THE EFFECT OF INDIVIDUAL DIGITALIZATION LEVEL ON CONSUMER RISK PERCEPTION

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ŞEHIDE RUKEN BIRINCI

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submitted by **ŞEHİDE RUKEN BİRİNCİ** in partial fulfillment of the requirements for the degree of **Master of Business Administration, the Graduate School of Social Sciences of Middle East Technical University** by,

Prof. Dr. Yaşar Kondakçı
Dean
Graduate School of Social Sciences _____

Prof. Dr. Zehra Nuray Güner
Head of Department
Department of Business Administration _____

Assoc. Prof. Dr. Zeynep Onay
Supervisor
Department of Business Administration _____

Examining Committee Members:

Assoc. Prof. Dr. Eminegül Karababa (Head of the Examining Committee)
Middle East Technical University
Department of Business Administration _____

Assoc. Prof. Dr. Zeynep Onay (Supervisor)
Middle East Technical University
Department of Business Administration _____

Prof. Dr. Cengiz Yılmaz
Abdullah Gül University
Department of Business Administration _____

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last Name: Şehide Ruken, Birinci

Signature:

ABSTRACT

THE EFFECT OF INDIVIDUAL DIGITALIZATION LEVEL
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Birinci, Şehide Ruken

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This study investigates the role of risk perception in the online shopping context. The effects of degree of consumer digitalization, product involvement, consumer innovativeness, price sensitivity, and level of internet use on twelve different perceived risk dimensions- financial risk, economic risk, performance risk, product risk, time risk, privacy risk, security risk, social risk, psychological risk, after-sale risk, delivery risk, and transaction risk- are explored based on a multicultural sample of respondents. For this purpose, primary data was collected through a questionnaire from the sample as a quantitative data collection method. Findings from the study are in line with previous research in terms of observed effects of price sensitivity, level of internet use, and consumer innovativeness, whereas contradictory results are obtained regarding the roles of consumer digitalization and product involvement factors. Theoretical and managerial implications and findings are discussed.

Keywords: Perceived risk, Consumer digitalization, Internet shopping, Product involvement, Internet use, Price sensitivity

ÖZ

BİREYSEL DİJİTALLEŞME DÜZEYİNİN MÜŞTERİLERİN
RİSK ALGILARINA OLAN ETKİSİ

Birinci, Şehide Ruken
Yüksek Lisans, İşletme Bölümü
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Bu çalışmada internet alışverişi olgusu üzerinden risk algısı kavramını araştırılmaktadır. Çok kültürlü katılımcılardan oluşan bir örneklemin yanıtlarına dayanarak müşteri dijitalleşmesi, ürün ilgilenimi, müşteri yenilikçiliği, fiyat duyarlılığı ve internet kullanım seviyesi değişkenlerinin on iki alt başlığa ayrılan risk algısı kavramlarına- mali risk, ekonomik risk, performans riski, ürün riski, zaman riski, mahremiyet riski, güvenlik riski, sosyal risk, psikolojik risk, satış sonrası risk, teslimat riski ve ödeme işlemi riskleri- olan etkisi araştırılmıştır. Bu kapsamda örnekleme sunulan anket aracılığıyla birincil veriler nicel veri toplama yöntemi ile elde edilmiştir. Fiyat duyarlılığı, internet kullanım seviyesi ve müşteri yenilikçiliği önceki araştırmaları destekleyen sonuçlar verirken, müşteri dijitalleşmesi ve ürün ilgilenimi daha önceki çalışmalarla çelişen sonuçlar vermiştir. Bulgular kapsamında teorik ve pratik öneriler tartışılmıştır.

Anahtar Kelimeler: Risk algısı, Müşteri dijitalleşmesi, İnternet alışverişi, Ürün ilgilenimi, İnternet kullanımı, Fiyat duyarlılığı

To my FAMILY

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LIST OF ABBREVIATIONS

KMO	: Kaiser-Meyer-Olkin
GENX	: Generation X
GENY	: Generation Y
GENZ	: Generation Z
M	: Millennials
SPSS	: Statistical Package for the Social Sciences
IU	: Internet Use
CD	: Consumer Digitalization
CI	: Consumer Innovativeness
PS	: Price Sensitivity
PI	: Product Involvement
FR	: Financial Risk
ER	: Economic Risk
PER	: Performance Risk
PR	: Product Risk
TR	: Time Risk
PVR	: Privacy Risk
SR	: Security Risk
SOR	: Social Risk
PSYR	: Psychological Risk
ASR	: After-Sale Risk
DR	: Delivery Risk
TSR	: Transaction Risk
PCA	: Principal Component Analysis
LSD	: Least Significant Difference

CHAPTER 1

INTRODUCTION

Consumer digitalization concept is one of the much-researched and discussed topics in the recent years. Since individuals spend more time online in order to search for information related to products and services to purchase, marketers are bound to develop new approaches and ways in order to reach consumers and to satisfy their needs and wants. As the conventional ways for commercial activities are losing their allure, online shopping is more preferred by consumers for its convenience. Especially after technological improvements over the last decade in order to provide consumers chance to inspect products in visual and audio forms, people prefer to make purchases online rather than going to physical stores. Another reason for consumers' changing preference is improvement of after-sale and logistics services provided by sellers in digital platforms.

Moreover, as per the changing generational characteristics, younger generations (particularly Millennials and Generation Z) are more open to new ways and acceptable of innovative solutions. Promoting products and services, spreading user experience through word-of-mouth and finding right products and services for the cheapest price are more convenient through digital channels and therefore more appealing to younger generations. With his perspective, digital world particularly for commercial purposes is welcoming particularly young consumers to search for information, buy and sell products and services as well as manage the operational part of the process as a more convenient channel.

On the other hand, the recent Covid-19 pandemic forced individuals to adapt to selling and buying activities in digital platforms due to quarantine conditions regardless of the generational categories. Strict rules prohibiting individuals from going outdoors made

them to look for ways to through digital platforms for daily activities such that shopping. This affected online sales and revenues to increase as people had to make purchases from their houses with only connection to the world through internet due to not having other opportunities to socialize. Apart from the daily life commodities such as food, people purchased product and services for entertainment purposes to kill time at home such as gardening tools etc. Without having any other option, online shopping became a more preferred way to buy and sell even for people who were hesitant about the channel's security and credibility. For the reason stated above, digital trade is expected to grow even further in the future.

However, with every purchasing decision there comes a risk factor affecting the purchaser throughout the general decision-making process followed by the final decision (Bauer, 1960). Therefore, researchers have focused on this fact to understand those factors and try to figure out ways to improve the general experience of shopping. The terminology formed around this concept was perceived risk which was researched for many years by academics such as Bauer, Featherman and Pavlou (2003), Kotler and Keller (2016) in addition to many others.

Consumers perceive various types of risks when they perform purchasing activities. For all types of purchasing channels, there is perceived risk involved that consumers experience throughout the purchasing process or even after the purchase (Ko et al., 2004). These risks may involve product risk which explains the risks involving physical features of the product (Popli and Mishra, 2015), or transaction risks that involve the payment and receipt process of the purchase (Jarvenpaa et al., 1997) in the case of an online purchase.

On the other side, perceived risk is found to be affected by many factors as studied by many researchers from different areas such as psychology or marketing since the formation of the phenomena. Perceived transaction risk, for example, is close to zero in the case of conventional shopping since the payment and receipt are exchanged on the spot, so there is almost no risk involved through the transaction process (Miyazaki and Fernandez, 2001).

For online shopping, on the other hand, there is a high risk in terms of financial transactions since the payment is made through intermediaries which can form a basis for financial losses (Miyazaki and Fernandez, 2001). Therefore, the factors affecting the perceived risk may differ among the types of purchasing channels but it can be said that there are always risks involved in the purchasing process.

1.1. The Objective and the Motive of the Study

In order to discover the relationships between factors affecting risk perception, this study aims to contribute to the literature in understanding consumers' behavioral tendencies to assist marketing efforts regarding digital platforms. As the greatly expanding channel for shopping, internet marketing, and the mechanisms it holds for consumption purposes as an infinite platform is the main focus in trying to find answers to perceptions regarding risk concerns of consumers.

Also, this study aims to help marketers in understanding consumers when they make purchasing decisions and how they are affected by the process, and by what factors they are affected when making purchasing decisions.

As the digital age requires individuals to be familiar with the digital world and to perform most of their daily activities online, marketers must search for ways to improve the online experience for consumers. Since digital platforms provide the opportunity for activities such as buying, selling, communicating, paying and etc. it is vital to make those platforms safer in terms of privacy and security more enhanced in terms of understanding the consumers' concerns and through understanding their behavioral reactions. By understanding consumers' concerns regarding commercial activities online, marketers can provide a better experience and as a result, increase their sales and revenues. For instance, a digital platform that hosts buying and selling activities can benefit from understanding consumers' concerns regarding transactional activities and make their platform safer by implementing more secure payment channels.

Also, by realizing consumers' concerns regarding privacy issues, a digital platform can take necessary measures to convince their customers that their platform can be

trusted and that their personal information will be kept private and not shared with other parties. That is why, it is vital to understand consumers' behavior in terms of the risks they perceive when shopping online. This study aims to contribute to these efforts both for academic and practical purposes.

1.2. Method Used for the Study

Since perceived risk is thought to be present when consumers conduct digital shopping, various types of risk dimensions were examined against several variables to find out their effects on the concept. As the focus of this study, these risk dimensions as dependent variables are as follows; financial risk, economic risk, performance risk, product risk, time risk, privacy risk, security risk, social risk, psychological risk, after-sale risk, delivery risk, and transaction risk. All these risk types are obtained from previous studies examining the risk types that consumers face when shopping online. While some of these risk types are significantly affecting the shopping experience as well as the final decision for purchase, some others are not present based on the context in which the purchasing takes place.

To discover the effects, the dependent variables stated above are evaluated against independent variables namely internet use level for shopping, digitalization level of consumers, product involvement types, price sensitivity, and finally consumer innovativeness which are also determined from prior research as factors which influence the risk perception of consumers when shopping online.

The analysis based on these variables is aimed to reveal the effects and relationships between the perceived risk phenomenon and all of the above-mentioned independent variables. The variable measuring the individual digitalization level of consumers is the focus of this study in terms of its relationship to the risk perception phenomenon.

To obtain the above-mentioned outcomes, primary data is collected from a sample that consisted of participants with different demographic backgrounds by following the previous research in stride. Quantitative data are collected through a questionnaire distributed via online communication channels. The reason for selecting the quantitative data collection method is the ease of doing analysis and the reflectability

of the results. Therefore, quantitative research and a questionnaire as a tool are thought to be more suitable for this research study.

1.3. The Findings and Contributions of the Study

In pursuit of finding meaningful results on what risk types consumers perceive when making a purchase online and what the influencing factors are on their risk concerns, this study contributes to the literature with both surprising and useful outcomes. While there is plenty of research done on this very subject, factors affecting the risk perception are analyzed individually as independent variables. For instance, if the risk perception was thought to be influenced by culture, the model included only cultural difference as the independent variable along with the age, education level, etc. as control variables.

A model that includes all the control variables namely; age, education level, income level, occupation, etc. in addition to independent variables such as product category, price sensitivity, and level of consumer innovativeness was not formed in earlier research. The model designed in this study tries to include several independent variables as possible influencing factors on the risk perception in addition to several control variables as demographics factors such as income/education level, age, gender etc.

In this way, this research is aimed to be considered a multidimensional and multivariate model that can be more reflective in terms of consumer behavior when shopping online. In this direction, this study reveals some contradictory as well as supportive results to previous research. It can be said that when making sense of consumer behavior even within the scope of such contemporary technology as the internet, one needs to keep fundamental aspects of human psychology in mind.

This study provides a wide range of perspectives on the research done within the literature then by the methodology used to analyze the data is presented. After this, the analysis of the results and a discussion of the findings are provided to make sense of the findings. In the end, some of the limitations faced and the implications are mentioned.

CHAPTER 2

LITERATURE REVIEW

2.1. Perceived Risk Phenomenon

Since 1960 when it was first proposed by a Harvard Business School Professor Raymond Bauer, the perceived risk theory had been receiving great attention and has become a popular area for research. The research and implications obtained through the years have been used by academics for further and deeper research as well as marketers in actual business settings. The theory of perceived risk has helped to understand what consumers go through when making purchase decisions and how to benefit from this understanding to attain more profitable commercial outcomes. Also, the understanding of such a concept is believed to pave the way for more convenient ways to conduct marketing activities.

Throughout the years, there have been many different descriptions and definitions of the perceived risk concept. Especially after the internet where new risks involved in making purchase decisions have started emerging, the definition of the concept has evolved. As the initiator of the concept, Bauer (1960) proposed that consumers' behavior during a purchase decision carries a notion of risk and therefore, should be considered a risk-taking behavior. This can be elaborated by the tension and uneasiness faced during and after a purchase decision is made due to various reasons. This state of mind can cause anxiety and feeling of uncertainty in individuals that can potentially stem from the skepticism of the outcome of the particular purchase decision (Sahney, 2013) since the consumer cannot be certain about the consequences of the decision. The reasons behind this feeling of uncertainty may be a lack of information about the purchased product or service, prices. (Sahney, 2013).

Similarly, Rich (1964) defined perceived risk as "the nature and amount of uncertainty perceived by consumers in completing a particular purchase decision". Peter and Ryan (1976) defined the perceived risk as "consumers' expectation of losses associated with purchasing and acts as an inhibitor of purchase behavior". Featherman and Pavlou (2003) further argued that the risk perceived often results from the feelings of uncertainty which causes discomfort and anxiety as well as concern which causes psychological ds comfort and cognitive inconsistency.

To construct a model exhibiting how the risk perception affects consumers when making a purchase decision, academics have developed different models trying to understand the concept and show how consumers process a purchase decision. In this direction, Cunningham (1967) proposed a two-component model. His model consists of uncertainty and dangerousness of consequence as the major two sources of risk perception. Dangerousness of consequences is also divided into two dimensions as performance, and psychosocial consequences. While the main source of uncertainty feeling is the difficulty in detecting purchase aim and toning, purchase aims and dangerousness of consequences factor stemmed from the concern regarding the performance. These concerns included if products or services will perform as anticipated in addition to the psychological concerns indicating the others' perception of the purchaser. This creates perceived risk for consumers which will affect the likelihood of a purchase happening or not. For this reason, perceived risk is a vital concept since consumers' stand in this kind of matter is more on avoiding risks rather than maximizing their utility as Mitchell (1998) argued.

Taking the research further, Jacoby and Kaplan (1972) made a significant contribution when they classified perceived risk under five major titles; performance, physical, psychological, social, and financial. Alongside, Roselius (1971) proposed the "time" factor in the classification of the risk perception concept. More recently, Kotler and Keller (2016) approached the subject by describing the perceived risk concept with six main breeds; functional, physical, financial, social, psychological, and time risks.

After many studies were conducted and different definitions of perceived risk were made, the digital shopping experience was also questioned in terms of risk perceptions

of consumers after the development of internet technology in terms of shopping experience through online platforms where buying and selling take place.

2.2. Perceived Risk Phenomenon in Digital Platforms

When the era of communication has arrived as a result of the internet and the collectible information through various channels piled up, consumers started having difficulties in collecting the right and useful information regarding the products whose diversity also increased for the same reason. Thus, academicians have started researching the online shopping behavior of consumers in addition to the conventional sales channels in terms of risks associated with these channels.

In the digital context, some additional types of risks contributing to the risk perception were found to be present after studies conducted aiming to understand the purchase decisions on digital platforms. Especially after the 2000s, digital purchase behavior was investigated by many researchers. It was found that some of the risk types affecting risk perceptions in conventional shopping were not present in the digital context. Also, some additional types of risks were discovered. For this reason, there were other definitions made in describing risk perception, particularly in the digital context.

In this connection, perceived risk is defined in terms of digital platforms as "the expectation of any loss or any negative consequences as a result of online shopping" according to Pires and Stanton (2004). Similar to conventional shopping, internet shopping consists of two elements in terms of factors affecting the purchase decision. The two elements are uncertainty and consequences according to Park et al. (2005). They considered perceived risk in the framework of willingness to buy and recommend the purchase to others.

On the other side, Schierz et al. (2010) describe perceived risk with respect to the expecting the fact that any loss can occur. According to the study's outcome, more expectations of losses lead to greater risks consumers perceive for the purchase. Nepomuceno et al. (2005), furthermore, argued that the negative perceptions of the unexpected and fluctuating results from purchasing a product can be named as

perceived risk. In other respects, Ko et al. (2004) proposed that perceived risk is the consumers' discernment of changeable and conflicting outcomes resulting from product or service purchases. This argument includes two element that are indecisions and consequences. Indecisions refer to the probability of negative outcomes, and consequences refer to the significance of losses (Nepomuceno et al., 2005).

Based on the literature review above, risk perception is present and crucial when shopping online. However, what are the effects on the purchasing decision-making process? How do these effects contribute to the decision-making process of consumers? Many studies have been conducted to understand consumers' behavior when shopping online to determine the concerns and possible effects.

2.3. The Effect of Risk Perception in Making Online Purchases

Even though most of the research done reinforces the finding that risk hurts the intention to make a purchase online, some other research disaffirms this argument. Therefore, it is necessary to further investigate the role of risk perception in the digital context. Not only exploring the particular risk-related concepts but also identifying models explaining several antecedents of risk also on overall risk.

As proposed by Groß (2016), research related to online purchases requires more elaborative studies to increase its exploratory power. In doing so, Cai et al. (2015) and Hubert et al. (2017) have provided supportive research on the influence of different risk factors and facets in a contextual setting.

As perceived risk plays a vital role in consumers' intention to make purchases online which already showcases the behavior in making purchases (Ko et al., 2004), based on the findings in the respective research, it has been found that consumers perceive more risk in the digital platforms than physical stores when shopping. Lee and Tan (2003) contribute to this finding by stating that consumers who perceive any kind of risk will not be making a purchase online. Similarly, Liu and Wei (2003) have found that perceived risk impacts consumers to make online purchases negatively. Taking the argument further, Kim and Lennon (2013) postulated that by increased perceived risk in online shopping, consumers' intention to buy through the internet is decreased.

Similarly, Akhlaq and Ahmed (2015) have proposed the same argument in terms of the negative effect of perceived risk on online shopping intentions.

In the same way, Kim et al. (2008) also found that risk is negatively involved in the purchase willingness of US consumers. Liébana-Cabanillas et al. (2017) contributed to this founding by adding that the most significant negative influence on mobile payment acceptance is the risk perceived by consumers. Similarly, Chang et al. (2016) concluded with the same effect of perceived risk on the purchase intention of Chinese consumers through internet shopping.

As the significance of risk perception in the digital context is proven the next step is to look at the studies conducted in the literature to discover relationships between factors affecting the risk perception phenomenon.

In pursuit of investigating the risk perception concept concerning the factors affecting it, studies in the literature have formed different research models based on major factors that are believed to affect the risk perception during online shopping.

2.4. Research Models in Investigating the Perceived Risk Phenomenon

Most of the studies base their model on the study of Jacoby and Kaplan (1972), however, it is necessary to note that Jacoby and Kaplan (1972) considered that there would be no physical risk involved in a digital platform. Therefore, they omitted this type of risk from their five-dimension model contrary to the six-dimension model proposed by Cunningham (1967). On the other hand, Cunningham's model consists of financial, psychological, performance, physical, time, and social risks.

While Featherman and Pavlou (2003) investigated the perceived risk phenomenon with six dimensions model including time, psychological, privacy, financial, performance, and social risk, Bhukya and Singh (2015), studied only four dimensions of perceived risk which are a functional, financial, physical and psychological risk. Furthermore, Han and Kim (2017) conducted research based on a multidimensional model for risk perception that includes privacy, social/ psychological, product, financial, security, and time risk.

Almousa (2011) further argued that as a result of the nature of online platforms in terms of non-physicality, security and privacy concerns stressed the importance of product, financial, and security risks. Bhatnagar et al. (2000) also highlighted product and financial risk to be the two main facets of perceived risk.

Forsythe et al. (2006) contributed to the literature by modeling a scale to assess perceived benefits and risks in internet shopping with a four dimensions model consisting of product, performance, financial, psychological, and time/convenience risk. The results showed that an increased level of internet use for shopping purposes has positively affected the perceived greater benefits while perceived risks were affected negatively. Additionally, a positive effect of perceived benefits and a negative effect of perceived risks were discovered regarding the future intention to make an online purchase.

To understand the factors investigated in the previous research as part of the research models formed within those respective studies, a comprehensive summary of risk dimensions is presented in Table 2.1. followed by a section with detailed explanations. As can be seen from Table 2.1. below, all the dimensions contributing to the risk perception are paired with the foremost studies regarding the perceived risk facets.

Table 2. 1. Risk Perception Dimensions with Definitions and the Corresponding Literature

Risk Dimension	Definition	Respective Literature
Financial	Risks in regards to money loss when shopping online	Bhatnagar et al. (2000), Featherman and Pavlou (2003), Forsythe et al. (2006), Ko et al. (2004)
Economic	Risks related to additional costs incurring in online shopping	Popli and Mishra (2015). Ariffin et al. (2018)

Table 2.1. (Continued)

Performance	Risks related to product's performance resulting from online shopping	Featherman and Pavlou (2003), Ko et al. (2004), Forsthye et al. (2006)
Product	Risks related to product's features and attributes when shopping online	Featherman and Pavlou (2003), Forsythe et al. (2006), Ko et al. (2004)
Time	Risks related to time loss during online shopping	Featherman and Pavlou (2003), Forsythe et al. (2006), Ko et al. (2004)
Privacy	Risks related to concerns regarding loss of personal information when shopping online	Bhatnagar et al. (2000), Miyazaki and Fernandez (2001), Featherman and Pavlou (2003), Zheng et al. (2012), Han and Kim (2017)
Security	Risks related to the credibility of the seller or online platform	Bhatnagar et al. (2000), Miyazaki and Fernandez (2001), Featherman and Pavlou (2003)
Social	Risk related to potential loss of one's social status resulting from online shopping	Hanjun et al. (2004), Ko et al. (2010), Zheng et al. (2012)
Psychological	Risks related to mental stress and dissatisfaction resulting from a potential failure of online purchase	Featherman and Pavlou (2003), Ko et al. (2010), Zheng et al. (2012), Han and Kim (2017)
After-sale	Risks related to the after-sale period	Dan Yu et al.(2009), Zhang et al. (2011)
Delivery	Risk related to the delivery of the product purchased online	Forsythe et al. (2006), Zhang et al. (2011) Zheng et al. (2012)

Table 2.1. (Continued)

Transaction	Risks related to the payment and transaction when shopping online	Pennington et al. (2003), Ariff et al. (2014), Dhanapal et al. (2015)

2.4.1. Dimensions of Perceived Risk as Dependent Variable

The risk dimensions stated above can be separated based on the concerns consumers relate to. Concerns regarding the financial aspects can be considered under financial and product risk dimensions. Furthermore, concerns regarding the product to be purchased can be considered as product risk and performance risk dimensions. Security concerns can be included as the security risk and transaction risk dimensions. Personal and social concerns can be named as social risk, psychological risk, time risk, and privacy risk dimensions. Concerns regarding the services to be received after the purchase can be included as after-sale risk and delivery risk dimensions. In this way, all the concerns starting from the search of the product online until the receipt of the product are included as the risk types faced by consumers when shopping online.

Below, detailed explanations and the literature are provided for further understanding of the dimensions of perceived risk.

2.4.1.1.Financial Risk

Financial risk is defined as the potential monetary loss and additional expenses as a result of a fraudulent purchase (Popli and Mishra, 2015). This potential loss can also include the potential need for maintenance and repair due to damaged delivery, etc.

Most of the research conducted in the literature regarding the perceived risk facets showed the financial risk to be one of the most influential facets of the perceived risk phenomenon when consumers purchase the internet. As a result of potential other risks such as product, performance, or delivery risk, consumers were concerned to suffer from a financial loss due to the very nature of online shopping (Featherman and Pavlou, 2003). Masoud (2013) added to the findings by arguing a potential financial

loss contributes to the consumers' negative decision on making a purchase online and therefore impacts the online shopping intentions unfavorably.

In addition to that, Pallab (1996) pointed out the transaction and security concerns in the internet environment for consumers to change their minds to shop online. In other words, concerns regarding the usage of credit cards and personal identification information online were the main reasons why consumers did not prefer shopping online (Maignan and Lukas, 1997).

Based on the findings in the studies of Almousa (2011) and Dai et al. (2014), financial risk was found to be dominantly affecting consumers' intention of purchasing online, particularly for apparel. As a high involvement product, apparel was found to be impacting financial risk perception when shopping online (Bhatnagar et al., 2000).

Furthermore, Forsythe and Shi (2003) in addition to Bhukya and Singh (2015) postulated that consumers' intention to purchase online is negatively affected by perceived financial risk, thus online purchasing will decrease.

2.4.1.2.Economic Risk

Financial risk and economic risk are used in the literature interchangeably and were described with the same definition. Popli and Mishra (2015) used them as the same type of risks by using the title financial/economic risk. Other researchers explained this type of risk as either referring to it as financial risk or economic risk. As in the case of Zhang et al. (2011)'s study, they used the term economic risk to refer to the concern caused by potential monetary loss and additional expenses as a result of a fraudulent purchase. Other than the above, most of the research used the term financial risk when referring to the concept.

In this study, economic risk is separated from financial risk by separating the actual losses from the indirect monetary costs incurred as a result of shopping online such as overspent money due to the convenience of online shopping or potential oblique expenses caused by the nature of online purchases such damaged product during delivery. While financial risk measured the risk perception regarding the concerns due

to potential monetary loss during the actual purchase, economic risk measured the after-effects.

2.4.1.3.Product Risk

According to Popli and Mishra (2015), product risk involves the feeling of uncertainty regarding the product's features and attributes. If the promised attributes and expectations of the consumers are not met by the actual product (Zheng et al., 2012), consumers face the feeling of uncertainty regarding their purchase intention. Since the product cannot be examined physically, consumers feel anxious when making a purchase online which causes perceived risk to increase and hurts consumer buying intentions (Dai et al., 2014).

In previous studies by Han and Kim (2017), Zheng et al. (2012), and Dai et al. (2014), consumers' intention for making purchases online decreases when the perceived risk in terms of product and its performance increases. Particularly, high involvement level products such as apparel were found to be perceived riskier than low involvement level products such as books when shopping online (Warrington and Shim, 2000).

2.4.1.4.Performance Risk

While Featherman and Pavlou (2003) focused on the health aspect of the risk potentially faced by purchasing a harmful product online and described it as a health risk, Ko et al. (2004) described it as a physical risk with the same referral to the definition. Both argued that an increase in health or physical risk resulted in an increased perceived risk overall.

On other hand, performance risk was referred to as the failure of the product's performance against expectations by other researchers. Featherman and Pavlou (2003) argued that when the performance risk is higher the perceived risk will be higher too.

Based on the different approaches in the literature, this study takes these risk types separately as product risk and performance risk. Product risk refers to the concerns regarding not having an opportunity to inspect a product's traits as well as the

probability of health risk. Performance risk on the side refers to the performance aspects and adjustment efforts needed for a product after purchase.

2.4.1.5.Privacy Risk

Privacy risk was defined by Popli and Mishra (2015) as the concerns regarding the probability of losing control over personal information inserted online when purchasing through the internet.

Based on the findings of Karnik (2014), consumers worldwide show perceived risk when shopping online as a result of low internet security. Particularly, the information needed for online purchases such as full names, addresses, and credit card details makes consumers more concerned regarding the risk they perceive for online shopping. (Leeraphong and Mardjo, 2013). Especially in the case of apparel, consumers even need to provide their sizes, personal choices of styles, and other private details online (Dai et al., 2014) and therefore they are more hesitant to make an online purchase.

In this direction, Featherman and Pavlou (2003) contributed to the literature by finding out that privacy risk affects the overall perceived risk when shopping online as it affects purchase intentions negatively.

2.4.1.6.Security Risk

Security risk, on the other hand, is described as the potential loss incurred as a result of the non-credibility of the website or the seller (Comegys et al., 2009). Even though online shopping is more convenient, a lack of security measures can lead to decreased consumer intentions to make purchases online (Karnik, 2014).

Featherman and Pavlou (2003), as well as Thompson and Liu (2007), also argued that security risk will amplify the perceived risk regarding the purchase intentions. Hsu and Bayarsaikham (2012) postulated the same argument, particularly for apparel.

Kayworth and Whitten (2010) took the argument a step forward by stating that if the consumers do not have trust in the website, they will not provide their personal

information and will give false information if necessary. Therefore, previous research showed that online purchase intention decreases if the security risk increases.

2.4.1.7.Time Risk

Time risk is described as the potential loss of time due to bad purchase decisions during searching, purchasing, and returning the product (Popli and Mishra, 2015). Being one of the most impactful risk facets when shopping online (Zhang et al., 2012), time risk represents the inconvenience faced during the search for the product, placing the order, and receiving the product (Forsythe et al., 2006; Dai et al., 2014; Ko et al., 2004) as well as returning the product if not met expectations (Ariff et al., 2014).

Based on the findings of Forsythe and Shi (2003), and Forsythe et al. (2006), time risk will harm consumers' purchase intentions online.

2.4.1.8.Social Risk

The social risk was described as the potential loss of one's status within social groups or family resulting from a purchase (Popli and Mishra, 2015) and therefore, may deter consumers from purchasing online (Shang et al., 2017). Similarly, Stone and Grønhaug (1993), as well as Zielke and Dobbelstein (2007), concluded in their studies that social risk results from the fear of losing one's social image due to a purchase made. Thus this fear can cause consumers to seek for approval of peers and family members in order not to contradict the opinions of others. This can be interpreted that the social perceived risk is an effective factor in consumers' intention to make purchases online.

2.4.1.9.Psychological Risk

Psychological risk is present as the probability of losing self-regard due to frustration faced during and after a purchase (Popli and Mishra, 2015).

It was also described as the displeasure experienced from choosing the wrong option out of many other options (Ueltschy et al., 2004). Not being sure about the choice made regarding the purchase or having regrets due to a wrong purchase decision can cause consumers unease.

Based on the argument by Han and Kim (2017), social and psychological risks negatively impact consumers in terms of making a purchase online.

2.4.1.10. After-Sale Risk

After-sale risk is described as the potential loss caused by product problems after purchase, after-sale guarantee services, or payment returns (Popli and Mishra, 2015). As the study by Yu et al. (2007) argues, after-sale risk negatively affects the consumers' purchase intentions when shopping online. Zhang et. al., (2012) contributed to the literature with the same argument. Hsu and Luan (2017) found that consumers see after-sale risk as an influential part of their attitude towards online shopping.

2.4.1.11. Delivery Risk

The delivery risk was defined as the potential loss when the products are not delivered as expected in terms of time, place, and physical condition (Zheng et al., 2012). Naiyi (2004) postulated that delivery risk also affects the overall perceived risk and has an effect on the purchase intentions as well. Moreover, Zheng et al. (2012) also argued that delivery risk was one of the most influential risks when shopping online specifically for clothing. Based on the findings of Masoud (2013) and Ariff et al. (2014), delivery risk hurt consumers' attitudes toward shopping online. Similarly, Javadi et al. (2012) and Alkailani and Kumar (2011) argued that perceived delivery risk affects consumers' intention to buy online in a negative way.

2.4.1.12. Transaction Risk

Also referred to as payment risk (Jarvenpaa and Todd, 1997) or transaction cost risk (Chen et al., 2015), transaction risk refers to the concerns regarding financial loss when credit card details were provided by consumers to the digital seller through digital platforms.

Andrews and Boyle (2008) suggested that if consumers do not receive a response when seeking out safe transactional ways to purchase online, they tend to feel anxious. They also added that the reachability of communication channels for consumers when shopping online determines the likelihood of adopting online transactional activities.

Yang et al. (2015) also found a significant relationship between the perceived transactional risk and consumers' online shopping behavior.

Even though some of the risk dimensions were considered not present in the digital context such as physical (health) risk as some researchers argued (Jacoby and Kaplan, 1972), this study aims to include all the dimensions pointed out in the literature as stated above regardless of their impact. Since all the risk types are found to be effective in the behavior of consumers when shopping online, this study includes all of the risk dimensions to provide a comprehensive perspective as to their effect on the risk perception phenomenon. With this aim, this study also aims to discover if the model proposed in this study shows different results than the literature.

Having formed an understanding of the risk perception concept with its dimensions, the main aim is to understand the factors affecting risk perception in positive or negative ways. To construct a model that is specific to this research study to understand these possible factors, independent variables are included based on the related literature for the forming of a model that includes the most significant factors thought to be effective on the perceived risk phenomenon.

2.4.2. Factors Affecting the Risk Perception as Independent Variables

Since the formation of the concept, the risk perception phenomenon was researched by many academics against various factors that are thought to be influencing consumers regarding their behavior when shopping online. One of the most prominent factors is consumers' willingness and adaptability to use the internet for shopping purposes. This idea was represented as consumer digitalization as the level of internet users to buy and sell products or consumer innovativeness as the willingness to try out new ways of doing things as in this case is to prefer to shop online.

Also, factors related to a product such as its price and category are factors that need to be considered if a reflectable research model is to be formed. Based on the literature, price sensitivity and product involvement levels are found to be factors influencing consumers' risk perception when making a purchase decision.

Similarly, the extent consumers use the internet for daily activities, as well as their familiarity with the digital world, is another factor not to be neglected when considering how consumers perceive the purchasing process in a digital context based on studies in the literature.

Lastly, some studies included demographic factors to only describe the samples within those, yet some other studies found the significant contribution of demographic factors such as gender, age, income, education level even culture to be effective on consumers' risk perception.

As a result of the above-stated reasons, it is quite crucial to include all these factors in the research model within this study in order to present a multi-perspective model to enhance the understandability of the risk perception phenomenon. The description of each factor and how they were found to be influencing consumers' risk perception when shopping online based on the respective literature are presented below.

2.4.2.1.Consumer Digitalization

The term digital consumer can be defined in various ways. However, all the definitions refer to individuals who conduct buying and selling products and services online (BusinessWire, 2013). Digital consumers use the internet to collect information before purchasing and conduct shopping activities online. Within this context, consumer digitalization levels, in other words, digital consumer types may differ based on different behavioral aspects of consumers when shopping online. Based on the study conducted by GroupM Next (2013), consumers fall into six main segments with regard to their behavior and intent for shopping on digital platforms. These segments can be named digitally-driven segments, calculated shoppers, basic digital consumers, retail scouts, brand scouts, and eternal shoppers (GroupM Next, 2013).

The digitally-driven segment can be named as the most digitalized consumers-in other words, consumers with a high digitalization level- since they use almost all of the digital platforms to search for information with an intention to buy (GroupM Next, 2013). According to the GroupM Next study, thirty percent of shoppers within this segment visit social media platforms for branded pages for shopping purposes. This

rate is the highest among all the six segments. This segment is estimated to be the dominant within the next five years as they carry on online activities from beginning to end and use social media and mobile devices more than any other segment (GroupM Next, 2013). These consumers prefer to shop online rather than bearing with the inconveniences of conventional shopping. Therefore, it can be concluded that the digitalization level of consumers cannot be neglected when establishing marketing strategies as it is a significant factor in the behavioral differences of consumers who shop online.

Consequently, this research study includes the consumer digitalization level –the extent they use the internet for buying and selling purposes- variable to the research model to discover its effect, particularly on the perceived risk phenomenon.

In the related literature, some findings support the argument that online purchasing experience has negative relation with perceived risk as well as the opposing arguments provided in other studies. The more online shopping experience, the less risk perception faced by the consumers as Miyazaki and Fernandez (2001) argued. They postulated that consumers who shop online perceive less financial risk as compared to ones with less online shopping experience. Moreover, Forsythe and Shi (2003) found that consumers who shop online more than others experience less privacy risk.

On the other hand, opposing arguments emerged based on the findings of other studies in the literature. Almost 39% of US internet users avoid online shopping due to fear of financial loss (Horrigan, 2008). Moreover, privacy risk is also not reduced due to the effects of negative news regarding the jeopardizing personal information when shopping online (Caterinicchia 2005; Chapell 2005). This shows that privacy risk is also not eliminated even with increasing the online shopping experience.

Having an overall look at the literature, it can be concluded that consumer digitalization level is a factor that should be further investigated within different research models in order to discover more meaningful results in terms of its effect on the risk perception phenomenon. For this reason, it is included in the research model of this study.

2.4.2.2.Product Involvement

Based on the definition made by the American Marketing Association (2015), product involvement is the level of one's relevance to a particular product, brand, or object. As an important contributor to the decision-making behavior of consumers (Chakravarti and Janiszewski, 2003) as well as an influencer of consumers' reasoning and behavioral responses including memory searching, processing satisfaction, etc. (Laaksonen, 1994), product involvement categories were classified based on personal relevance and importance. While products such as apparel and automobiles are classified as high-involvement products, paper towels and chocolate are classified as low-involvement products.

Previous research showed that the level of involvement in product categories has a significant relationship with risk perception. The greater the involvement level of the product, the higher the perceived risk will be as a result of the individual importance and relevance given to the product based on performance, financial or physical risks (Venkatraman, 1989).

As determined in this study as well, clothing is a high-involvement product that carries symbolic meaning for people in terms of representing self-image and character (Solomon, 1986). Coffee, on the other hand, is a low-involvement product that does not represent any deep meaning to one's preference in terms of peer perception (Radder and Huang, 2008).

Since the high-involvement product would need more information to be searched before making a purchase (Browne and Kaldenberg, 1997) and require more effort and time, consumers would feel more anxious during the process of purchase which would affect the risk perception significantly (Bian and Moutinho, 2008).

As Venkatraman (1989) argued that product involvement is strongly linked to the expected fulfillment or to the need for deeper knowledge about the product, which would result in perceived risk since the consumers will attain the goal of fulfillment from that particular product (Houston and Rothschild, 1978). This is because, as

Blosch (1981) argued, consumers expect a good purchase as well as maximum fulfillment.

According to Venkatraman (1989), consumers' risk perceptions will depend on the purchasing occasion, while product involvement does not differ by change of time. This is why the more fulfillment and knowledge consumers hold about the product, the less perceived risk they will feel for that particular product.

Furthermore, other studies argued the opposite by postulating that the role of the product category is not clear regarding the effect on risk perception whether it increases or decreases the risk concerns (Dai et al., 2014). The main reason for this ambiguity is dependent on the significance and deepness of the personal information needed when making transactions for online purchases (Dai et al., 2014). For instance, apparel items require more personal information such as size, address, personal taste, etc. to be shared when shopping online than a typical digital product such as MP3 files (Dai et al., 2014).

Since there are different perspectives on the effect of product involvement level on risk perception concept within the literature, in addition to the fact that it is an important factor to be included when studying consumer behavior in the online shopping experience, this study includes this factor as an independent variable to the research model. This research aims to find similarities and differences to the literature regarding how and whether the product involvement level affects consumer risk perception when shopping online.

2.4.2.3.Consumer Innovativeness

Midgley and Dowling (1978) specified innovativeness as the level of openness to new ideas and experiences and described innovative individuals as people who take steps forward before others do. As consumers need to learn and adopt new technology skills in order to perform online activities for shopping purposes, innovativeness in terms of online shopping is an effective function of the attitude towards performing activities online and one's characteristics (Slyke et al., 2004; Lassar et al., 2005). Thus,

consumer innovativeness is the notion that describes the tendency to adoption towards new products and services.

In the literature, there are two major innovativeness types general innovativeness and domain-specific innovativeness. While general innovativeness refers to the openness and pursuit of new experiences (Craig and Ginter, 1975; Joseph and Vyas, 1984), domain-specific innovativeness describes one's disposition towards innovations implemented on products and services. The scale for domain-specific innovativeness was developed by Goldsmith and Hofacker (1991) due to the abstract nature of general innovativeness definitions. Domain-specific innovation measurements were found to be more foretelling of new items (Goldsmith et al., 1995).

In the previous research, it was found that domain-specific innovativeness affected online shopping in a direct and positive way in terms of both searching and making a purchase decision through online channels and after the domain-specific innovativeness scale was applied to online shopping (Blake et al., 2003; Citrin et al., 2000). Based on Limayem et al. (2000)'s findings, innovativeness affected online shopping behavior in consumers' attitudes and intentions. Moreover, Lassar et al. (2005) postulated that internet-specific innovativeness impacted adapting the online banking services.

In addition to the above findings, Rogers (1995) developed five levels of adopters. Early adopters are described as the most innovative individuals who are distinct from the late adopters in terms of social and economic characteristics as well as behavior e.g. social participation and knowledge of innovations. These individuals showed a tendency to take a risk when performing online activities. Also, Gatignon and Robertson (1991) have argued that consumers who have a higher level of income and education along with high self-esteem showed a positive effect on attitude towards risk.

Connecting these findings to the relation between innovativeness and risk perception, studies were conducted and their results were informative. For this purpose, studies done by Bauer (1960), Cox and Rich (1964), Cunnigham (1966), and Ostlund (1974)

showed negative results regarding the relationship between perceived risk and innovativeness.

It can be concluded that consumer innovativeness is an important factor since it can be linked to consumer behavior regarding risk perception in the digital context. Therefore, this research study includes consumer innovativeness level in its research model as an independent variable.

2.4.2.4.Price Sensitivity

Price sensitivity indicates the differentiation made by consumers regarding the changes and levels of a price (Goldsmith et al. 2005). It also shows how willing consumers are to pay what price is asked for a product or service. This is why price sensitivity is an important factor that affects consumer behavior which as a result impacts the profits made (Han et al. 2001).

Being affected by so many other factors such as income and education level as well as age and gender, price sensitivity was found to be impacting perceived risk as well. Gupta and Cooper (1992), Kalyanaram and Little (1994), Helson (1964), and Kalwani and Yim (1992) have argued in their studies that price sensitivity decreases when the perceived risk increases indicating a negative relationship between them.

This study includes price sensitivity into its research model in order to further investigate if it is a determinant factor for consumers relate to their perceive risks when shopping online.

2.4.2.5.Internet Use

Previous studies have proved that internet use level has a significant influence on online shopping behavior (Bellman et al., 1999). Citrin et al. (2000) contributed to this finding by postulating that the internet use variable can impact the acceptance level of online shopping.

Soopramanien (2011) found that experience in online shopping results in more usage of the channel as a way to make a purchase. He classified online consumers as non-

enthusiast, skeptical, and enthusiast regarding the intention to use online shopping against the number of years for online shopping. He emphasized the fact that the less number of years with online shopping the more consumers feel skeptical to make a purchase online and those who have more experience in online shopping will be more enthusiastic about making purchases online and also less conflicting against the channel.

Similarly, Bhatnagar et al. (2000) postulated in their study that more usage of the internet for shopping purposes indicated more purchases to be made through the internet. Furthermore, Kim et al. (2000) found a positive relationship between the internet use level for shopping purposes and online shopping behavior.

Connected to the concepts of consumer digitalization and consumer innovativeness in terms of usage of the internet to perform activities, the amount that consumers spend time on the internet for buying and selling purposes is a significant determinant of the level of familiarity of consumers with the internet technology. Thus, it is crucial to include internet usage level as an independent variable in the research model in order to showcase its relation to the risk perception concept.

2.4.2.6.Consumer Characteristics (Demographics) as Control Variables

There are different perspectives regarding the demographics' effect on risk perception. Some scholars have argued that the effect of demographics on perceived risk is not present, while others have refuted this argument by proposing that even a little variance in the demographics can make a significant difference regarding the effect on perceived risk as they are related to the behavioral aspects.

Within this context, Bellman et al. (1999) argued that demographics had little effect on purchasing behavior and in fact, past behavior is more predictive regarding online shopping behavior. Li et al. (1999) also provided a similar result in the study with a quite low percentage of variance in the online behavior against the demographic differences. Korgaonkar and Wolin (2002) further argued that when internet use and adoption increase, demographic differences make less effect on behavior online.

On the other hand, some studies showed significant results in terms of the influence of demographic factors affecting internet use for shopping purposes and as a result risk perception. These factors include income level, gender, age, education level, and residence country representing the cultural aspects of the group.

In this direction, Lee and Turban (2001) wanted to consider the possibility of an even little effect of demographic factors on risk perception and therefore included demographic variables in their study. Gender and income level seemed to be affecting factors of internet shopping behavior in their study. Other literature has also revealed that demographic factors affect internet shopping behavior (Katz and Aspden, 1997). Demographic factors such as gender, age, income, education level, resident country, etc. can be taken into account as control variables (Lee and Turban, 2001).

Moreover, Li et al. (1999) and Teo (2001) found out that male users make more online purchases than females, as opposed to Howell and Mariott (2002) who postulated that there is no significant difference in terms of online shopping based on gender. According to Alves and Dias (2015), male consumers used online shopping more than female consumers which was the result of income levels and use of credit cards.

Also, Kim et al. (2000) argued that income levels had a significant effect on online shopping behavior. Li et al. (1999), provided a similar argument stating that when income level increases, it is more like that consumers will make more frequent purchases online.

These arguments make gender and income level possible influencers on consumer behavior in online shopping and as a result, factors that need to be taken into account when investigating the risk perception concept.

Furthermore, Bhatnagar et al. (2000) concluded some moderating results by including another variable in the model. They argued that demographics can be effective factors depending on the product category to be purchased online. Since the product category variable is already included in the model it is also helpful to add demographics into the model in order to see similar or different results as compared to the literature the

above arguments and findings, this study includes all the demographic factors into the model as control variables in order to discover their effect as well as to provide a more meaningful analysis.

The following section will try to discuss the cultural aspect of demographics in terms of behavioral effects on individuals. Since behavior and decision-making processes are heavily affected by cultural backgrounds in terms of how people think and react, it is important to include cultural aspects within studies conducted.

2.4.2.6.1. Culture as a Demographic Factor

Since culture resides in the center of one's attitude formation, decision-making process as cognitive processes (Radford et al., 1993), as well as intentions and purchases (Jarvenpaa and Tractinsky, 1999), many researchers consider culture as a significant factor affecting consumer behavior (Keh and Sun, 2008; Steenkamp, 2001) by even going as far as declaring culture as the most significant factor affecting marketing on the internet (Samiee, 2001).

With this perspective, it is critical to mention Hofstede's cultural dimensions. Dutch management researcher Geert Hofstede (1984) developed a model with dimensions referring to differences that exist in cultures around the world as a conceptual framework. His model provides a systematic process where cultures can be analyzed and compared concerning beliefs, values, behaviors, and attitudes of individuals. Hofstede's model is not important only because it helps to understand the impact of culture on individuals but also how those individuals behave under the culture they belong to when they make decisions.

Therefore, this study includes culture as a demographical factor that affects consumers' decision-making as the focus on making purchasing decisions on digital platforms when discussing the findings of this study. Before diving into the literature for risk perception based on culture's influential role, it is meaningful to further explain Hofstede's cultural dimensions theory.

Hofstede's theory states six cultural dimensions describing the differences between social groups that affect also individuals' behavior; individualism/collectivism, masculinity/femininity, power distance, uncertainty avoidance, time orientation, and indulgence/restraint (1984). His model was initially four-dimensional and time orientation dimension was added by Michael Harris Bond in 1988 and the indulgence/restraint dimension was added by Michael Minkov in 2010 making the final model six dimensional.

Table 2. 2. Hofstede's Cultural Dimensions

Cultural Dimension	**Description**		**Example**
Power Distance	the degree of inequality and power distribution in society	**High** when inequality is expected and accepted by individuals with less power	China, India, Singapore, and Arab countries
		Low when inequality is not accepted well by individuals	Germany, and United Kingdom
Individualism / Collectivism	ties between individuals are not strong and individuals' benefit is primary	prefer to work individually and take credit for it	United States, Australia, United Kingdom, Canada, and Netherland,
	ties between individuals are strong and the benefit of the group is primary	like to work in groups and the credit goes to the group rather than individuals	Asian and Latin American countries
Masculinity / Feminity	Differentiating gender roles and traits based on society	assertive, decisive, dominant, and focused on success	Japan, Austria, Venezuela, Italy, Mexico, and China
		Caring, giving and focused on the quality in life	Sweden, Netherland, and Finland

Table 2. 2. (Continued)

Uncertainty Avoidance	how people deal with uncertain situations based on the countries they come from	**High** when people avoid uncertain situations and follow the rules and routines	Greece, Russia, Portugal, Belgium, and Japan
		Low when people are comfortable with undesirable moments	Singapore, Denmark, Sweden, and Malaysia
Time Orientation	categorizes society based on pragmatic and normative actions	**Long-term** the future considered more important than the past	South Korea, Japan, China, Germany, and Singapore
		Short-term past and the present are considered more important than the future	Nigeria, Australia, United States, Philippines
Indulgence / Restraint	The stance differentiates cultures based on if they promote or suppress enjoyment and gratification	Majority of the people are happy with their life in the society	Latin American countries, Nigeria, Sweden, Germany, Canada
		Small number of the people are happy with their life in the society	Egypt Ukraine, Iraq, Russia, and China.

While most Western cultures are defined as individualist, most Eastern cultures are considered collectivist (Kim et al., 1998). Similarly, power distance and uncertainty avoidance are low in Western cultures while Eastern cultures score high in these dimensions (Hofstede, 1984).

Considering the information regarding the cultural dimensions explained above, the literature provided some findings as to relationship between cultural dimensions and risk perception as an influencing factor, hence perceived risk is found to be affected by culture.

As per previous research, a high score of uncertainty avoidance results with concerns due to fear of loss and causing less risk-taking behavior (Bontempo et al., 1997). Similarly, since a high score of power distance indicates a high level of inequality in terms of power and wealth within the society; individuals within those societies will only be willing to take risks only if it is required by those with power (Algahtani et al., 2007).

Furthermore, a low score of individualism results in a low level of acceptance of new technologies and innovations, and those within such societies will take risks only when it brings more social acceptance (Brosdahl and Almousa 2013).

In the same direction as the findings above, Jarvenpaa et al. (1999) argued that perceived risk levels differ based on country and culture, and therefore risk perception levels for shopping through the internet will be lower in individualistic cultures than in collectivist ones.

The argument reached to another dimension when Ko et al. (2004) studied both experienced and inexperienced consumers in terms of previous online shopping experiences as well as the cultural differences between American and South Korean consumers. Based on their findings, consumers who have shopping online experience showed less risk perception than the experienced consumers in both countries. Moreover, Korean consumers had a higher level of risk perception in terms of social risk while American consumers showed higher risk perception on facets such as financial, psychological, and time risk. For both countries, performance and physical risk perceptions showed similar results. While South Korea is a collectivist and high-power distant culture, the United States of America is an individualist and low-power distance country. This study also showed the effect of cultural aspects on the risk perception phenomenon and therefore, needs to be considered during analysis within this study. Even if cultural aspects of consumers have little effect on the risk perception concept as a result of behavioral differences stemming from the cultural dimensions explained above, it is still an important factor included in the research model in order to discover any significant influence.

CHAPTER 3

METHODOLOGY

3.1. Research Strategy

3.1.1. The Research Problem

This research study is intended to be measuring the different factors affecting perceived risk of consumers when shopping online by forming a research model that would include most of the aspects of the previous studies. Additionally, demographics were compared in order to observe their effects.

As the main focus of this particular study, the research question is asked as follows;

Does the digitalization level of consumers affect risk perception when shopping online?

3.1.2. Research Design and Conceptual Model

As mentioned above, the factors forming the general risk perception are obtained from previous studies and included in this study. These perceived risk dimensions are as follows; financial risk, economic risk, performance risk, product risk, time risk, privacy risk, security risk, social risk, psychological risk, after-sale risk, delivery risk, and transaction risk.

All the of these dimensions are included in the model to discover not only their impact based on the sample demographically variant but also to check if they have a collective effect when included altogether. Some of the dimensions hold significant contributing value to the model such as transaction risk, security risk, safety risk, social risk, delivery risk, and product risk due to the very nature of the online shopping experience.

Every individual faces these risks inevitably when shopping online. These are the foremost types of risks involved in digital purchases as they will affect one's feelings of comfort and trust when making purchases online and putting sensitive personal information on platforms where any breach is possible.

On the other hand, some other dimensions such as psychological risk, financial risk, economic risk, and time risk are included due to their indirectly influential role discovered in the literature. Not only did their effect is aimed to be tested on the sample of this study but also they are aimed to be tested against the independent variables included in the model.

Eventually, all the risk dimensions are evaluated against several variables which are also obtained from previous literature. These variables are internet use level for shopping purposes, digitalization level of consumers, product involvement types, price sensitivity, and consumer innovativeness levels. They are selected for their explanatory role over risk perception phenomenon based on the literature. Internet use level for shopping purposes is an affecting variable on risk perception and therefore it cannot be omitted in any study investigating perceived risk. Similarly, digitalization level of consumers as the main focus of this study is also considered an important factor affecting risk perception and hence it is placed at the center of the study.

Consumer innovativeness can also be addressed with a similar reason for the aforementioned variables as it describes one's willingness to adopt new ways of doing things. Shopping online as opposed to conventional shopping can be an indicator of one's innovativeness as it is required to accept and adopt the new processes of making a purchase, it is not questionable to disregard it from the model.

Product category is an effective variable on risk perception due to size of risks involved for various reasons such as purchasing without seeing the actual product. Due to influential power of product category, the model in this study includes it as an effective factor in the risk perception variable.

Lastly, price sensitivity is included in the model as it is also another main contributor to consumers' behavior in online shopping context regarding how they perceive risks and benefits. If a consumer is price sensitive, can they consider shopping online instead of conventional shopping? The literature investigated this question and studies found that price sensitivity is as an important factor in people's choice of channel of purchase. Therefore, this study includes it in the research model in order to see how it affects risk perception besides other variables.

The demographics such as income level, education level, age, or gender are influential factors as per the literature even though there was a debate claiming the opposite. This research study aims to include all the demographic factors in order to discover their effects if there is any major influence on the risk perception phenomenon. Demographics are such an influential variant that if omitted, the explanatory power of the model decreases. The previous research has confirmed this claim, hence they are included in the model in order to interpret the results in a more complementary way.

While perceived risk and its twelve dimensions are considered as the dependent variable; internet use level for shopping purposes, digitalization level of consumers, product involvement types, price sensitivity, and consumer innovativeness levels are considered as independent variables for this study. Demographics are investigated as control variables to observe their effects on the other variables and contribution to the model as shown in Figure 3.1. below.

Figure 3. 1. The Research Model

Based on the model represented above, the following are the hypothesis determined for the study;

***H1$_0$**: Internet use for shopping purposes has no significant effect on perceived risk.*
***H1$_1$**: Internet use for shopping purposes has a significant effect on perceived risk.*

***H2$_0$**: Consumer digitalization level has no significant effect on perceived risk.*
***H2$_1$**: Consumer digitalization level has a significant effect on perceived risk.*

***H3$_0$**: Product involvement level has no significant effect on perceived risk.*
***H3$_1$**: Product involvement level has a significant effect on perceived risk.*

***H4$_0$**: Price sensitivity level has no significant effect on perceived risk.*
***H4$_1$**: Price sensitivity level has a significant effect on perceived risk.*

***H5$_0$**: Consumer innovativeness level has no significant effect on perceived risk.*
***H5$_1$**: Consumer innovativeness level has a significant effect on perceived risk.*

3.1.3. Measurement Scale

As the dependent variable of the scale, perceived risk and its dimensions are investigated in previous literature for appropriate constructs as per represented in the tables below.

3.1.3.1.Measurement Scale for Dependent Variable

Financial risk indicating the potential financial loss during online shopping is measured by the questions stated in Table 3. 1. below.

Table 3. 1. Scale for Financial Risk Dimension

Risk Dimension	Item Code	Question	Reference
Financial Risk	FR1	I am concerned that I will lose money due to careless mistakes such as the wrong input of a credit card number.	Featherman and Pavlou (2003)
	FR2	I am afraid that I cannot get compensation due to the risks of buying a fake product or buying from a fake seller.	Featherman and Pavlou (2003)

Economic risk indicating the additional costs incurring in case of a loss doing online shopping is measured by the questions stated in Table 3. 2. below.

Table 3. 2. Scale for Economic Risk Dimension

Risk Dimension	Item Code	Question	Reference
Economic Risk	ER1	I am afraid I will overspend if I find online shopping convenient.	Ariffin et al. (2018)
	ER2	I worry that total expenditure will be higher than expected as compared to conventional shopping.	Ariffin et al. (2018)

Performance risk indicating the potential loss when a product does not perform as expected is measured by the questions stated in Table 3. 3. below.

Table 3. 3. Scale for Performance Risk Dimension

Risk Dimension	Item Code	Question	Reference
Performance Risk	PER1	I am concerned that the product performance will not meet my expectations in terms of physical features and attributes.	Featherman and Pavlou (2003)
	PER2	I am afraid that the product will not conform to the promised traits and quality.	Featherman and Pavlou (2003)

Product risk indicating the potential harm that may be caused by the product is measured by the questions stated in Table 3. 4. below.

Table 3. 4. Scale for Product Risk Dimension

Risk Dimension	Item Code	Question	Reference
Product Risk	PR1	I am afraid that the product will be harmful to health or contain harmful substances.	Forsythe et al. (2006)
	PR2	I am concerned that I cannot physically inspect the product.	Forsythe et al. (2006)
	PR3	I am concerned that the product will require a complex procedure to adjust or fix before I can use it.	Forsythe et al. (2006)

Time risk indicating the potential loss of time during the research for information and making the purchase is measured by the questions stated in Table 3. 5. below.

Table 3. 5. Scale for Time Risk Dimension

Risk Dimension	Item Code	Question	Reference
Time Risk	TR1	Online shopping is a time-consuming option as compared to conventional shopping since finding the right product is difficult.	Featherman and Pavlou (2003)
	TR2	I am afraid it will take a long time to fix errors that occurred online or to get help from customer services.	Featherman and Pavlou (2003)
	TR3	I am concerned about the time lost until I receive the product.	Featherman and Pavlou (2003)

Privacy risk indicating the belief that personal information will be collected and used against one's will is measured by the questions stated in Table 3. 6. below.

Table 3. 6. Scale for Privacy Risk Dimension

Risk Dimension	Item Code	Question	Reference
Privacy Risk	PVR1	I am afraid that my personal information will not be kept confidential by the seller company from other companies.	Featherman and Pavlou (2003)
	PVR2	I am afraid that my personal information will be used for reasons other than commercial activities.	Featherman and Pavlou (2003)
	PVR3	I would not feel secure putting sensitive information such as credit card details on a website.	Featherman and Pavlou (2003)

Security risk indicating the belief that the credibility of the seller cannot be confirmed is measured by the questions stated in Table 3. 7. below.

Table 3. 7. Scale for Security Risk Dimension

Risk Dimension	Item Code	Question	Reference
Security Risk	SR1	I am afraid that my personal information (credit card details, address, identification details, etc.) will be obtained by third parties during online shopping.	Featherman and Pavlou (2003)
	SR2	I cannot be sure of the credibility of the seller and its website.	self-developed
	SR3	I am concerned that the information about the online shopping company may be insufficient for me to trust.	self-developed

Social risk indicating the potential loss of one's status in social groups as a resulting from a purchase is measured by the questions stated in Table 3. 8. below.

Table 3. 8. Scale for Social Risk Dimension

Risk Dimension	Item Code	Question	Reference
Social Risk	SOR1	I am concerned about my social image when I take risks when shopping online.	Ko et al. (2004)
	SOR2	I am afraid that my social image will be hurt if a loss happens as a result of fraud or hacking.	Ko et al. (2004)

Psychological risk indicating the potential loss of one's self-esteem from frustration of not achieving a purchase is measured by the questions stated in Table 3. 9. below.

Table 3. 9. Scale for Psychological Risk Dimension

Risk Dimension	Item Code	Question	Reference
Psychological Risk	PSYR1	I am concerned about the stress and frustration experienced when a return or replacement of a product is needed.	Featherman and Pavlou (2003)

Table 3. 9. (Continued)

	PSYR2	I am afraid I may do excessive shopping due to its convenience.	self-developed
	PSYR3	I am concerned about the stress and frustration experienced during and after online shopping.	self-developed

After-sale risk indicating the potential loss after a purchase order is made is measured by the questions stated in Table 3. 10. below.

Table 3. 10. Scale for After-sale Risk Dimension

Risk Dimension	**Item Code**	**Question**	**Reference**
After-Sale Risk	ASR1	I am afraid that I cannot cancel or change my order online after I purchase a product.	self-developed
	ASR2	I am afraid that I will not receive any after-sale support.	self-developed

Delivery risk indicating the potential loss of time and product during delivery process is measured by the questions stated in Table 3. 11. below.

Table 3. 11. Scale for Delivery Risk Dimension

Risk Dimension	**Item Code**	**Question**	**Reference**
Delivery Risk	DR1	I am worried that the product I order will be damaged during delivery.	Hong (2015)
	DR2	I am worried that the product I order will not be delivered on time.	Hong (2015)
	DR3	I am worried that the product will be delivered to the wrong address.	Hong (2015)

Transaction risk indicating the potential financial loss during the payment process is measured by the questions stated in Table 3. 12. below.

Table 3. 12. Scale for Transaction Risk Dimension

Risk Dimension	Item Code	Question	Reference
Transaction Risk	TSR1	I am afraid that the transactions are not secured.	Pennington et al. (2003)
	TSR2	I am concerned that the transaction process is too complicated to handle.	self-developed
	TSR3	When transaction errors occur, I am concerned that I cannot get compensation from either bank or the seller.	Featherman and Pavlou (2003)

3.1.3.2.Measurement Scale of Independent Variables

As the independent variables of the scale, internet use level for shopping purposes, digitalization level of consumers, product involvement levels, price sensitivity, and consumer innovativeness are investigated in previous literature for appropriate constructs as represented in the tables below.

Internet use variable indicating how frequently the internet is used for shopping purposes is measured by the questions stated in Table 3. 13. below.

Table 3. 13. Scale for Internet Use for Shopping Variable

Independent Variable	Item Code	Question	Reference
Internet Use for Shopping	IU1	What percentage of your shopping is online?	Alda´s-Manzano et al (2008)
	IU2	I shop online intensively.	self-developed
	IU3	I shop online for various products and services.	self-developed
	IU4	I shop online more as compared to the people I know.	self-developed

Consumer digitalization indicating the level of involvement in the digital world for buying and selling products and services is measured by the questions stated in Table 3. 14. below.

Table 3. 14. Scale for Consumer Digitalization Variable

Independent Variable	Item Code	Question	Reference
Consumer Digitalization	CD1	I can say that I am more active online and on social media as compared to people around me.	Ahmad and Hadi (2020)
	CD2	I feel very comfortable in the digital world.	Ahmad and Hadi (2020)

Product involvement indicating the level of involvement of the product being purchased was measured by the questions stated in Table 3. 15. below.

Table 3. 15. Scale for Product Involvement Variable

Independent Variable	Item Code	Question	Reference
Product Involvement	PI1	Generally, I am someone who finds it important what clothing/coffee I buy.	De Wulf et al. (2001),
	PI2	Generally, I am someone who is interested in the kind of clothing/coffee I buy.	De Wulf et al. (2001),
	PI3	Clothing/coffee is a kind of product that takes an important place in my life and a product that I take seriously.	De Wulf et al. (2001),

Price sensitivity indicating the effect on the consumers' willingness to buy a product based on its price was measured by the questions stated in Table 3. 16. below.

Table 3. 16. Scale for Price Sensitivity Variable

Independent Variable	Item Code	Question	Reference
Price Sensitivity	PS1	I compare the prices of products I want to buy very cautiously.	Adapted from Goldsmith and Newell (1997)
	PS2	I like to spend time to find cheaper products.	Adapted from Goldsmith and Newell (1997)

Consumer innovativeness indicating the level of consumers' receptiveness to a new product or a platform to make a purchase was measured by the questions stated in Table 3. 17. below.

Table 3. 17. Scale for Consumer Innovativeness Variable

Independent Variable	Item Code	Question	Reference
Consumer Innovativeness	CI1	If I hear that a clothing company sells clothing/coffee items online, I will be interested to shop online.	Goldsmith and Hofacker (1991) and Citrin et al. (2000)
	CI2	Compared to other people around me, I use the internet more to collect information.	Goldsmith and Hofacker (1991) and Citrin et al. (2000)
	CI3	I will be the first one to try a newly launched website to shop for clothing items/coffee.	Goldsmith and Hofacker (1991) and Citrin et al. (2000)
	CI4	I will generally be the first person to hear about a new clothing/coffee brand website for online shopping among the people around me.	Goldsmith and Hofacker (1991) and Citrin et al. (2000)
	CI5	I believe online shopping is more efficient than conventional shopping.	self-developed

Table 3. 17. (Continued)

	CI6	The internet is a more convenient way to perform daily tasks.	self-developed
	CI7	Even though it is risky to use the internet for shopping, its benefits are worth the risks.	self-developed

In addition to the above variables; age, marital status, gender, employment status, income level, education level, and ethnicity/residence country were investigated in order to complete the model as control variables of the scale.

3.1.4. Data Collection and Analysis

3.1.4.1.Research Method and Type of Data Collected

In this study, a quantitative research strategy was used since it is the best method to test a hypothesis in which measuring the scale is standardized and all the variables have distinct characteristics (Neuman and Robson, 2007). In quantitative research, hypotheses are specified, a research design is selected, variables are determined and measured after sampling, and data collection is conducted (Bryman, 2016). Additionally, a large sample such that in this study can be tested through quantitative research the most accurately. The results obtained can be trusted and reused by other studies as reliable outcomes.

Furthermore, the advantage of numerical outcomes that can be compared and contrasted to other studies makes the quantitative research best choice in the marketing field. The outcomes can be generalized due to large samples as well, which can contribute to the literature in the field. As in the case of the literature applied for this particular study, using quantitative research method in order to benefit from the above-mentioned aspects.

Consequently, the type of data collected for this study is primary data which is collected through a questionnaire as a tool used for quantitative research.

As the focus of this study was directed on several independent variables as affecting factors, the quantitative research method, and questionnaire as a tool for data collection made a perfect fit for this study. By closed-end questions, the bias of the researcher could be minimized. Moreover, through a systematic approach to research design, a hypothesis could be tested in a highly structured way. This way of approaching the research problem is thought to be produced more reliable outcomes.

3.1.5. Sampling

The questionnaire firstly is distributed to the social network of the author and those individuals were asked to pass the questionnaire to their social circles. This method is called snowball sampling where the existing sample recruits future individuals among their acquaintances to attend as the subjects of the study (Goodman, 1961).

There are mainly three types of snowballing sampling techniques (Etikan et al., 2015). The first method is called linear snowball sampling where one initial participant refers to one other participant who would also refer to one other participant. Each time the referral takes place only one participant is reached. The next technique, on the other hand, is the referral process where there is more than one participant reached each time which is called exponential non-discriminative snowball sampling. The last type is called exponential discriminative snowball sampling where the participants were screened before they were accepted into the sample.

This type of sampling was preferred to save time and for ease when reaching participants. As a result, through referral chains, initial participants were asked to pass on the questionnaire to who would be potential participants. To reflect the different demographics and backgrounds of individuals, participants in the questionnaire were selected randomly coming from different backgrounds with only one condition which is to have done online shopping before.

As a result of the selection of this type of sampling method, the demographics vary in terms of economic, social, and educational aspects among the subjects of the sample in this study.

Since the construct was formed by the items retrieved from several studies, the reliability and validity of the scale for this particular research needed to be assessed before any other analyses were conducted. Therefore, the aforementioned scale was tested for reliability and validity through measurement of Cronbach's alpha and Pearson's Correlation Coefficient whose results were stated in the Results and Findings Section.

3.1.6. Formation of the Questionnaire

A self-constructed online questionnaire was developed based on the previous studies in the related fields such as psychology and marketing as the tool for data collection for this research. Before distributing the questionnaire, ethical evaluation was done through the Human Research Ethical Committee at the Middle East Technical University. After the approval was obtained for ethical confirmation of the questionnaire, it was distributed through Google forms in both English and Turkish languages for the convenience of the participants from different backgrounds. The questionnaire was divided into three sections and consisted of a total of 57 questions.

Apart from the questions asked for demographics which required categorical and definitive answers, the remaining questions were asked to be answered based on a 7-point Likert scale ranging from strongly disagree=1 to strongly agree=7.

3.1.7. Measurement of Variables

In section 1 of the questionnaire, participants were asked to answer demographical questions including age, marital status, gender, employment status, income level, education level, occupation, and ethnicity as control variables used for the analysis. Age, occupation, ethnicity, and monthly household income level questions were asked requiring definite answers, while the remaining questions were asked for categorical answers.

While answers to marital status included *single* and *married*, gender included *female* and *male*, answers to the employment status included three options *part-time working*, *working*, and *not working*. Education levels on the side, included *primary school*

graduate, middle school graduate, high school graduate, university student, university graduate, master's degree, and *doctoral degree* answers.

In section 2, the questionnaire intended to figure out the level of internet use for shopping purposes and product involvement of the participants for particular products. Section 2 also included the questions related to the level of price sensitivity, consumer digitalization, and consumer innovativeness.

In section 3, the participants were asked to answer questions related to the perceived risk types when shopping online. As a multi-dimensional construct, section 3 consisted of questions intended to measure financial risk, economic risk, performance risk, product risk, time risk, privacy risk, security risk, social risk, psychological risk, after-sale risk, delivery risk, and transaction risk perceptions of consumers when shopping online.

3.1.8. Data Collection Process

The questionnaire was designed in two separate forms, each one directing related questions in sections 2 and 3 for a particular product with different involvement levels. Thus, one questionnaire was designed for clothing items as a *high involvement* product and the other questionnaire was designed for coffee as a *low involvement* product. The two separate questionnaires were given to two separate groups of people and one group answered only one questionnaire to be able to compare the results based on different product involvement levels against the risk perception constructs. A total of 123 participants responded to the questionnaire for coffee as a low involvement product group and 145 participants responded to the questionnaire for clothing items as a high involvement product group. In total, the sample size was 268 individuals.

The questionnaires were distributed for two months between 08.05.2021 and 10.07.2021. English versions of the questionnaire were distributed to a total of 83 non-Turkish participants originating from different countries. Participants from outside Turkey totaling 35 answered the questionnaire for clothing items and 48 of them answered for coffee. The remaining participants were from Turkey and a total of 110 of them answered the questionnaire for clothing items and 75 of them answered it for

coffee. All the questions were directed as must answer questions except for income level and occupation. At the initial stage of the distribution of the questionnaire, these two items were omitted to be marked as *must-answer* questions and therefore some of the earlier participants did not answer the questions. The missing values were considered when conducting analysis and reports were made accordingly in the following sections.

3.1.9. Data Analysis

The data collected through the methods mentioned above were analyzed through the software program named Statistical Package for the Social Sciences (SPSS). Before the aforementioned analysis was conducted, the data had to be prepared for those analyses.

For this purpose, independent variables –internet use for online shopping, consumer digitalization, price sensitivity, consumer innovativeness, and product involvement- were computed into new variables where they reflected their means for further analysis.

Furthermore, some of the demographic variables needed to be grouped since the responses were open-ended to these questions. For the sake of ease of analysis, these responses were grouped within their respective classification to be reflected collectively rather than mere responses. For instance, if the answer to the occupation question was a business owner; the group for that particular participant was determined as self-employed/entrepreneur. All the groups formed within the demographics were shown in Table 3. 18. below.

Table 3. 18. Demographic Groupings

Demographic	Groups Formed	Percentage %
Age (years)	19-24 (Gen Z)	11.94
	25-40 (Millennial)	79.85
	41+ (Gen X and Boomers)	8.21
Monthly Income Level for Household ($)	Less than 1045 (Low)	55.60
	1046—4095 (Low-middle)	33.60
	4096—12695 (Upper-middle)	8.00
	More than 12696 (High)	2.80

Table 3. 18. (Continued)

Country of Residence	**Turkey**	**70.52**
	West	**26.12**
	East	**3.36**
Occupation	Civil Servant	31.05
	Self Employed/Entrepreneur	7.30
	Wageworker	57.54
	Student	0.91
	Housewife	3.20
Education (level attained)	High School	5.97
	University Student	10.83
	Higher Education	83.20

After the preparation of the data as presented above, the reliability and validity analysis was conducted for the scale. After the results were satisfactory in terms of scale reliability and validity, factor analysis, independent sample t-tests, one-way ANOVA, and regression analysis were conducted.

CHAPTER 4

ANALYSIS AND RESULTS

4.1. Sample Characteristics

As seen in Table 4.1. below, the sample consists heavily of females and millennials with a rate of almost three-quarters. Similarly, there are single participants more than married ones with a rate of almost 60% of the entire sample.

Out of all the participants, most of them have higher education consisting 85% of the sample. With 75%, the sample comprises working participants as compared to not working participants.

Moreover, it is seen from Table 4.1. that 70% of the participants were from Turkey. The remaining participants came from various countries including Gulf countries such as Qatar, UAE, Saudi Arabia, and Oman as well as European and Western countries such as Britain, Nederland, Denmark, Bosnia, and Canada. There were also participants coming from the Middle Eastern countries particularly Jordan, Egypt, Palestine, and Iran besides the ones coming from Asian countries such as India and South Korea. Also, there was only one country from Africa as the participants' home country, Kenya. However, for the convenience purposes of the analysis, these countries were grouped into East and West when the statistical analysis was conducted based merely on the geographic classification.

At a 55% rate, participants had a low-income level following the low-middle income level of around 33% based on the World Bank country classifications by income level for 2021-2022. Most of these participants worked as wageworkers followed by the ones working as civil servants. A small percentage of around 7% of the sample worked in the private sector as entrepreneurs or as self-employed individuals.

Having shopped online at least once in their life, the participants' level of internet use for shopping purposes varied. If 41%- 60% of shopping made through the internet is considered to be a moderate level and more than %60 is considered to be a high level of the online shopping experience, it is deducted from Table 4. 1. is that around 52% of the participants relied heavily on the internet for shopping purposes.

In a summary, the sample consisted of mostly females and highly educated individuals who have low to low-middle income levels with most of them currently working as wageworkers. Also, most of the participants were young and single adults who use the internet for shopping purposes.

Table 4. 1. Sample Characteristics (Demographics)

Sample Characteristics	**Percentage %**
Gender (n = 268)	
Female	77.24
Male	22.76
Marital Status (n = 268)	
Single	59.70
Married	40.30
Age (years) (n = 268)	
19-24 (Gen Z)	11.94
25-40 (Millennial)	79.85
41+ (Gen X and Boomers)	8.21
Education (level attained) (n = 268)	
High School	5.97
University Student	10.83
University Graduate	39.55
Master's Degree	39.18
Doctoral Degree	4.47
Employment Status (n = 268)	
Working	75.00
Part-time Working	3.36
Not Working	21.64
Monthly Income Level for Household	
($)(n = 250)	55.60
Less than 1045 (Low)	33.60
1046—4095 (Low-middle)	8.00
4096—12695 (Upper-middle)	2.80
More than 12696 (High)	
Country of Residence (n = 268)	
Turkey	70.52
Other	29.48

Table 4. 1. (Continued)

Online Shopping Rate (n = 268)	**13.43**
Less than 10%	**16.42**
10-20%	**17.92**
21-40%	**24.25**
41-60%	**27.98**
More than 61%	
Occupation (n = 219)	
Civil Servant	31.05
Self Employed/Entrepreneur	7.30
Wageworker	57.54
Student	0.91
Housewife	3.20

4.2. Data Analysis and the Results

4.2.1. Factor Analysis

The construct items used for the questionnaire were both adopted from the previous studies as well as self-developed. Since the construct items were collected from various sources, validity and reliability were not checked for the complete scale. Therefore, reliability and validity results in addition to the factor loadings were checked to prove the scale's appropriateness for this study.

4.2.1.1.Factor Analysis for the Dependent Variable

As seen in Table 4. 2., factor loadings for the dependent variable were measured through direct oblimin with the Kaiser Normalization method. The reason why this method was used instead of varimax is that the correlation between the different dimensions of the dependent variable had to be considered when making the analysis.

To obtain the factor loadings as per Table 4. 2., some dimensions that loaded on the several different factors at once were eliminated. In doing so, time risk, psychological risk, and transaction risk were removed from the scale since their loadings did not give any meaningful results for the overall scale.

Additionally, dimensions that seem to load into the same factor were combined as it was concluded that the measurement of items for these constructs asked the same or highly similar points. As a result, product and performance risk dimensions; privacy

and security risk dimensions; and after-sale and delivery risk dimensions were combined as pairs to have a more meaningful measurement for the scale.

As per the values represented in Table 4. 2., all the loadings are greater than 0.4 and less than -0.4. Therefore, none of the constructs were eliminated for the reason of having insufficient value and all the loading values seemed to be sufficient for further analysis such as t-test, ANOVA, and regression.

Table 4. 2. PCA and Factor Loadings for the Dependent Variable Dimensions

		Factors					
Dimensions	**Constructs**	**1**	**2**	**3**	**4**	**5**	**6**
financial risk	FR1						-.857
	FR2						-.654
economic risk	ER1			.898			
	ER2			.761			
performance risk/ product risk	PER1				-.778		
	PER2				-.731		
	PR1				-.559		
	PR2				-.664		
	PR3				-.653		
privacy risk/ security risk	PVR1		-.861				
	PVR2		-.892				
	PVR3		-.804				
	SR1		-.894				
	SR2		-.743				
	SR3		-.743				
social risk	SOR1					.735	
	SOR2					.651	
after-sale risk/ delivery risk	ASR1	.561					
	ASR2	.510					
	DR1	.666					
	DR2	.761					
	DR3	.560					

Moreover, the bivariate correlation matrix is analyzed to see if there is any multicollinearity between the items. The value for the bivariate correlation should not be greater than 0.8 or less than -0.8 for the item not to be removed from the scale. As can be seen from Table 4. 3., there is no value greater or less than these limits so there is not any multicollinearity detected.

Table 4. 3. Correlation Matrix for the Dependent Variable

Correlations						
Component	**1**	**2**	**3**	**4**	**5**	**6**
1	1.000	-.435	.305	-.396	.265	-.322
2	-.435	1.000	-.324	.408	-.332	.445
3	.305	-.324	1.000	-.303	.155	-.216
4	-.396	.408	-.303	1.000	-.206	.387
5	.265	-.332	.155	-.206	1.000	-.215
6	-.322	.445	-.216	.387	-.215	1.000
Total Variance Explained = 69.35 %						
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .928						
Significance of Bartlett's Test of Sphericity = .000						

Based on the eigenvalue scores, the total variance explained table shows the first six components explaining nearly 70% of the total variance. Therefore, it can be concluded that all the factors are loading to the corresponding items in the analysis.

When it comes to the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy for assessment of the sample size, it can be seen from the Table 4.3. that a rate of 0.928 which is quite higher than the minimum acceptable value of 0.5 (Kaiser, 1974) suffices the aimed adequacy in terms of sample size. Moreover, the p-value indicating the significance for Bartlett's Test of Sphericity of .00 implies that the value is statistically significant in terms of relationships among the construct items.

In conclusion, the factor loading values, KMO values, and p-value for Bartlett's Test of Sphericity for dependent variables show that further analysis can be done with the dependent variable constructs in the scale.

4.2.1.2.Factor Analysis for the Independent Variables

On the side, for the independent variables factor loadings were measured the same way dependent variables were done which was through direct oblimin with the Kaiser Normalization method. Based on the same reason when the dependent variable analysis was done, any possible correlation between the variables was considered when selecting the method. As seen from Table 4. 4., all the variables were loaded to a certain factor except the consumer innovativeness. To excerpt, the best scale for the

measurement, four items of consumer innovativeness variable were removed from the scale.

Table 4. 4. PCA and Factor Loadings for the Independent Variables

		Factors				
Variables	**Constructs**	**1**	**2**	**3**	**4**	**5**
internet use construct	IU1	.954				
	IU2	.941				
	IU3	.744				
	IU4	.781				
consumer digitalization construct	CD1					.830
	CD2					.826
product involvement construct	PI1		.905			
	PI2		.929			
	PI3		.917			
price sensitivity construct	PS1			.927		
	PS2			.911		
consumer innovativeness construct	CI5				.814	
	CI6				.846	
	CI7				.590	

As per the values represented in Table 4. 4. that all the loadings are greater than 0.4 and less than -0.4. Therefore, none of the constructs were eliminated for the reason of having insufficient value.

Moreover, the bivariate correlation matrix is analyzed to see if there is any multicollinearity between the items. The value for the bivariate correlation should not be greater than 0.8 or less than -0.8 for the item not to be removed from the scale. As can be seen from Table 4. 4., there is no value greater or less than those limits, so there is not any multicollinearity detected.

Based on the eigenvalue scores, the total variance explained table shows the first five components explaining nearly 80% of the total variance. Therefore, it can be concluded that all the factors are loading to the corresponding items in the analysis.

Table 4. 5. Correlation Matrix for the Independent Variables

Correlations					
Component	**1**	**2**	**3**	**4**	**5**
1	1	0.247	0.164	0.416	0.331
2	0.247	1	0.257	0.197	0.159
3	0.164	0.257	1	0.207	0.229
4	0.416	0.197	0.207	1	0.286
5	0.331	0.159	0.229	0.286	1
Total Variance Explained = 79.99 %					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.817					
Significance of Bartlett's Test of Sphericity = .00					

When it comes to the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy for assessment of the sample size, it can be seen from the Table 4. 5. that a rate of 0.817 which is quite higher than the minimum acceptable value of 0.5 (Kaiser, 1974) suffice the aimed adequacy in terms of sample size. Moreover, the p-value indicating the significance for Bartlett's Test of Sphericity of .00 implies that the value is statistically significant in terms of relationships among the construct items.

In conclusion, the factor loading values, KMO values, and p-value for Bartlett's Test of Sphericity for independent variables show that further analysis can be done with the independent variable constructs in the scale.

4.2.2. Reliability and Validity Analysis

After determining the factor loadings and the most suitable scale for further analysis, testing of the reliability and validity of the construct is needed to be conducted. Reliability analysis is made to prove that the scale produces the same results when repeated at different times (Cheng et al., 2012). The validity, on the other hand, measures how well the items on the scale are intended to measure and if they reflect the real world realities (Field, 2005). While Cronbach's Alpha is used to assess the scale's reliability, Pearsons' Correlation Coefficient is used to determine the validity of the scale.

Reliability outcomes in terms of Cronbach's alpha values are represented for both dependent variable dimensions and independent variables in Table 4. 6. below.

Table 4. 6. Reliability Analysis for the Scale

		Cronbach's Alpha Based on Standardized Items	N of items
dependent variable dimensions	financial risk	0.751	2
	economic risk	0.779	2
	performance risk/ product risk	0.874	5
	privacy risk/ security risk	0.932	6
	social risk	0.862	2
	After-sale risk/ delivery risk	0.872	5
independent variables	internet use	0.906	4
	consumer digitalization	0.656	2
	product involvement	0.909	3
	price sensitivity	0.859	2
	consumer innovativeness	0.773	3

As can be seen from Table 4. 6., all the values for Cronbach's alpha are greater than 0.7 (Kline, 1999), which is the necessary limit for the scale to be considered reliable. Thus, it can be deducted from the results that the scale is reliable.

Validity tests were conducted based on the Pearson's Correlation Coefficient analysis which is shown in Table 4. 7. and Table 4. 8. below. For the sake of ease of reading, dependent and independent variables are shown in two different tables. As can be seen from both tables, significance levels fall under the reference value of .05 which shows highly significant results for the scale to be considered valid. Therefore, it can be said that all the items measure what they are intended to be measuring on the scale. Furthermore, the probability of multicollinearity is not present since there is no correlation value high enough to be causing such a problem.

Table 4. 7. Pearson's Correlation Coefficient Values for the Independent Variables

		IU1	IU2	IU3	IU4	CD1	CD2	PI1	PI2	PI3	PS1	PS2	CI5	CI6	CI7
IU1	Pearson Correlation	1	.796**	.662**	.641**	.189**	.240**	.238**	.235**	0.116	0.051	0.064	.435**	.249**	.298**
	Sig. (2-tailed)		0	0	0	0.002	0	0	0	0.058	0.409	0.293	0	0	0
IU2	Pearson Correlation		1	.769**	.737**	.288**	.343**	.228**	.242**	0.112	.172**	.150*	.528**	.325**	.344**
	Sig. (2-tailed)			0	0	0	0	0	0	0.067	0.005	0.014	0	0	0
IU3	Pearson Correlation			1	.634**	.300**	.363**	.257**	.285**	.171**	.209**	.178**	.502**	.418**	.455**
	Sig. (2-tailed)				0	0	0	0	0	0.005	0.001	0.003	0	0	0
IU4	Pearson Correlation				1	.436**	.339**	.276**	.301**	.126*	.253**	.232**	.558**	.346**	.321**
	Sig. (2-tailed)					0	0	0	0	0.04	0	0	0	0	0
CD1	Pearson Correlation					1	.488**	.215**	.227**	.137*	.274**	.313**	.299**	.197**	.207**
	Sig. (2-tailed)						0	0	0	0.025	0	0	0	0.001	0.001
CD2	Pearson Correlation						1	.154*	.167**	.122*	.126*	.217**	.340**	.264**	.392**
	Sig. (2-tailed)							0.012	0.006	0.046	0.039	0	0	0	0
PI1	Pearson Correlation							1	.876**	.703**	.305**	.272**	.315**	.263**	0.107
	Sig. (2-tailed)								0	0	0	0	0	0	0.08
PI2	Pearson Correlation								1	.730**	.248**	.196**	.339**	.258**	.148*
	Sig. (2-tailed)									0	0	0.001	0	0	0.016
PI3	Pearson Correlation									1	.190**	.160**	.196**	.169**	0.054
	Sig. (2-tailed)										0.002	0.009	0.001	0.006	0.383
PS1	Pearson Correlation										1	.754**	.230**	.316**	.166**
	Sig. (2-tailed)											0	0	0	0.006
PS2	Pearson Correlation											1	.262**	.255**	.146*
	Sig. (2-tailed)												0	0	0.017
CI5	Pearson Correlation												1	.552**	.539**
	Sig. (2-tailed)													0	0
CI6	Pearson Correlation													1	.504**
	Sig. (2-tailed)														0
CI7	Pearson Correlation														1
	Sig. (2-tailed)														

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

*Correlation is significant at the 0.05 level (2-tailed).

N = 268

Table 4. 8. Pearson's Correlation Coefficient Values for the Dependent Variables

		FR1	FR2	ER1	ER2	PER1	PER2	PR1	PR2	PR3	PVR1	PVR2	PVR3	SR1	SR2	SR3	SOR1	SOR2	ASR1	ASR2	DR1	DR2	DR3
FR1	Pearson Correlation	1	.602**	.332**	.352**	.372**	.353**	.431**	.334**	.417**	.378**	.386**	.382**	.420**	.325**	.412**	.372**	.347**	.422**	.476**	.348**	.323**	.386**
	Sig. (2-tailed)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FR2	Pearson Correlation		1	.323**	.332**	.403**	.433**	.430**	.423**	.445**	.386**	.401**	.377**	.438**	.312**	.380**	.372**	.408**	.478**	.486**	.475**	.333**	.381**
	Sig. (2-tailed)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ER1	Pearson Correlation			1	.638**	.382**	.359**	.259**	.294**	.346**	.290**	.262**	.238**	.257**	.272**	.316**	.243**	.215**	.253**	.195**	.234**	.316**	.196**
	Sig. (2-tailed)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.001	0	0	0	0.001
ER2	Pearson Correlation				1	.338**	.361**	.331**	.361**	.321**	.302**	.331**	.347**	.315**	.288**	.372**	.281**	.274**	.321**	.282**	.213**	.317**	.222**
	Sig. (2-tailed)					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PER1	Pearson Correlation					1	.831**	.563**	.582**	.512**	.344**	.391**	.398**	.364**	.344**	.378**	.143*	.220**	.476**	.422**	.457**	.381**	.321**
	Sig. (2-tailed)						0	0	0	0	0	0	0	0	0	0	0.019	0	0	0	0	0	0
PER2	Pearson Correlation						1	.538**	.583**	.527**	.343**	.425**	.444**	.404**	.383**	.453**	.172**	.269**	.514**	.458**	.488**	.447**	.324**
	Sig. (2-tailed)							0	0	0	0	0	0	0	0	0	0.005	0	0	0	0	0	0
PR1	Pearson Correlation							1	.475**	.628**	.423**	.453**	.450**	.472**	.436**	.462**	.343**	.358**	.396**	.449**	.361**	.309**	.341**
	Sig. (2-tailed)								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PR2	Pearson Correlation								1	.574**	.316**	.354**	.360**	.321**	.353**	.438**	.303**	.284**	.507**	.412**	.429**	.367**	.353**
	Sig. (2-tailed)									0	0	0	0	0	0	0	0	0	0	0	0	0	0
PR3	Pearson Correlation									1	.302**	.388**	.403**	.410**	.429**	.440**	.413**	.438**	.575**	.507**	.419**	.323**	.373**
	Sig. (2-tailed)										0	0	0	0	0	0	0	0	0	0	0	0	0
PVR1	Pearson Correlation										1	.840**	.602**	.728**	.593**	.656**	.431**	.468**	.424**	.494**	.397**	.335**	.398**
	Sig. (2-tailed)											0	0	0	0	0	0	0	0	0	0	0	0
PVR2	Pearson Correlation											1	.688**	.815**	.619**	.696**	.399**	.527**	.500**	.500**	.416**	.315**	.495**
	Sig. (2-tailed)												0	0	0	0	0	0	0	0	0	0	0
PVR3	Pearson Correlation												1	.722**	.613**	.684**	.407**	.482**	.436**	.398**	.315**	.306**	.390**
	Sig. (2-tailed)													0	0	0	0	0	0	0	0	0	0
SR1	Pearson Correlation													1	.677**	.713**	.419**	.519**	.463**	.499**	.421**	.343**	.464**
	Sig. (2-tailed)														0	0	0	0	0	0	0	0	0
SR2	Pearson Correlation														1	.767**	.513**	.541**	.495**	.465**	.432**	.389**	.449**
	Sig. (2-tailed)															0	0	0	0	0	0	0	0
SR3	Pearson Correlation															1	.509**	.552**	.512**	.496**	.474**	.443**	.444**
	Sig. (2-tailed)																0	0	0	0	0	0	0
SOR1	Pearson Correlation																1	.758**	.433**	.450**	.282**	.280**	.427**
	Sig. (2-tailed)																	0	0	0	0	0	0
SOR2	Pearson Correlation																1	.497**	.480**	.349**	.275**	.489**	
	Sig. (2-tailed)																	0	0	0	0	0	
ASR1	Pearson Correlation																	1	.785**	.656**	.518**	.540**	
	Sig. (2-tailed)																		0	0	0	0	
ASR2	Pearson Correlation																		1	.624**	.477**	.490**	
	Sig. (2-tailed)																			0	0	0	
DR1	Pearson Correlation																			1	.627**	.545**	
	Sig. (2-tailed)																				0	0	
DR2	Pearson Correlation																				1	.511**	
	Sig. (2-tailed)																					0	
DR3	Pearson Correlation																					1	
	Sig. (2-tailed)																						

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

* Correlation is significant at the 0.05 level (2-tailed).

N = 268

4.2.3. T-Test and ANOVA Results

To find out whether the control variables have any effect on the independent and dependent variables in terms of how significant the differences between and within the groups are and whether those differences occurred as a result of chance. For doing so, t-tests for 2-category control variables and Anova tests for 3-category control variables were conducted. Based on the sample size, the reference value for the p-value is considered to be 0.1.

As can be seen from the below tables, *equal variances assumed/ equal variances not assumed* lines were filtered based on the significance level of Levene's test for equality of the variance. Except for the product involvement and economic risk, all the other variables were interpreted as equal variances assumed since their significance levels were shown to be greater than 0.1.

In the analysis, all the variables' averages were calculated and represented as new variables. For instance, the internet use variable is shown as IU and its average is shown as Internet Use.

4.2.3.1.Consumer Digitalization Level

First and foremost, consumer digitalization levels were assessed to measure the effect on the perceived risk. To separate the highly digital participants from digitally low-involved participants in the sample, the median score was calculated and found to be as in Table 4. 9. below.

Table 4. 9. Statistics for Consumer Digitalization Variable

Consumer Digitalization		
N	Valid	268
	Missing	0
Mean		4.1996
Median		4.0000
Mode		4.50

Participants who showed consumer digitalization level value greater than Median = 4 were considered to be highly digital and the ones who showed lower values were considered to have low involvement in digital activities.

Since the questionnaire was conducted for two different products that had two distinct involvement levels, two analyses were done based on each group and one analysis was done for the entire sample to check if the product involvement level had any manipulative effect on the consumer digitalization and perceived risk relationship.

Table 4. 10. below shows the statistics for high and low product involvement groups along with the entire sample. Following Table 4.11. shows Levene's test and t-test results for each of the groups and overall the sample.

Table 4. 10. Statistics for Low, High, and All Involvement Levels

	Consumer Digitalization_ high_low_ involvement		N	Mean	Std. Deviation	Std. Error Mean
Statistics for **Low Product Involvement** Group	Overall Perceived Risk	low	69	4.2288	1.11587	.13434
		high	54	4.2335	1.10580	.15048
Statistics for **High Product Involvement** Group	Overall Perceived Risk	low	68	4.2646	1.35825	.16471
		high	77	4.2985	1.21030	.13793
Statistics for **All Product Involvement** Groups	Overall Perceived Risk	low	137	4.2466	1.23764	.10574
		high	131	4.2717	1.16444	.10174

Having close sample sizes, each group had shown similar results in terms of means and standard deviations within the groups formed based on product involvement levels. This shows that the variations within each group do not have any major effect on the t-test results.

Table 4. 11. T-test Results for Low, High, and All Involvement Levels

			Levene's Test for Equality of Variances		t-test for Equality of Means				
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Independent Samples Test for **Low Product Involvement** Group	Overall Perceived Risk	Equal variances assumed	.045	.832	-.023	121	.981	-.004	.2019
Independent Samples Test for **High Product Involvement** Group	Overall Perceived Risk	Equal variances assumed	.490	.485	-.159	143	.874	-.033	.2133
Independent Samples Test for **All Product Involvement** Groups	Overall Perceived Risk	Equal variances assumed	.281	.597	-.171	266	.864	-.025	.1469

When the significance levels were calculated for each group, the results showed a greater value than the reference significance point of .1. This result indicates that there is no significant difference between means and therefore, the null hypothesis cannot be rejected.

As a result, it can be concluded that consumer digitalization levels do not have any effect on the perceived risk. If the two groups of low and high product involvement are checked, the conclusion would be that different product involvement levels did not have any effect on this no-effect relationship between the digitalization level and the perceived risk.

4.2.3.2.Product Category

When the analysis was done based on the product involvement variable, product categories were divided into two groups- high involvement (n = 145) and low involvement (n = 123) product groups.

It can be seen in Table 4. 15. Appendix C that all the independent variables have their significance level as $p < .1$ which indicates that there is a significant difference between means and the null hypothesis can be rejected.

On the other hand, significance levels for the dependent variables show greater values than .1 which indicates that there is no significant difference between means and the null hypothesis cannot be rejected.

In summary, a product category in terms of involvement levels (high vs low) does affect the internet use for shopping purposes, consumer digitalization levels, price sensitivity, and consumer innovativeness levels.

4.2.3.3.Marital Status

Marital Status control variables were also grouped into two which are single (n = 160) and married (n = 108). After the analysis was done based on the two groups, except for the consumer digitalization and price sensitivity, the remaining variables have significant differences greater than .1 based on Table 4. 16. Appendix C. For these two variables, null hypotheses were rejected and the remaining ones failed to reject.

In other words, it can be concluded that marital status does have an effect on consumer digitalization level and price sensitivity levels but does not have any effect on risk perceptions in addition to the internet use level, product involvement level, and consumer innovativeness levels.

4.2.3.4.Gender

As can be seen from Table 4. 17. In appendix C, the internet use levels for shopping, product involvement levels, price sensitivity levels, and economic risk are seen to have a significant difference between means with p-values less than .1 and therefore, the

null hypothesis concerning these variables is rejected. All the remaining variables showed no significant difference and their null hypothesis failed to be rejected.

In summary, only internet use levels for shopping, product involvement levels, price sensitivity levels, and economic risk are affected by the gender difference being considered as females (n = 207) and males (n = 61).

4.2.3.5.Country

Country variable were divided into three groups as Turkey (n = 189), West (n = 9) and East (n = 70). Since the country backgrounds of the participants showed high variation, a comparison was more meaningful between Turkish participants to the others and check if there are any differences and similarities. The other two groups' names West and East were made merely based on the geographical locations of the countries of the participants.

Based on the Anova analysis from Table 4. 18. Appendix C, internet use variable showed significant difference of Turkish group to both West and East groups with p – values less than .1.

Similarly, the product involvement variable showed a significant difference between the Turkish group and to East group with p = .001.

In the same way, price sensitivity showed a significant difference between the Turkish group and to East group with p = .003.

Consumer digitalization and consumer innovativeness did not show any significant differences between means having the null hypothesis not to be rejected.

Represented in Table 4. 19. Appendix C, the Turkish group did not differ from the groups West and East in financial risk, privacy/security risk, social risk, and aftersale/delivery risk with a p-value greater value than .1 which makes the null hypothesis not be rejected.

On the other hand, Turkish participants showed a significant difference between means of the East group with a p-value less than .1 which indicates that the null hypothesis is rejected for the following risk dimensions; economic risk, performance/product risk, time risk, psychological risk, and transaction risk.

4.2.3.6.Age

Age variable were divided into three groups which are Generation X (GenX) and Boomers (n = 22), Generation Z (GenZ) (n = 32) and the Millennials (n = 214). Detailed descriptive statistics for the groups were given in Appendix C.

Based on a one-way ANOVA analysis from Table 4. 20. Appendix C, product involvement, price sensitivity, consumer innovativeness, economic risk, and after-sale/delivery risk variables have non-significant results of p-value which are greater than .1. The remaining variables show lower p-values than .1 indicating significant results.

As can be seen from Table 4. 21. In appendix C, multiple comparisons with LSD were run for the age control variable within the groups to see whether the groups differed significantly from each other.

Internet Use variable showed a significant difference between GenZ and GenX and Boomers groups with p = .056 being less than the reference level of .1. Similarly, the millennials group showed a significant difference from GenX and Boomers with a p = .003.

The consumer digitalization variable also showed a significant difference between GenZ and millennials with p = .036 as well we GenZ and GenX and Boomers with p = .041.

On the other hand, millennials did not show any significant difference from GenX and Boomers with p = .452 being greater than .1.

The product involvement variable showed no significant difference between any groups with values greater than .1.

The price sensitivity variable only showed a significant difference between millennials and GenX and Boomers with $p = .084$. In the same way, the consumer innovativeness variable showed a significant difference between millennials and GenX and Boomers with $p = .069$.

The financial risk dimension under the perceived risk variable showed a significant difference between GenZ and Millennials with $p = .095$ and between GenX and Boomers and millennials with $p = .048$.

Economic risk only showed a significant difference between GenX and Boomers and millennials with $p = .068$.

Performance/product risk, on the other hand, showed a significant difference when GenX and Boomers were compared to both GenZ and millennials with p-values of .048 and .037.

In the same way, privacy/security risk showed a significant difference when GenX and Boomers were compared to both GenZ and millennials with p-values of .020 and .030.

When social risk was analyzed, only GenX and Boomers had a significant difference when compared to GenZ and millennials with p-values of .018 and .003.
After-sale/delivery risk variable showed non-significant differences between all the groups.

Overall perceived risk variable showed a significant difference between GenZ and GenX and Boomers with $p = .055$ and between millennials and GenX and Boomers with $p = .022$.

4.2.3.7.Education

Education variables were divided into three groups high school graduates with $n = 16$, university students with $n = 29$, and higher education attained with $n = 223$.
Detailed descriptive statistics for the groups were given in Appendix C.

Based on one-way ANOVA with analysis from Table 4. 22. Appendix C, only internet use for shopping purposes, price sensitivity, and consumer innovativeness variables have significant results of p-value which is less than .1. The remaining variables show greater p-values than .1 indicating non-significant results. As can be seen from Table 4. 23. In appendix C, multiple comparisons were run for the age control variable within the groups to see whether the groups differed significantly from each other.

The Internet Use variable showed a significant difference when high school graduates were compared to university students and higher education groups with $p = .006$ and $p = .003$ being less than the reference level of .1. University students on the other hand showed a non-significant difference from the higher education group the $p = .683$.

In the same way, the consumer innovativeness variable showed a significant difference between high school graduates and university students ($p = .008$) and higher education groups ($p = .005$). University students and higher education groups did not show a significant difference ($p = .627$).

Consumer digitalization and product involvement variables showed no significant difference between all groups with p-values being greater than .1.
The price sensitivity variable only showed a significant difference between high school graduates and higher education groups with $p = .028$.

No risk variable except the financial risk variable showed a significant difference between groups with their p-values being greater than .1 as per Table 4. 23. The financial risk variable showed a significant difference between groups of university students and higher education with $p = .096$.

4.2.3.8.Employment Status

Education variables were divided into three groups employed with *n* = 201, unemployed with *n* = 58, and part-time working with *n* = 9. Detailed descriptive statistics for the groups were given in Appendix C.

Based on one-way ANOVA with analysis from Table 4. 24. Appendix C, only the price sensitivity variable has significant results of p-value which is less than .1.

The remaining variables show greater p-values than .1 indicating non-significant results. As can be seen from Table 4. 25. In appendix C, multiple comparisons were run for the age control variable within the groups to see whether the groups differed significantly from each other.

As can be concluded from the p-values represented in Table 4. 25. In appendix C, none of the variables showed a significant difference between groups.

Only the price sensitivity variable showed a significant difference between groups. They are namely; unemployed and employed differed from each other with *p* = .007 and unemployed and part-time working differed from each other with *p* = .085. Employed and part-time working groups did not differ from each other significantly with *p* = .534.

4.2.3.9.Income Level

Income level variable were divided into four groups as low with *n* = 139, low-middle with *n* = 84, upper-middle with *n* = 20 and high with *n* = 7. Detailed descriptive statistics for the groups were given in Appendix C.

Based on one-way ANOVA with analysis from Table 4. 26. Appendix C, product involvement, price sensitivity, consumer innovativeness, financial risk, and social risk variables have significant results of p-value which is less than .1. The remaining variables show greater p-values than .1 indicating non-significant results.

As per the results shown in Table 4. 27. Appendix C, the internet use variable shows significant results only between low income and upper-middle-income groups with p = .066.

Consumer digitalization variables showed a significant difference between groups of low-income and low-middle income groups with p = .069. Also, low-middle income and high-income groups showed a significant difference with p = .067.

The product involvement variable showed a significant difference between the low-income group and the low-middle income group with p = .033. Also, the low-income group differed from the high-income group with p = .013. Low-middle income group differed from the high-income group as well with p = .090. Upper-middle income group differed from the high-income group with p = .031.

Price sensitivity variable had significant difference when low income group was compared to low-middle income group (p = .013), upper-middle income group (with p = .086) and high income group (with p = .046).
The consumer innovativeness variable showed a significant difference when the low-income group was compared to the upper-middle-income group with p = .024. Also, the low-middle income group showed a significant difference from the upper-middle-income group with p = .008.

The financial risk variable showed a significant difference between low income and low-middle income groups with p = .006 in addition to the upper-middle-income group with p = .004. Moreover, the low-middle income group significantly differed from the high-income group with p = .021.

Economic, performance/ product a,nd after-sale/ delivery risk variables showed non-significant differences between all the groups with p-values greater than .1 as per Table 4. 27.

The privacy/ security risk variable, on the other hand, showed a significant difference only between upper-middle and high-income groups with p = .050.

The social risk variable showed a non-significant difference when the low-income group was compared to low-middle income and high-income groups. All the other groups showed significant differences with p-values less than .1 as per Table 4. 27. Appendix C.

Overall perceived risk variable showed significant results only between upper-middle-income and high-income groups with $p = .064$.

4.2.3.10. Occupation

Occupation variables were divided into four groups civil servant with $n = 68$, self-employed with $n = 16$, wageworker with $n = 117$, and student/housewife with $n = 18$. Detailed descriptive statistics for the groups were given in Appendix C.

Based on one-way ANOVA with analysis from Table 4. 28. In appendix C, only the product involvement variable showed significant results of p-value which is less than .1. The remaining variables show greater p-values than .1 indicating non-significant results. As can be seen from Table 4. 29. In appendix C, multiple comparisons were run for the age control variable within the groups to see whether the groups differed significantly from each other.

The product involvement variable showed a significant difference between civil servant and self-employed groups with $p = .004$. Also, self-employed differed from wageworker groups significantly with $p = .010$ and from the student/housewife group with $p = .012$.

The financial risk variable showed a significant difference between groups of the civil servant and self-employed with $p = .040$. Similarly, the self-employed group differed significantly from the wageworker group with $p = .031$.

The privacy/security risk variable showed a significant difference between groups of the civil servant and self-employed with $p = .032$. Similarly, the self-employed group differed significantly from the wageworker group with $p = .038$.

4.2.4. Regression Analysis

In addition to the analysis explained above, multiple linear regression analysis needed to be assessed to observe how more than one independent variable affects one dependent variable. For this purpose, multiple linear regression analyses are conducted to test if internet use for shopping purposes, consumer digitalization, product involvement, price sensitivity, and consumer innovativeness significantly predicted perceived risk. The analysis was done separately for high involvement and low involvement product sample groups. In the following section, an overall analysis of the entire sample was conducted. The significant regression equation is found for the low involvement product sample group ($F(5,117) = 3.801$, $p < .003162$), with an R^2 of .140 as per Table 4. 12. below.

Table 4. 12. Regression Statistics for Low Involvement Products

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.374[a]	.140	.103	1.04836

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.890	5	4.178	3.801	.003[b]
	Residual	128.591	117	1.099		
	Total	149.481	122			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.784	.432		8.761	.000
	IU	-.092	.078	-.125	-1.167	.245
	CD	-.016	.064	-.023	-.250	.803
	PI	.115	.049	.210	2.345	.021
	PS	.222	.068	.303	3.266	.001
	CI	-.150	.089	-.182	-1.689	.094

As per the Table 4.12. above, participants' predicted perceived risk is equal to 3.784 - .092 (INTERNET USE) - .016 (CONSUMER DIGITALIZATION) + .115 (PRODUCT INVOLVEMENT) + .222 (PRICE SENSITIVITY) - .150 (CONSUMER INNOVATIVENESS). While the object of measurement decreases by .092 unit for

each unit of internet use, .016 unit for each unit of consumer digitalization and by .150 unit for each unit of consumer innovativeness, it increases by .115 unit for each unit of product involvement, and by .222 unit for each unit of price sensitivity. While product involvement (p = .021), price sensitivity (p = .001) and consumer innovativeness (p = .094) are significant predictors for perceived risk, internet use for shopping purposes (p = .245) and consumer digitalization (p = .803) levels are non-significant predictors. R^2 = .140 depicts that the model explains 14% of the variance in perceived risk.

On the other hand, the significant regression equation is found for the high involvement product sample group ($F(5,139) = 3.717$, $p < 0.003450$), with an R^2 of .118 as per the Table 4.13. below.

Table 4. 13. Regression Statistics for High Involvement Products

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.343[a]	.118	.086	1.22110

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.711	5	5.542	3.717	.003[b]
	Residual	207.260	139	1.491		
	Total	234.971	144			

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.357	.592		5.669	.000
	IU	-.266	.085	-.318	-3.110	.002
	CD	.091	.086	.109	1.069	.287
	PI	.191	.073	.233	2.634	.009
	PS	.060	.087	.062	.688	.492
	CI	.083	.098	.084	.846	.399

As represented in the Table 4.13. above, participants' predicted perceived risk is equal to 3.357 - .266 (INTERNET USE) + .091 (CONSUMER DIGITALIZATION) + .191 (PRODUCT INVOLVEMENT) + .060 (PRICE SENSITIVITY) + .083 (CONSUMER INNOVATIVENESS). While the object of measurement decreases by

.266 unit for each unit of internet use, it increases by .091 unit for each unit of consumer digitalization, .191 unit for each unit of product involvement, .060 unit for each unit of price sensitivity and by .083 unit for each unit of consumer innovativeness. While internet use for shopping purposes (p = .002) and product involvement (p = .009) are significant predictors for perceived risk, price sensitivity (p = .492), consumer innovativeness (p = .399) and consumer digitalization (p = .287) levels are non-significant predictors. R^2 = .118 depicts that the model explains almost 12% of the variance in perceived risk.

In order to obtain an overall perspective including both low and high involvement samples, a general regression analyses is conducted.

Table 4. 14. Regression Statistics for the Entire Sample

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.322[a]	.103	.086	1.14730

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	39.757	5	7.951	6.041	.000[b]
	Residual	344.872	262	1.316		
	Total	384.630	267			

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.529	.340		10.364	.000
	IU	-.171	.057	-.221	-3.017	.003
	CD	.036	.052	.047	0.700	.485
	PI	.129	.042	.196	3.118	.002
	PS	.151	.052	.185	2.909	.004
	CI	-.021	.066	-.023	-.311	.756

As per the Table 4. 14. Above, participants' predicted perceived risk is equal to 3.529 - .171 (INTERNET USE) + .036 (CONSUMER DIGITALIZATION) + .129 (PRODUCT INVOLVEMENT) + .151 (PRICE SENSITIVITY) - .021 (CONSUMER INNOVATIVENESS). While the object of measurement decreases by .171 unit for

each unit of internet use and by .021 unit for each unit of consumer innovativeness, it increases by .036 unit for each unit of consumer digitalization, .129 unit for each unit of product involvement, .151 unit for each unit of price sensitivity. While internet use for shopping purposes (p = .000), product involvement (p = .002) and price sensitivity (p = .004) are significant predictors for perceived risk, consumer innovativeness (p = .756) and consumer digitalization (p = .485) levels are non-significant predictors. R^2 = .103 depicts that the model explains almost 10% of the variance in perceived risk.

On the other hand, the significant regression equation was found for the high involvement product sample group ($F(5,262) = 6.041$, $p < 0.000026$), with an R^2 of .103 as per the Table 4. 14. above.

CHAPTER 5

DISCUSSION

Online shopping has become more preferred choice for commercial activities in recent years with the help of technological developments and accessibility of the internet by individuals all around the world. Particularly since 2019 after the spread of Covid-19, people started using internet shopping more due to quarantine conditions.

Similar to the case of conventional shopping, consumers face various risks when shopping online. Further to this, Lee and Tan (2003) argued that consumers feel more at risk when shopping online than shopping through traditional channels as a result of the feeling of uncertainty concerning the purchase if it turns out to be a bad one. For this reason, perceived risk concept attracts high attention in the literature as it is found to be a significant factor affecting online shopping behavior as well as attitudes towards it.

With having various dimensions -a couple of which are financial, security, privacy, psychological, etc. - perceived risk concept is found to be affected by other factors based on the respective research. In previous research, level of internet use, product involvement levels, consumer innovativeness, and consumer characteristics were investigated in pursuit of finding their effect on the perceived risk concept. In this study, these variables are also considered as part of the research model developed. Most particularly, consumer digitalization level is the main focus as considered the major contributor to the model in respect to its impact on the general perceived risk phenomenon.

Thus, the research question for this study is as follows;

Does the digitalization level of consumers affect risk perception when shopping online?

5.1. Research Findings

Regression analysis done based on the product involvement categories shows that the major contributor to the model is the price sensitivity variable followed by (in order) consumer innovativeness, consumer digitalization level, and level of internet use for low involvement level product (coffee). For the case of low involvement product, perceived risk is affected negatively by the level of internet use, consumer digitalization, and consumer innovativeness while price sensitivity has a positive effect on risk perception.

The high involvement product (clothing) category, on the other hand, shows that the major contributor of the model is the level of internet use followed by (in order) consumer digitalization and consumer innovativeness. For the case of high involvement product, perceived risk is affected negatively by the level of internet use while price sensitivity, consumer digitalization, and consumer innovativeness have a positive effect on the risk perception.

In terms of overall regression for the entire sample, the results indicate negative relations between the level of internet use and risk perception as well as consumer innovativeness and risk perception. The remaining variables; consumer digitalization level, product involvement, and price sensitivity show positive relation to the perceived risk variable.

5.1.1. Consumer Digitalization Variable Findings

Being the major focus of this study, consumer digitalization level variable turns out to have non-significant results against perceived risk variable. Contrary to the findings in the literature such by Soopramanien (2010) and Forsythe and Shi (2003), more digitalized consumers does not show less risk perception when shopping online.

Even though it was argued otherwise by Miyazaki and Fernandez (2001), more online experience does not indicate less perceived risk as long as this study's result is concerned.

Therefore, we fail to reject the null hypothesis;

$H2_0$: Consumer digitalization level has no significant effect on perceived risk.

Also, in other studies conducted such as Chapell's (2005), internet use may be an indicator of more online shopping due to fear of financial loss. Furthermore, as Caterinicchia (2005) and Horrigan (2008) argued, privacy risk is also not eliminated by the fact that consumers use the internet since they still may be affected by the negative news regarding the unsafety of online platforms.

It can be deferred that consumer digitalization level may not be the sole indicator of the risk perception concept, even though there are studies claiming the opposite. There may be other factors that may affect the consumers' behavior in terms of risk perception when shopping online other than consumer digitalization level.

In this perspective, demographic factors can be determinant influencers based on the sample characteristics. Based on the t-test and ANOVA findings, marital status and age factors seem to affect the consumer digitalization level variable. Further elaborations will be made in the discussion section below.

5.1.2. Product Involvement Variable Findings

As the second major focus of this study, product involvement categories show significant results on the effect of risk perception in line with what was proposed in the literature (Solomon, 1986; Radder and Huang, 2008; Browne and Kaldenberg, 1997; Bian and Moutinho, 2008).

Therefore, we reject the null hypothesis;

$H3_0$: Product involvement level has no significant effect on perceived risk.

The research findings concerning the product involvement level show supporting results to the literature. Venkatraman (1989), Solomon (1986), Radder, and Huang (2008) have argued that the risk perception is increased when the level of involvement of the product is increased as is the case for this study. Since the high-involvement products require more information before purchase and resulting more anxiety in terms of performance, physical and product risks, consumers perceive more risk when shopping for high involvement products online.

5.1.3. Level of Internet Use Variable Findings

The level of internet use variable findings are in line with the previous research, as an effective factor in risk perception. The increased use of the internet results in less risk perception when shopping online (Soopramanien, 2010).

Therefore, we reject the null hypothesis;

$H1_0$: Internet use for shopping purposes has no significant effect on perceived risk.

Particularly for low involvement products, the level of internet use variable does not affect the risk perception. However for high involvement products and the overall sample show results supporting the literature that when consumers use the internet more, they perceive less risk when shopping online.

Similar to the findings of Citrin et al. (2000), this study shows that the more consumers use the internet, the more likely they will make purchases online.

5.1.4. Price Sensitivity Variable Findings

Price sensitivity is found to be an influential factor in risk perception as supported by previous research. These studies argued that price sensitivity has a negative relation to risk perception (Gupta and Cooper, 1992; Kalyanaram and Little, 1994; Helson, 1964; Kalwani and Yim, 1992).

In this study, price sensitivity variable shows significant results for the low involvement product category but not in the high involvement category. The overall analysis shows that the price sensitivity affects the risk perception.

Thus, we reject the null hypothesis;

$H4_0$: Price sensitivity level has no significant effect on perceived risk.

However, contrary to the literature the price sensitivity variable shows a positive relationship with the risk perception. The reason might be the financial standards of the participants in the sample. Most of the participants (55.6%) fall into the low-income category by having a monthly income of lower than 1.045,00 USD working as wageworkers. This may be the cause of higher financial and economic concerns when shopping online which results with higher risk perception. For a potential failure in making a purchase online, low-income individuals may be more concerned to use online channels and may perceive more risks when using online channels for shopping purposes.

5.1.5. Consumer Innovativeness Variable Findings

The consumer innovativeness variable is found to be negatively related to risk perception similar to previous research conducted (Cox and Rich, 1964; Cunnigham, 1966; Ostlund, 1974).

Thus, we reject the null hypothesis;

$H5_0$: Consumer innovativeness level has no significant effect on perceived risk.

Even though the consumer innovativeness variable shows a positive relationship to the perceived risk variable for the high involvement product category, analysis for the low involvement product along with the overall analysis show negative relations.

In the literature, there are findings for both negative and positive relationships between consumer innovativeness and risk perception. While Blake et al. (2003) and Citrin et al. (2000) argued the positive relationships in their studies, Cox and Rich (1964),

Cunnigham (1966), and Ostlund (1974) postulated negative relationships between the perceived risk and innovativeness.

5.2. Overall Discussion

For both low involvement and high involvement product levels analysis along with the overall analysis, the results show that the reason for the unexpected outcome concerning consumer digitalization levels does not stem from the difference between product involvements levels that participants answered the questionnaire. Therefore, other factors are discussed in order to investigate the reasons behind contradictory findings to the literature.

In doings so, methodological errors such as poor construct formation and sampling are discussed below as potential causes of the unexpected results. Moreover, other potential causes such as trust in online channels as well as demographical aspects of the sample such as cultural backgrounds as well as income level, gender, occupation etc. are also examined in order to investigate potential causes further. Most importantly, the effects of Covid-19 pandemic are discussed as the main contributor the surprising results of consumer digitalization's non-significant results against risk perception.

If an overall evaluation is done based on the unexpected results found in this study, it is vital to note that data collection for this study is done during the Covid-19 pandemic time. Most of the participants around the world were in quarantine when the questionnaire was distributed and data was collected. Therefore, the discussion of the findings cannot be complete without examining the effects of Covid-19 pandemic, an incident that changed the digital commerce forever.

Not only has the way of living changed in terms of communication, transportation, health systems etc.; but also the way of working has changed and people were forced to adopt to this major change in a very short period of time (UNCTAD, 2020). Most of the activities were transferred to the digital platforms in order to provide individuals opportunities to continue with their daily lives without needing to go outside. Meetings started to be held online, application for various services started to be collected through

online channels and so on. In addition to these changes, there is also commercial changes having changed the way doing business permanently. Most consumers said that they will continue to purchase products and services through digital platforms even after the Covid-19 pandemic according the survey of UNCTAD (2020), particularly Chinese and Turkish consumers.

During the pandemic, people did their all purchases online for mostly low involvement products (UNCTAD, 2020). Having no physical connection to the outside, people had to do their shopping online from their houses due to the general lock-down which was effective throughout the entire world. Physical stores and market places were all closed and people had to make purchases for all types of products and services online. This way, it can be said that almost everyone had to prefer digital platforms for shopping purposes which made them highly digitalized even if it was not their own choice.

Furthermore, the concerns regarding the job losses due to Covid-19, most the consumers suffered from higher financial and economic perceived risk particularly (Rafi et al., 2019). This was because, with the fear of job loss and not being able to afford expenses, they may have felt more anxious shopping online. However, even with such fear, low-priced commodities such as food and cleaning materials as well as paying bills had to be done through online channels due to the lock-down conditions. Therefore, people still need to shop online for daily purchases. This has caused individuals to be highly digitalized despite the fear of job loss, and financial stability regardless of the demographical factors which may affect the digitalization level.

The overall effect of Covid-19 pandemic on digitalization level of consumers can be explained through the terminology named *ceiling effect*. Ceiling effect is defined as the "situation in which the majority of values obtained for a variable approach the upper limit of the scale used in its measurement" based on the American Psychology Association (2022). In other words, results do not show significant results because there is skewness in the scores and little variance detected after the analysis (American Psychology Association, 2022).

If an independent variable does not have any effect on a dependent variable due to the fact that variance is not sufficient for measuring, the ceiling effect is said to be present (Salkind, 2010). In other words, if it is quite easy to reach the perfect score of the scale, it is not possible to differentiate between the participants in regards to their response to the measured variables and therefore the results do not give meaning outcome (Glen, 2022).

For this reason, it can be inferred that Covid-19 pandemic conditions forced the participants in the sample to make online shopping during the lock-down period when the questionnaire was distributed and answered. As a result of the ceiling effect explained above, all the participants were forcibly digitalized during the lock-down period which made the effect of digitalization on risk perception impossible to be measured. Having affected by the extreme changes in the way of making purchases, the sample could not showcase any variance between risk perception and other variables that are thought to be influential factors.

On the other side, the cultural aspects based on Hofstede's (1984) dimensions distinguishing Eastern and Western countries in terms of shopping behavior can be another reason for the unexpected results. Based on the risk-aversion, power distance, and individualism/collectivism aspects of the Hofstede's model, Eastern cultures such as Asian and Middle Eastern are more risk-averse and score high in power distance. On the contrary, Western countries such as America, Canada, and Western European countries are more risk-prone and score low in power distance. Similarly, while Eastern cultures are more collectivist, Western cultures are more individualist societies.

With this perspective, because most of the participants (261 out of 268 participants) of the questionnaire came from the countries (Turkey, Qatar, Saudi Arabia, Jordan, Korea, Bosnia, etc.) with high uncertainty avoidance, power distance, and collectivism scores; consumer digitalization effect on perceived risk does not show significant results within the frame of this sample. Each of the three cultural characteristics affected the risk-taking and decision-making process regarding online purchases as well online shopping behavior in a negative way as per the respective literature

(Algahtani, 2007; Brosdahl and Almousa, 2013; Jarvenpaa and Tractinsky, 1999). As Brosdahl and Almousa (2013) have found in their study comparing American and Saudi Arabian consumers, power distance, risk aversion, and uncertainty avoidance played significant roles in determining the risk-taking attitude when shopping online. As a result of low scores in power distance, and uncertainty avoidance in addition to individualist culture, Americans tend to take risks more than Saudi Arabians when shopping online (Brosdahl and Almousa, 2013).

Similarly, Park and Jun (2003) compared Korean and American consumers' risk-taking behavior and found out that Americans tend to take risks more than Koreans. Being a collectivist and high scored on power distance and uncertainty avoidance culture, Korean participants showed higher risk perception as compared to Americans Park and Jun (2003). Therefore, the non-significant results for digitalization level effect on perceived risk may be the result of the sample's cultural characteristics.
Additionally, it was seen that marital status and occupation seem to have significant relationships with perceived risk as influential demographics factors. Marital status and occupation, being a possible indication of financial standards within a household, can be considered as the dominating effect on the participants' risk perception which eliminated the effect of the digitalization level effect.

In connection with above stated demographical aspects, most of the participants fall in the low (55%) and low-middle (33%) income level categories in the sample. Also, most of the participants being wageworkers (57%), their income is stable and highly affected by financial life standards determined by the inflation rates in their resident countries. Therefore, all of these results based on the control variables can be indicators for higher risk perception even though the sample consisted of highly digital consumers.

Furthermore, based on the previous studies, male consumers are more active searchers and buyers than female consumers (Dholakia and Uusitalo, 2002; Vrechopoulos et al., 2001; Gupta and Nayyar 2011). Considering that most of the participants in this study are female (77%) and the products chosen for this study representing the low and high involvement levels as coffee and clothing could be a factor that disrupted the

digitalization effect to be significant. Since females are more conscious about clothing as a way to form self-image and communication, they can be more anxious and spend more time thinking when shopping online for clothing products.

Besides, the low levels of trust in the platforms for online shopping could have been the contributing factor to the unexpected results regarding the digitalization level as most of the participants (70%) are from Turkey. The recent scandal was a major reason for decreasing trust when the consumers' private information details such as names, telephone numbers, and credit card details were hacked and stolen in yemeksepeti which is a massive online platform for food retailers. Consumers' trust levels drop significantly when such incidents occur. As the previous research showcased that trust is a major factor in terms of shopping behavior and attitude towards online shopping (Featherman and Pavlou, 2003; Thompson and Liu, 2007; Hsu and Bayarsaikhan, 2012), the non-significant results can be due to the environment with low trust levels as far as the majority of the participants concerned.

Another reason for the non-significant results of consumer digitalization levels on perceived risk can be the construct's non-reflective formation. There are only two construct items within the consumer digitalization variable that seems to address more of the general digitalization levels rather than the digitalization regarding online shopping. Therefore, the unexpected results may be caused by the insufficient construct items in terms of reflectability of the construct.

5.3. Theoretical and Practical Implications

This study provides a significant contribution to the literature in terms of theoretical implications. Even though there are other factors taken into consideration when forming research models in the literature, it is seen that models without demographic factors will not provide meaningful results since their effects are one of the determinants for risk perception in online shopping context. Even though the sample turns out to be highly digitalized in this study as explained above resulting contradictory findings to the literature in terms of digitalization level effect on risk perception; it is understood that demographic factors such as income level, gender, and cultural characteristics are also effective when risk perception is under investigation.

It can be concluded from the findings in this study that demographic factors as well as multidimensional cultural characteristics as Hofstede (1984) proposed are significantly important factors to be considered when forming research models. Observing effect of digitalization level on samples, these demographic and cultural characteristics should be controlled to obtain meaningful results.

One important practical implication of the study can be derived from the surprising result of consumer digitalization outcome. Even though individuals are expected to be more digitalized in the future due to the reasons stated above, it may not be an indicator of fewer risks involved when consumers make purchases online. It can be concluded that there is no linear negative relationship between consumer digitalization and risk perception and other factors such as demographical factors, cultural aspects, and general commercial safety of countries for the digital platforms play important role in people's perception of digital shopping.

Marketers can benefit from these findings to determine strategies as well as safety measures for online shopping in order to make digital channels more preferable for shopping purposes. Also, inferring from the discussions regarding the Covid-19 pandemic and its effects, academicians can benefit from this study in order to conduct further research considering the extreme time periods such as Covid-19 pandemic lock-down.

5.4. Limitations of the Study and Recommendations for the Future Research

Some limitations prevented this study to be reflective of the general population. The first limitation was the sample consists of the author's social circle which may have been representing particular demographic factors such as income and education level. Therefore, the results can be reflective only of the sample herein rather than the general population. Also, general sample characteristics disrupted the expected results in terms of digitalization effect on risk perception. Further research can be done by comparison of two different samples in terms of Hofstede's (1984) multidimensional cultural characteristics. Selecting the sample in a way that can reflect the general population can also enhance the quality of the analysis and results. This way, the results can be more meaningful.

As an unusual time after Covid-19 hit the world, perceived risk in internet shopping should be re-investigated with considerations for such unusual conditions as well. Since this study's data were collected during the pandemic, the results show unusual outcomes which are contradictory to the literature. Further research should consider these unusual conditions when collecting data to prevent the findings from the ceiling effect as discussed above.

5.5. Conclusion

This study aims to investigate the impact of digitalization level of consumers on risk perception in addition to other factors such as product involvement level, consumer innovativeness, price sensitivity and internet use. Perceived risk concept included twelve dimensions as financial risk, economic risk, performance risk, product risk, time risk, privacy risk, security risk, social risk, psychological risk, after-sale risk, delivery risk, and transaction risk. With the research model formed in this study, the aim is to understand the relationship between risk perception as a dependent variable and digitalization level to consumers as an independent variable along with the other ones as stated above.

Primary data collection through a questionnaire formed based on respective literature is performed as a way of quantitative research. A multicultural sample answered the questionnaire. Based on the analysis, price sensitivity and internet use variables show supporting results to the literature as they exhibit negative relationship with risk perception. In the contrary, consumer digitalization and product involvement show opposing results with showing non-significant relations to the risk perception.

The unexpected findings are thought to be result of various factors. The ceiling effect on the sample is thought to be the major reason due to Covid-19 pandemic conditions. Additionally, demographical factors such as cultural characteristics, marital status, income level, gender are also found to be causing factors of surprising findings. Lastly, the limited construct items preventing meaningful results is another reason for the unexpected results.

In the light of this study, it can be concluded that risk perception is a concept that will continue to be studied by future researchers due to its significance in understanding consumer behavior and attitudes particularly in digital platforms as a rapidly growing commercial channel. The number of people of using digital channels for buying and selling activities are increasing and therefore, it is becoming more important to provide more secure and convenient online services to attract more individuals and therefore increase sales and revenues. Understanding consumers' concerns and fears in regards to online shopping can benefit marketers to develop strategies and services to convince consumers use digital channels for buying and selling purposes.

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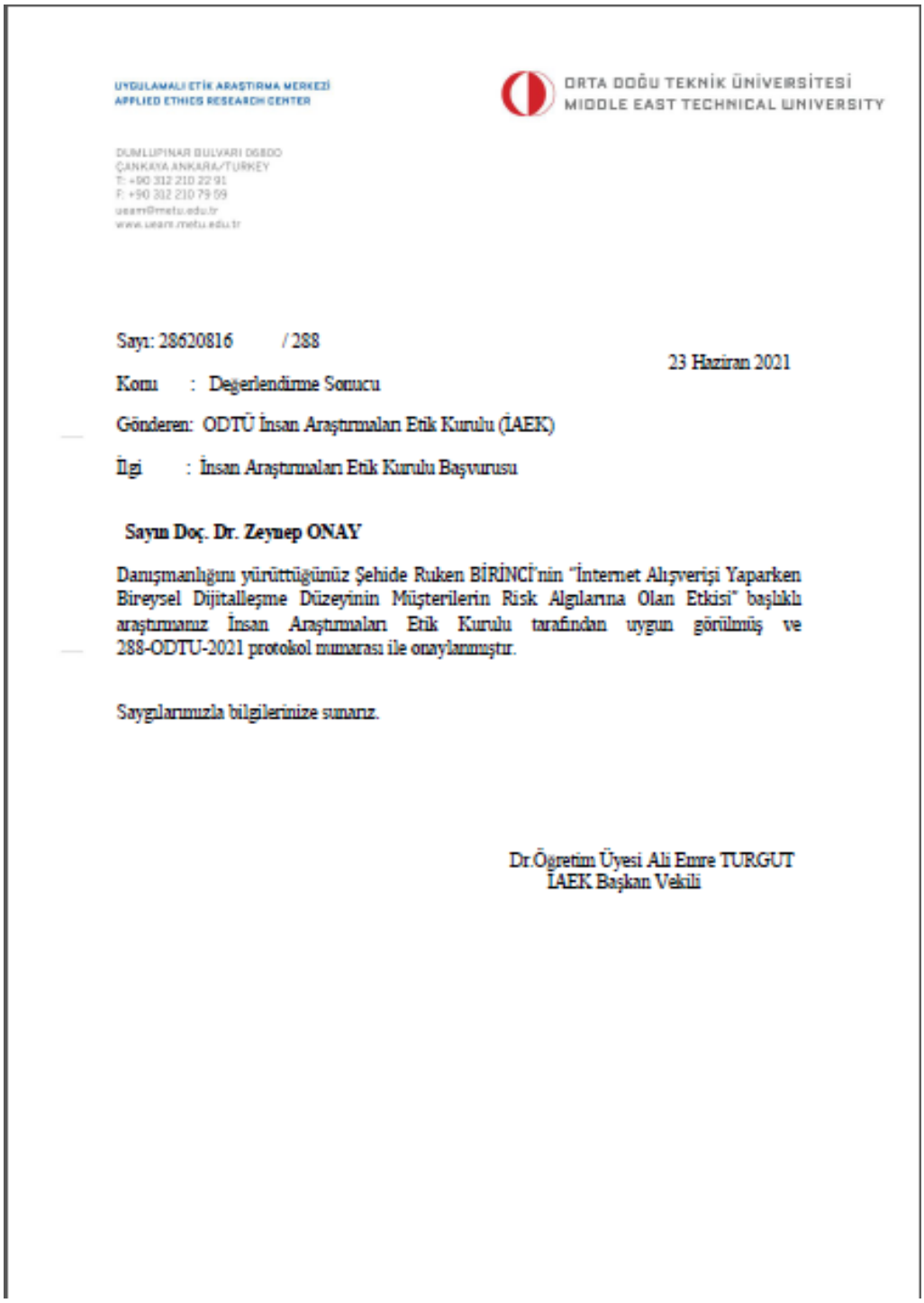
APPENDICES

A. APPROVAL OF THE METU HUMAN SUBJECTS ETHICS COMMITTEE



UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

DUMLUPINAR BULVARI 06800
ÇANKAYA ANKARA/TURKEY
T: +90 312 210 22 91
F: +90 312 210 79 59
uaem@metu.edu.tr
www.uaem.metu.edu.tr

Sayı: 28620816 / 288

23 Haziran 2021

Konu : Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi : İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Doç. Dr. Zeynep ONAY

Danışmanlığını yürüttüğünüz Şehide Ruken BİRİNCİ'nin "İnternet Alışverişi Yaparken Bireysel Dijitalleşme Düzeyinin Müşterilerin Risk Algılarına Olan Etkisi" başlıklı araştırmanız İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve 288-ODTU-2021 protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.

Dr.Öğretim Üyesi Ali Emre TURGUT
İAEK Başkan Vekili

B. QUESTIONNAIRE IN TURKISH

SORU SINIFI	SORULAR	CEVAP SEÇENEKLERİ
Demografikler	Yaşınız?	Açık uçlu soru
	Medeni Durumunuz?	Evli Bekar
	Cinsiyetiniz?	Kadın Erkek
	Çalışma Durumunuz?	Çalışıyor Çalışmıyor Yarı zamanlı çalışıyor
	Gelir Düzeyiniz?	Açık uçlu soru
	Eğitim Düzeyiniz?	İlkokul Mezunu Ortaokul Mezunu Lise Mezunu Üniveriste Öğrencisi Üniversite Mezunu Yüksek Lisans Doktora
	Mesleğiniz?	Açık uçlu soru
	Hiç internetten alışveriş yaptınız mı?	Evet Hayır
Internet Kullanım Seviyesi	Alışverişinizin yüzde kaçını internet üzerinden yapmaktasınız?	%10'dan az %10 - %20 %21 - %40 %41 -% 60 %61'den fazla
	İnternet alışverişini çok yoğun kullanıyorum.	Kesinlikle Katılmıyorum-1 Kesinlikle Katılıyorum-7
	Çok farklı ürün ve hizmet türleri için internet alışverişini kullanıyorum	
	Tanıdığım pek çok insana kıyasla internet alışverişini daha yoğun kullanıyorum.	
Tüketici Dijitallik Seviyesi	Tanıdığım birçok insana kıyasla sosyal medya ve internette daha aktif olduğumu söyleyebilirim.	
	Dijital dünyada kendimi gayet rahat hissediyorum.	
Ürün İlgilenimi	Genellikle, ne tür giyim/kahve aldığına önem veren birisiyim.	
	Genellikle, satın aldığı giyim/kahve çeşidine ilgi duyan birisiyim.	
	Giyim/Kahve benim hayatımda önemli yer tutan ve ciddiye aldığım bir üründür.	
Fiyat Duyarlılığı	Ürünlerin fiyatlarını dikkatle kıyaslarım.	
	Daha uygun fiyatlı ürünleri bulmak için zaman harcamayı severim.	

Tüketici Yenilikçiliği	Bir giyim/kahve firmasının internet satışı olduğunu duyarsam buradan internet alışverişi yapmak isterim.	Kesinlikle Katılmıyorum-1 Kesinlikle Katılıyorum-7
	Çevremdeki insanlara kıyasla interneti bilgi edinme amacıyla daha yoğun kullanıyorum.	
	Giyim/kahve satın almak için yeni bir web sayfası açılırsa, deneyen ilk kişi olurum.	
	Çevremdeki insanlar arasında, yeni bir giyim/kahve markası web sayfasını ilk duyan genellikle ben olurum.	
	Geleneksel alışverişe kıyasla internet alışverişinin daha etkin olduğunu düşünüyorum.	
	Günlük işleri halletmek için internet daha elverişli bir yöntemdir.	
	İnternetten alışveriş yapmak riskli olmasına rağmen, faydaları bu risklere değer.	
Mali Risk	Yanlış kart numarası girmek gibi dikkatsizce yapılabilecek hatalar sebebiyle para kaybına uğramaktan endişe ediyorum.	
	Sahte satıcıdan ürün almak veye sahte ürün satın alma riskinden dolayı para iadesi alamamaktan korkuyorum.	
Ekonomik Risk	İnternet alışverişini kolay ve rahat bulmam sebebiyle aşırı harcama yapmaktan korkuyorum.	
	Geleneksel alışverişe kıyasla toplam alışveriş maliyetinin beklediğimden fazla olmasından endişe ediyorum.	
Performans Riski	Fiziksel özellikler ve nitelikler bakımından satın aldığım ürünün beklentilerimi karşılamayacağından endişe ediyorum.	
	Ürünün söz verilen özellikleri ve kaliteyi karşılamayacağından korkuyorum.	
Ürün Riski	Ürünün sağlığa zararlı olmasından veya üründe sağlığa zararlı bir içerik olmasından korkuyorum.	
	Ürünü fiziksel olarak değerlendirememekten endişe duyuyorum.	
	Ürünün kullanım öncesi karmaşık uyarlama ve düzeltme işlemi gerektirmesinden endişe ediyorum.	
Zaman Riski	Doğru ürünü bulmanın zor olması sebebiyle internet alışverişi geleneksel alışverişe kıyasla daha çok zaman tüketiyor.	
	Çevrimiçi hataları düzeltmenin veya müşteri hizmetlerinden destek almanın zaman almasından korkuyorum.	
	Ürünü teslim alana kadar olan süreçteki zaman kaybından endişe ediyorum.	
Mahremiyet Riski	Satıcı firma tarafından kişisel bilgilerimin diğer firmalardan gizli tutulmayacağından korkuyorum.	
	Kişisel bilgilerimin ticari aktiviteler dışında kullanılmasından korkuyorum.	
	Kredi kartı detayları gibi hassas bilgileri internetteki bir web sayfasına koymayı güvenli bulmuyorum.	

Güvenlik Riski	Kişisel bilgilerimin (kredi kartı detayları, adres, kimlik bilgiler vb.) üçüncü kişiler tarafından ele geçirilmesinden korkuyorum.	
	Satıcının ve satış için kurulan web sayfasının güvenirliliğinden emin olamıyorum.	
	İnternet satışı yapan firmanın bilgilerinin bende güven oluşturması için yeterli olmayacağından endişe duyuyorum.	
Sosyal Risk	İnternetten alışveriş yaparak risk alırken sosyal imajımın zedelenmesiden korkuyourm.	
	Sosyal imajımın hacklenme veya dolandırıcılık sebebiyle zedelenmesinden korkuyorum.	
Psikolojik Risk	Ürün iadesi ve değişimi gerektiğinde gerçekleşebilecek stres ve gerilimden endişe duyuyorum.	
	Kolaylığı ve rahatlığı sebebiyle aşırı alışveriş yapar olmaktan korkuyorum.	
	İnternet alışverişi sırasında ve sonrasında gerçekleşen stres ve gerilimden endişe duyuyorum.	
Satış Sonrası Risk	Ürünü satın aldıktan sonra siparişimi iptal edemekten veya değiştirememekten korkuyorum.	Kesinlikle Katılmıyorum-1 Kesinlikle Katılıyorum-7
	Satış sonrası destek alamayacağımdan korkuyorum.	
Teslimat Riski	Satın aldığım ürünün teslim sırasında zarar görmesinden endişe duyuyorum.	
	Satın aldığım ürünün zamanında teslim edilmemesinden endişe duyuyorum.	
	Satın aldığım ürünün yanlış adrese gönderilmesinden endişe duyuyorum.	
Para Aktarımı Riski	Para aktarım işleminin emniyetli hale getirilmemiş olmasından korkuyorum.	
	Para aktarım sürecinin başa çıkabilmek için fazla karmaşık olmasından endişe duyuyorum.	
	Para aktarım hataları oluştuğunda, ne bankadan ne de satış sitesinden iade alamayacağımdan korkuyorum.	

C. TABLES

Table 4. 15. T-test Statistics for Product Involvement Category

Variables		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Internet Use	Equal variances assumed	.203	.653	3.431	266	.001	.63912	.18626
Consumer Digitalization	Equal variances assumed	.190	.663	1.662	266	.098	.31637	.190352
Product Involvement	Equal variances not assumed	18.102	.000	3.267	227.353	.001	.72775	.22278
Price Sensitivity	Equal variances assumed	1.962	.162	4.855	266	.000	.83995	.17300
Consumer Innovativeness	Equal variances assumed	.245	.621	3.275	266	.001	.52767	.16110
Financial Risk	Equal variances assumed	.312	.577	-.139	266	.890	-.02876	.20715
Economic Risk	Equal variances not assumed	8.554	.004	.286	265.981	.775	.05733	.20069
Performance /Product Risk	Equal variances assumed	2.138	.145	-.190	266	.850	-.03187	.16788
Privacy/ Security Risk	Equal variances assumed	1.258	.263	.638	266	.524	.12139	.19028
Social Risk	Equal variances assumed	2.440	.119	.970	266	.333	.21264	.21925
After-sale/ Delivery Risk	Equal variances assumed	.599	.440	-.110	266	.912	-.02047	.18599
Overall Perceived Risk	Equal variances assumed	2.291	.131	.290	266	.772	.04314	.14876

Table 4. 16. T-test Statistics for Marital Status

Variables		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Internet Use	Equal variances assumed	.379	.539	.831	266	.407	.16042	.19312
Consumer Digitalization	Equal variances assumed	.147	.701	-2.383	266	.018	-.458449	.192343
Product Involvement	Equal variances assumed	.314	.576	1.201	266	.231	.27091	.22564
Price Sensitivity	Equal variances assumed	.533	.466	1.657	266	.099	.30231	.18244
Consumer Innovativeness	Equal variances assumed	.358	.550	.935	266	.351	.15579	.16666
Financial Risk	Equal variances assumed	.001	.974	.176	266	.860	.03704	.21045
Economic Risk	Equal variances assumed	.776	.379	.014	266	.989	.00289	.20683
Performance/Product Risk	Equal variances not assumed	4.471	.035	-.798	203.077	.426	-.14051	.17601
Privacy/ Security Risk	Equal variances assumed	.827	.364	.178	266	.859	.03449	.19345
Social Risk	Equal variances assumed	1.278	.259	.736	266	.463	.16400	.22291
After-sale/ Delivery Risk	Equal variances assumed	2.483	.116	-1.472	266	.142	-.27704	.18820
Overall Perceived Risk	Equal variances not assumed	3.253	.072	-.430	204.391	.668	-.06695	.15587

Table 4. 17. T-test Statistics for Gender

Variables		Levene's Test for Equality of Variances		t-test for Equality of Means				
						Sig. (2-tailed)	Mean Difference	Std. Error Difference
		F	Sig.	t	df			
Internet Use	Equal variances assumed	3.773	.053	.965	266	.336	.2178	.2258
Consumer Digitalization	Equal variances assumed	.045	.833	-.404	266	.687	-.0917	.2273
Product Involvement	Equal variances not assumed	5.856	.016	-.411	114.710	.682	-.0988	.2407
Price Sensitivity	Equal variances assumed	3.470	.064	.279	266	.780	.0598	.2144
Consumer Innovativeness	Equal variances assumed	.417	.519	.027	266	.978	.0053	.1952
Financial Risk	Equal variances assumed	.400	.528	2.277	266	.024	.5552	.2438
Economic Risk	Equal variances not assumed	8.405	.004	2.750	118.081	.007	.5894	.2143
Performance/Product Risk	Equal variances assumed	2.339	.127	2.283	266	.023	.4510	.1976
Privacy/ Security Risk	Equal variances assumed	1.099	.295	.197	266	.844	.0444	.2263
Social Risk	Equal variances assumed	.025	.876	-1.249	266	.213	-.3250	.2602
After-sale/ Delivery Risk	Equal variances assumed	2.226	.137	1.289	266	.199	.2839	.2203
Overall Perceived Risk	Equal variances assumed	1.257	.263	1.440	266	.151	.2537	.1761

Table 4. 18. Anova Statistics for Country

		Sum of Squares	df	Mean Square	F	Sig.
Internet Use	Between Groups	26.977	2	13.489	5.819	.003
	Within Groups	614.316	265	2.318		
	Total	641.294	267			
Consumer Digitalization	Between Groups	6.964	2	3.482	1.439	.239
	Within Groups	641.106	265	2.419		
	Total	648.070	267			
Product Involvement	Between Groups	40.241	2	20.120	6.365	.002
	Within Groups	837.731	265	3.161		
	Total	877.972	267			
Price Sensitivity	Between Groups	21.368	2	10.684	5.098	.007
	Within Groups	555.358	265	2.096		
	Total	576.727	267			
Consumer Innovativeness	Between Groups	.967	2	.483	.269	.765
	Within Groups	476.971	265	1.800		
	Total	477.938	267			
Financial Risk	Between Groups	.694	2	.347	.121	.886
	Within Groups	758.996	265	2.864		
	Total	759.690	267			
Economic Risk	Between Groups	13.925	2	6.963	2.564	.079
	Within Groups	719.749	265	2.716		
	Total	733.674	267			
Performance/ Product Risk	Between Groups	12.519	2	6.260	3.410	.034
	Within Groups	486.428	265	1.836		
	Total	498.947	267			
Time Risk	Between Groups	9.519	2	4.760	2.423	.091
	Within Groups	520.638	265	1.965		
	Total	530.157	267			
Privacy/ Security Risk	Between Groups	2.748	2	1.374	.570	.566
	Within Groups	639.152	265	2.412		
	Total	641.900	267			
Social Risk	Between Groups	4.930	2	2.465	.769	.464
	Within Groups	849.051	265	3.204		
	Total	853.980	267			
Psychological Risk	Between Groups	12.550	2	6.275	2.702	.069
	Within Groups	615.333	265	2.322		
	Total	627.882	267			
After-sale/ Delivery Risk	Between Groups	5.970	2	2.985	1.304	.273
	Within Groups	606.425	265	2.288		
	Total	612.394	267			
Transaction Risk	Between Groups	11.943	2	5.972	2.110	.123
	Within Groups	750.158	265	2.831		
	Total	762.101	267			
Overall Perceived Risk	Between Groups	1.268	2	.634	.438	.646
	Within Groups	383.361	265	1.447		
	Total	384.630	267			

Table 4. 19. Multiple Comparison with LSD Results for Country

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
Internet Use	turkey	west	1.38360*	.51946	.008
		east	.51415*	.21303	.016
	west	turkey	-1.38360*	.51946	.008
		east	-.86944	.53916	.108
Consumer Digitalization	turkey	west	.73280	.53067	.168
		east	-.17989	.21763	.409
	west	turkey	-.73280	.53067	.168
		east	-.91270*	.55079	.099
Product Involvement	turkey	west	.66490	.60661	.274
		east	.86966*	.24877	.001
	west	turkey	-.66490	.60661	.274
		east	.20476	.62961	.745
Price Sensitivity	turkey	west	.66402	.49391	.180
		east	.61323*	.20255	.003
	west	turkey	-.66402	.49391	.180
		east	-.05079	.51263	.921
Consumer Innovativeness	turkey	west	.26808	.45772	.559
		east	-.07002	.18771	.709
	west	turkey	-.26808	.45772	.559
		east	-.33810	.47508	.477
Financial Risk	turkey	west	-.259259	.577401	.654
		east	-.059259	.236792	.803
	west	turkey	.259259	.577401	.654
		east	.200000	.599294	.739
Economic Risk	turkey	west	-.03704	.56227	.948
		east	-.52037*	.23059	.025
	west	turkey	.03704	.56227	.948
		east	-.48333	.58359	.408
Performance/ Product Risk	turkey	west	-.60847	.46224	.189
		east	-.45259*	.18956	.018
	west	turkey	.60847	.46224	.189
		east	.15587	.47977	.746

Table 4. 19. (Continued)

Time Risk	turkey	west	-.49030	.47822	.306
		east	-.40194*	.19612	.041
	west	turkey	.49030	.47822	.306
		east	.08836	.49635	.859
Privacy/Security Risk	turkey	west	.35714	.52986	.501
		east	.19497	.21729	.370
	west	turkey	-.35714	.52986	.501
		east	-.16217	.54995	.768
Social Risk	turkey	west	.58201	.61069	.341
		east	.22407	.25045	.372
	west	turkey	-.58201	.61069	.341
		east	-.35794	.63385	.573
Psychological Risk	turkey	west	-.48677	.51989	.350
		east	-.47302*	.21321	.027
	west	turkey	.48677	.51989	.350
		east	.01376	.53960	.980
After-sale/Delivery Rİsk	turkey	west	-.28466	.51611	.582
		east	-.33228	.21166	.118
	west	turkey	.28466	.51611	.582
		east	-.04762	.53568	.929
Transaction Risk	turkey	west	-.32981	.57403	.566
		east	-.47637*	.23541	.044
	west	turkey	.32981	.57403	.566
		east	-.14656	.59579	.806
Overall Perceived Risk	turkey	west	-.04171	.41036	.919
		east	-.15757	.16829	.350
	west	turkey	.04171	.41036	.919
		east	-.11586	.42592	.786

Table 4. 20. ANOVA Results for Age

Variables		Sum of Squares	df	Mean Square	F	Sig.
Interent Use	Between Groups	22.162	2	11.081	4.743	.009
	Within Groups	619.132	265	2.336		
	Total	641.294	267			
Consumer Digitalization	Between Groups	12.999	2	6.499	2.712	.068
	Within Groups	635.071	265	2.396		
	Total	648.070	267			
Product Involvement	Between Groups	5.493	2	2.746	.834	.435
	Within Groups	872.479	265	3.292		
	Total	877.972	267			
Price Sensitivity	Between Groups	6.487	2	3.243	1.507	.223
	Within Groups	570.240	265	2.152		
	Total	576.727	267			

Table 4. 20 (Continued)

Consumer Innovativeness	Between Groups	6.140	2	3.070	1.724	.180
	Within Groups	471.798	265	1.780		
	Total	477.938	267			
Financial Risk	Between Groups	17.125	2	8.563	3.056	.049
	Within Groups	742.565	265	2.802		
	Total	759.690	267			
Economic Risk	Between Groups	9.220	2	4.610	1.686	.187
	Within Groups	724.455	265	2.734		
	Total	733.674	267			
Performance/ Product Risk	Between Groups	8.914	2	4.457	2.410	.092
	Within Groups	490.034	265	1.849		
	Total	498.947	267			
Privacy/ Security Risk	Between Groups	14.069	2	7.035	2.969	.053
	Within Groups	627.831	265	2.369		
	Total	641.900	267			
Social Risk	Between Groups	28.067	2	14.034	4.503	.012
	Within Groups	825.913	265	3.117		
	Total	853.980	267			
After-sale/Delivery Risk	Between Groups	.563	2	.282	.122	.885
	Within Groups	611.831	265	2.309		
	Total	612.394	267			
Overall Perceived Risk	Between Groups	7.883	2	3.941	2.720	.068
	Within Groups	383.991	265	1.449		
	Total	391.874	267			

Table 4. 21. Multiple Comparisons with LSD Results for Age

Dependent Variable	(I) agegroup	(J) agegroup	Mean Difference (I-J)	Std. Error	Sig.
Internet Use	genz	millennial	-.23087	.28970	.426
		genx and boomers	.81108	.42333	.056
	millennial	genz	.23087	.28970	.426
		genx and boomers	1.04195*	.34222	.003
Consumer Digitalization	genz	millennial	.618429*	.293409	.036
		genx and boomers	.879261*	.428745	.041
	millennial	genz	-.618429*	.293409	.036
		genx and boomers	.260833	.346598	.452

Table 4. 21. (Continued)

Product Involvement	genz	millennial	-.15606	.34391	.650
		genx and boomers	-.62405	.50253	.215
	millennial	genz	.15606	.34391	.650
		genx and boomers	-.46800	.40625	.250
Price Sensitivity	genz	millennial	.07798	.27803	.779
		genx and boomers	-.49148	.40627	.227
	millennial	genz	-.07798	.27803	.779
		genx and boomers	-.56946	.32843	.084
Consumer Innıvativeness	genz	millennial	.03641	.25290	.886
		genx and boomers	.58144	.36954	.117
	millennial	genz	-.03641	.25290	.886
		genx and boomers	.54503	.29874	.069
Financial Risk	genz	millennial	.53169	.31727	.095
		genx and boomers	-.21449	.46361	.644
	millennial	genz	-.53169	.31727	.095
		genx and boomers	-.74618*	.37478	.048
Economic Risk	genz	millennial	.02643	.31338	.933
		genx and boomers	-.65199	.45792	.156
	millennial	genz	-.02643	.31338	.933
		genx and boomers	-.67842	.37019	.068
Performance/ Product Risk	genz	millennial	-.11051	.25774	.668
		genx and boomers	-.74773*	.37662	.048
	millennial	genz	.11051	.25774	.668
		genx and boomers	-.63721*	.30446	.037
Privacy/ Security Risk	genz	millennial	-.24499	.29173	.402
		genx and boomers	-.99669*	.42629	.020
	millennial	genz	.24499	.29173	.402
		genx and boomers	-.75170*	.34462	.030
Social Risk	genz	millennial	.02088	.33460	.950
		genx and boomers	-1.16051*	.48894	.018
	millennial	genz	-.02088	.33460	.950
		genx and boomers	-1.18139*	.39526	.003
After-sale/Delivery Risk	genz	millennial	.07424	.28799	.797
		genx and boomers	-.07784	.42083	.853
	millennial	genz	-.07424	.28799	.797
		genx and boomers	-.15208	.34020	.655

Table 4. 21. (Continued)

Overall Perceived Risk	genz	millennial	-.02242	.22815	.922
		genx and boomers	-.64372	.33339	.055
	millennial	genz	.02242	.22815	.922
		genx and boomers	-.62130*	.26951	.022

Table 4. 22. ANOVA Results for Education Level

Variables		Sum of Squares	df	Mean Square	F	Sig.
Internet Use	Between Groups	22.250	2	11.125	4.762	.009
	Within Groups	619.044	265	2.336		
	Total	641.294	267			
Consumer Digitalization	Between Groups	5.547	2	2.774	1.144	.320
	Within Groups	642.523	265	2.425		
	Total	648.070	267			
Product Involvement	Between Groups	2.162	2	1.081	.327	.721
	Within Groups	875.810	265	3.305		
	Total	877.972	267			
Price Sensitivity	Between Groups	13.504	2	6.752	3.177	.043
	Within Groups	563.223	265	2.125		
	Total	576.727	267			
Consumer Innovativeness	Between Groups	14.916	2	7.458	4.268	.015
	Within Groups	463.022	265	1.747		
	Total	477.938	267			
Financial Risk	Between Groups	11.873	2	5.936	2.104	.124
	Within Groups	747.818	265	2.822		
	Total	759.690	267			
Economic Risk	Between Groups	1.543	2	.772	.279	.757
	Within Groups	732.131	265	2.763		
	Total	733.674	267			
Performance/ Product Risk	Between Groups	3.560	2	1.780	.952	.387
	Within Groups	495.388	265	1.869		
	Total	498.947	267			
Privacy/ Security Risk	Between Groups	1.656	2	.828	.343	.710
	Within Groups	640.244	265	2.416		
	Total	641.900	267			
Social Risk	Between Groups	7.169	2	3.585	1.122	.327
	Within Groups	846.811	265	3.196		
	Total	853.980	267			
After-sale/ Delivery Risk	Between Groups	1.084	2	.542	.235	.791
	Within Groups	611.311	265	2.307		
	Total	612.394	267			
Overall Perceived Risk	Between Groups	1.125	2	.563	.382	.683
	Within Groups	390.748	265	1.475		
	Total	391.874	267			

Table 4. 23. Multiple Comparison with LSD Results for Education Level

Dependent Variable	(I) agegroup	(J) agegroup	Mean Difference (I-J)	Std. Error	Sig.
Internet Use	highschool grad	unv student	-1.31466*	.47598	.006
		higher educ	-1.19114*	.39557	.003
	unv student	highschool grad	1.31466*	.47598	.006
		higher educ	.12351	.30171	.683
Consumer Digitalization	highschool grad	unv student	-.572198	.484918	.239
		higher educ	-.127943	.403003	.751
	unv student	highschool grad	.572198	.484918	.239
		higher educ	.444255	.307376	.150
Product Involvement	highschool grad	unv student	.26724	.56615	.637
		higher educ	.36734	.47051	.436
	unv student	highschool grad	-.26724	.56615	.637
		higher educ	.10010	.35886	.781
Price Sensitivity	highschool grad	unv student	.43103	.45401	.343
		higher educ	.83408*	.37731	.028
	unv student	highschool grad	-.43103	.45401	.343
		higher educ	.40305	.28778	.163
Consumer Innovativeness	highschool grad	unv student	-1.09411*	.41165	.008
		higher educ	-.96721*	.34211	.005
	unv student	highschool grad	1.09411*	.41165	.008
		higher educ	.12690	.26093	.627
Financial Risk	highschool grad	unv student	.02586	.52315	.961
		higher educ	.57960	.43477	.184
	unv student	highschool grad	-.02586	.52315	.961
		higher educ	.55373*	.33161	.096
Economic Risk	highschool grad	unv student	.35560	.51763	.493
		higher educ	.30914	.43019	.473
	unv student	highschool grad	-.35560	.51763	.493
		higher educ	-.04647	.32811	.887
Perceived Risk	highschool grad	unv student	.58147	.42579	.173
		higher educ	.33044	.35386	.351
	unv student	highschool grad	-.58147	.42579	.173
		higher educ	-.25103	.26990	.353
Privacy Risk	highschool grad	unv student	.34734	.48406	.474
		higher educ	.32871	.40229	.415
	unv student	highschool grad	-.34734	.48406	.474
		higher educ	-.01863	.30683	.952
Social Risk	highschool grad	unv student	.29526	.55670	.596
		higher educ	.59950	.46265	.196
	unv student	highschool grad	-.29526	.55670	.596
		higher educ	.30424	.35287	.389
After-sale/ Delivery Risk	highschool grad	unv student	.03836	.47299	.935
		higher educ	-.14423	.39309	.714
	unv student	highschool grad	-.03836	.47299	.935
		higher educ	-.18259	.29982	.543
Overall Perceived Risk	highschool grad	unv student	.29712	.37816	.433
		higher educ	.26726	.31428	.396
	unv student	highschool grad	-.29712	.37816	.433
		higher educ	-.02986	.23970	.901

Table 4. 24. ANOVA Results for Employment Status

Variables		Sum of Squares	df	Mean Square	F	Sig.
Internet Use	Between Groups	6.858	2	3.429	1.432	.241
	Within Groups	634.436	265	2.394		
	Total	641.294	267			
Consumer Digitalization	Between Groups	2.903	2	1.452	.596	.552
	Within Groups	645.167	265	2.435		
	Total	648.070	267			
Product Involvement	Between Groups	2.132	2	1.066	.323	.725
	Within Groups	875.839	265	3.305		
	Total	877.972	267			
Price Sensitivity	Between Groups	17.410	2	8.705	4.124	.017
	Within Groups	559.317	265	2.111		
	Total	576.727	267			
Consumer Innovativeness	Between Groups	.322	2	.161	.089	.915
	Within Groups	477.616	265	1.802		
	Total	477.938	267			
Financial Risk	Between Groups	2.622	2	1.311	.459	.633
	Within Groups	757.069	265	2.857		
	Total	759.690	267			
Economic Risk	Between Groups	3.691	2	1.845	.670	.513
	Within Groups	729.984	265	2.755		
	Total	733.674	267			
Performance/ Product Risk	Between Groups	.521	2	.261	.139	.871
	Within Groups	498.426	265	1.881		
	Total	498.947	267			
Privacy/ Security Risk	Between Groups	.247	2	.124	.051	.950
	Within Groups	641.653	265	2.421		
	Total	641.900	267			
Social Risk	Between Groups	7.162	2	3.581	1.121	.328
	Within Groups	846.819	265	3.196		
	Total	853.980	267			
After-sale/ Delivery Risk	Between Groups	1.200	2	.600	.260	.771
	Within Groups	611.195	265	2.306		
	Total	612.394	267			
Overall Perceived Risk	Between Groups	.197	2	.098	.066	.936
	Within Groups	391.677	265	1.478		
	Total	391.874	267			

Table 4. 25. Multiple Comparison with LSD Results for Employment Status

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
Internet Use	unemployed	employed	-.36799	.23063	.112
		parttime	.01054	.55434	.985
	employed	unemployed	.36799	.23063	.112
		parttime	.37852	.52718	.473
Consumer Digitalization	unemployed	employed	-.089424	.232568	.701
		partime	-.610153	.559004	.276
	employed	unemployed	.089424	.232568	.701
		parttime	-.520730	.531623	.328
Product Involvement	unemployed	employed	.17373	.27097	.522
		parttime	-.16347	.65132	.802
	employed	unemployed	-.17373	.27097	.522
		parttime	-.33720	.61941	.587
Price Sensitivity	unemployed	employed	.59097*	.21654	.007
		parttime	.89943*	.52048	.085
	employed	unemployed	-.59097*	.21654	.007
		parttime	.30846	.49499	.534
Consumer Innovativeness	unemployed	employed	-.08421	.20010	.674
		parttime	-.04662	.48097	.923
	employed	unemployed	.08421	.20010	.674
		partime	.03759	.45741	.935
Financial Risk	unemployed	employed	.23932	.25193	.343
		parttime	.11494	.60555	.850
	employed	unemployed	-.23932	.25193	.343
		parttime	-.12438	.57588	.829
Economic Risk	unemployed	employed	-.20767	.24738	.402
		parttime	.28736	.59461	.629
	employed	unemployed	.20767	.24738	.402
		parttime	.49502	.56549	.382
Perceived Risk	unemployed	employed	-.03275	.20442	.873
		partime	-.25862	.49134	.599
	employed	unemployed	.03275	.20442	.873
		parttime	-.22587	.46727	.629
Privacy Risk	unemployed	employed	-.06551	.23193	.778
		partime	-.12963	.55748	.816
	employed	unemployed	.06551	.23193	.778
		parttime	-.06412	.53017	.904
Social Risk	unemployed	employed	.12957	.26645	.627
		parttime	-.75766	.64043	.238
	employed	unemployed	-.12957	.26645	.627
		parttime	-.88723	.60906	.146
After-sale/ Delivery Risk	unemployed	employed	-.16125	.22636	.477
		parttime	-.06705	.54409	.902
	employed	unemployed	.16125	.22636	.477
		parttime	.09420	.51744	.856
Overall Perceived Risk	unemployed	employed	-.04730	.18121	.794
		parttime	-.14168	.43556	.745
	employed	unemployed	.04730	.18121	.794
		parttime	-.09438	.41422	.820

Table 4. 26. ANOVA Results for Income Level

Variables		Sum of Squares	df	Mean Square	F	Sig.
Internet Use	Between Groups	11.209	3	3.736	1.552	.202
	Within Groups	592.263	246	2.408		
	Total	603.472	249			
Consumer Digitalization	Between Groups	13.425	3	4.475	1.855	.138
	Within Groups	593.531	246	2.413		
	Total	606.956	249			
Product Involvement	Between Groups	31.679	3	10.560	3.276	.022
	Within Groups	793.032	246	3.224		
	Total	824.712	249			
Price Sensitivity	Between Groups	21.090	3	7.030	3.445	.017
	Within Groups	502.006	246	2.041		
	Total	523.096	249			
Consumer Innovativeness	Between Groups	12.463	3	4.154	2.397	.069
	Within Groups	426.294	246	1.733		
	Total	438.757	249			
Financial Risk	Between Groups	46.510	3	15.503	5.655	.001
	Within Groups	674.471	246	2.742		
	Total	720.981	249			
Economic Risk	Between Groups	5.358	3	1.786	.660	.577
	Within Groups	665.478	246	2.705		
	Total	670.836	249			
Performance/ Product Risk	Between Groups	5.821	3	1.940	1.063	.365
	Within Groups	449.059	246	1.825		
	Total	454.879	249			
Privacy/ Security Risk	Between Groups	10.804	3	3.601	1.505	.214
	Within Groups	588.819	246	2.394		
	Total	599.623	249			
Social Risk	Between Groups	40.457	3	13.486	4.313	.005
	Within Groups	769.227	246	3.127		
	Total	809.684	249			
After-sale/ Delivery Risk	Between Groups	2.510	3	.837	.360	.782
	Within Groups	570.950	246	2.321		
	Total	573.460	249			
Overall Perceived Risk	Between Groups	5.151	3	1.717	1.190	.314
	Within Groups	355.019	246	1.443		
	Total	360.169	249			

Table 4. 27. Multiple Comparison with LSD Results for Income Level

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
Internet Use	low	low-middle	.24111	.21443	.262
		upper-middle	.68516*	.37108	.066
		high	.63695	.60105	.290
	low-middle	low	-.24111	.21443	.262
		upper-middle	.44405	.38606	.251
		high	.39583	.61041	.517
	upper-middle	low	-.68516*	.37108	.066
		low-middle	-.44405	.38606	.251
		high	-.04821	.68141	.944
Consumer Digitalization	low	low-middle	.391701*	.214664	.069
		upper-middle	.038129	.371476	.918
		high	-.733299	.601692	.224
	low-middle	low	-.391701*	.214664	.069
		upper-middle	-.353571	.386470	.361
		high	-1.125000*	.611063	.067
	upper-middle	low	-.038129	.371476	.918
		low-middle	.353571	.386470	.361
		high	-.771429	.682138	.259
Product Involvement	low	low-middle	.53109*	.24813	.033
		upper-middle	.01918	.42939	.964
		high	1.73347*	.69550	.013
	low-middle	low	-.53109*	.24813	.033
		upper-middle	-.51190	.44672	.253
		high	1.20238*	.70633	.090
	upper-middle	low	-.01918	.42939	.964
		low-middle	.51190	.44672	.253
		high	1.71429*	.78849	.031
Price Sensitivity	low	low-middle	.49195*	.19742	.013
		upper-middle	.58957*	.34164	.086
		high	1.11100*	.55336	.046
	low-middle	low	-.49195*	.19742	.013
		upper-middle	.09762	.35543	.784
		high	.61905	.56198	.272
	upper-middle	low	-.58957*	.34164	.086
		low-middle	-.09762	.35543	.784
		high	.52143	.62734	.407

Table 4. 27. (Continued)

Consumer Innovativeness	low	low-middle	.15839	.18193	.385
		upper-middle	-.71463*	.31482	.024
		high	.14251	.50993	.780
	low-middle	low	-.15839	.18193	.385
		upper-middle	-.87302*	.32753	.008
		high	-.01587	.51787	.976
	upper-middle	low	.71463*	.31482	.024
		low-middle	.87302*	.32753	.008
		high	.85714	.57810	.139
Financial Risk	low	low-middle	.64089*	.22883	.006
		upper-middle	1.15755*	.39600	.004
		high	-.87102	.64141	.176
	low-middle	low	-.64089*	.22883	.006
		upper-middle	.51667	.41198	.211
		high	-1.51190*	.65140	.021
	upper-middle	low	-1.15755*	.39600	.004
		low-middle	-.51667	.41198	.211
		high	-2.02857*	.72716	.006
Economic Risk	low	low-middle	.12843	.22730	.573
		upper-middle	.08795	.39335	.823
		high	-.75848	.63712	.235
	low-middle	low	-.12843	.22730	.573
		upper-middle	-.04048	.40922	.921
		high	-.88690	.64704	.172
	upper-middle	low	-.08795	.39335	.823
		low-middle	.04048	.40922	.921
		high	-.84643	.72230	.242
Performance/ Product Risk	low	low-middle	-.03618	.18672	.847
		upper-middle	-.51475	.32312	.112
		high	-.46475	.52336	.375
	low-middle	low	.03618	.18672	.847
		upper-middle	-.47857	.33616	.156
		high	-.42857	.53152	.421
	upper-middle	low	.51475	.32312	.112
		low-middle	.47857	.33616	.156
		high	.05000	.59334	.933

Table 4. 27. (Continued)

Privacy/Security Risk	low	low-middle	-.12937	.21381	.546
		upper-middle	.46349	.37000	.212
		high	-.87342	.59930	.146
	low-middle	low	.12937	.21381	.546
		upper-middle	.59286	.38493	.125
		high	-.74405	.60863	.223
	upper-middle	low	-.46349	.37000	.212
		low-middle	-.59286	.38493	.125
		high	-1.33690*	.67942	.050
Social Risk	low	low-middle	.12076	.24438	.622
		upper-middle	1.30647*	.42290	.002
		high	-1.09353	.68498	.112
	low-middle	low	-.12076	.24438	.622
		upper-middle	1.18571*	.43997	.008
		high	-1.21429*	.69565	.082
	upper-middle	low	-1.30647*	.42290	.002
		low-middle	-1.18571*	.43997	.008
		high	-2.40000*	.77656	.002
After-sale/ Delivery Risk	low	low-middle	.06903	.21054	.743
		upper-middle	.24094	.36434	.509
		high	-.41192	.59014	.486
	low-middle	low	-.06903	.21054	.743
		upper-middle	.17190	.37905	.651
		high	-.48095	.59933	.423
	upper-middle	low	-.24094	.36434	.509
		low-middle	-.17190	.37905	.651
		high	-.65286	.66904	.330
Overall Perceived Risk	low	low-middle	.05310	.16602	.749
		upper-middle	.29617	.28730	.304
		high	-.68499	.46535	.142
	low-middle	low	-.05310	.16602	.749
		upper-middle	.24307	.29890	.417
		high	-.73810	.47260	.120
	upper-middle	low	-.29617	.28730	.304
		low-middle	-.24307	.29890	.417
		high	-.98117*	.52756	.064

Table 4. 28. ANOVA Results for Occupation

Variables		Sum of Squares	df	Mean Square	F	Sig.
Internet Use	Between Groups	13.213	3	4.404	1.805	.147
	Within Groups	524.497	215	2.440		
	Total	537.709	218			
Consumer Digitalization	Between Groups	14.433	3	4.811	1.986	.117
	Within Groups	520.905	215	2.423		
	Total	535.338	218			
Product Involvement	Between Groups	30.140	3	10.047	3.117	.027
	Within Groups	692.896	215	3.223		
	Total	723.036	218			
Price Sensitivity	Between Groups	9.049	3	3.016	1.465	.225
	Within Groups	442.727	215	2.059		
	Total	451.776	218			
Consumer Innovativeness	Between Groups	5.963	3	1.988	1.085	.356
	Within Groups	393.925	215	1.832		
	Total	399.887	218			
Financial Risk	Between Groups	17.115	3	5.705	2.011	.113
	Within Groups	610.024	215	2.837		
	Total	627.139	218			
Economic Risk	Between Groups	5.243	3	1.748	.619	.603
	Within Groups	606.941	215	2.823		
	Total	612.185	218			
Performance/ Product Risk	Between Groups	3.702	3	1.234	.632	.595
	Within Groups	420.040	215	1.954		
	Total	423.742	218			
Privacy/ Security Risk	Between Groups	12.323	3	4.108	1.670	.174
	Within Groups	528.836	215	2.460		
	Total	541.159	218			
Social Risk	Between Groups	3.889	3	1.296	.401	.752
	Within Groups	694.770	215	3.231		
	Total	698.660	218			
After-sale/ Delivery Risk	Between Groups	.434	3	.145	.066	.978
	Within Groups	468.212	215	2.178		
	Total	468.647	218			
Overall Perceived Risk	Between Groups	.926	3	.309	.202	.895
	Within Groups	328.360	215	1.527		
	Total	329.286	218			

Table 4. 29. Multiple Comparison with LSD Results for Occupation

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
Internet Use	civil servant	self-employed	-.86397*	.43399	.048
		wageworker	-.31269	.23817	.191
		student/ housewife	.13603	.41401	.743
	self-employed	civil servant	.86397*	.43399	.048
		wageworker	.55128	.41632	.187
		student/ housewife	1.00000*	.53666	.064
	wageworker	civil servant	.31269	.23817	.191
		self-employed	-.55128	.41632	.187
		student/ housewife	.44872	.39545	.258
Consumer Digitalization	civil servant	self-employed	-.66912	.43250	.123
		wageworker	-.53664*	.23735	.025
		student/ housewife	-.53023	.41259	.200
	self-employed	civil servant	.66912	.43250	.123
		wageworker	.13248	.41489	.750
		student/ housewife	.13889	.53481	.795
	wageworker	civil servant	.53664*	.23735	.025
		self-employed	-.13248	.41489	.750
		student/ housewife	.00641	.39409	.987
Product Involvement	civil servant	self-employed	-1.46936*	.49882	.004
		wageworker	-.22524	.27375	.412
		student/ housewife	.10240	.47585	.830
	self-employed	civil servant	1.46936*	.49882	.004
		wageworker	1.24412*	.47851	.010
		student/ housewife	1.57176*	.61682	.012
	wageworker	civil servant	.22524	.27375	.412
		self-employed	-1.24412*	.47851	.010
		student/ housewife	.32764	.45452	.472
Price Sensitivity	civil servant	self-employed	-.62500	.39873	.118
		wageworker	-.26816	.21882	.222
		student/ housewife	-.62500	.38037	.102
	self-employed	civil servant	.62500	.39873	.118
		wageworker	.35684	.38249	.352
		student/ housewife	0.00000	.49305	1.000
	wageworker	civil servant	.26816	.21882	.222
		self-employed	-.35684	.38249	.352
		student/ housewife	-.35684	.36332	.327

Table 4. 30 (Continued)

Consumer Innovativeness	civil servant	self-employed	-.43995	.37611	.243
		wageworker	.15318	.20641	.459
		student/ housewife	.26144	.35879	.467
	self-employed	civil servant	.43995	.37611	.243
		wageworker	.59313	.36079	.102
		student/ housewife	.70139	.46508	.133
	wageworker	civil servant	-.15318	.20641	.459
		self-employed	-.59313	.36079	.102
		student/ housewife	.10826	.34271	.752
Financial Risk	civil servant	self-employed	-.968750*	.468036	.040
		wageworker	.005342	.256858	.983
		student/ housewife	-.513889	.446491	.251
	self-employed	civil servant	.968750*	.468036	.040
		wageworker	.974092*	.448980	.031
		student/ housewife	.454861	.578759	.433
	wageworker	civil servant	-.005342	.256858	.983
		self-employed	-.974092*	.448980	.031
		student/ housewife	-.519231	.426474	.225
Economic Risk	civil servant	self-employed	-.51471	.46685	.271
		wageworker	.06435	.25621	.802
		student/ housewife	-.18137	.44536	.684
	self-employed	civil servant	.51471	.46685	.271
		wageworker	.57906	.44784	.197
		student/ housewife	.33333	.57729	.564
	wageworker	civil servant	-.06435	.25621	.802
		self-employed	-.57906	.44784	.197
		student/ housewife	-.24573	.42539	.564
Performance/ Product Risk	civil servant	self-employed	.24559	.38838	.528
		wageworker	.28298	.21314	.186
		student/ housewife	.07614	.37050	.837
	self-employed	civil servant	-.24559	.38838	.528
		wageworker	.03739	.37256	.920
		student/ housewife	-.16944	.48025	.725
	wageworker	civil servant	-.28298	.21314	.186
		self-employed	-.03739	.37256	.920
		student/ housewife	-.20684	.35389	.560

Table 4. 29. (Continued)

Privacy/ Security Risk	civil servant	self-employed	.94056*	.43578	.032
		wageworker	.06886	.23916	.774
		student/ housewife	.24265	.41572	.560
	self-employed	civil servant	-.94056*	.43578	.032
		wageworker	-.87171*	.41804	.038
		student/ housewife	-.69792	.53887	.197
	wageworker	civil servant	-.06886	.23916	.774
		self-employed	.87171*	.41804	.038
		student/ housewife	.17379	.39708	.662
Social Risk	civil servant	self-employed	.41544	.49949	.406
		wageworker	-.09578	.27412	.727
		student/ housewife	.07516	.47650	.875
	self-employed	civil servant	-.41544	.49949	.406
		wageworker	-.51122	.47915	.287
		student/ housewife	-.34028	.61765	.582
	wageworker	civil servant	.09578	.27412	.727
		self-employed	.51122	.47915	.287
		student/ housewife	.17094	.45513	.708
After-sale/ Delivery Risk	civil servant	self-employed	.11029	.41004	.788
		wageworker	.05794	.22503	.797
		student/ housewife	-.07026	.39117	.858
	self-employed	civil servant	-.11029	.41004	.788
		wageworker	-.05235	.39335	.894
		student/ housewife	-.18056	.50704	.722
	wageworker	civil servant	-.05794	.22503	.797
		self-employed	.05235	.39335	.894
		student/ housewife	-.12821	.37363	.732
Overall Percevied Risk	civil servant	self-employed	.24031	.34339	.485
		wageworker	.09389	.18845	.619
		student/ housewife	.01114	.32758	.973
	self-employed	civil servant	-.24031	.34339	.485
		wageworker	-.14642	.32940	.657
		student/ housewife	-.22917	.42462	.590
	wageworker	civil servant	-.09389	.18845	.619
		self-employed	.14642	.32940	.657
		student/ housewife	-.08275	.31289	.792

D. TURKISH SUMMARY / TÜRKÇE ÖZET

Tüketici dijitalleşmesi kavramı, son yıllarda en çok araştırılan ve tartışılan konulardan biri haline gelmiştir. Bireyler satın alacakları ürün ve hizmetlerle ilgili bilgileri aramak için internette daha fazla zaman harcadıklarından, pazarlamacılar tüketicilere ulaşmak ve onların ihtiyaç ve isteklerini tatmin etmek için yeni yaklaşımlar ve yollar geliştirmek zorunda kalmışlardır. Ticari faaliyetler için geleneksel yollar cazibesini yitirirken, tüketiciler tarafından kolay olması nedeniyle çevrimiçi alışveriş daha çok tercih edilmektedir. Özellikle son on yılda tüketicilere ürünleri görsel ve işitsel olarak inceleme şansı vermek üzere gerçekleştirilen teknolojik gelişmelerden sonra, insanlar fiziksel mağazalara gitmek yerine internetten alışveriş yapmayı tercih eder hale gelmişlerdir. Tüketicilerin tercihlerinin değişmesinin bir diğer nedeni de dijital platformlarda satıcıların sunduğu satış sonrası ve lojistik hizmetlerinin iyileştirilmesi olmuştur.

Ancak, her satın alma kararı ile birlikte, nihai karar ile sonuçlanan genel karar verme süreci boyunca alıcıyı etkileyen bir risk faktörü ortaya çıkmaktadır (Bauer, 1960). Bu nedenle, araştırmacılar bu faktörleri anlamak ve genel alışveriş deneyimini iyileştirmenin yollarını bulmaya çalışmak için bu gerçeğe odaklanmışlardır. Bu kavram etrafında şekillenen terminoloji, daha birçokları ile birlikte Bauer, Featherman ve Pavlou (2003), Kotler ve Keller (2016) gibi akademisyenler tarafından uzun yıllardır araştırılan kavram olan risk algısı olmuştur.

Tüketiciler satın alma faaliyetlerini gerçekleştirirken çeşitli risk türleri ile karşılaşmaktadırlar. Her tür satın alma kanalı için, tüketicilerin satın alma süreci boyunca ve hatta satın alma işleminden sonra deneyimlediği risk algısı söz konusudur (Ko ve diğerleri, 2004). Bu riskler, ürünün fiziksel özelliklerini içeren risk şekillerini açıklayan ürün riskini (Popli ve Mishra, 2015) veya satın alma işleminin ödeme ve teslim alma sürecini içeren işlem risklerini (Jarvenpaa ve diğerleri, 1997) içerebilir.

Öte yandan, oluşumundan bu yana risk algısı kavramı psikoloji veya pazarlama gibi farklı alanlardan birçok araştırmacı tarafından incelendiği üzere birçok faktörden etkilendiği tespit edilmiştir. Örneğin geleneksel alışveriş durumunda, ödeme alışveriş esnasında fiziksel olarak gerçekleştiğinden işlem riski, sıfıra yakındır. Bu nedenle işlem sürecinde neredeyse hiç algılanan risk yoktur (Miyazaki ve Fernandez, 2001).

Tüketiciler dijital platformlarda alışveriş yaparken algılanan riskin üzerinde hangi faktörlerin etkili olduğunu bulmak için çeşitli değişkenler incelenmiştir. Bu çalışmanın odak noktası olarak, bağımlı değişkenler takip eden şekildedir; finansal risk, ekonomik risk, performans riski, ürün riski, zaman riski, mahremiyet riski, güvenlik riski, sosyal risk, psikolojik risk, satış sonrası risk, teslimat riski ve işlem riski. Tüm bu risk türleri, tüketicilerin çevrimiçi alışveriş yaparken karşılaştıkları risk türlerini inceleyen önceki çalışmalardan elde edilmiştir. Bu risk türlerinden bazıları alışveriş deneyimini ve nihai satın alma kararını önemli ölçüde etkilerken, bazıları satın almanın gerçekleştiği bağlama göre mevcut değildir.

Etkilerini keşfetmek için yukarıda belirtilen bağımlı değişkenler, internet kullanım düzeyi, tüketicilerin dijitalleşme düzeyi, ürün katılım türleri, fiyat duyarlılığı ve son olarak yine önceki araştırmalardan belirlenen tüketici yenilikçiliği gibi bağımsız değişkenlere karşı ölçülmüş ve sobnuçlar analikz edilmiştir.

Yukarıda belirtilen amaç doğrultusunda farklı demografik geçmişe sahip katılımcılardan oluşan bir örneklemden birincil veriler toplanmıştır. Nicel veriler, çevrimiçi iletişim kanalları aracılığıyla dağıtılan bir anket aracılığıyla toplanmıştır. Nicel veri toplama yönteminin seçilmesinin nedeni, analiz yapmanın kolay olması ve sonuçların yansıtılabilir olmasıdır. Bu nedenle nicel araştırma ve araç olarak anketin bu araştırma çalışması için daha uygun olacağı değerlendirilmiştir.

Tüm kontrol değişkenlerini içeren bir model; ürün kategorisi, fiyat duyarlılığı, tüketici yenilikçilik düzeyi gibi bağımsız değişkenlerin yanı sıra yaş, eğitim düzeyi, gelir düzeyi, meslek vb. demografik faktörler de daha önceki araştırmalarda olduğu gibi araştırma modeline eklenmiştir. Bu çalışmada tasarlanan model, gelir/eğitim düzeyi, yaş, cinsiyet gibi demografik faktörler gibi çeşitli kontrol değişkenlerine ek olarak risk

algısını etkileyen olası faktörler olarak bağımsız değişkenleri dahil etmiştir. Bu sebeple bu çalışamadaki araştırma modeli çevrimiçi alışveriş yaparken tüketici davranışı açısından daha yansıtıcı olabilen çok boyutlu ve çok değişkenli bir model olarak kabul edilebilir. Bu doğrultuda, bu çalışma önceki araştırmalarla çelişen veya destekleyici sonuçlar ortaya koymaktadır. Bu çalışma, literatürde yapılan araştırmalara geniş bir bakış açısı sağlamakta ve sonrasında verileri analiz etmek için kullanılan metodoloji sunulmaktadır. Bu bölümden sonra, bulguların anlamlve ırılması için sonuçların analizi ve bulguların tartışılması kısmı takip etmektedir.

İnternet aracılığıyla çeşitli kanallardan toplanan bilgilerin tek bir yerde toplanması sonucu oluşan bilgi yığını yüzünden tüketiciler de aynı nedenle çeşitliliği artan ürünlerle ilgili doğru ve faydalı bilgileri toplamakta zorlanmaya başlamışlardır. Böylece akademisyenler, geleneksel satış kanallarına ek olarak tüketicilerin çevrimiçi alışveriş davranışlarını bu kanallarla ilişkili riskler açısından araştırmaya başlamışlardır.

Dijital platformlarda satın alma kararlarını anlamaya yönelik yapılan çalışmalar sonucunda, risk algısına katkıda bulunan bazı ek risk türlerinin de mevcut olduğu tespit edilmiştir. Özellikle 2000'li yıllardan sonra dijital satın alma davranışı birçok araştırmacı tarafından incelenmiştir. Konvansiyonel alışverişte risk algılarını etkileyen bazı risk türlerinin dijital ortamda bulunmadığı tespit edilmiştir. Ayrıca dijital platformlara özgü, bazı ek risk türleri keşfedilmiştir. Bu nedenle özellikle dijital bağlamda risk algısını tanımlarken yapılan başka tanımlar da olmuştur.

Bu bağlamda algılanan risk, dijital platformlar açısından Pires ve Stanton'a (2004) göre “çevrimiçi alışveriş sonucunda herhangi bir kayıp veya herhangi bir olumsuz sonuç beklentisi” olarak tanımlanmaktadır. Geleneksel alışverişe benzer şekilde internet alışverişi de satın alma kararını etkileyen faktörler açısından iki unsurdan oluşmaktadır. Park ve diğerlerine (2005) göre bu iki unsur belirsizlik ve sonuçlardır. Algılanan risk satın alma istekliliği ve satın almayı başkalarına tavsiye etme çerçevesinde değerlendirilmektedir.

Öte yandan, Schierz ve diğerleri (2010), algılanan riski, herhangi bir kaybın meydana gelebileceğini beklemekle olarak tanımlar. Çalışmanın sonucuna göre, daha fazla kayıp beklentisi, tüketicilerin satın alma için algıladığı daha büyük risklere yol açmaktadır. Nepomuceno ve diğerleri. (2005), ayrıca, bir ürünü satın almanın beklenmeyen sonuçlarına ilişkin olumsuz algıların algılanan risk olarak adlve ırılabileceğini ileri sürmüştür. Diğer açılardan, Ko ve diğerleri. (2004), algılanan riskin, tüketicilerin ürün veya hizmet satın almalarından kaynaklanan değişken ve çelişkili sonuçları öngörmesi olarak değerlendirmiştir.

Yukarıdaki literatür incelemesine dayanarak, çevrimiçi alışveriş yaparken risk algısı mevcuttur ve çok önemli bir unsur olduğu görülmektedir. Ancak, satın alma karar verme süreci üzerindeki etkileri nelerdir? Bu etkiler tüketicilerin karar verme süreçlerine nasıl katkıda bulunur? Endişeleri ve olası etkileri belirlemek için tüketicilerin çevrimiçi alışveriş yaparken davranışlarını anlamak için birçok çalışma yapılmıştır.

Bu kapsamda aşağıdaki risk algısı türleri tespit edilmiştir.

Risk Algısı	Tanımı	İlgili Literatür
Mali	Çevrimiçi alışveriş yaparken oluşabilecek para kaybıyla ilgili riskler	Bhatnagar ve diğerleri (2000), Featherman ve Pavlou (2003), Forsythe ve diğerleri (2006), Ko ve diğerleri (2004)
Ekonomik	Çevrimiçi alışverişte ortaya çıkabilecek ek maliyetlerle ilgili riskler	Popli ve Mishra (2015). Ariffin ve diğerleri (2018)
Performans	Çevrimiçi alışverişten kaynaklanan ürün performansıyla ilgili riskler	Featherman ve Pavlou (2003), Ko ve diğerleri (2004), Forsthye ve diğerleri (2006)
Ürün	İnternetten alışveriş yaparken ürün özellikleri ile ilgili riskler	Featherman ve Pavlou (2003), Forsythe ve diğerleri (2006), Ko ve diğerleri (2004)

Zaman	Çevrimiçi alışverişte zaman kaybına bağlı riskler	Featherman ve Pavlou (2003), Forsythe ve diğerleri (2006), Ko ve diğerleri (2004)
Mahremiyet	Çevrimiçi alışveriş yaparken kişisel bilgilerin kaybolmasıyla ilgili endişelerle ilgili riskler	Bhatnagar ve diğerleri (2000), Miyazaki ve Fernve ez (2001), Featherman ve Pavlou (2003),
Güvenlik	Satıcının veya çevrimiçi platformun güvenilirliği ile ilgili riskler	Bhatnagar ve diğerleri (2000), Miyazaki ve Fernve ez (2001), Featherman ve Pavlou (2003)
Sosyal	Çevrimiçi alışverişten kaynaklanan potansiyel sosyal statü kaybıyla ilgili risk	Hanjun ve diğerleri (2004), Ko ve diğerleri (2010), Zheng ve diğerleri (2012)
Psikolojik	Potansiyel bir çevrimiçi satın alma başarısızlığından kaynaklanan zihinsel stres ve memnuniyetsizlikle ilgili riskler	Featherman ve Pavlou (2003), Ko ve diğerleri (2010), Zheng ve diğerleri (2012), Han ve Kim (2017)
Satış sonrası	Satış sonrası döneme ilişkin riskler	Dan Yu ve diğerleri(2009), Zhang ve diğerleri (2011)
Teslimat	İnternetten satın alınan ürünün teslimatı ile ilgili risk	Forsythe ve diğerleri (2006), Zhang ve diğerleri (2011) Zheng ve diğerleri (2012)
İşlem	Çevrimiçi alışverişte ödeme ve işleme ilişkin riskler	Pennington ve diğerleri (2003), Ariff ve diğerleri (2014), Dhanapal ve diğerleri (2015)

Risk algısı kavramının oluşumundan bu yana tüketicilerin çevrimiçi alışveriş yaparken davranışlarını etkilediği düşünülen çeşitli faktörlere karşı birçok akademisyen tarafından araştırılmalar yapılmıştır. En belirgin faktörlerden biri, tüketicilerin interneti alışveriş amacıyla kullanma istekliliği. Bu fikir, internet kullanıcılarının ürün satın alma ve satma düzeyi olarak tanımlanan tüketici dijitalleşmesi değişkeni ve yeni yollarını denemeye isteklilik olarak ise tüketici yenilikçiliği olarak literatürde çalışmalar yapılmıştır.

Ayrıca bir ürünle ilgili fiyat duyarlılığı ve ürün ilgilenimi gibi unsurlar da bir araştırma modeli oluşturulacaksa dikkate alınması gereken unsurlardır. Literatüre dayalı olarak, fiyat duyarlılığı ve ürün ilgilenimi düzeylerinin tüketicilerin satın alma kararı verirken risk algısını etkileyen faktörler olduğu tespit edilmiştir.

Benzer şekilde, tüketicilerin interneti günlük aktiviteler için ne ölçüde kullandıkları ve dijital dünyaya aşinalıkları da literatürdeki çalışmalara dayanarak tüketicilerin dijital bağlamda satın alma sürecini nasıl algıladıkları göz önünde bulundurulduğunda göz ardı edilmemesi gereken diğer unsurlardır.

Son olarak, bazı çalışmalarda demografik faktörler yalnızca örneklemi tanımlamak için yer alırken, bazı çalışmalarda cinsiyet, yaş, gelir, eğitim düzeyi ve hatta kültür gibi demografik faktörlerin tüketicilerin risk algısı üzerinde etkili olduğu tespit edilmiştir.

Yukarıda belirtilen sebeplerin bir sonucu olarak, risk algısı olgusunun anlaşılırlığını artırmak için çok yönlü bir model sunmak üzere tüm bu faktörlerin bu çalışma kapsamındaki araştırma modeline dahil edilmesi oldukça önemlidir.

Bu bağlamda, bu çalışması, önceki çalışmaların birçok yönünü içerecek bir araştırma modeli oluşturarak tüketicilerin çevrimiçi alışveriş yaparken algıladıkları riski etkileyen farklı faktörleri ölçmeyi amaçlamaktadır. Ek olarak, etkilerini gözlemlemek için demografik özellikler karşılaştırılmıştır.

Bu özel çalışmanın ana odak noktası olarak araştırma sorusu şu şekilde sorulmuştur;

Tüketicilerin dijitalleşme düzeyi internetten alışveriş yaparken risk algısını etkiler mi?

Sonuç olarak, bu çalışma için toplanan veri türü, nicel araştırmalarda kullanılan bir araç olan anket yoluyla toplanan birincil verilerdir.

Anket, her biri farklı ürün ilgilenimi içeren iki ayrı anket iki ayrı gruba dağıtılmıştır. Bu nedenle, bir anket yüksek ilgilenim seviyesinde olan bir ürün olarak giyim eşyaları için, diğer anket ise düşük ilgilenimli bir ürün olarak kahve için tasarlanmıştır. İki ayrı anket iki ayrı gruba sunulmuş ve bir grup sadece bir anketi yanıtlamıştır.

Anketin İngilizce versiyonu farklı ülkelerden gelen Türk olmayan toplam 83 katılımcıya dağıtılmıştır. Ankete Türkiye dışından toplam 35 kişi giyim eşyası, 48 kişi ise kahve için cevap vermiştir. Geriye kalan katılımcılar Türkiye'dendi ve toplam 110'u giyim eşyaları için anketi, 75'i ise kahve için cevaplamıştır. Gelir düzeyi ve meslek dışındaki tüm sorular yanıtlanması gereken sorular şeklinde yöneltilmiştir.

Katılımcıların çoğu, örneklemin %85'ini oluşturan yüksek öğrenimlidir. %75 ile örneklem, çalışmayan katılımcılara kıyasla çalışan katılımcılardan oluşmaktadır. Katılımcıların %70'i Türkiye'den diğerleri ise Katar, BAE, Suudi Arabistan ve Umman gibi Körfez ülkeleri ile İngiltere, Hollanda, Danimarka, Bosna ve Kanada gibi Avrupa ve Batı ülkeleri dahil olmak üzere çeşitli ülkelerden olmuştur. Hindistan ve Güney Kore gibi Asya ülkelerinden cevaplayanların yanı sıra Ürdün, Mısır, Filistin ve İran başta olmak üzere Ortadoğu ülkelerinden de katılımcılar vardır. Ayrıca, katılımcıların anavatanı olarak Afrika'dan sadece bir ülke olarak Kenya yer almıştır. Ancak, analizin kolaylığı açısından, yalnızca coğrafi sınıflandırmaya dayalı olarak yapıldığında bu ülkeler Doğu ve Batı olarak gruplandırılmıştır.

Katılımcıların %33'ü, 2021-2022 yılları Dünya Bankası ülke sınıflandırmalarına göre gelir düzeyi açısından düşük-orta gelir düzeyinde, %55 oranında katılımcı ise düşük gelir düzeyine sahiptir. Bu katılımcıların çoğu ücretli işçi olarak çalışmış, bunu devlet memuru olarak çalışanlar izlemiştir. Örneklemin yaklaşık %7'lik küçük bir yüzdesi özel sektörde girişimci veya serbest meslek sahibi olarak çalışmaktadır.

Hayatlarında en az bir kez internetten alışveriş yapan katılımcıların interneti alışveriş amaçlı kullanım düzeyleri farklılık göstermektedir. İnternet üzerinden yapılan alışverişlerin %41 - %60'ı orta düzeyde, %60'tan fazlası ise yüksek düzeyde çevrimiçi alışveriş deneyimi olarak kabul edilirse katılımcıların %52'si alışveriş amacıyla büyük ölçüde internete güvenmektedir.

Özetle, örneklem çoğunlukla kadın ve düşük-orta gelir düzeyine sahip yüksek eğitimli bireylerden oluşmakta olup, bunların çoğu şu anda ücretli olarak çalışmaktadır. Ayrıca, katılımcıların çoğu interneti alışveriş amacıyla kullanan genç ve bekar yetişkinlerdir.

Ürün ilgilenimi kategorilerine dayalı olarak yapılan regresyon analizi sonucu, modele en büyük katkıyı yapan faktör olarak fiyat duyarlılığı değişkeni ve ardından (sırasıyla) tüketici yenilikçiliği, tüketici dijitalleşme düzeyi ve düşük ilgilenim düzeyi ürün (kahve) için internet kullanım düzeyi olduğunu göstermektedir. Düşük ilgilenimli ürün kategorisinde, algılanan risk internet kullanım düzeyi, tüketici dijitalleşmesi ve tüketici yenilikçiliğinden olumsuz etkilenirken, fiyat duyarlılığı risk algısı üzerinde olumlu bir etkiye sahiptir.

Yüksek ilgilenimli ürün (giyim) kategorisi ise, modele en büyük katkıyı yapanın internet kullanım düzeyinin ardından (sırasıyla) tüketici dijitalleşmesi ve tüketici yenilikçiliği olduğunu göstermektedir. Yüksek ilgilenimli ürün kategorisinde, algılanan risk internet kullanım seviyesinden olumsuz etkilenirken, fiyat duyarlılığı, tüketici dijitalleşmesi ve tüketici yenilikçiliği risk algısı üzerinde olumlu bir etkiye sahiptir.

Tüm örneklem için genel regresyon açısından sonuçlar, internet kullanım düzeyi ile risk algısı ile tüketici yenilikçiliği ve risk algısı arasında negatif ilişkiler olduğunu göstermektedir. Kalan değişkenler; tüketici dijitalleşme düzeyi, ürün ilgilenimi ve fiyat duyarlılığı, algılanan risk değişkeni ile pozitif ilişki göstermektedir.

Yapılan analizler sonunca müşteri dijitalleşmesi ve ürün ilgilenimi değişkenlerinin risk algısını etkilemediği görülmüştür. Bu şaşırtıcı sonuç için aşağıdaki değerlendirmeler yapılmaktadır.

Genel analizle birlikte hem düşük ilgilenim hem de yüksek ilgilenim ürün seviyeleri analizi için sonuçlar, tüketici dijitalleşme seviyelerine ilişkin beklenmedik sonucun nedeninin, katılımcıların anketi yanıtladığı ürün ilgilenim seviyeleri arasındaki farktan

kaynaklanmadığını göstermektedir. Bu nedenle, literatürle çelişen bulguların arkasındaki nedenleri araştırmak için diğer faktörler tartışılmıştır.

Bunu yaparken, zayıf doğru örnekleme yapılmaması gibi metodolojik hataların yanısıra çevrimiçi kanallara duyulan güven gibi diğer potansiyel nedenler de değerlendirilmiştir. Örneklemin kültürel geçmişleri, gelir düzeyi, cinsiyet, meslek vb. gibi demografik yönleri de incelenerek açıklanmıştır. En önemlisi, tüketici dijitalleşmesinin risk algısına karşı şaşırtıcı etkisiliğinin sebebi olarak Covid-19 pandemisinin etkileri ana sebep olarak tartışılmıştır.

İletişim, ulaşım, sağlık sistemleri vb. açılardan sadece yaşam biçimi değişmekle kalmamış aynı zamanda çalışma şekli de değişmiştir. İnsanlar çok kısa sürede bu büyük değişime uyum sağlamak zorunda kalmışlardır (UNCTAD, 2020). Bireylerin dışarı çıkmalarına gerek kalmadan günlük yaşamlarına devam etmelerine olanak sağlamak amacıyla faaliyetlerin çoğu dijital platformlara aktarılmıştır. Toplantılar çevrimiçi olarak yapılmaya başlanmış, çeşitli hizmetler için başvurular çevrimiçi kanallardan toplanmaya başlanmıştır.

Bu değişikliklere ek olarak. UNCTAD'ın (2020) araştırmasına göre başta Çinli ve Türk tüketiciler olmak üzere çoğu tüketici, Covid-19 pandemisi sonrasında da dijital platformlar üzerinden ürün ve hizmet satın almaya devam edeceklerini belirtmişlerdir.

Ayrıca, Covid-19 nedeniyle iş kayıplarına ilişkin endişeler sebebiyle tüketicilerin çoğu, özellikle daha yüksek finansal ve ekonomik algılanan riskten muzdariptir (Rafi ve diğerleri, 2019). Bunun nedeni, işlerini kaybetme korkusu ve giderlerini karşılayamama korkusuyla çevrimiçi alışverişte daha endişeli olmalarıdır. Ancak böyle bir korkuya rağmen, sokağa çıkma yasağı nedeniyle gıda ve temizlik malzemeleri gibi düşük fiyatlı mallar ile ödemeler çevrimiçi kanallardan yapılmak zorunda kalınmıştır. Bu durum, dijitalleşme düzeyini etkileyebilecek demografik faktörler ne olursa olsun, bireylerin işini kaybetme korkusuna ve finansal istikrara rağmen yüksek oranda dijitalleşmesine neden olmuştur.

Covid-19 pandemisinin tüketicilerin dijitalleşme düzeyine genel etkisi tavan etkisi olarak adlandırılan terminoloji ile açıklanabilir. Tavan etkisi, Amerikan Psikoloji Derneği'ne (2022) göre "bir değişken için elde edilen değerlerin çoğunluğunun, ölçümünde kullanılan ölçeğin üst sınırına yaklaşması durumu" olarak tanımlanmaktadır. Diğer bir deyişle, puanlarda çarpıklık olduğu ve analiz sonrası çok az varyans tespit edildiğinden sonuçlar anlamlı sonuçlar göstermemektedir (Amerikan Psikoloji Derneği, 2022).

Bu nedenle Covid-19 pandemi koşullarının anketin dağıtıldığı ve cevaplandığı karantina döneminde örneklemdeki katılımcıları çevrimiçi alışveriş yapmaya zorladığı söylenebilir. Yukarıda açıklanan tavan etkisinin bir sonucu olarak, karantina döneminde tüm katılımcıların zorla dijitalleştirilmesi, dijitalleşmenin risk algısı üzerindeki etkisinin ölçülmesini imkansız hale getirmiştir. Satın alma şeklindeki aşırı değişikliklerden etkilenen örneklem, risk algısı ile etkili olduğu düşünülen diğer değişkenler arasında herhangi bir farklılık gösterememiştir.

Öte yandan, Hofstede'nin (1984) Doğu ve Batı ülkelerini alışveriş davranışı açısından ayıran teorisine dayanan kültürel yönler, beklenmedik sonuçların bir başka nedeni olabilir. Hofstede'nin modelinin riskten kaçınma, güç mesafesi ve bireycilik/toplulukçuluk yönlerine dayalı olarak, Asya ve Orta Doğu gibi Doğu kültürleri daha fazla riskten kaçınırlar ve güç mesafesi açısından yüksek puan alırlar. Aksine, Amerika, Kanada ve Batı Avrupa ülkeleri gibi Batılı ülkeler daha riske açık ve güç mesafesi açısından düşük puan alıyor. Benzer şekilde, Doğu kültürleri daha kolektivist iken, Batı kültürleri daha bireyci toplumlardır.

Bu bakış açısıyla, ankete katılanların çoğu (268 katılımcıdan 261'i) belirsizlikten kaçınma, güç mesafesi ve kolektivizm yüksek ülkelerden (Türkiye, Katar, Suudi Arabistan, Ürdün, Kore, Bosna vb.) geldiği için puanlar; tüketici dijitalleşmesinin algılanan risk üzerindeki etkisi bu örneklem çerçevesinde anlamlı sonuçlar göstermemektedir.

Ayrıca katılımcıların çoğu düşük (%55) ve düşük-orta (%33) gelir düzeyi kategorilerinde yer almaktadır. Ayrıca, katılımcıların çoğu ücretli çalşan (%57) olup,

gelirleri düzenli ve ikamet ettikleri ülkelerdeki enflasyon oranlarının belirlediği finansal yaşam standartlarından oldukça etkilenmektedir. Dolayısıyla, kontrol değişkenlerine dayalı bu sonuçların tümü, örneklem son derece dijital tüketicilerden oluşsa bile, daha yüksek risk algısının göstergeleri olabilir.

Dahası, erkek tüketiciler kadın tüketicilere göre daha aktif araştırıcılar ve alıcılardır (Dholakia ve Uusitalo, 2002; Vrechopoulos ve diğerleri, 2001; Gupta ve Nayyar 2011). Bu çalışmaya katılanların çoğunun kadın olduğu (%77) ve bu çalışma için seçilen ürünlerin kahve ve giyim gibi düşük ve yüksek ilgilenim düzeylerini temsil ettiği düşünülürse, dijitalleşme etkisini önemli ölçüde bozan bir faktör olabilir. Kadınlar, kendi imajını oluşturmanın ve iletişim kurmanın bir yolu olarak giyim konusunda daha bilinçli olduklarından, giyim ürünleri için çevrimiçi alışveriş yaparken daha endişeli olabilirler ve düşünmeye daha fazla zaman ayırabilirler.

Ayrıca, katılımcıların büyük çoğunluğunun (%70) Türkiye'den olması nedeniyle, çevrimiçi alışveriş platformlarına olan güvenin düşük olması, dijitalleşme düzeyine ilişkin beklenmedik sonuçlara katkıda bulunan faktör olabilir. Gıda perakendecileri arasında devasa bir çevrimiçi platform olan yemeksepeti'nde tüketicilerin ad, telefon numarası ve kredi kartı bilgileri gibi özel bilgilerinin çalınması sonucu güvenin azalması risk algısında önemli bir artışa neden oldu. Bu tür olaylar meydana geldiğinde tüketicilerin güven seviyeleri önemli ölçüde düşer. Bir önceki araştırma, alışveriş davranışı ve çevrimiçi alışverişe yönelik tutum açısından güvenin önemli bir faktör olduğunu gösterdiğinden (Featherman ve Pavlou, 2003; Thompson ve Liu, 2007; Hsu ve Bayarsaikhan, 2012), anlamlı olmayan sonuçlar düşük güven düzeyine sahip ortamdan kaynaklanmış olabilir.

Tüketici dijitalleşme düzeylerinin algılanan risk üzerindeki anlamlı olmayan sonuçlarının bir başka nedeni de anketin yansıtıcı olmayışı olabilir. Tüketici dijitalleşmesi değişkeninde, çevrimiçi alışverişle ilgili dijitalleşmeden ziyade genel dijitalleşme düzeylerinin ele alındığını gösteren yalnızca iki öğe vardır. Bu nedenle, beklenmeyen sonuçlara, yapının yansıtılabilirliği açısından yetersizliği neden olmuş olabilir. Sonuç olarak bu çalışma, ürün ilgilenim düzeyi, tüketici yenilikçiliği, fiyat

duyarlılığı ve internet kullanımı gibi faktörlerin yanı sıra tüketicilerin dijitalleşme düzeyinin risk algısı üzerindeki etkisini araştırmayı amaçlamıştır.

Çevrimiçi alışveriş, teknolojik gelişmeler ve internetin dünyanın her yerindeki bireyler tarafından erişilebilirliği ile son yıllarda ticari faaliyetler için daha çok tercih edilen bir seçenek haline gelmiştir. Özellikle Covid-19'un yayılmasının ardından 2019 yılından itibaren insanlar karantina koşulları nedeniyle internet alışverişini daha fazla kullanmaya başlamıştır.

Bu çalışma ışığında risk algısının, hızla büyüyen bir ticari kanal olarak özellikle dijital platformlarda tüketici davranış ve tutumlarını anlamadaki önemi nedeniyle gelecekteki araştırmacılar tarafından incelenmeye devam edecek bir kavram olduğu sonucuna varılabilir. Alım satım faaliyetleri için dijital kanalları kullananların sayısı artıyor ve bu nedenle daha fazla bireyi çekmek ve dolayısıyla satışları ve gelirleri artırmak için daha güvenli ve kullanışlı çevrimiçi hizmetler sunmak daha önemli hale geliyor. Tüketicilerin çevrimiçi alışverişle ilgili endişelerini ve korkularını anlamak, pazarlamacılara, tüketicileri satın alma ve satış amacıyla dijital kanalları kullanmaya ikna etmek için stratejiler ve hizmetler geliştirme konusunda fayda sağlayabilir.

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YAZARIN / AUTHOR

Soyadı / Surname : BİRİNCİ
Adı / Name : Şehide Ruken
Bölümü / Department : İşletme / Business Administration

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