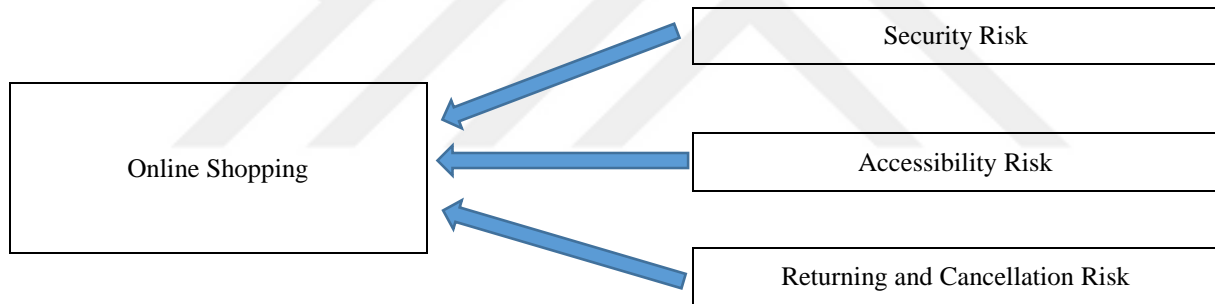
	Estimate
Accessibility Risk <--> Return &_Cancellation_Risk	.550
Security Risk <--> Accessibility Risk	.670
Security Risk <--> Return &_Cancellation_Risk	.526

Regression weights of items are over .5. none of the items should be extracted from the latent variables. In the table below regression weights of all items can be seen.

Table 27 Standardized Regression Weights of Items

			Estimate
Eshop6	<---	Online Shopping	.856
Eshop5	<---	Online Shopping	.783
Eshop7	<---	Online Shopping	.775
Eshop4	<---	Online Shopping	.666
InfoSecRisk33	<---	Security Risk	.887
FinRisk12	<---	Security Risk	.797
FinRisk10	<---	Security Risk	.760
InfoSecRisk31	<---	Security Risk	.729
FinRisk11	<---	Security Risk	.711
TimeRisk19	<---	Accessibility Risk	.794
TimeRisk18	<---	Accessibility Risk	.782
TimeRisk23	<---	Accessibility Risk	.711
DelRisk24	<---	Accessibility Risk	.686
DelRisk26	<---	Accessibility Risk	.642
DelRisk27	<---	Return & Cancellation Risk	.942
DelRisk28	<---	Return & Cancellation Risk	.793

The Final Model of Effect of Independent Variables



4.5. Analysis of Demographic Variables

In this research there are 8 demographic variables which are age, gender, marital status, education, total income per month, internet usage rate, job sector and internet usage platforms. Some statistical information was given in the model desing and aim part about demographic variables. In this part, effect of demographic variables on Online Shopping and the effect of them on Risk Perception Types (Security Risk, Accessibility Risk, Return and Cancellation Risk) which we found a significant effect on online shopping is analysed.

If we want to measure the relationship between particular demographic variables and online shopping and Risk Perceptions, first we must examine level of scales of both demographic variables and other variables. Scale levels of those variables are going to be considered for analysing. Online Shopping and Risk Perception Types are ratio scales and scale of demographic variables can be seen in the following table.

Table 28 Level of Scale of Demographic Variables.

Demographic Variable	Level of Scale of Demographic Variable
Age	Ratio
Gender	Nominal
Marital Status	Nominal
Education	Ordinal
Total Income Per Month	Ordinal
Internet Usage Rate	Ordinal
Job Sector	Nominal
Internet Usage Platforms	Nominal

4.5.1. Analysis and Results of “Age” and Online Shopping

The demographic variable “age” is a level of ratio scale variable so to measure the effect of age on Online Shopping and Risk Perception Types regression analysis is performed. The R Squared and Adjusted R Squared show us a sign about the amount of variability in the scores that can be explained by our independent variable (Hinton, Brownlow, McMurray, & Cozens, 2015).

Regression analysis result for Online Shopping show that “age” can explain online Shopping with a very low ($R = 0.272$; $R^2 = 0.074$; $F \text{ value} = 25.519$; $p \text{ value} = 0.000$) level.

Table 29 Regression Analysis Result For Online Shopping

Independent Variable	Dependent Variable: Online Shopping		
	Beta	t value	p value
Age	0.272	5.052	0.000
R= 0.272; R²= 0.074; F value= 25.519; p value= 0.000			

4.5.2. Analysis and Results of “Age” and Independent Variables

Security Risk: Regression analysis result for Security Risk show that “age” can explain Security Risk with a very low ($R= 0.201$; $R^2= 0.041$; $F\ value= 13.491$; $p\ value= 0.000$) level.

Table 30 Regression Analysis Result For Security Risk

Independent Variable	Dependent Variable: Security Risk		
	Beta	t value	p value
Age	0.201	3.673	0.000
R= 0.201; R²= 0.041; F value= 13.491; p value= 0.000			

Accessibility Risk: Regression analysis result for Accessibility Risk show that “age” can explain Accessibility Risk with a very low ($R= 0.214$; $R^2= 0.043$; $F\ value= 15.279$; $p\ value= 0.000$) level.

Table 31 Regression Analysis Result For Accessibility Risk

Independent Variable	Dependent Variable: Accessibility Risk		
	Beta	t value	p value
Age	0.214	3.909	0.000
R= 0.214; R²= 0.043; F value= 15.279; p value= 0.000			

Return and Cancellation Risk: Regression analysis result for Return and Cancellation Risk show that “age” can explain Return and Cancellation Risk with a very low ($R= 0.127$; $R^2= 0.013$; $F\ value= 5.224$; $p\ value= 0.023$) level.

Table 32 Regression Analysis Result For Return and Cancellation Risk

Independent Variable	Dependent Variable: Return and Cancellation Risk		
	Beta	t value	p value
Age	0.127	2.286	0.023
R= 0.127; R²= 0.013; F value= 5.224; p value= 0.023			

4.5.3. Analysis and Results of “Gender” and Online Shopping

The demographic variable “Gender” is a level of nominal scale variable with 2 different groups. To measure if there is a difference between these two groups for Online Shopping Independent Sample T-test is performed. The first group (Woman) is label as “1” and the second group (Man) labeled as “2”. Results of Independent Sample T-test is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in the online shopping for the different Gender groups.

H_1 : There is a difference in the online shopping for the different Gender groups.

Table 33 T-tests Result For Gender

		N	Mean	Std.Dev.	t value	p value
Online Shopping	Women	141	9.87	3.40	3.385	0.001
	Men	180	8.59	3.35		

Independent Sample T-tests result show that *there is a difference in the online shopping for the different Gender groups* ($t(319) = 3.385$; $p = 0.001$). To detect which gender group shop online more or less than the other we can look the average for the different gender groups. Mean value for Women is higher than men so we can say that women Shop Online more than men ($\mu_{women} = 9.87$, $Std.Dev. = 3.40$; $\mu_{men} = 8.59$, $Std.Dev. = 3.35$).

4.5.4. Analysis and Results of “Gender” and Independent Variables

Security Risk: To measure if there is a difference between two Gender groups for Security Risk, Independent Sample T-test is performed. The first group (Woman) is label as “1” and the second group (Man) labeled as “2”. Results of Independent Sample T-test is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in Security Risk for the different Gender groups.

H_1 : There is a difference in the Security Risk for the different Gender groups.

Table 34 T-tests Result For Gender

		N	Mean	Std.Dev.	t value	p value
Security Risk	Women	141	17.01	3.91	1.821	0.069
	Men	180	16.25	3.58		

Independent Sample T-tests result show that *there is no difference in Security Risk for the different Gender groups. ($t(319)= 1.821; p=0.069$).*

Accessibility Risk: To measure if there is a difference between two Gender groups for Accessibility Risk Independent Sample T-test is performed.

Hypothesis for this measurement is as follow:

H₀ : There is no difference in Accessibility Risk for the different Gender groups.

H₁ : There is a difference in the Accessibility Risk for the different Gender groups.

Table 35 T-tests Result For Gender

		N	Mean	Std.Dev.	t value	p value
Accessibility Risk	Women	141	12.35	3.72	1.383	0.168
	Men	180	11.79	3.42		

Independent Sample T-tests result show that *there is no difference in Accessibility Risk for the different Gender groups. ($t(319)= 1.383; p=0.168$).*

Return and Cancellation Risk: To measure if there is a difference between two Gender groups for Return and Cancellation Risk Independent Sample T-test is performed.

Hypothesis for this measurement is as follow:

H₀ : There is no difference in Return and Cancellation Risk for the different Gender groups.

H₁ : There is a difference in the Return and Cancellation Risk for the different Gender groups.

Table 36 T-tests Result For Gender

		N	Mean	Std.Dev.	t value	p value
Return and Cancellation Risk	Women	141	12.35	3.72	1.383	0.168
	Men	180	11.79	3.42		

Independent Sample T-tests result show that *there is no difference in Accessibility Risk for the different Gender groups. ($t(319)= 1.383$; $p=0.168$).*

4.5.5. Analysis and Results of “Marital Status” and Online Shopping.

The demographic variable “Marital Status” is a level of nominal scale variable with 2 different groups. To measure if there is a difference between these two groups for Online Shopping Independent Sample T-test is performed. The first group (Married) is label as “1” and the second group (Single) labeled as “2”. Results of Independent Sample T-test is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : *There is no difference in the online shopping for the different Marital Status groups.*

H_1 : *There is a difference in the online shopping for the different Marital Status groups.*

Table 37 T-tests Result For Gender

		N	Mean	Std.Dev.	t value	p value
Online Shopping	Married	206	9.10	3.48	-0.354	0.723
	Single	115	9.24	3.33		

Independent Sample T-tests result show that *there is no difference in the online shopping for the different Marital Status groups. ($t(319)= -0.354$; $p=0.723$).*

4.5.6. Analysis and Results of “Marital Status” and Independent Variables

Security Risk: To measure if there is a difference between two Marital Status groups for Security Risk, Independent Sample T-test is performed. The first group (Married) is label as “1” and the second group (Single) labeled as “2”. Results of Independent Sample T-test is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in Security Risk for the different Marital Status groups.

H_1 : There is a difference in Security Risk for the different Marital Status groups.

Table 38 T-tests Result For Marital Status

		N	Mean	Std.Dev.	t value	p value
Security Risk	Women	206	16.55	3.76	-0.206	0.837
	Men	115	16.64	3.72		

Independent Sample T-tests result show that there is no difference in Security Risk for the different Marital Status groups ($t(319) = -0.206$; $p = 0.837$).

Accessibility Risk: To measure if there is a difference between two Marital Status groups for Accessibility Risk, Independent Sample T-test is performed.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in Accessibility Risk for the different Marital Status groups.

H_1 : There is a difference in the Accessibility Risk for the different Marital Status groups.

Table 39 T-tests Result For Marital Status

		N	Mean	Std.Dev.	t value	p value
Accessibility Risk	Married	206	11.86	3.44	-1.200	0.231
	Single	115	12.36	3.77		

Independent Sample T-tests result show that there is no difference in Accessibility Risk for the different Marital Status groups ($t(319) = -1.200$; $p = 0.231$).

Return and Cancellation Risk: To measure if there is a difference between two Marital Status groups for Return and Cancellation Risk, Independent Sample T-test is performed.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in Return and Cancellation Risk for the different Marital Status groups.

H_1 : There is a difference in the Return and Cancellation Risk for the different Marital Status groups.

Table 40 T-tests Result For Marital Status

		N	Mean	Std.Dev.	t value	p value
Return and Cancellation Risk	Married	206	6.26	1.93	-2.220	0.027
	Single	115	6.75	1.84		

Independent Sample T-tests result show that there is a difference in Return and Cancellation Risk for the different Marital Status groups ($t(319) = -2,220$; $p=0,027$). To detect which Marital Status group perceive Return and Cancellation Risk more or less than the other we can look the average for the different Marital Status groups. Mean value for Singles is higher than Married ones so we can say that Single participants perceive more Return and Cancellation Risk than Married participants ($\mu_{single} = 6.75$. $Std.Dev. = 1.93$; $\mu_{married} = 6.26$. $Std.Dev. = 1.93$).

4.5.7. Analysis and Results of “Job Sector” and Online Shopping.

The demographic variable “Job Sector” is a level of nominal scale variable with 3 different groups but the last group “half-private sector” has just 8 members so we decrease the “job sector” group into 2 groups by adding that 8 members to “private sector”. To measure if there is a difference between these two groups for Online Shopping, Independent Sample T-test is performed. The first group (Private Sector) is labeled as “1” and the second group (Public Sector) is labeled as “2”. Results of Independent Sample T-test is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in the online shopping for the different Job Sector groups.

H_1 : There is a difference in the online shopping for the different Job Sector groups.

Table 41 T-tests Result For Job Sector

		N	Mean	Std.Dev.	t value	p value
Online Shopping	Private	112	9.11	3.32	-0.174	0.862
	Public	209	9.18	3.49		

Independent Sample T-tests result show that *there is no difference in the online shopping for the different Job Sector groups. ($t(319) = -0.174; p = 0.862$).*

4.5.8. Analysis and Results of “Job Sector” and Independent Variables

Security Risk: To measure if there is a difference between two Job Sector groups for Security Risk, Independent Sample T-test is performed. The first group (Private Sector) is labeled as “1” and the second group (Public Sector) is labeled as “2”. Results of Independent Sample T-test is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : *There is no difference in Security Risk for the different Job Sector groups.*

H_1 : *There is a difference in Security Risk for the different Job Sector groups.*

Table 42 T-tests Result For Job Sector

		N	Mean	Std.Dev.	t value	p value
Security Risk	Private	112	16.48	3.73	-0.362	0.717
	Public	209	16.64	3.76		

Independent Sample T-tests result show that there is no difference in Security Risk for the different Job Sector groups ($t(319) = -0.362; p = 0.717$).

Accessibility Risk: To measure if there is a difference between two Job Sector groups for Accessibility Risk, Independent Sample T-test is performed.

Hypothesis for this measurement is as follow:

H_0 : *There is no difference in Accessibility Risk for the different Job Sector groups.*

H_1 : *There is a difference in Accessibility Risk for the different Job Sector groups.*

Table 43 T-tests Result For Job Sector

		N	Mean	Std.Dev.	t value	p value
Accessibility Risk	Private	112	11.88	3.53	-0.597	0.551
	Public	209	12.12	3.59		

Independent Sample T-tests result show that there is no difference in Accessibility Risk for the different Job Sector groups ($t(319) = -0.597$; $p = 0.551$).

Return and Cancellation Risk: To measure if there is a difference between two Job Sector groups for Return and Cancellation Risk Independent Sample T-test is performed.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in Return and Cancellation Risk for the different Job Sector groups.

H_1 : There is a difference in Return and Cancellation Risk for the different Job Sector groups.

Table 44 T-tests Result For Job Sector

		N	Mean	Std.Dev.	t value	p value
Return and Cancellation Risk	Private	112	6.60	1.96	1.135	0.257
	Public	209	6.34	1.88		

Independent Sample T-tests result show that there is no difference in Return and Cancellation Risk for the different Job Sector groups ($t(319) = 1.135$; $p = 0.257$).

4.5.9. Analysis and Results of “Internet Usage Platforms” and Online Shopping.

The demographic variable “Internet Usage Platforms” is a level of nominal scale variable with 5 different groups but we decreased it to 2 different groups. To measure if there is a difference between these two groups for Online Shopping, Independent Sample T-test is performed. The first group (At Home) is label as “1” and the second group (At Work) labeled as “2”. Results of Independent Sample T-test is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in the online shopping for the different Internet Usage Platform groups.

H_1 : There is a difference in the online shopping for the different Internet Usage Platform groups.

Table 45 T-tests Result For Internet Usage Platform

		N	Mean	Std.Dev.	t value	p value
Online Shopping	At Home	138	9.03	3.19	-0.561	0.575
	At Work	183	9.25	3.60		

Independent Sample T-tests result show that *there is no difference in the online shopping for the different Internet Usage Platform groups* ($t(319) = -0.561$; $p=0.575$).

4.5.10. Analysis and Results of “Internet Usage Platforms” and Independent Variables

Security Risk: The demographic variable “Internet Usage Platforms” is a level of nominal scale variable with 2 different groups. To measure if there is a difference between these two groups for Security Risk, Independent Sample T-test is performed. The first group (At Home) is label as “1” and the second group (At Work) labeled as “2”. Results of Independent Sample T-test is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : *There is no difference in the Security Risk for the different Internet Usage Platform groups.*

H_1 : *There is a difference in the Security Risk for the different Internet Usage Platform groups.*

Table 46 T-tests Result For Internet Usage Platform

		N	Mean	Std.Dev.	t value	p value
Security Risk	At Home	138	16.36	3.65	-0.928	0.354
	At Work	183	16.75	3.82		

Independent Sample T-tests result show that *there is no difference in the Security Risk for the different Internet Usage Platform groups* ($t(319) = -0.928$; $p=0.354$).

Accessibility Risk: To measure if there is a difference between these two internet usage platform groups for Accessibility Risk, Independent Sample T-test is performed.

Hypothesis for this measurement is as follow:

H_0 : *There is no difference in the Accessibility Risk for the different Internet Usage Platform groups.*

H_1 : *There is a difference in the Accessibility Risk for the different Internet Usage Platform groups.*

Table 47 T-tests Result For Internet Usage Platform

		N	Mean	Std.Dev.	t value	p value
Accessibility Risk	At Home	138	11.78	3.54	-1.145	0.253
	At Work	183	12.23	3.58		

Independent Sample T-tests result show that *there is no difference in the Accessibility Risk for the different Internet Usage Platform groups ($t(319) = -1.145$; $p = 0.253$).*

Return and Cancelation Risk: To measure if there is a difference between these two internet usage platform groups for Return and Cancelation Risk, Independent Sample T-test is performed.

Hypothesis for this measurement is as follow:

H_0 : *There is no difference in the Return and Cancelation Risk for the different Internet Usage Platform groups.*

H_1 : *There is a difference in the Return and Cancelation Risk for the different Internet Usage Platform groups.*

Table 48 T-tests Result For Internet Usage Platform

		N	Mean	Std.Dev.	t value	p value
Return and Cancelation Risk	At Home	138	6.40	1.89	-0.280	0.779
	At Work	183	6.46	1.93		

Independent Sample T-tests result show that *there is no difference in the Return and Cancelation Risk for the different Internet Usage Platform groups ($t(319) = -0.280$; $p = 0.779$).*

4.5.11. Analysis and Results of “Education” and Online Shopping.

The demographic variable “Education” is a level of ordinal scale with 5 different groups but sample size of 2 groups out of 5 are less than 30 so we will perform one-way anova analysis with 3 groups.

Results of One-Way Anova is shown below in the table.

Hypothesis for this measurement is as follow:

H₀ : There is no difference in the online shopping for the different Education groups.

H₁ : There is a difference in the online shopping for the different Education groups.

Table 49 One-Way Anova Result for Education

		N	Mean	F Value	p value
Online Shopping	University Graduated	71	9.62	7.874	0.000
	Master Graduated	71	7.79		
	Doctorate Graduated	170	9.58		

The result of One-Way Anova show that there is a difference between education groups for online shopping ($F(2)=7.87; p=0.000$). To detect which educational level has a difference Scheffe test results are considered.

Table 50 Scheffe Test Result for Education

Scheffe Results			Mean Difference	Std. Error	Sig.
Online Shopping	University	Master	1,83099*	,56534	,006
		Doctorate	,03737	,47597	,997
	Master	University	-1,83099*	,56534	,006
		Doctorate	-1,79362*	,47597	,001
	Doctorate	University	-,03737	,47597	,997
		Master	1,79362*	,47597	,001

Scheffe Test results show that there is a difference between “Master Graduated” and “University Graduated” also a difference between “Master Graduated” and “Doctorate Graduated”. To detect which Educational Level Group shop online more than the others we can look at the results of their mean. The Table 50 show that University Graduates have the highest mean value and then Doctorate Graduates follow it. Master graduates have a low mean average. There is a significant difference between Master Graduates and other groups so we can conclude that University and Doctorate Graduates significantly shop online more than Master Graduates.

4.5.12. Analysis and Results of “Education” and Independent Variables

The demographic variable “Education” is a level of ordinal scale with 5 different groups but sample size of 2 groups out of 5 are less than 30 so we will perform one-way anova analysis with 3 groups.

Security Risk:

Results of One-Way Anova test is shown below in the table.

Hypothesis for this measurement is as follow:

H₀ : There is no difference in the Security Risk for the different Education groups.

H₁ : There is a difference in the Security Risk for the different Education groups.

Table 51 One-Way Anova Result for Education

		N	Mean	F Value	p value
Online Shopping	University Graduated	71	13.23	3.106	0.064
	Master Graduated	71	12.48		
	Doctorate Graduated	170	13.58		

The result of One-Way Anova show that there is no difference between education groups for Security Risk ($F(2)=3.106$; $p=0.064$).

Accessibility Risk:

Results of One-Way Anova is shown below in the table.

Hypothesis for this measurement is as follow:

H₀ : There is no difference in the Accessibility Risk for the different Education groups.

H₁ : There is a difference in the Accessibility Risk for the different Education groups.

Table 52 One-Way Anova Result for Education

		N	Mean	F Value	p value
Online Shopping	University Graduated	71	12.01	1.593	0.205
	Master Graduated	71	11.42		
	Doctorate Graduated	170	12.30		

The result of One-Way Anova show that there is no difference between education groups for Accessibility Risk ($F(2)=1.593$; $p=0.205$).

Return and Cancellation Risk:

Results of One-Way Anova is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in the Return and Cancellation Risk for the different Education groups.

H_1 : There is a difference in the Return and Cancellation Risk for the different Education groups.

Table 53 One-Way Anova Result for Education

		N	Mean	F Value	p value
Online Shopping	University Graduated	71	6.30	1.844	0.160
	Master Graduated	71	6.13		
	Doctorate Graduated	170	6.61		

The result of One-Way Anova show that there is no difference between education groups for Return and Cancellation Risk ($F(2)=1.844$; $p=0.160$).

4.5.13. Analysis and Results of “Total Income per Month” and Online Shopping.

The demographic variable “Total Income per Month” is a level of ordinal scale with 7 different groups but sample size of 1 group out of 7 is less than 30 so we will perform one-way anova analysis with 6 groups.

Results of One-Way Anova is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in the online shopping for the different Total Income per Month groups.

H_1 : There is a difference in the online shopping for the different Total Income per Month groups.

Table 54 One-Way Anova Result for Total Income per Month

		N	Mean	F Value	p value
Online Shopping	Between 2001-3000 TL	34	8.88	0.259	0.935
	Between 3001-4000 TL	35	8.77		
	Between 4001-5000 TL	68	9.06		
	Between 5001-6000 TL	37	9.14		
	Between 6001-7000 TL	36	9.17		
	More Than 7001 TL	99	9.42		

The result of One-Way Anova show that there is no difference between Total Income per Month groups for online shopping ($F(5)=0.259$; $p=0.935$).

4.5.14. Analysis and Results of “Total Income per Month” and Independent Variables

The demographic variable “Total Income per Month” is a level of ordinal scale with 7 different groups but sample size of 1 group out of 7 is less than 30 so we will perform one-way anova analysis with 6 groups.

Security Risk:

Results of One-Way Anova is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in the Security Risk for the different Total Income per Month groups.

H_1 : There is a difference in the Security Risk for the different Total Income per Month groups.

Table 55 One-Way Anova Result for Total Income per Month

		N	Mean	F Value	p value
Security Risk	Between 2001-3000 TL	34	13.32	0.495	0.780
	Between 3001-4000 TL	35	13.20		
	Between 4001-5000 TL	68	13.07		
	Between 5001-6000 TL	37	13.24		
	Between 6001-7000 TL	36	12.78		
	More Than 7001 TL	99	13.63		

The result of One-Way Anova show that there is no difference between Total Income per Month groups for Security Risk ($F(5)=0.495$; $p=0.780$).

Accessibility Risk:

Results of One-Way Anova is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in the Accessibility Risk for the different Total Income per Month groups.

H_1 : There is a difference in the Accessibility Risk for the different Total Income per Month groups.

Table 56 One-Way Anova Result for Total Income per Month

		N	Mean	F Value	p value
Accessibility Risk	Between 2001-3000 TL	34	12.06	0.186	0.968
	Between 3001-4000 TL	35	11.97		
	Between 4001-5000 TL	68	12.28		
	Between 5001-6000 TL	37	12.22		
	Between 6001-7000 TL	36	11.61		
	More Than 7001 TL	99	12.03		

The result of One-Way Anova show that there is no difference between Total Income per Month groups for Accessibility Risk ($F(5)=0.186$; $p=0.968$).

Return and Cancellation Risk:

Results of One-Way Anova is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in the Return and Cancellation Risk for the different Total Income per Month groups.

H_1 : There is a difference in the Return and Cancellation Risk for the different Total Income per Month groups.

Table 57 One-Way Anova Result for Total Income per Month

		N	Mean	F Value	p value
Return and Cancellation Risk	Between 2001-3000 TL	34	6.18	1.282	0.271
	Between 3001-4000 TL	35	6.09		
	Between 4001-5000 TL	68	6.82		
	Between 5001-6000 TL	37	6.43		
	Between 6001-7000 TL	36	6.06		
	More Than 7001 TL	99	6.52		

The result of One-Way Anova show that there is no difference between Total Income per Month groups for Return and Cancellation Risk ($F(5)=1.282$; $p=0.271$).

4.5.15. Analysis and Results of “Internet Usage Rate” and Online Shopping.

The demographic variable “Internet Usage Rate” is a level of ordinal scale with 5 different groups but sample size of 1 group out of 5 is less than 30 so we will perform one-way anova analysis with 4 groups.

Results of One-Way Anova is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in the online shopping for the different Internet Usage Rate groups.

H_1 : There is a difference in the online shopping for the different Internet Usage Rate groups.

Table 58 One-Way Anova Result for Internet Usage Rate

		N	Mean	F Value	p value
Online Shopping	Between 1-3 Hours in a Day	106	9.74	1.912	0.128
	Between 3-5 Hours in a Day	101	8.75		
	Between 5-8 Hours in a Day	56	8.68		
	More Than 8 Hours in a Day	42	9.05		

The result of One-Way Anova show that there is no difference between Internet Usage Rate groups for online shopping ($F(3)=1.912$; $p=0.128$).

4.5.16. Analysis and Results of “Internet Usage Rate” and Independent Variables

The demographic variable “Internet Usage Rate” is a level of ordinal scale with 5 different groups but sample size of 1 group out of 5 is less than 30 so we will perform one-way anova analysis with 4 groups.

Security Risk:

Results of One-Way Anova is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in the Security Risk for the different Internet Usage Rate groups.

H_1 : There is a difference in the Security Risk for the different Internet Usage Rate groups.

Table 59 One-Way Anova Result for Internet Usage Rate

		N	Mean	F Value	p value
Security Risk	Between 1-3 Hours in a Day	106	13.25	0.345	0.793
	Between 3-5 Hours in a Day	101	13.35		
	Between 5-8 Hours in a Day	56	12.95		
	More Than 8 Hours in a Day	42	13.55		

The result of One-Way Anova show that there is no difference between Internet Usage Rate groups for Security Risk ($F(3)=0.345$; $p=0.793$).

Accessibility Risk:

Results of One-Way Anova is shown below in the table.

Hypothesis for this measurement is as follow:

H_0 : There is no difference in the Accessibility Risk for the different Internet Usage Rate groups.

H_1 : There is a difference in the Accessibility Risk for the different Internet Usage Rate groups.

Table 60 One-Way Anova Result for Internet Usage Rate

		N	Mean	F Value	p value
Accessibility Risk	Between 1-3 Hours in a Day	106	12.39	1.698	0.167
	Between 3-5 Hours in a Day	101	12.05		
	Between 5-8 Hours in a Day	56	11.09		
	More Than 8 Hours in a Day	42	11.95		

The result of One-Way Anova show that there is no difference between Internet Usage Rate groups for Accessibility Risk ($F(4)=1.698$; $p=0.167$).

Return and Cancellation Risk:

Results of One-Way Anova is shown below in the table.

Hypothesis for this measurement is as follow:

H₀: There is no difference in the Return and Cancellation Risk for the different Internet Usage Rate groups.

H₁: There is a difference in the Return and Cancellation Risk for the different Internet Usage Rate groups.

Table 61 One-Way Anova Result for Internet Usage Rate

		N	Mean	F Value	p value
Return and Cancellation Risk	Between 1-3 Hours in a Day	106	6.40	0.302	0.824
	Between 3-5 Hours in a Day	101	6.57		
	Between 5-8 Hours in a Day	56	6.32		
	More Than 8 Hours in a Day	42	6.57		

The result of One-Way Anova show that there is no difference between Internet Usage Rate groups for Return and Cancellation Risk ($F(3)=0.302$; $p=0.824$).

5. CONCLUSIONS, IMPLICATIONS AND LIMITATIONS

In this chapter there is a summary of our study which we discussed our findings, implications and limitations. As we mentioned before, a survey conducted with 321 participant and we try to indicate the effect of risk types on online shopping and if there is a correlation or association between online shopping and demographic variables. There are different findings about effect of perceived risk types on online shopping in literature. As we are measuring the perception of the consumers different findings for different countries are very normal. There are also similar studies in Turkey but our study is unique as we determine new risk factors and also questionnaire we used was created by us.

5.1. Conclusions

After literature review and analysis of our questionnaire's result, we discover 5 types of perceived risk which are Security Risk, Accessibility Risk, Product Risk, Returning and Cancellation Risk, and Trust Risk. The labels of our new risk factors are created depend on content of questions of the survey. SPSS 20 is used for Factor Analysis and we use Principal Component Analysis as extraction method. After Structural Equation Modeling (SEM) on AMOS 18, we found that Security Risk, Accessibility Risk and Returning and Cancellation Risk have a significant effect on online shopping.

Security Risk which is one of the effective perceived risk types on online shopping and in literature, Financial Risk and Information Security Risks correspond to Security Risk. The content of the questions of Security Risk are about security shopping without any loss and being secure about personal information. Thus we labeled our component as Security Risk. When we look at literature we can see that most of the studies find Financial Risk an effective risk type on online shopping and it is negatively related to online shopping (Dai, Forsythe, and Kwon, 2014; Khan, Liang, and Shahzad, 2015; Masoud, 2013; Al-Rawad et al., 2015; Almousa, 2014; Moshrefjavadi et al., 2012). Yang et al., 2015 found information security as an insignificant dimension but also most of the studies found it important and negatively related (Featherman and Pavlou, 2003; Masoud, 2013, Tsai and Yeh, 2010). These findings support our study about negative effect of Perceived Security Risk on online shopping.

The other important perceived risk type for our study is Accessibility Risk and in literature, Delivery and Time Risks correspond to Accessibility Risk. Moshrefjavadi et al., 2012 found delivery risk is negatively associated with online shopping in his study and Forsythe &

Shi, 2003 found delivery and time risk is related with the customers' re-purchase intention. Almousa, 2011 also found time risk significant on appraisal online shopping. In the light of these findings,

Return and Cancellation Risk type is not mention in literature directly but delivery risk correspond to it, so the results for delivery risk on literature can be considered. Forsythe & Shi, 2003 and Moshrefjavadi et al., 2012 found delivery risk negatively associated with online shopping but in our study we found Return and Cancellation Risk positively associated with online shopping. We can conclude that Return and Cancellation Risk perception don't guide customers to avoid online shopping. Another motivation lead consumers to shop online even they perceive a high Return and Cancellation Risk.

For the demographic variables we found "Gender" and "Education Level" has an effect on online shopping. There are lots of studies (Settle and Alreck, 2002; Boyle and Ruppel, 2006; Calik and Ersoy, 2008; W.-J. Chen and Chuan, 2005; Clemes et al., 2014; Doolin et al., 2005; El Ansary and Roushdy, 2013; Fan and Miao, 2012; Girard et al., 2003; Gong and Maddox, 2011; Koyuncu and Lien, 2003; Lian and Yen, 2014; Saprikis, 2013; Stafford et al., 2004; Thamizhvanan and Xavier, 2013; Vaidehi, 2014; Slyke et al., 2002) indicate that Gender has a significant impact on online shopping except Wang et al., 2010. In other words male and females have significantly different results on online shopping. For our study we can see that females have greater online shopping tendency than males. This difference can change in different cultures. The following studies found that Educational Level has a significant impact on online shopping El Ansary and Roushdy, 2013; Calik and Ersoy, 2008; Clemes et al., 2014; Girard et al., 2003; Gong and Maddox, 2011; Koyuncu and Lien, 2003; Punj, 2011; Saprikis, 2013; Thamizhvanan and Xavier, 2013. No matter they way of relation, most of the studies in literature support our findings about demographic variables.

In summary we can say that our findings are generally supported by literature and some of the findings can broad literature and may create new research topics.

5.2. Implications

The main contribution of this study is to create a framework of effect of perceived risk types on online shopping. Results of this study is valid for Turkish consumers but the survey used for analysis can also be used in any country. Determining the effect of perceived risk on online shopping gives idea both to consumers and companies in different ways. For the consumers if they know which perceived risk types have an effect on online shopping, they can think that these types of risks should be considered during online shopping. Perception of risk about online shopping for customers may occur just because of hearsy but it may also be about past experience. Thus the effective perceived risk types should be considered by customers more carefully during their online purchasing. For the companies all risk types are important and the sould have enough precautions but for the more effective ones, they should take extra actions to decrease risk perception. High risk perception of customers will decrease their online purchasing. Companies may have big losses if they don't take actions in time and sufficiently.

Results of demographic variables are also crucial. For our study we found that there is a difference between male and females in terms of their purchasing behaviours. Female customers shop online more than male customers. This information is a good data for companies and they can make surveys to detect the reason of that result and thus they can offer their products based on this information. Also for the educational background, there are differences between different educational levels in terms of their purchasing behaviour. We can see that university graduates and doctorate graduates shop online significantly more than other educational levels. An interesting result occured for master graduates. We found that they significantly shop online less than other groups. Details and reasons of that result can help companies to discover a new potential customer group that can shop online more.

5.3. Limitations

Studies of social sciences are interpretations of the researchers so they don't give exact result for the studied topics but they give a general idea about the topic. This study is also based on a survey result and different participants may give different results. Possible effective reasons can be that can be considered as limitations for our study are as follow

Small Sample Size: Population size is wide for this study so 341 participants are actually a small part of that population. Also the respondents with extreme cases could be choosen. So better results can be derive with a wide sample size.

Inattentive Responses: Respondets may answer the survey without reading or caring. They may just click an answer without looking what the question is. These inattentive responses might give unexpected results or violate expected results.

Misunderstand or Totally Don't Understanding Questions: Respondents may misunderstood or they may not understood some of the questions. Understanding a positive way question into a negative way or vice versa will change the result of the survey for this respondent and it will affect all the study. It is not possible to detect such participants and to remove them from the study.

Surveying Online: The conducted survey is prepared online and the link sent to respondents by their e-mail. They participate the survey online and they could make some mistakes during answering the questions. Clicking wrong answer by mistake violates the results.

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APPENDIX A

The Conducted Survey (in Turkish)

1. **(CC: Online Shopping)** İnternette alışveriş yapmak son derece kolaydır.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

2. **(CC: Online Shopping)** Evden dışarı çıkmamak için internette alışveriş yaparım.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

3. **(R-CC: Online Shopping)** İnternette alışveriş yaşam tarzıma uygun değildir.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

4. **(CC: Online Shopping)** Ürün bilgilerini bütün detaylarıyla alabildiğim için internette alışveriş yapıyorum.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

5. **(CC: Online Shopping)** İnternette alışverişte çok daha fazla ürün seçeneğim var.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

6. **(CC: Online Shopping)** İnternette alışveriş daha kolay fiyat karşılaştırması yapmamı sağlıyor.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

7. **(CC: Online Shopping)** İnternette alışverişte karar vermek için istediğim kadar düşünebiliyorum.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

8. **(R-Financial Risk)** İnternette alışverişlerde ürünler piyasa fiyatından daha pahalıdır.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

9. **(Financial Risk)** İnternette alışveriş para israfına engel olur.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

10. **(Financial Risk)** İnternette alışverişlerde kredi kartı kullanmak son derece güvenlidir.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

11. **(Financial Risk)** İnternette alışverişte görseldeki ürün gerçek ürünle birebir aynıdır. (boyut, kalite, renk vesaire)

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

12. **(Financial Risk)** İnternet siteleri internette alışveriş için son derece güvenlidir.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

13. **(R-Product Risk)** İnternette alışverişte ürünün kalitesini anlamak zordur.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

14. **(Product Risk)** İnternette alışverişte sipariş ettiğim üründen farklı bir ürün teslim edilmez.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

15. **(Product Risk)** İnternette alışverişlerde ürünü görememek, dokunup inceleyememek benim için sorun değildir.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

16. **(Product Risk)** İnternette alışverişte ürünün ölçüsünü, bedenini, numarasını tutturmak (elbise, ayakkabı gibi ürünlerde) son derece kolaydır.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

17. **(Product Risk)** İnternette alverişte ürünü deneyemiyor olmak benim için sorun değildir.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

18. **(Time Risk)** İnternette alışverişte uygun alışveriş siteleri bulmak son derece kolaydır.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

19. **(Time Risk)** İnternette alışverişte uygun ürünü bulmak son derece kolaydır.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

20. **(R-Time Risk)** İnternette alışveriş zaman kaybına neden olur.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

21. **(Time Risk)** İnternette alışveriş yaptığım için ürünün hemen elime geçmiyor olması benim için sorun değildir.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

22. **(Time Risk)** İnternette alışverişte satıcıyla iletişime geçmek son derece kolaydır.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

23. **(Time Risk)** İnternette alışverişte sipariş vermek son derece kolay bir işlemdir.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

24. **(Delivery Risk)** İnternette alışverişte sipariş verdiğim ürün mutlaka elime ulaşır.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

25. **(R-Delivery Risk)** İnternette alışverişte sipariş verdiğim ürünün farklı bir adrese teslim edilme ihtimali son derece yüksektir.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

26. **(Delivery Risk)** İnternette alışverişte sipariş verdiğim ürün belirtilen sürede mutlaka elime ulaşır.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

27. **(Delivery Risk)** İnternette alışverişte siparişi iptal/iade etmek son derece kolaydır.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

28. **(Delivery Risk)** İnternette alışverişte iptal/iade süreci son derece kısa sürer.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

29. **(Information Security Risk)** Alışveriş siteleri tüm özel bilgilerimi korur.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

30. **(R-Information Security Risk)** Alışveriş sitelerini riskli buluyorum.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

31. **(Information Security Risk)** Alışveriş sitelerinde gezinirken güvenlik açısından son derece rahatım.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

32. **(Information Security Risk)** Alışveriş siteleri, ürünler ve süreçler (ürün bilgileri, satınalma, iade, iptal, teslim v.b.) ilgili gerekli tüm bilgileri içerir.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

33. **(Information Security Risk)** Alışveriş sitelerine alışveriş yapma konusunda son derece güveniyorum.

Kesinlikle Katılıyorum Çok Katılıyorum Az-Çok Katılıyorum Az Katılıyorum Kesinlikle Katılmıyorum

Yaş:

Cinsiyet:

Erkek Kadın

Medeni Durum:

Evli Bekar

Eğitim Durumu:

İlk/Orta okul Mezunu Lise Mezunu Lisans Mezunu Yüksek Lisans Mezunu Doktora Mezunu

Aylık Hane Geliri:

2000 TL'den az 2001-3000 arası 3001-4000 arası 4001-5000 arası 5001-6000 arası 6001-7000 arası 7001'den fazla

İnternet Kullanımı:

Günde 1 saatten az 1-3 saat arası 3-5 saat arası 5-8 saat arası Günde 8 saatten fazla

Çalıştığı Sektör Tipi:

Özel Sektör Kamu Sektörü Yarı-Özel Sektör

İnterneti en çok nerede kullanıyorsunuz?

Evde-Laptop/Tablet

Evde-Mobil

İşyerinde- Laptop/Tablet

İşyerinde- Mobil

Diğer (Belirtiniz)

APPENDIX B

The Conducted Survey (in English)

1. *(CC: Online Shopping)* It is extremely easy to shop online.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

2. *(CC: Online Shopping)* I shop online because i don't want go out.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

3. *(R-CC: Online Shopping)* Shopping online is not appropriate for my lifestyle.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

4. *(CC: Online Shopping)* I shop online because i can get any detail about the product.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

5. *(CC: Online Shopping)* I have too many different product choices on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

6. *(CC: Online Shopping)* Online shopping enable to compare prices of products easily.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

7. *(CC: Online Shopping)* I can think to decide about a product as much as i want on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

8. **(R-Financial Risk)** Products are more expensive than the retail market on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

9. **(Financial Risk)** Online shopping prevent waste of money.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

10. **(Financial Risk)** It is extremely secure to use credit cards on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

11. **(Financial Risk)** Visual and real product is totally same on online shopping (the size, quality, colour etc.)

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

12. **(Financial Risk)** Webpages are extremely secure for online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

13. **(R-Product Risk)** It is difficult to understand the quality of the product on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

14. **(Product Risk)** I'm not delivered a different product than the purchased product on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

15. **(Product Risk)** It is not problem for me not to see, touch or check the product on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

16. **(Product Risk)** It is extremely easy to prove the size, number, measure of a product on online shopping. (for clothes, shoes etc.)

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

17. **(Product Risk)** It is not problem for me not to able to try the product on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

18. **(Time Risk)** It is extremely easy to find the right webpage on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

19. **(Time Risk)** It is extremely easy to find the right product on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

20. **(R-Time Risk)** Online shopping waste my time.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

21. **(Time Risk)** It is not problem for me not to have the product just after the purchasing on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

22. **(Time Risk)** It is extremely easy to contact with seller on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

23. **(Time Risk)** Ordering process is extremely easy on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

24. **(Delivery Risk)** The ordered product is exactly deliver on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

25. **(R-Delivery Risk)** Possibility of wrong delivering of the product is extremely high on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

26. **(Delivery Risk)** The ordered product is absolutely deliver on time that they specified.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

27. **(Delivery Risk)** It is extremely easy to cancel/return the order on online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

28. **(Delivery Risk)** The cancellation/return process is extremely short on online shopping

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

29. **(Information Security Risk)** Webpages protect all my special information.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

30. **(R-Information Security Risk)** I think that online shopping webpages are risky to use.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

31. **(Information Security Risk)** I extremely take comfort in searching webpages for online shopping.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

32. **(Information Security Risk)** Webpages contain all necessary information about products and processes. (product information, purchasing, return, cancellation, delivery etc.)

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

33. **(Information Security Risk)** I extremely trust webpages about shopping online there.

Strongly Agree Agree Neither Agree Nor Disagree Disagree Strongly Disagree

Age:

Gender:

Male Female

Marital Status:

Married Single

Education:

Primary School Graduated

High School Graduated

University Graduated

Master Graduated

Doctorate Graduated

Monthly Household Income:

- Less Than 2000 TL
- Between 2001-3000
- Between 3001-4000
- Between 4001-5000
- Between 5001-6000
- Between 6001-7000
- More Than 7001 TL

Internet Usage (in a day) :

- Less Than 1 hour
- Between 1-3 Hours
- Between 3-5 Hours
- Between 5-8 Hours
- Less Than 8 Hours

Job Sector:

- Private Sector
- Public Sector
- Half Private Sector

Internet Usage Platform:

- Home-Laptop/Tablet
- Home-Mobile
- Work - Laptop/Tablet
- Work - Mobile
- Other (Please Denote)