ISTANBUL TICARET UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
DEPARTMENT OF MARKETING MANAGEMENT
MASTER OF MARKETING MANAGEMENT PROGRAMME

A CONSUMER BEHAVIOR RESEARCH ON ONLINE BUYING: TAM MODEL AND TURKISH UNIVERSITY STUDENTS EXAMPLE

MA Thesis

Gökçe HEPGÜLER

ISTANBUL, 2023

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Advisor: Prof. Figen YILDIRIM

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Dedication

I dedicate all the required information in this title ‘A CONSUMER BEHAVIOR RESEARCH ON ONLINE BUYING : TAM MODEL AND TURKISH UNIVERSITY STUDENTS EXAMPLE’ has been written in accordance with the academic manners and ethical commitment. I would clarify that all the materials, sources, data and all extra inputs have been benefited well throughout the writing procedure of this thesis. All matters contained in this thesis are my personal opinion and do not reflect the official view of Istanbul Ticaret University.

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ABSTRACT

Online shopping, commonly known as e-commerce, is the process of buying goods or services over the internet, which has entered into our lives thanks to the developments in technology. Over the world, there are billions of people who shop online and the forecast upon online shopping is positive in terms of the increase for the following years. Online shopping has changed the buying behavior of the consumers over years and this topic is on the scope of the researchers in order to investigate the factors that has an effect. The aim of this research is to understand the factors that are related to online shopping buying behavior of Turkish university students. The qualitative analysis has been employed as the methodology and the hypothesis used in this research paper are based on Crespo's research (2009) about attitude, perceived usefulness, perceived ease of use, perceived financial risk, perceived social risk, perceived performance risk, perceived psychological risk, perceived time risk and perceived privacy risk. The survey is concluded with the 300 Turkish university student who are currently studying in Turkey. Also, the demographic and educational factors and their relationship with the other factors are examined during the research.

Keywords: *Consumer buying behavior, Technology Acceptance Model, Online Shopping Behavior, Online Buying Behavior, Perceived Risk Factors*

ÖZET

Online alışveriş, diğer bir adıyla e-ticaret, hayatımıza teknolojik gelişmeler sayesinde giren internetin tüketicilerine sağladığı ürün veya hizmet satın alma sürecidir. Tüm dünya üzerinde, online alışveriş yapan milyarlarca insan bulunmaktadır ve bu sayının da önümüzdeki yıllarda olumlu bir yönde artacağı öngörülmektedir. Bu çalışmada tüketicilerin satın alma alışkanlıklarının hangi faktörlerden etkilendiği kavramsal bir çerçeve ile incelenecektir. Bu çalışmanın amacı Türk üniversite öğrencilerinin satın alma alışkanlıklarının hangi faktörlerden etkilendiğini incelemek ve anlamlandırmaktır. Araştırmayı sınırlandırmak için katılımcılar eğitim durumlarına göre kısıtlandırılmış, önlisans öğrencilerinden doktora öğrencilerine kadar sadece Türk üniversite öğrencileri araştırmaya katkı sağlamıştır. Bu çalışmanın methodolojisi nitel olup, hipotezleri Crespo (2009) tarafından öne sürülen davranış, algılanan fayda, algılanan kullanım kolaylığı, algılanan finansal risk, algılanan sosyal risk, algılanan psikolojik risk, algılanan zaman risk ve algılanan güvenlik riskine bağlı olarak geliştirilmiştir. Çalışmada kullanılan anket, aktif olarak Türkiye'de üniversite okuyan 300 Türk üniversite öğrencisine uygulanmış olup, çalışma sırasında bu kişilerin demografik ve eğitimsel faktörlerinin diğer faktörlerle ilişkisi de incelenmiştir.

Anahtar Kelimeler: *Tüketici Satın Alma Davranışı, Teknoloji Kabul Modeli, Online Alışveriş Davranışı, Online Satın Alma Davranışı, Türk Üniversite Öğrencilerinin Satın Alma Davranışı*

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I want to dedicate this thesis to my beloved Grandfather, Celaleddin Hepgüler, who was my biggest supporter, who empowered me during his life and made me believe I can achieve that. I know he is watching me from the heaven with a huge smile on his face, and yes, this achievement is for you my dearest. Rest in peace, we will meet again.

I want to thank Assoc. Prof. Dr. Figen Yıldırım, for always making time for me and supporting me during my Master's Degree. Thank you for everything you've done, you have been a great inspiration for me.

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And finally, Attila, my rock, thank you for always being so patient and calm during my hardest times, you have a wonderful heart and I am so blessed to have you in my life. I couldn't have done it without your love and support. Thanks for pushing me for being a better version of myself.

To all of my friends and family, who supported me during my stressful days, I love you and I appreciate everything you have done for me.

Thank you.

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DEFINITION OF TERMS ON CONSUMER BEHAVIOR AND TECHNOLOGY

The definitions of the related terms are given below.

Consumer

Consumer is someone who buys goods or services for personal use (Kotler & Keller, 2016).

Customer

Customer is a person or entity who purchases goods or services from a company (Kotler & Keller, 2016).

Consumer Behavior

The study of individuals, groups, or organizations and the processes they use to select, secure, utilize, and dispose of items, services, experiences, or ideas to meet needs, as well as the effects these processes have on the consumer and society (Solomon, 2017).

Buying Behavior

Buying behavior refers to the activities and decision-making processes of individuals and organizations who purchase products and services (Solomon, 2017).

Buying Intention

Buying intention is the consumer's intention or likelihood to acquire a specific product or service (Ajzen, 1991).

Attitude

Attitude is a taught proclivity to respond consistently favorably or unfavorably to an object or class of objects (Fishbein & Ajzen, 1975).

Decision-making

Decision making is the cognitive process of choosing a course of action from a set of alternatives based on available information and the perceived outcomes of each option. (Simon, 1

INTRODUCTION

This paper aims to understand the consumer buying behavior and technology with their related terminologies. This part of the study will highlight the background information of the study, the objective of this research, and the research questions with the findings and the analysis. Key terms are explained in the upcoming section and the structure of the paper is stated in the end.

Statista predicts that worldwide e-commerce sales will reach $6.4 trillion in 2024, up from $3.5 trillion in 2019 (Statista, retrieved in 2021). This situation highlights a tremendous increase in internet purchasing and its importance in today's world. E-commerce has contributed to the comfort of the humanity in a way that people are able to shop wherever and whenever they want. Online shopping provides a huge variety of products and services, competitive prices and delivery to their own door with a click. The interference of the websites has become so easy that from children to elders are able to shop online. However, online shopping also has its own disadvantages, such as financial risk or privacy risk.

Bhatnagar (2004) defines online buying behavior as the process that consumers go through when obtaining an online purchase. This procedure entails gathering information, assessing choices, and making the actual purchase. Furthermore, it includes a variety of factors such as website usability, product information, perceived security of the online store, payment options, and customer service. When shopping online, all of these factors can influence the consumer's decision-making process.

Technology has enabled firms to establish online shopping platforms that provide an effortless and individualized client experience, according to Al-Debei et al. (2013). Product recommendations, targeted promos, and one-click checkout choices are examples of such tools. Furthermore, technological advancements have

made it easier for businesses to collect and analyze data about customer preferences and behavior, which can then be used to improve the online shopping experience.

Technology has significantly transformed our buying behaviors as consumers by changing the way we browse, seek for information, and make purchases. And one of the most important outcome of this change is online shopping: with the rise of e-commerce platforms such as Amazon and Alibaba, people can now purchase things from the comfort of their own homes. Online shopping offers consumers' convenience, flexibility, and a broader selection of possibilities. But what are the factors that have an impact of the consumer buying behavior, do these factors are negatively related to this decision making process or positively? This is a broad topic to cover therefore the Turkish university students will be in focus in this research when trying to understand the factors on consumer buying behavior when shopping online.

The main purpose of this study is to understand;

- The evolution of consumer buying behavior in literature
- To understand how technology has evolved
- To examine the relationship between technology and consumer buying behavior
- To understand online buying behavior
- To understand the factors that are related to online shopping buying behavior

This study has been conducted to analyze factors of the online buying behavior of consumers, specifically Turkish university students, in the scope of Technology Acceptance Model.

The hypothesis is attitude, perceived usefulness, perceived ease of use, perceived financial risk, perceived social risk, perceived performance risk, perceived psychological risk, perceived time risk and perceived privacy risk have an influence on consumers' intention to buy online.

A questionnaire used in this research paper as a research method that has been on social media platforms such as Instagram and WhatsApp

The research paper includes 3 parts: Consumer behavior, technology and consumer behavior, research methodology.

Chapter one aims to understand the consumer buying behavior by examining and analyzing the literature review of the previously suggested theories and conducted research on this matter.

Chapter two addresses to the technology which is a milestone for the humanity by explaining the evolution of the technology and its impact on consumer behavior as well the marketing industry to examine how it has changed the buying behavior of consumers and the theories that are presented by previous researchers which also includes Technology Acceptance Model presented by Davis (1989) and enhanced by Crespo (2009) which inspired the research design of this study.

Chapter three entails the research which focuses on methodology, the aim and scope of the research, the data collection instruments, the sampling method, data analysis method and ethical consideration. The chapter ends with the analysis and interpretation of the findings that are collected from the data.

1. CONSUMER BEHAVIOR

Consumer buying behavior concept is a complex field of study rather than being a simple one, considering there are several internal and external factors that affect consumers' selections. Therefore, there are several explanations and definitions of consumer behavior presented by different researchers that contributed to this field of study through years.

Mostly the behavior of the consumer is goal-directed and the examples can be found in the marketing of durable and nondurable goods, services, ideas or people. Consumer buying behaviors rely on one or more end-state goals however they are not limited to end states but also cover the experiences, series of interdependent circumstances, and continuing processes (Bagozzi & Dholakia, 1999). Bagozzi and Dholakia also adds that the decision making and consumer behavior takes places complexly and at several stages and they are related to the goals or the purpose of the consumers.

Consumer behavior concept covers the processes involved when individuals or groups choose, purchase, use or dispose of products, experiences, services or ideas to satisfy the needs and wants (Solomon, Bamossy, Askeegard & Hogg, 2006, pp.3 cited in Qazzafi, 2020). In this definition, the usage of the word 'dispose' is important as it shows that it is not only the buying process but also the actions after it.

Engel, Blackwell, and Miniard defines consumer behavior, cited in Chowdhury in 2010, as "the acts of individuals, directly involved in obtaining, using, and disposing of economic goods and services, including the decision processes that precede and determine these acts".

Even though both of those definitions above contain similar elements defining the consumer behavior such as purchasing, using and disposing the product or services, the second definition made by Engel, Blackwell and Miniard point out that consumer behavior focuses on different elements. The "... directly involved in obtaining, using and disposing of ..." part of the definition highlights the importance

of the ultimate buyer as an individual. The individual involved of this process can buy the product for himself/herself or/and buy the product for another person as a gift or for some other reason. Therefore, the ultimate buyer should be taken into consideration when analyzing the consumer behavior. The second part of the definition 'including the decision processes that precede and determine these acts', remarks it is a process and not a single action. It also includes the precede process which might be considered as the marketing process, the actions occurring during the sales from the behavior of the sales person to the display of the products, to the end of the buying process.

Block and Roering (1976) defines consumer behavior as a systematic interdisciplinary study as it is based on both theoretical and empirical work of other disciplines and also an applied one such as medicine, and continue their explanation by adding psychologists, anthropologists, economists, statisticians and political scientists contributed to study of consumer behavior and consumer analysts should be aware of the empirical and theoretical supporting science of behavior.

Berkman and Gilson define consumer behavior, cited in Chowdhury in 2010, as "the activities of people engaged in actual or potential use of market items - whether products, services, retail environments, or ideas". This definition however draws attention to a whole new element that has not mentioned distinctively by other researchers above. The expression of 'the actual and potential use of market items' emphasizes the importance of hypothetical behavior pattern of both actual and potential consumers. When consumers are in the need or desire of buying a product or service, they go through a process which drives them to make the purchase or change their mind about the purchase and turn their head to another product or the service. The marketers' main concern is to make the potential consumers the actual ones therefore it is important to understand the process of what are the acts that actual and potential consumers perform during the decision making and buying process. Considering that if someone is in the need of buying a new phone, he/she will become an actual consumer for a company even though for other companies, he/she will still be a potential consumer. The activities of potential consumers are important for marketers because by researching their behavior patterns, they can

improve their acts in order to catch the attention of this group and in the future, they might become one of their own actual consumers (Chowdhury, 2010 pp. 7).

Consumer behavior is defined by many scholars in different ways through years from different perspectives, some have pointed out the similar elements, however, there are still controversial explanations about what consumer behavior is and is not. This issue has risen the concern of consumer behavior has become such a wide topic that it stands for everything that it has lost its boundaries. In order to differentiate consumer behavior from human behavior Folkes (2002), has claimed in the Association for Consumer Research presidential address that consumer behavior is different from human behavior in terms of:

a) it engenders unique interpersonal relationship that affect the balance of power between the buyer and seller
b) contains unique contextual characteristic such as the increase of mass media persuasive messages
c) and requires domain-specific topics such as materialism (MacInnis & Folkes, 2010).

MacInnis and Folkes (2010), also continues to their definition of consumer behavior by adding that consumer behavior is not only about acquisition through economic exchange also the consumption and the disposal of the product to the process. This explanation highlights that the consumption and the disposal of the product creates a link between the consumer behavior and the marketing institution as well as other institutions that surround it and also show similarity with Solomon et al., and Engel, Blackwell, and Miniard about how the consumer behavior is perceived.

Consumer behavior is the total act of the consumers they exhibit when they are looking for, purchasing, using, assessing and disposing a product or a service that they are hoping to satisfy their needs. This concept focuses on how consumers, either individuals or collective, make their decision to spend their resources on the products, the expression of resources might include money, time and effort. Consumer behavior includes what the consumers buy, why they buy it, from where they buy it, how often they buy and use it, how they assess the product after they make the purchase and after they use and what are the consequences and evaluations

of the product for the future purchases as well as how they dispose of it (Chawdhury, 2010).

From what is stated in the definitions above, the researchers mentioned in this paper so far, have met in a common ground that is consumer behavior does not end when the product meets with the consumer but it continues during the consumption process to the disposal of the product.

The reason why consumer behavior remains such an important concept and a controversial one about where it begins and ends is that the underlying reasons of consumers' choices are crucial for the marketers to understand the needs and wants of consumers in order to become successful in the marketplace. Companies are aware of the fact that this concept is directly related to their marketing and sales activities therefore they have started to give great importance to this research topic. Procter and Gamble once mentioned about their strategy as: "Our business is based on understanding the consumer and providing the kind of products that the consumer wants. We place enormous emphasis on our product development area and our marketing area, and our people knowing the consumer" (Chawdhury, 2010).

The question of who is the buyer of the product and how they buy it are the two questions that are related to the features of the buyer behavior therefore they can be explained by observing the buyer or interviewing him/her. However, the question of why does the buyer buy the product is a much complex question to explain. The mind of the buyer is a 'black box' and the duty of the strategist that work in the field of marketing is to understand this mysterious psychological process and construct a more certain model of mechanism about how it functions. (Kotler, 1965).

1.1. Approaches of Consumer Behavior

Block and Roering (1976) suggest that consumer behavior is an applied interdisciplinary work of study and the propositions are tested, verified or denied; therefore, the knowledge gained by these observations are accumulated and help the scholars for the further analysis. Nonetheless, if the results are not put into a

theoretical framework, the systematic analysis of the knowledge accumulation would not occur, for this reason, the experiences gained from the propositions and their results hold a very prominent place for the further analysis. In this section of the chapter, six of the consumer behavior approach will be discussed.

1.1.1. Distributive Approach

Distributive approach has been conceptualized as an act rather than a process when trying to understand the consumer behavior process. It focuses on the result of the decision making process and the independent variables such as marital status, social class, income etc. Distributive Approach is a simple and an inexpensive approach and it is considered useful when the product purchase decision is related to the independent variables and this approach is used when the analysts are analyzing the potential of the market and selecting the best media tools. For example, if the analysists study between which age the social media is used the most, they can target this age group in order to capture consumers' attention through social media for a product. However, there are also limitations about this approach as it does not focus on the decision making process but the outcome directly. It provides general and incomplete information about the consumer behavior because distributive approach ignores the question of why the independent variables affect the product purchase decision (Block & Roering, 1976).

1.1.2. Decision – Process Approach

Decision – Process approach is concerned with how the consumers reach a decision and what are the stages they go through when making a purchase. The stages of the decision – process approach consist of problem recognition, alternative evaluation – internal search, alternative evaluation – external search, purchase and outcomes. As it is understood by the name of this approach, it focuses on the decision making process therefore the main concern is to understand how the decision of the purchase of the consumer is reached. Therefore, it provides complex and comprehensive information than distributive approach and it provides a more relevant information as it identifies various stages and the factors of the consumers' decision making process, however, this approach is a recent one and because of that there is less empirical data collected on how this approach functions. Also, the

variety of the stages obstruct the relationship between the factors affecting the purchase making process of the consumers (Block & Roering, 1976).

1.1.3. Economic Man Approach

According to economic man approach, consumers are making rational decisions by being aware of the alternatives of the products or the services, advantages and disadvantages of each of their options, and they focus on which of these options will maximize their well-being and bring the most efficient financial gain (Dudovskiy, 2013). It assumes individuals strive to maximize self-interest (Horton, 2022).

However, there are some concerns about how well this approach fits into today's society as the marketing strategies and the marketing tools of the companies affect consumers to make irrational decisions and hold a place for shaping their consumer behavior (Blackwell, Miniard, Engel, 2006).

1.1.4. Psychodynamic Approach

Psychodynamic approach mostly ground on the work of Sigmund Freud, who is considered as the founder of the psychoanalysis.

Sigmund Freud claims that human behavior is shaped by biological influence rather than external factors (Bray, 2008).

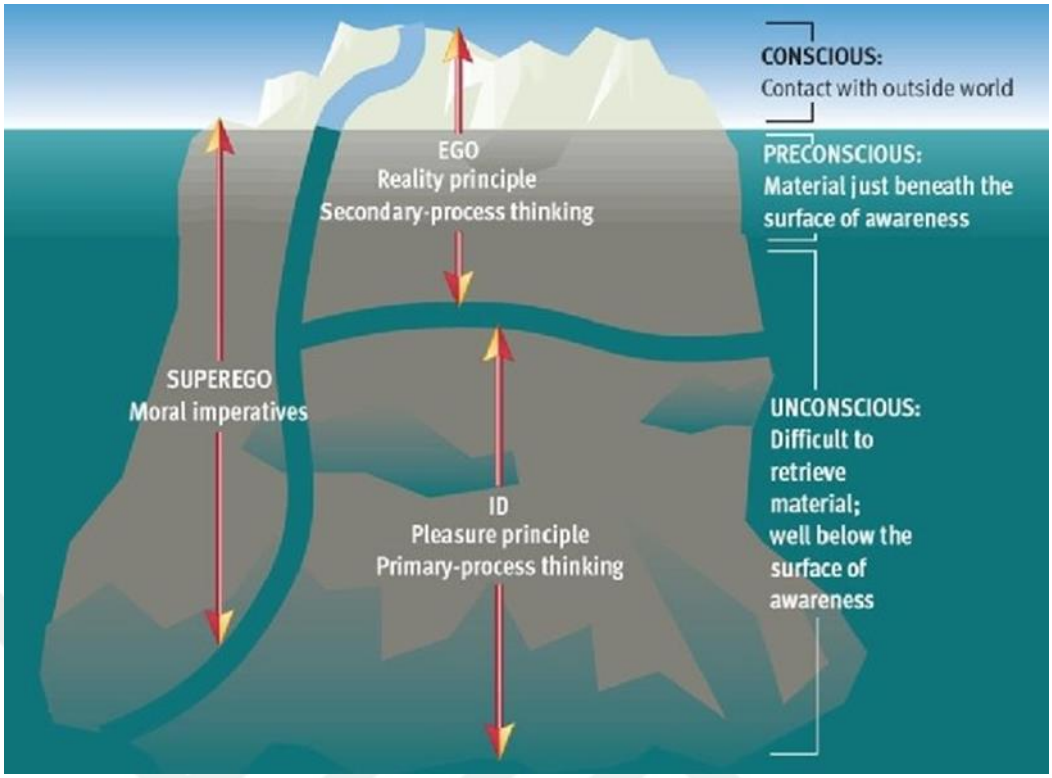

Figure 1. Freudian Psychoanalytic Model
Source: Thomson Higher Education (2007)

He suggests that there are 3 concepts in psychoanalysis which are ID, ego and super ego. ID is the primary process of thinking where the basic instincts exist and it is ruled by pleasure principles. Ego is the secondary process of thinking where the individuals start getting to know the real world so they become aware of the limitations of the society. The last component is the super ego which the moral part of the individuals' personality The theories on psychodynamic are based upon the psychic apparatus model of Sigmund Freud. Researchers suggest that consumer behavior mainly relies on instinctive forces rather than environmental forces, therefore they are concerned with the psychodynamic factors of the purchase making process.

1.1.5. Behaviorist Approach

Behaviorism is an approach where behavior is explained by the things the organisms do, as actions, or thoughts and feelings that are affected by external events. Behavior is attributed to the external factors of individuals (Bray, 2008).

Russian scientist Ivan Pavlov is considered to be an important figure regarding this approach and Lantos (2010) as cited by Dudovskiy (2013), links this approach with his disreputable experiments that he has carried out while developing a particular behavioral pattern through external factors. Behaviorist approach provides a part of fully possible explanation on human behavior even though it still contributes to the understanding of the human behavior (Stewart, 1994 as cited in Bray, 2008). It does not provide an adequate information for the diversified response of a similar or near identical population (Bray, 2008).

1.1.6. Cognitive Approach

In cognitive approach, individuals are seen as an 'information processor' where individuals are affected by the internal factors, his/her way of thinking, and decision making process and by doing so the external factors' influence is limited because consumers are continuously searching for and receiving information from external factors and processing them in order to get aid in their decision making process when they are making up their mind.

Dudovskiy (2013) suggest that the outcome of this process enable consumers to behave in a certain way as a consumer behavior.

1.2. Traditional and Contemporary Models of Consumer Behavior

In this chapter of the study, traditional and contemporary models of consumer behavior will be examined.

1.2.1. Traditional Models

In this section of the research, after explaining the traditional models of consumer behavior, traditional models will be analyzed.

1.2.1.1. Economic Model

According to economic model, consumers tend to make their purchase in the consideration of acquiring most benefit with the minimum cost. Therefore, marketers can predict the buying pattern of the consumers by examining the economic situation of the consumers and arrange the product prices accordingly as

they tend to choose the product which has a lower price and has the capability of meeting the demand or want of his/hers (Jisana, 2014). This model is the easiest to understand and the most limited one to analyze the consumer behavior, because consumers might have different motivations to make a purchase rather than just buying the cheapest one (Needle, 2021).

1.2.1.2. Learning Model

Learning model explains that consumer behavior is ruled by two different needs: the first one is basic needs of the individuals such as food and shelter; and the second one is learned needs that individuals learn from their experiences which also include fear and guilt. Learned needs include the feeling of satisfaction that individuals want to provide from making a purchase; however, if an individual cannot meet their basic needs, he/she cannot lean on the learned needs (Jisana, 2014).

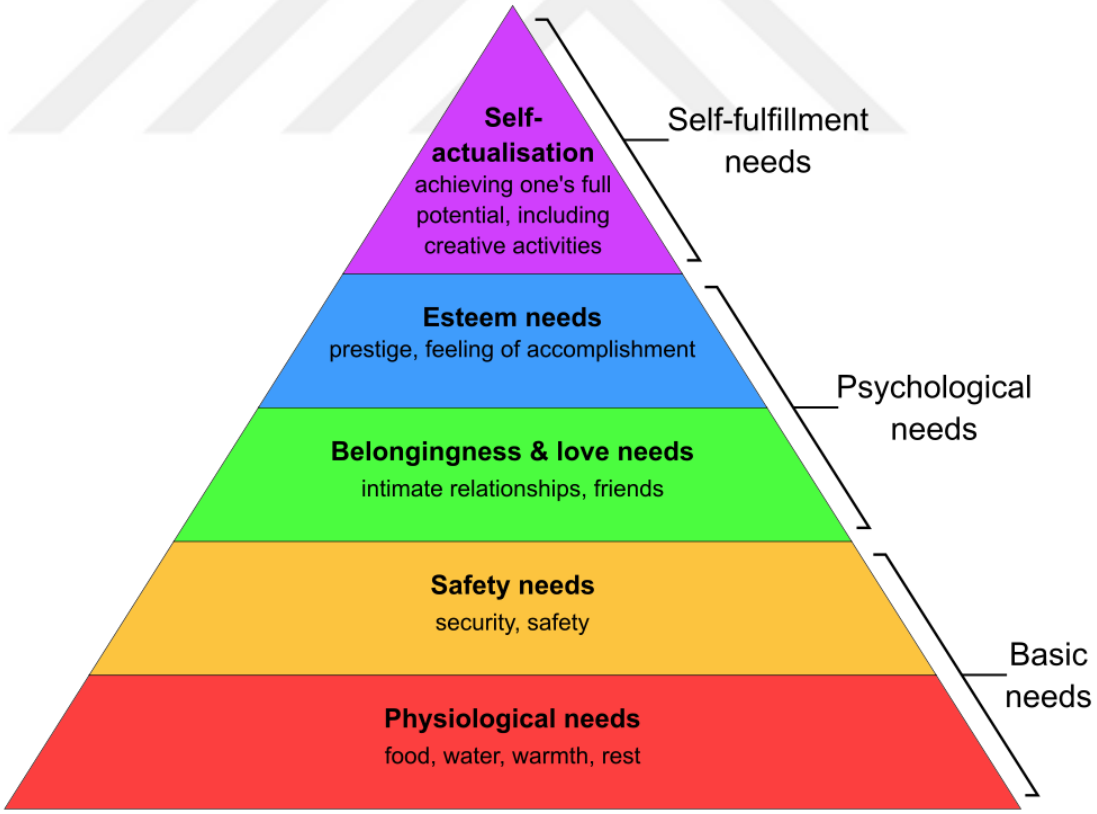

Figure 2. Maslow's Hierarchy of Needs
Source: Wikipedia (Retrieved in 2023)

Abraham Maslow's hierarchy of needs has a significant impact on the learning model. According to Maslow's theory, there are 3 phase of needs of individuals which are basic needs, psychological needs and self-fulfillment needs. The first phase is basic needs and it is at the bottom of the pyramid. It includes physiological needs that people must have in order to survive such as food, water etc. and; safety needs such as security and providing health services for oneself. The second phase is psychological needs. It includes the belongingness and love needs of people such as relationships and friends; and esteem needs like prestige and desire for accomplishment. Without meeting the basic needs, people might skip that kind of social needs. The last but not least, self-fulfillment needs lie on the top of the pyramid where self-actualization appear. Self-actualization is the phase that people want to achieve and become their full potential, the activities they do or the behavior they show in order to become what they actually want to be. However, self-fulfillment needs are the last step for individuals to consider after fulfilling all of the other steps and only then they can reach the self-actualization.

Learning Model suggest that marketers should take into consideration of these phases as consumer first instinct is to meet their basic needs, and learned needs come afterwards (Needle, 2021).

1.2.1.3. Psychoanalytic Model

Psychoanalytic model is based on the theory of Sigmund Freud and it suggests that people make decisions both consciously and unconsciously and Freud explains that in his Psychoanalytic Model where he mentions about 3 concepts: ID, Ego and Super Ego. It is already explained above what is this model and what are the concepts that it includes on the section 2.1.4. in this paper.

Freud suggests that these three concepts, or level of consciousness, affect people when they are making a decision, and this model stands after this theory of him. This model states that a hidden symbol, or a logo, or an advertisement of a company might influence the consumer behavior unconsciously and navigate an individual to make a purchase from a specific brand rather than the others (Jisana, 2014).

Consumers make purchases when they are influenced by a brand, it might be the quality, logo, symbol, the message or whatsoever and the desires that make the consumer purchase a product or a service can be unconscious therefore even the consumers do not understand the reason behind this decision-making process, they just buy the product because they care for it (Needle, 2021).

1.2.1.4. Sociological Model

The sociological model suggests that a consumer buying behavior is influenced by individuals' role in social life and the community they belong in, as well as the people that they share similar culture and are surrounded within this society (Jisana, 2014). Individuals make a purchase in accordance with thinking what is suitable for them and the group they belong to, therefore marketers consider the ways of appealing the specific common features of the social environment that they live in as they cannot sell a pair of running shoes to a consumer who has never worked out therefore they market their products to a specific group in order to show them their product will help them stay their position in their society (Needle, 2021).

1.2.2. Contemporary Models

In this section of the research, after explaining the traditional models of consumer behavior, contemporary models will be analyzed.

1.2.2.1. Nicosia' Consumer Decision Making Model (1966)

Nicosia's CDM Model consists of 5 stages that includes with firms' attributes, consumer attributes, search evaluation, decision and finally consumption storage. Nicosia has divided this model into 4 fields.

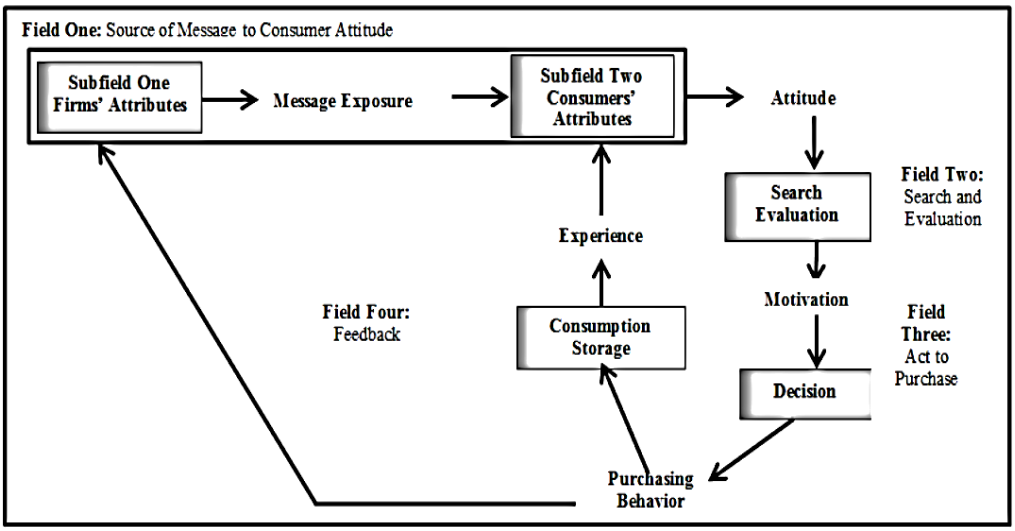

Figure 3. Nicosia' Consumer Decision Making Model
Source: Mahmood & Baharun, 2019

The first field is the source of message to the consumer attitude and it consists of two subfields that are mentioned above during the explanation of the stages: the firms' attributes and consumers' attributes. Firms attributes are the messages that organizations convey to the consumers and they can be advertisements, campaigns or any kinds of promotions for the consumers. These messages are served as a data to subfield two where consumers receive the message and process it. The second field is where the consumers receive the input from the first stage and they are in the search of the product and the evaluation of the products and the alternatives that they have encountered with. If the second stage become successful to motivate the consumer to make the purchase, it steps into field there where the decision-making process and the act of purchase lie. The final stage is the fourth field, it consists of post purchase process and consumption and it might be the feedback on the sales for the firm (Jisana, 2014; Mahmood & Baharun, 2019)

1.2.2.2. EKB (EBM) Model of Decision Process (1968, 2001)

EKB model or also known as EBM model as a result of the changes that are made until the year of 2001, is a consumer behavior model that is specifically focused on problem solving and learning behavior of the consumers. It describes the active information seeking and the evaluation process of the consumer by showing the

components of decision making and the connection between those elements (see Fig. 4).

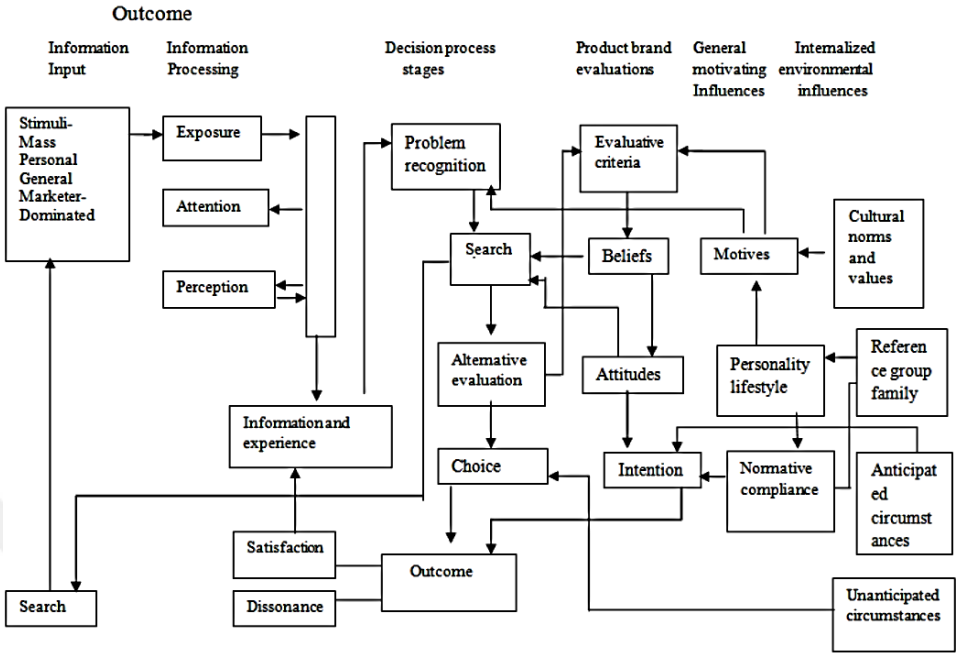

Figure 4. Engel – Kollat – Blackwell Model

Source: Jisana, 2014

The model has five main stages which are problem recognition, information search, alternative evaluation, choice and outcome. Problem recognition is the phase the consumer differentiates the actual and ideal state and what they should be. The second stage is information research and it is the phase where the consumer is exposed to the data from different sources, in this stage the consumer might be interested in the data he/she is exposed to, and the data collected in this stage might be collected and stored in the memory. Alternative evaluation is the third stage where the consumer evaluates the brands and the evaluation might be dependent on the beliefs, goals or motives of the consumer. Choice is the fourth stage and it depends on the consumer's intention or attitude. The last stage is the outcome, or the purchase making process which might result in either positive or negative. And while going through these 5 stages, there are variables affecting those stages (Jisana, 2014).

In EKB model there are five variables in the decision making process. The first one is the information input which consumers get by the companies such as advertisements and sales strategies; the second variable is information processing where the consumers are exposed to the messages or the symbols of the companies, and afterwards they either show attention or retention of the information and it changes their perception about the company, the brand or the product. The third variable is the information processing stage where consumer recognizes the problem, he/she goes into the search of alternatives and evaluate them, make a choice and get a closure with purchase as an outcome. The fourth variable of this model is product-brand evaluation where evaluate the criteria of the products according to their beliefs which form their attitudes towards the product and might encourage buying intention resulting in purchase. The fifth variable is general motivating influences that includes motives, personality and lifestyle and normative compliance which might also encourage the intention and then result in choice and purchase. The sixth and the final variable is the internalized environmental influences where people might get affected by cultural norms and values, reference group family, anticipated circumstances or unanticipated circumstances where these variables might also result in purchase (Mahmood & Baharun, 2019).

1.2.2.3. Howard-Sheth Model (1969)

Howard- Sheth Model suggests that buying process of consumers is dependent on inputs, perceptual constructs and learning constructs and only after then they are able to make an ultimate decision about their purchase which brings us to the outcomes (Mahmood & Baharun, 2019). This model was applicable for both industrial and consumer products for the conception of various consumer buying behavior (Loudon & Della 2002; Sahney, 2017 as cited in Mahmood & Baharun, 2019).

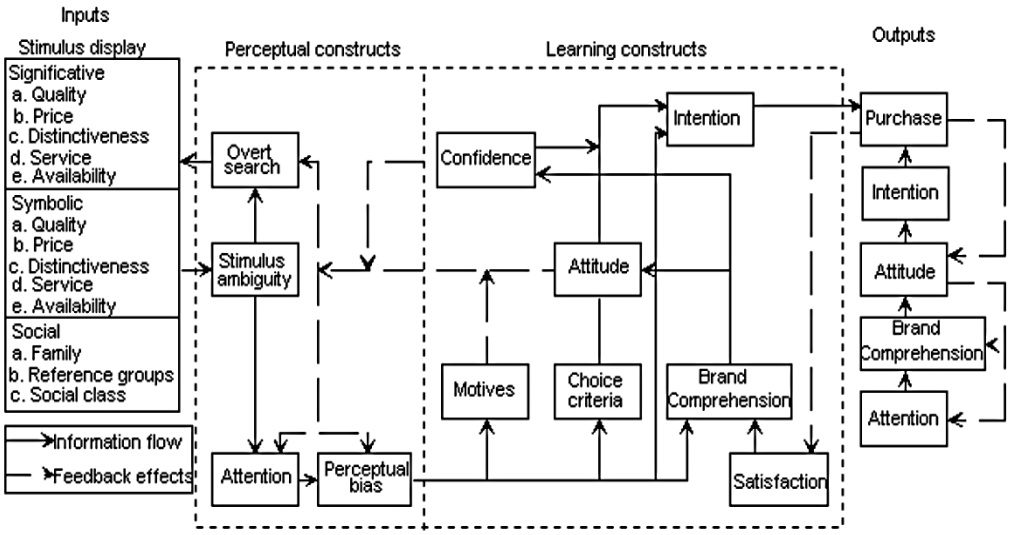

Figure 5. Howard-Sheth Model of Buyer Behavior
Source: Sangarathas & Shanmugathas, 2017

There are 4 main elements of this model which are inputs, perceptual constructs, learning constructs and outcomes (see Fig. 5).

Input variables involves the informing cues about the features of a product and Howard and Sheth divided this cues into three different sections:

- Significative Stimulies: quality, price, distinctiveness services. These stimulies are the actual elements that the consumers are faced with and they are strictly related to brands' features.

- Symbolic Stimulies: quality, price, distinctiveness services. Symbolic stimulies are the representation of the products in symbolic form such as advertisements. They have an impact on the consumers without them realizing this impact.

- Social Stimulies: social, family, reference group, social class. Social stimulies are originated from the social environment such as social class. These factors are internalized by the consumers and they have an influence on the buying process (Jisana, 2014).

Perceptual and Learning constructs are simply the psychological information and the feedback of the consumers that they are exposed to and they might include

goals, preferences and needs (Needle, 2021). Perceptual constructs concerned with how the consumer perceives and responds the information he/she has acquired from the inputs, considering stimulus ambiguity and perceptual bias. (Jisana, 2014). Learning constructs are concerned with choice criteria, the confidence associated with the brand, the purchase cause of the buyer.

Output variables start from Attention to Purchase and the purchase is the result of the attention that the consumer follow through during the process in sequence. The sequence starts with attention, the brand comprehension, attitude, buyer intention and finally leads to purchase. (Jisana, 2014).

Last but not least, exogenous variables which are not described but they are accepted as constant and they also affect the purchase decision of the consumers (Jisana, 2014).

According to Howard and Sheth Model, there are 3 different levels decision making of consumers which are extensive problem solving, limited problem solving and habitual response behavior (Sciffman & Kanuk, 2004 as cited in Sangarathas & Shanmugathas in 2017).

In the stage of extensive problem solving, the consumers are not aware of the features of the products they are looking for so they are in the search of finding a suitable product for their needs. In the stage of limited problem solving, consumers have limited or more information about the product and they start comparing the options. The last stage is the habitual response behavior where they are aware of the brands they prefer and they are aware of their options so they have specific brands in their mind when they desire to make a purchase (Needle, 2021).

1.2.2.4. Information Processing Model of Bettman (1979)

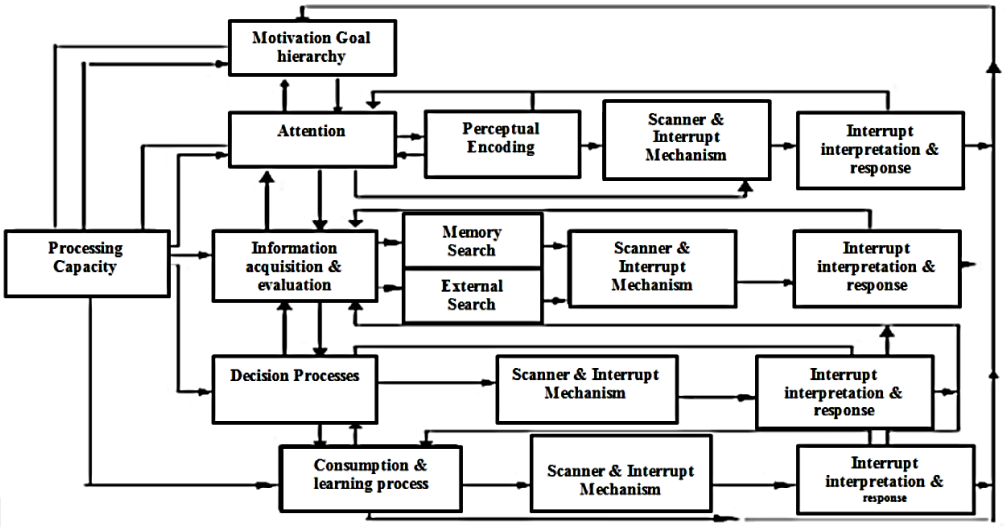

Figure 6. Information Processing Model
Source: Mahmood & Baharun, 2019

Information Processing Model of Bettman is derived from a general concept of consumer behavior decision process and Bettman described the model as an information processing that relies on the specified program and controlled by the consumers (see Fig. 6). There are basic hierarchy elements such a s motivation, attention, information acquisition and evaluation etc., and intermediate process such as conceptual encoding, memory research, interrupt mechanism and interpretation and response. But this model is considered a complex one and empirically not tested therefore not defined accurately (Mahmood & Baharun, 2019).

1.2.2.5. Stimulus-Response Model (1997)

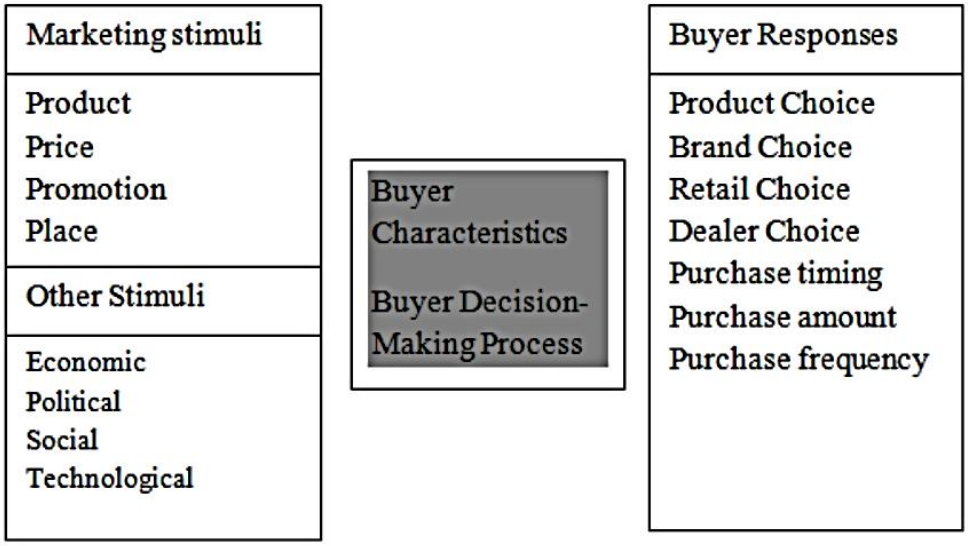

Figure 7. Basic Stimulus-Response Model of Kotler
Source: Jisana, 2014

The Stimulus-Response model is a model designed by Kotler in order to understand the buying behavior of the individual buyers on consumer products. It suggests that the mind of the buyer is a black-box and there are some factors affecting the buying decision of the consumers (see Fig. 7). Marketers need to understand what are the driving forces of the purchase making decision and in the model, we can see the stimuli are divided into two categories which are marketing stimuli and environmental stimuli. Marketing stimuli consist of four P's which are product, price, place and promotion. Environmental stimuli include the major effects such as economic, political, technological, cultural events. All the data the buyer is exposed to enter into his/her black box and they are converted into observable buyer responses such as product choice, brand choice, retail choice, dealer choice, purchase timing etc. The marketers aim to comprehend what drives the responses in buyer's black box. There are two parts of the buyer's black box which are buyer characteristics which influence how the buyer perceives the stimuli and reacts to it. The second part is the buyer decision making process which affects the behaviors of the buyer (Jisana, 2014)

2. TECHNOLOGY AND CONSUMER BEHAVIOR

The second part of this paper is focused on the relationship between technology and consumer behavior, and in this chapter the terms related to this concept will be explained. In order to understand the relationship between technology and consumer behavior, the definition of technology from different authors and the summary of its evolution will be briefly presented in order to understand the background story.

2.1. Technology and Consumer Behavior Related Terms

The term of technology is a combination of two Greek words which are technē, meaning art and craft, and logos, meaning word and speech: In Greece, this term meant a discourse on both fine and applied arts (Seo, 2022).

Kranzberg and Purcell (1967) suggests that the term of technology cannot be defined precisely even though the influence of it is prevalent and essential; technology means a lot more than tools, machines, artefacts and processes, in fact, it concerns with the effort of man in order to fulfill the desires by human activity on physical objects (Solomon, 1984).

According to Brian Arthur (2009), there are three definitions on technology: He makes his first definition as the simplest one and suggests that technology is a medium to actualize a purpose and for some technologies the purpose of the usage of this technology is very obvious whereas for some of them, they are indefinite, several and variable such as the usage of computers. The second definition goes as it follows: Technology is a cluster of practices and components and it consist of different kinds of technologies such as electronics and biotechnology and those are accumulations or utility boxes of individual theories and actions. The third and the last definition suggested by Arthur is: the technology is the complete accumulation of devices and engineering implementations available to the culture.

The evolution of the technology has a long story; however, the topic of this paper is focused more upon the modern stages. The modern sense of technology began

after the industrial revolution and it is rooted in the economic thought as the main purpose of its usage is primarily economic. The art and artefacts that are mentioned during the definitions above, have given their places to machines and mass production and the technical descriptions of technology evolved into seeing technology as a social process (Salomon, 1984).

Technological developments have been the driving force of the progress of the society since the beginning of the civilization therefore scholars in economics have started to concern with the evolution of the technology (Sima et al., 2020).

Defining and explaining technology has brought several other terms to the concern when explaining the relationship between technology and consumer behavior. The latest related concerns on how the definition of the modern technology been put has showed us the impact of society and civilization. In that sense, the social involvement of human beings in technology should also been considered.

Social involvement should be taken into consideration when analyzing technology development as in the condition that three of the aspects during the innovation process are missing, a technological innovation is not likely to be adopted or become an achievement. Those aspects are social need, social resources and a sympathetic ethos. If people do not feel a social need to meet, it is unlikely that they will dedicate resources to technological innovation. Social resources are also an essential necessity for an achievement of innovation as resources are vital to actualize the invention therefore the availability of the resources are vital. The last aspect mentioned above is a sympathetic social ethos and this term refers to having an open environment about welcoming new ideas especially for dominant social groups to accept them. The social conditions are essential in order to develop technology (Buchanan, 2019).

Social progress, social involvement and social conditions have contributed to the development of technology as it is indicated by different scholars during different time periods. The stages of the development of technology are important in order to understand the need and wants of the society in order to relate technology and its effect on consumer behavior and its consequences, therefore in the following chapter the development stages of technology will be briefly explained.

2.2. Evolution of Technology and Consumer Behavior Effect

The industrial revolution has been an important issue when technology is being discussed, even though the development of technology is rooted back to the ancient world. In order to understand the impacts of technology on consumer behavior, the technological development after the industrial revolution will be explained in brief.

The Industrial Revolution has been a global phenomenon, at least insofar as it has taken place in every region of the world where Western civilization has had an impact, with a few exceptions. Without a doubt, it started in Britain and only gradually expanded to the rest of continental Europe and North America. Clearly, the Industrial Revolution that ultimately changed these regions of the West outpaced Britain's accomplishments in scope, and the process was continued to drastically alter the socioeconomic landscape of Asia, Africa, South America, and Australasia. Although the causes of this successive events are complicated, they were already implied prior to the preparation for rapid industrialization. The combination of social needs and social resources that provided the necessary preconditions for commercially successful innovation as well as a social system capable of sustaining and institutionalizing the processes of rapid technological change were acquired by Britain by the early 18th century, partly through good fortune and partly through deliberate effort (Seo, 2022).

Industrial Revolution has been divided into 4 main stages by major events. The first industrial revolution (Industry 1.0) influenced the transition from the mercantile city, which expanded based on the trading of goods and products produced from agriculture, to the industrial city, which grew based on improved productivity.

The transition from the industrial city to the planned city was helped by the second industrial revolution (Industry 2.0). The new type of worker was excused from the productive processes that required heavy physical labor in the planned city since they have been completely automated and replaced by social and security services, mechanical equipment, and other means of production.

The third industrial revolution (Industry 3.0) changed the economic systems and manufacturing techniques and led to a switch from the planned city to the

fragmented city, where industries were gradually migrating away from the marketplaces. A new economic-social order emerged in the fragmented city, dividing housing from employment, customers, urban life, and organizations supporting research and innovation.

The fourth industrial revolution (Industry 4.0) enabled the transition from a fragmented city to a smart city; the economic and social changes were based on digitalization, and with an emphasis on the link between machines and people, technology has enabled new goods and services that have led to major shifts in both personal and professional life (Sima et al., 2020). The concept of Industry 4.0 was quickly and easily accepted by huge global firms that already used methods for continuous improvement of process and product quality, in addition to high research and development standards, in order to improve their market competitiveness. (Fernández et al., 2017 as cited in Sima et al., 2020).

Many actions and choices that have historically been left up to human decision-makers will be further enhanced and automated by emerging technologies as there are already more than 20 billion "smart" interfaces, including sensors, chat bots, and Amazon Echo gadgets that are online, than there are humans on the earth 7.35 billion according to Jowel (2017); and these technologies continue to connect people and they also connect with one another while they are changing the way that consumers think, behave, and make decisions (Melumad et al., 2020).

2.3. Defining Industry 4.0 and Its Impact on Marketing

Implementing the concept of Industry 4.0 in the manufacturing industry means fully utilizing the power of communications technology and ground-breaking inventions to encourage the development of manufacturing technologies (Kagermann et al 2023).

Industry 4.0 is a manufacturing initiative that aims to allow in end-to-end digitalization and the integration of all physical assets into digital ecosystems by merging various technologies and value chains to fulfill the needs of more specialized customers and goods (Koch et al., 2014, as cited in Ahmad et al., 2020).

The fourth industrial revolution, or as we mentioned above as Industry 4.0, makes "smart factories" possible, becoming grounds for a world where flexible global virtual and physical manufacturing systems can work together (Schwab, 2017). As a result, products can be completely customized, and new business models can be developed

The reason why understanding Industry 4.0 is important in this paper is its impact on how consumer behavior changed with the fourth industrial revolution. The world has changed with the technological development as mentioned above therefore the buying behavior of the consumers, the businesses that keep up with these changes and integrates them to their strategy enable them to survive in this competitive era. Therefore, defining and understanding the Industry 4.0 has been an important issue for the scholars, researchers and marketers themselves.

Consumers are connecting to businesses and each other more frequently thanks to the development and use of social networks, mobile technology, and similar technologies, therefore business models and marketing plans in particular require specific innovation in this new era of Industry 4.0. The usage of technology is becoming into a source of critical talents and capabilities, giving firms long-lasting competitive advantages. (Sima et al., 2020).

Marketers must include these new technologies into their advertising efforts and develop their technological proficiency if they want to stay competitive (Dadwal, 2020 as cited in Sima et al., 2020).

The use of information and communication technologies (ICT) in several industries has caught more attention over the past ten years. Early contributions to the retail sector were principally concerned with creating e-commerce and e-banking services, but more recent research has been looking at the best ways to create enhanced technologies in order to raise more traditional physical points of sale (Pantano and Corvello 2010; Willow 2010 as cited in Pantano and Di Pietro, 2012).

People use a variety of gadgets, including laptops, tablets, and smart phones, to reach the information and also make purchases. Due to the essentialness to collaborate with IT and technology departments to increase consumer access to

content, this transformation has led to changes in the way marketing departments are organized as also mentioned above by Pantano and Di Pietro (Sima et al., 2020).

Pantano and Di Pietro (2012) states in their dissertation that the technologies used today offer numerous advantages to consumers from many different angles. They can first enhance the services provided. Second, they can assist consumers in their decision-making. Third, they can improve the purchasing experience. Thus, it should not come as a surprise that numerous interactive tools have recently been introduced in traditional stores, including interactive floors and kiosks, in-store displays, smart mirrors, RFID systems, virtual salespeople, shopping assistant systems based on trolleys and handled devices, anthropomorphized shopping assistants, and immersive environments.

Consumers are becoming increasingly interconnected with one another and with businesses thanks to the development and use of social networks, mobile technology, and similar technologies. Business models in general and marketing techniques in particular require specific innovation in this new era of Industry 4.0 (Sima et al., 2020).

Advantages of the technology to businesses and their marketing activities are inevitable to mention when examining the impact on the industries and business life; and Rojas-Méndez et. al. (2017) mentions in dissertation both businesses and consumers (Lin and Hsieh, 2007) have seen significant changes as a result of technology (e.g. Kim and Garrison, 2010; Kurnia et al., 2015). Therefore, it stands to reason that both groups' interests and willingness to adopt novel approaches to market interactions are similar. A sizable amount of evidence, however, contends that this is untrue. It's possible that some people, whether they be customers or employees, aren't psychologically prepared as others to use technology in both their personal and professional lives, to give an example; some services are now too technologically advanced for users (Lin and Hsieh, 2007), and utilizing them may be too risky or time-consuming.

In order to understand how technology has changed consumer behavior, researchers and scholars have proposed theoretical approaches. In the following chapter, the theoretical approaches about technology and consumer behavior will be discussed.

2.4. Theoretical Approaches About Technology and Consumer Behavior

Technology is ever changing and the changes of technology gives a path for researchers to discover new fields about human behavior either the reasons, the results, the factors that drive consumers to make certain choices, or the impacts that technology leaves on human buying behavior.

As technology improves and it enhances its impact in global world in every field, researchers have studied the reasons of how technology has changed the consumer behavior and the causes underlying. In this part of the study, theoretical approaches about technology and consumer behavior will appear.

2.4.1. Theory of Reasoned Action

Ajzen and Fishbein developed the theory of reasoned action in 1980, leaning on psychology. According to the TRA, a person's behavioral intention is determined by two factors: their attitude toward behavior and how they perceive pressures from society, which is referred to as their subjective norm: attitude describes how an individual performs the activity rather than an individual's overall performance, and a person's subjective norm is the result of a set of ideas known as normative beliefs (Yousafzai et al., 2010).

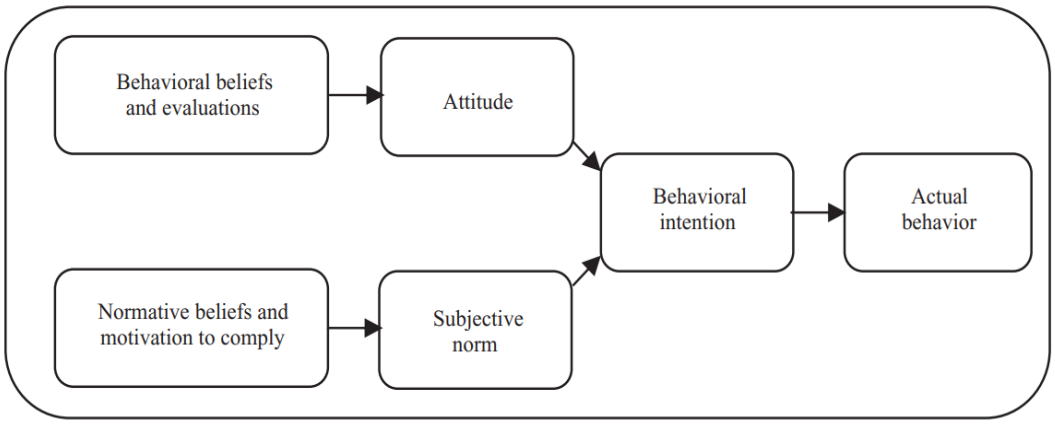

Figure 8. Theory of Reasoned Action (Ajzen and Fishbein, 1980)
Source: Yousafzai et al., 2010

According to Ajzen and Fishbein (1980), a person's behavior is determined by their purpose to engage in that behavior, and this intention is a result of their attitude towards the behavior. Intention is one of the possible indicators of a future behavioral outcome (Odoyo et al., 2016).

The TRA hypothesizes that as most human social behavior is volitionally controlled and can therefore be anticipated from intentions alone, we should be able to predict certain behaviors with a high degree of accuracy from intentions by observing how individuals are engaging to perform the intended behavior (Ozer & Yilmaz, 2010).

Davis et al. (1989) believe that because TRA is very extensive and "intended to describe virtually any human behavior," it should be ideal for exploring the factors that impact computer usage behavior as a specific case. TRA can describe whether an individual's behavior, such as using new innovations, is motivated by behavioral intentions, where behavioral intentions are a result of an individual's attitude toward the behavior, subjective norms surrounding the performance of the behavior, and the individual's judgments of the ease with which the behavior can be performed (Odoyo et al., 2016).

Ozer and Yilmaz (2010) states that due to its suitable features to investigate behavior, TRA has already been proposed by numerous researchers and is frequently utilized as a starting point for their studies on how people use IT. Whereas, Odoyo et al. (2016) states that the TRA can be expanded to understand human behavioral patterns in the use of novel innovations and technologies in decision-making processes, and the TRA has not been widely applied in evaluating studies like technology adoption and diffusion in the field of information systems and ICT in general.

2.4.2. Theory of Planned Behavior

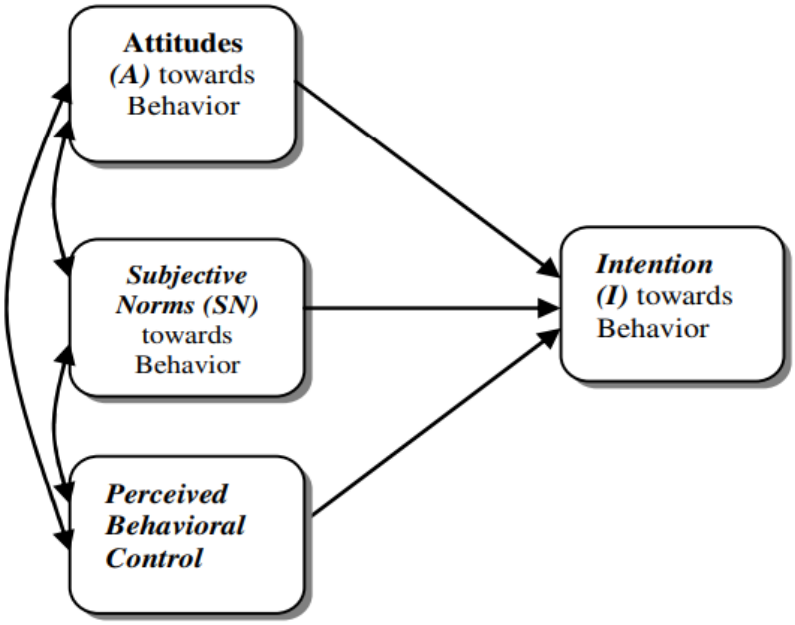

Figure 9. Theory of Planned Behavior (Ajzen, 1991)
Source: Ozer and Yilmaz, 2010

One of the most popular models for describing and forecasting individual behavioral intention and IT acceptance is the Theory of Planned Behavior (TPB). The attitude-intention-behavior (TPB) paradigm contends that a person's behavior is influenced by perceived behavioral control and intention; attitude, a person's subjective standard of behavior, and the perception of behavioral control all influence intention. These three components have been examined and repeated in numerous studies, and it has been determined that they are reliable in predicting why different ITs are intended to be used by an individual (Hsu et al., 2006).

Ajzen's theory of planned conduct, developed in 1991, is a development of the theory of reasoned action that addresses the flaws of the original model in dealing with tasks over which people have insufficient volitional control. According to the TPB, a third factor called perceived behavioral control, will be mentioned as PBC in short, (see Fig. 9) also affects behavioral intentions and actual behavior in addition to attitudinal and normative influence (Yousafzai et al., 2010).

In contrast to TRA, TPB incorporates PBC as a factor in determining behavioral intention. According to TPB's general rule, the more favorable an individual's attitude and subjective norms (SN) are toward an action, the higher the PBC is, and the more likely they are to engage in that behavior and in an effort to address circumstances where people might not have full volitional control over the conduct of interest, the construct of PBC was added (Ozer and Yilmaz, 2010).

According to TPB, humans are considered as rational beings who use all available knowledge, and before performing a particular behavior, people consider the consequences of their decisions. Although it is critical to consider one's orientation when assessing subjective standards and estimating the management of one's conduct, planned behavior theory contends that conduct orientations are a critical point that can estimate an activity. Experts use a variety of studies to develop accurate predictions about customer behavior and the TPB is an extension of TRA that aims to solve problems that are beyond the control of someone who is not fully knowledgeable in the theory of reasoned action. The Theory of Planned Behavior's core remains behavioral intention components, but drivers of intentions include elements of perceived behavior control, attitudes, and subjective standards. Nonetheless, it is assumed that perceived behavioral control has direct or indirect consequences on customer behavior prediction; the three components, namely attitudes, subjective norms, and perceived behavioral control, interact to generate interest determinants that influence whether or not the action is carried out (Sutisna & Handra, 2022).

While earlier research has established the model's validity across a wide range of IT acceptability, one barrier to employing TPB has been discovered when applying it to the study of IT continuity and it is that some studies recently pointed out that a drawback of TPB is its lack of explanatory power of IT continuance, which is due to TPB constructs failing to completely capture the context of user continuance decisions (Hsu et al., 2006). However, TPB has been used in order to investigate the consumer behavior and its relationship with technology in several studies (Sutisna & Handra, 2016).

2.4.3. Technology Acceptance Model

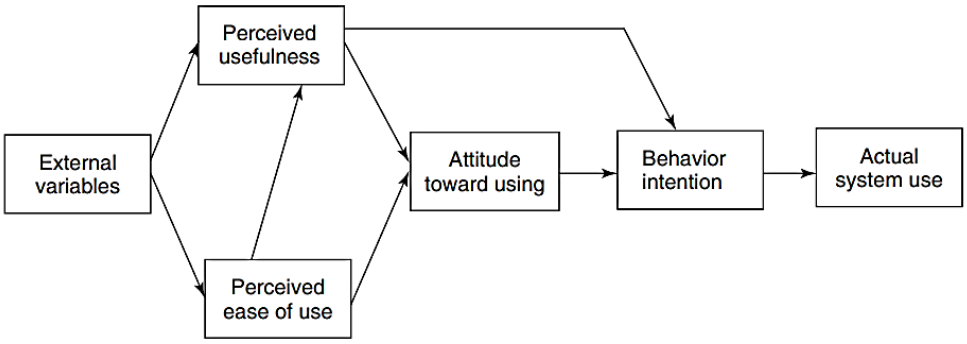

Figure 10. Original Technology Acceptance Model (Davis, 1989)
Source: Venkatesh, 2015

The technology acceptance model (TAM), created by Fred Davis over two decades ago, has become a popular method for examining factors that affect users' acceptance of technology, assuming that perceived usefulness and ease of use are two variables that mediate the complex relationship between system attributes (external variables) and potential system usage; also this model, which is based on the psychology-based theories of reasonable action (TRA) and theory of planned behavior (TPB), has taken the lead in characterizing user behavior toward technology (Marangunic & Granic, 2014). (Marangunic & Granic, 2014).

Perceived usefulness and perceived ease of use are two factors that TAM states have an impact on adoption: Perceived usefulness is defined as the degree to which an individual believes that using a particular technology would improve his or her job performance, and perceived ease of use is defined as the degree to which an individual believes using a particular technology will require no physical or mental effort (Wallace & Sheetz, 2012).

Individual attitudes about adopting technology are influenced by perceived usefulness and perceived ease of use; TAM states that a person's intentions to use technology will determine whether or not they use the technology which is considered as behavior (Rauniar et al., 2014). The Technology Adoption Model

(TAM) states that a person is more likely to embrace a technology, service, or habit if it enhances their performance without increasing the amount of work needed to execute a task (see Fig. 10). Several studies have shown the perceived utility and perceived ease of use factors in TAM to be valid and reliable (Wallace and Sheetz, 2012).

TAM has been adapted in numerous studies to meet the needs of the technology being studied, and one significant and well-received refinement of TAM has been the incorporation of social influence processes in predicting the usage behavior of a new technology by its users (Venkatesh and Davis, 2000). The TAM is the most widely used theoretical framework in information systems in general, and the Internet in particular (Crespo, 2009). However, even though it has received a lot of attention, recent marketing research has called into doubt TAM's applicability in the consumer environment because it was designed for employees, whose behavior is heavily influenced by their company's wants and desires, therefore TAM 2 by Venkatesh and Davis was proposed in 2000, as an enhanced the original model but it was criticized because of the same limits as its predecessor, most notably that it focuses on employee behavior at work rather than customer behavior in the market (Rojas-Méndez et al., 2017). Venkatesh and Bala (2008) recently developed and evaluated TAM 3, which is an integrated model of the drivers of individual-level (IT) adoption and use; nevertheless, this new model is likewise centered on employees rather than customers (Rojas- Méndez et al., 2017).

Crespo (2009), has also added some factors on his research additional to perceived usefulness and perceived ease of use, which are financial risk, performance risk, social risk, time risk, psychological risk, time risk and privacy risk:

- Financial risk refers to the possibility of losing money or being charged incorrectly during online buying.
- Performance risk is the risk that the product or service will not perform as expected or promoted is referred.
- Time risk refers to the risk of product delivery delays or late shipment.
- Psychological risk relates to the possibility of a negative emotional experience, such as worry or disappointment, as a result of the transaction.

- Social risk is the negative social effects, such as shame or disapproval, linked with the online shopping.

While there is some criticism as well as appreciation about TAM, the researchers keep revising this model by adding variables and questioning different factors, and in the following part of this study, this model will be used as an instrument in order to investigate the online buying behavior of university students.

2.4.4. Human Information Behavior Model

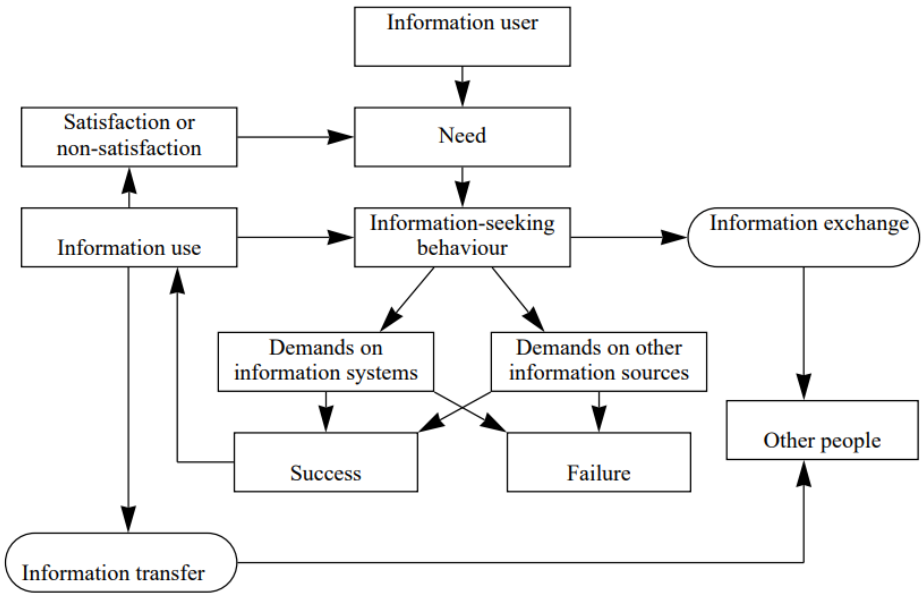

Figure 11. Wilson's Information Behavior Model (Wilson, 1981)
Source: Knight & Spink (2008)

Wilson's complex model (see Fig. 11), which was first presented in 1981 and revised in 1984, is a complex framework that aims to capture the information-seeking process. It includes the three entities of the information user, the information need, and the information environment, as well as the iterative variables of the successful (or unsuccessful) results of particular searches, the potential involvement of other information users, and the searcher's ultimate satisfaction (or dissatisfaction). (Knight and Spink, 2008).

According to the Information Behavior Model, information-seeking behavior emerges as a result of a perceived need by an information user who, in order to meet that need, places demands on formal or informal information sources or services, resulting in success or failure to obtain relevant information; if successful, the individual then uses the information obtained to either fully or partially satisfy the perceived need; and if this process fails to satisfy the need, then the information-seeking behavior should be repeated (Wilson, 1999). Also, it is stated that a general model of this type was valuable in identifying areas where more research could be beneficial, citing the lack of research on information use as an example and that part of the information seeking behavior may involve other people through information exchange, and that information viewed as beneficial may be passed on to other people whether it is used or not by the person himself or herself (Wilson, 1999).

2.4.5. Information-Seeking Behavior Model

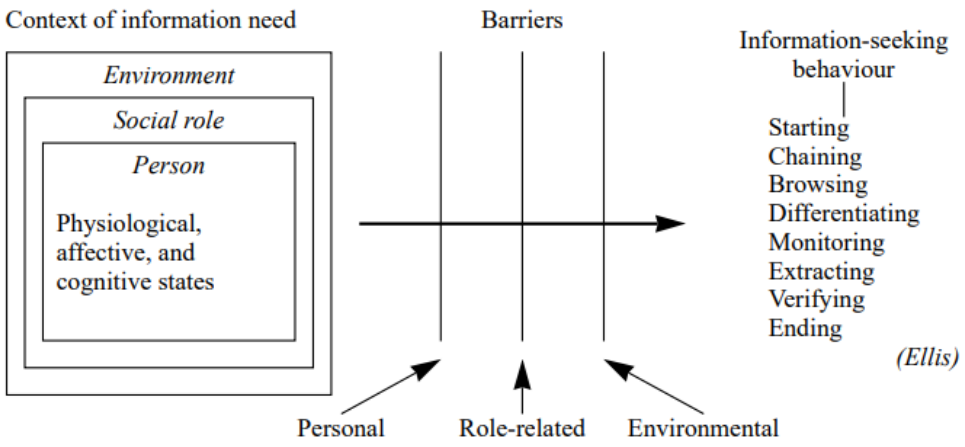

Figure 12: Wilson's Information-Seeking Behavior Model (Wilson, 1981)
Source: Wilson (1999)

The second model from 1981 is based on two fundamental propositions: first, that information need is a secondary need that arises from more basic needs; and second, that in the quest to acquire information to satisfy a need, the enquirer is likely to

encounter barriers of various kinds; thus, it is proposed that basic needs can be classified as physiological, cognitive, or emotive based on psychological classifications, and the context of any of these needs could be information need. (Wilson, 1999).

Wilson's (1981) model had a weakness in that it did not provide a clear description of how human beings interacted with an information retrieval system to identify and receive the material they sought (Knight & Spink 2008). Even though this model is referred to as a macro-model or a model of the overall information-seeking behavior and it offers insights into the ways in which information demands develop as well as what could obstruct the actual quest for information, there is no indication of the processes through which context affects the person, or of the causes that result in the perception of barriers, or of whether the many presumed obstacles have comparable or different effects on the motivation of individuals to seek information (Wilson, 1999).

2.5. Online Buying Behavior

As of January 2023, there are 5.18 billion of Internet users all around the world which is 64.4 percent of the global population (Statista, retrieved in 2023).

Over the previous 50 years, the industry of marketing has seen a number of paradigm transformations, but none has been more revolutionary than the most recent transition brought about by the Internet: Although early Internet marketing proponents overestimated the extent to which it would replace traditional marketing, few could deny that the Internet and its expanding set of tools have changed how customers and organizations engage in the marketplace (Cummins et al., 2014).

Following the long-term development of the internet, which has resulted in an increase in web users and high-speed internet connections, as well as the creation and deployment of new technology for web development, businesses can now market and enhance their product and service images through web sites, resulting in detailed product information and superior service, attracting an increasing

number of customers who are shifting their purchasing behavior away from traditional modes and online buying (Dange & Kumar, 2012).

There are several definitions and explanations about internet shopping behavior, online buying behavior or online shopping behavior as the scope of this topic is wide. The reason why marketers, scholars and business people started to lean on this subject is the global online buying rate of people. That is to say, as of 2023, the total number of digital buyers is 2.64 billion and this accounts for 33.3% of the global population meaning that one out of every three persons you see is an internet shopper (Oberlo, retrieved in 2023). There are some statements about what does online shopping and/or online buying behavior mean from different scholars and researchers.

Online shopping is defined by as the act of making a direct purchase from a seller without the use of a middleman or may also be referred to as the practice of making purchases and sales of things over the internet (Daroch et al., 2021).

According to Shih (2009), consumers primarily regard the Internet as a "Instrument of Convenience" because of the fact that online purchasing reduces overall shopping effort by allowing consumers to shop from the comfort of their own homes.

Online buying also saves time by providing remarkable simplicity, easy price comparisons, a consumer's infinite choice, easy access to consumer reviews and ratings, and so on (Jukariya & Singhvi, 2018). According to Vijay and Balaji (2009), consumers around the world are increasingly choosing one-click online buying over crowded storefronts.

2.5.1. External and Internal Factors Influencing Online Buying Behavior

Technology has been and will continue to be a motivating factor behind Internet marketing, as consumers' information-seeking behaviors and the ways in which they interact with sellers and other market participants have changed as they moved

from desktop computers to laptops to handheld devices like smartphones and tablets (Banerjee and Dholakia, 2012).

Li and Zang (2002), carried out a research about ten factors influencing the online buying behaviors and attitudes of consumers; and they presented a research model. The five elements that have been identified as antecedents often function as independent variables and shape attitudes toward online buying (see Fig. 13).

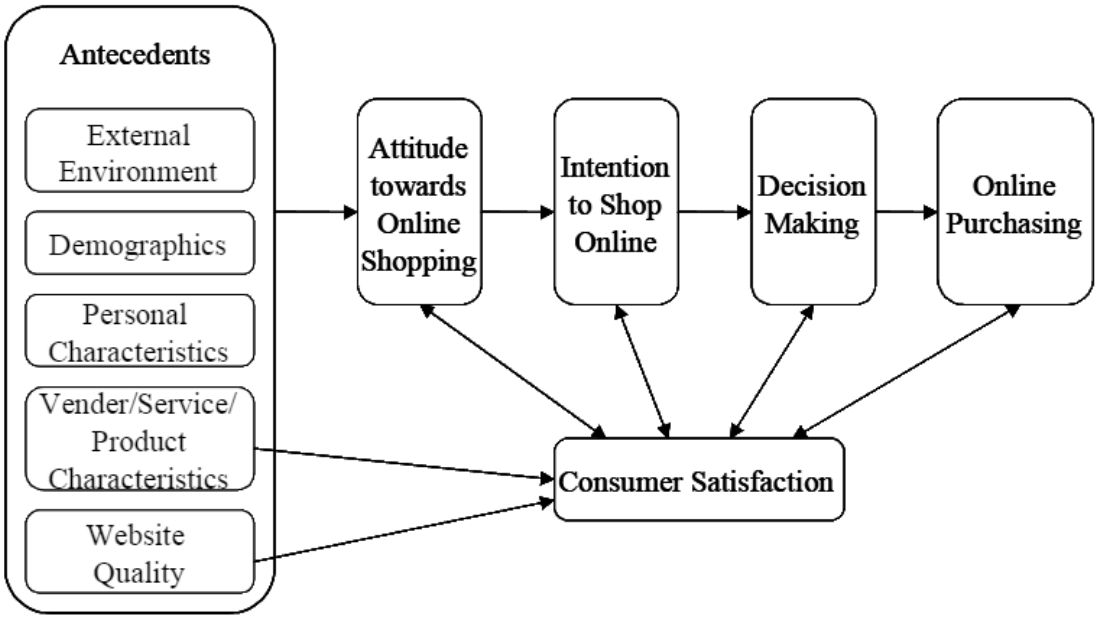

Figure 13. Research Model of Consumer's Online Shopping Attitudes and Behavior
Source: Li & Zang 2002

Consumer behavior researchers have access to a wide range of study options attributed to technical advancements with each new communication channel (Yang and Lee, 2010 as cited in Cummins et al., 2014). So, in hopes of developing theoretical frameworks for comprehending the preliminaries of successful buyer-seller relationships and throughout all stages of the consumer decision process, psychological, sociological, and behavioral research is required (Cummins et al., 2014).

There are numerous things that could affect customer behavior. Environmental elements are examples of external factors, while consumer attitudes are examples of internal factors (Dange & Kumar, 2012). Researchers studying online buying behavior of consumers, have divided this issue into two categories, internal and external factors, which influences the online buying behavior of consumers and in the following chapter, these two issues will be looked into.

2.5.1.1. External Factors Influencing Online Buying Behavior

The external factors influencing online buying behavior regarding the literature review of researchers and scholars will be explained in the following section.

2.5.1.1.1. Demographic Factor

There has been a lot of research on the attitudes, behavioral intentions, and adoption of online shopping in connection to different product categories and cultural contexts since online purchasers have different reasons for making purchases (Chawla et al., 2016).

Age, sex, occupation, education, family status, income, living conditions, and life expectancy are the defining characteristics of the consumer demographic profile, and reports indicate that factors consisting of income, gender, and ethnicity are significantly impacted by age, education, and career (Andersone & Gaile-Sarkane, 2009; Chawla et al., 2016).

Gender, marital status, income level, educational level, age, nationality are considered significant factors to predict the online buying behavior of consumers. Sultan and Henrics (2000) mentions that consumer readiness and enthusiasm for using the Internet as a shopping medium was also favorably connected to income, family size, and innovativeness.

Today's Internet buyers display a diversity of income and education (U. S. Department of Commerce, 2003 as cited in Richa, 2012), in comparison to the young, professional males of the past who had higher incomes, income levels, risk tolerance, and social status along with a greater dependence on the media and the need to use established retail channels (Ernst & Young, 2001; Mahajan, Muller &

Bass, 1990 as cited in Richa, 2012). In 2000, women were the primary online holiday season shoppers in (Sultan & Henrichs, 2000) and according to a Pew Research Center research (2001), the number of women (58%) who shopped online outnumbered males by 16%.

As of January 2023, female online buyers continue to buy more frequently each year, on average 7 times per year, compared to men who buy online approximately 5 times per year, and women make 7% faster purchasing decisions than men; as a result, many online retailers target women on social media with promotional campaigns that encourage impulse purchases (Tidio, retrieved in 2023).

When it comes to nationality, China, the United States, Japan, the United Kingdom, France, and Germany are the countries that spend the most money on internet shopping, and when it comes to the age component of the ecommerce sector, Gen X online purchasers remain the most important consumer group; they routinely shop online and have the highest average yearly expenditure (almost $70,000) of any generation, and while their total cumulative buying power is lower than that of the Baby Boomers, they compensate by shopping online more frequently (Tidio, 2023).

2.5.1.1.2. Personal Characteristics

Personal qualities include demographics, personality, value, lifestyle, attitude, consumer resources, consumer psychological aspects, behavioral traits, motivation, and experience (Chan et al., 2003).

Individuals who buy online more frequently are more convenience-oriented and less experience-oriented because they are time-constrained and do not mind buying things without touching or feeling them if it means saving time; these consumers rate convenience during shopping as the most important factor in purchase decisions (Li & Zhang, 2002).

Potential consumers concern about security and this situation deter them from shopping online (Han et al. 2001 as cited in Li & Zhang, 2002). Nonetheless, knowledge, competence, and familiarity with the Internet, computers, and online

purchasing can help to lessen perceived risk (Ratchford et al., 2001; Senecal 2000; Ha et al. 2001; Li & Zhang, 2002).

However, as Generation Z, Y and X have become much more involved with the Internet especially after the Pandemic in 2019, buying online has become as easy as the tasks that they perform daily such as answering to mails, reading messages, sharing photos, using navigation etc. People are in need of motivation or fulfilment, some of the people might reach that motivation by having experiences, some of them by buying a very expensive bag or buying themselves a holiday abroad. It depends on the characteristics of the people however we are living in an era that everything that is mentioned above can be reached online therefore people have become more familiar with buying online and spend their money online.

2.5.1.1.3. Vender/Service/Product Characteristics

There are several factors influencing online shopping behavior of consumers; vender, service product and characteristics are one of these factors as Li and Zang (2022) used in their Online Shopping Attitudes and Behavior.

In an empirical study of Bhatnagar et al., (2004) the following metrics to utilizes vender characteristics are used: (1) the existence of the store/physical location; (2) its reputation; (3) its size; (4) its dependability; (5) the number of Internet store entrances; (6) assurance-building mechanisms (such as seals, warranties, news clips); and (7) its use of customer reviews (Jukariya and R. Singhvi, 2018). While Bhatnagar gives detailed sub-factors affecting the vender characteristics, there are other scholars that study this case mainly relying on online shopping behavior of consumers and trustworthiness and reputation is one of the most common point. Huang and Benyoucef (2015) states that consumer behavior is affected by the reputation and trustworthiness.

A research that Limayem et al., (2015) conducted has shown that satisfaction and loyalty are the natural consequences of a trusted and reputable vendor, therefore the higher the trust and reputation of the vendor is, the greater effect on the satisfaction and loyalty of this vendor attributed by consumers. Research has shown that

consumers are more likely to purchase from vendors they trust and perceive as reputable, and that trust in the vendor positively affects satisfaction and loyalty.

Consumer behavior can be dramatically influenced by the quality of service offered by an online vender and the consumers' satisfaction and loyalty can be influenced by the service's convenience, personalization, and ease of use (Paraskevas & Papadimitriou, 2019). Online consumers expect the platform to be easy to use and browse, and they are more likely to be satisfied with the service if it is personalized and adapted to meet their needs. Hence, while building an online platform for consumers a user-friendly interface and simplified purchasing procedure are essential aspects (Zeithaml et al., 2018). Another important factor is the quality of customer service provided by the vendor as quick and helpful customer service can increase consumer trust and loyalty (Van Doorn et al., 2010) whereas the opposite situation can cause negativity against the vender and decrease on loyalty. Therefore, it is important for venders to evaluate and answer the reviews of the consumers and provide efficient feedback.

Consumers' online shopping behavior is affected significantly by product characteristics such as quality, price, and perceived value as people are more likely spend their money on the online products which offers high quality, reasonably prices and good value for money (Kim & Kim, 2018). One factor affecting consumer while shopping online is the product presentation, as the accurate description and high-quality images can increase the confidence and trust in vender (Babin & Attaway, 2000). In relation with this matter, another factor is the perceived risk when shopping online as consumers are often concerned about the quality of the product, the accuracy of the product in descriptions, and the security of online transactions (Li & Zhang, 2002). Therefore, venders should ensure the online transaction of the consumers when shopping online are safe, they are not deceiving the consumers and everything that they see on the website is accurate and can be trusted.

2.5.1.1.4. Website Quality

There are several advantages of online shopping that make this process satisfying and beneficial for consumers such as not having to go the shopping mall in order to make a purchase when they are able to do it from their home without even cash by just using their credit cards (Hossain & Rahman, 2022). If a website design provides pleasant and unerring experience for the consumers, the satisfaction and the loyalty rise whereas when the consumers face with technical problems and poor website design lead the abandonment of the website and affect the purchase decision of the consumer therefore causes lost in sales (Sorce et al., 2005).

2.5.1.2. Internal Factors Influencing Online Buying Behavior

The internal factors influencing online buying behavior regarding the literature review of researchers and scholars will be explained in the following section.

2.5.1.2.1. Attitude Towards Online Buying

The consumer has a positive attitude towards online shopping if he or she considers online buying convenient and time-saving, whereas if the consumer thinks the online buying process lacks of trust and security, this situation creates a negative attitude towards online shopping (Jarvenpaa and Todd, 1997). Attitude towards online buying has an impact on online buying intention, therefore keeping the attitude positive is important.

Javadi et al. (2012) investigated factors influencing online buying behavior of consumers as well as how perceived risks (financial risks, product risk, convenience risk, and non-delivery risk) influence attitudes toward online shopping and it is discovered that financial risks and non-delivery risk had a negative impact on attitudes toward online purchasing, while product risks and convenience risk had no significant impact.

The findings also revealed that domain-specific innovativeness and subjective norms have a positive impact on online buying behavior, in addition the research has shown that consumers' attitudes towards online buying has an influence on their online shopping behavior (Masoud, 2013). Furthermore, customers' attitudes about

online buying have been proven to be influenced by perceived control/user empowerment, enjoyment/playfulness, and perceived actual added-value from membership (Koufaris et al. 2002; Cho et al. 2001 as cited by Li & Zhang, 2002).

2.5.1.2.2. Intention to Buy Online

The willingness of consumers to make purchases online is referred to as their intention to shop online; and this factor is commonly measured by consumers' willingness to buy and return for additional purchases; that is to say, if a consumer returns to the website to shop online, this situation helps to increase consumer loyalty (Li & Zhang, 2002).

One of the important factors affecting intention for buying online is the individuals' attitudes towards online buying; so as to say, if the individuals consider online buying as a convenient and time-saving activity compared to traditional way of shopping, their intention to buy online is higher (Jarvenpaa and Todd, 1997).

The TAM takes into account two direct factors related to intention: attitude toward technology and perceived usefulness; perceived usefulness influences attitude toward technology (Crespo, Bosque, & Sánchez, 2009). Perceived usefulness is defined as an individual's belief that utilizing the system will improve his or her performance, whereas perceived ease of use is described as an individual's belief that using the system will be easy and effortless (Venkatesh & Davis, 2000).

In a study, Kim et al. demonstrated that consumer trust has a strong positive effect on purchase intention while having a significant negative impact on a consumer's perception of risk, also it showed that a consumer's perception of risk reduces the consumer's purchase intention, whereas a consumer's perception of benefit increases the consumer's purchase intention (Lee & Turban, 2001).

2.5.1.2.3. Decision Making

When consumers make their decision about shopping online, there are several positive and negative factors that affect their decision making process.

Mican & Sitar-Taut (2020) state in their research paper that product characteristics, the consumer/specialist reviews of the products, price, opinions of the consumers from trusted sources as well as opinions on every source are the major factors influencing the decision making process of consumers while shopping online. Consumers may shop online as their friends or family members also buy online and this situation shows that the sociocultural influences play an important role in decision making process as well (Wei, 2016).

Convenience is another important factor as online shopping gives the consumers the comfort of shopping from their home whenever they want and however it is convenient for them (Chen & Barnes, 2007; Kim & Forsythe, 2008).

As online shopping payment modes are mostly performed with credit card, the consumers are wary of from who they are purchasing in order to protect themselves, so they tend to purchase from the sellers that they trust and the brands that they are familiar with when they are making a decision about shopping online whether it is a service or a product (Lim & Dubisnky, 2004; Chen & He, 2003; as cited in Katawetawaraks & Wang, 2013)

3. RESEARCH METHODOLOGY

This part of the research will emphasize the study's research design in order to achieve the research objectives and inquiries. This part will also discuss the data collecting method, the instruments used to complete the data collection procedure, the sample size, and the sampling technique. This part will additionally show the variable scales, the data analysis technique, the measurements for validity and reliability, and ethical considerations.

3.1. The Aim of the Research

Online shopping has become a regular activity in our life as we live in Digital Age, without even realizing we, consumers, have become very comfortable with online shopping by just clicking on our phones or on our tablets or laptops and ordering a new dress for the New Year, a new technological device or our weekly groceries.

The aim of the research is to understand the consumer behavior of students in Turkey on online shopping in the scope of Davis' Technology Acceptance Model.

This research will provide information about the factors affecting consumer behavior of university students and how they affect the intention of shopping online.

3.2. Hypotheses

HP1: Perceived usefulness has a positive influence on the intention to shop online.

HP2 : Attitude has a positive influence on the intention to shop online.

HP3: Perceived ease of use has a positive influence on the intention to shop online.

HP4: Perceived risk has a negative influence on the intention to shop online.
HP4.a: Perceived financial performance risk has a negative influence on the intention to shop online.

HP4.b: Perceived performance risk has a negative influence on the intention to shop online.

HP4.c: Social performance risk has a negative influence on the intention to shop online.

HP4.d: Time risk has a negative influence on the intention to shop online.

HP4.e: Psychological risk has a negative influence on the intention to shop online.

HP4.f: Privacy risk has a negative influence on the intention to shop online.

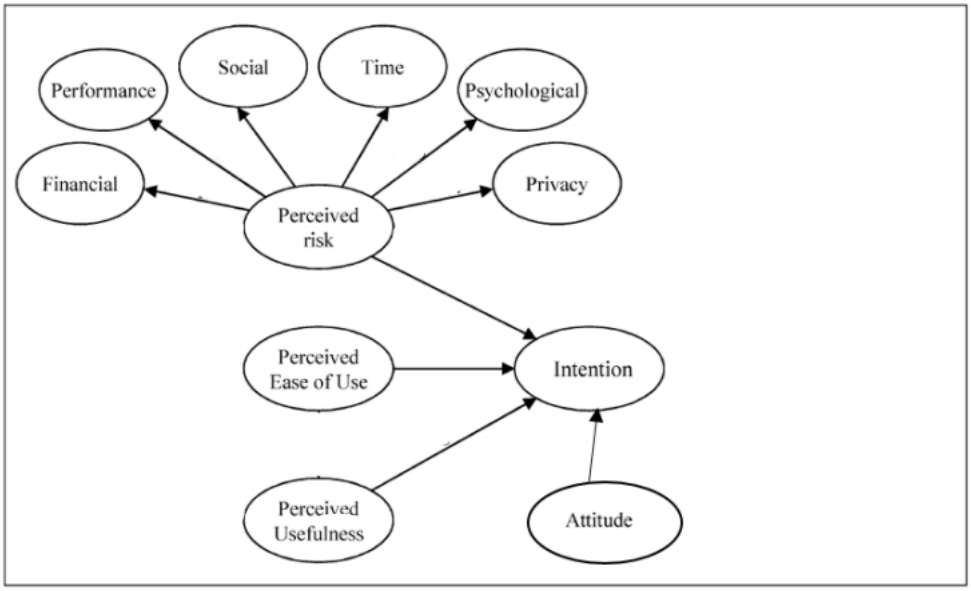

Figure 14. Proposed Research Model

3.3. Limitation of the Study

This research paper has used quantitative methods due to the limited time and the extensiveness of this topic. In order to understand the whole Turkish university students' perspective on that matter, the number of the participants can be increased and qualitative or mixed research methods can be applied. The students are compared in terms of their faculty by the faculty of science and faculty of social sciences however, this questionnaire was limited to 300 university students therefore this population can be increased to see if they vary in terms of buying behavior in a qualitative research. The variables can be expanded to get more clear

and effective results. This research might highlight important facts if improved, and provide an insight to the scholars and business about how consumer behavior evolves with the technology and what has an impact on the buying behavior of the consumers.

3.4. Data Collection Method

The objective of this research paper is to analyze the buying behavior of Turkish university students. This research paper is based on the Technology Accepted Model that suggested by Davis, Crespo's TAM scale is used to understand how buying intention is affected by perceived usefulness, perceived ease of use, perceived financial risk, perceived performance risk, perceived social risk, perceived time risk, perceived psychological risk and perceived privacy risk, also the demographic differences of the students are taken into consideration to understand.

A positivist approach, which is used to test a proposed theory or a hypothesis, will be used in this research paper.

The data collection method will be based on primary data in order to rely on genuine facts. A questionnaire will be sent to a target group which is Turkish university students. The university student's education level is not limited therefore from Associate Degree to Doctoral Degree, the students are welcomed to participate, this openness of the education level of the university students causes a diversity between ages. Also, in order to compare the different opinions of the different faculties, the target university students are chosen to be both Faculty of Sciences. There are 300 university students that has participated to the survey. The data was collected from the dates of 12th of February to 18th of March.

There are independent and dependent variables in the research. The dependent variable is buying intention of the consumers, this variable will be mentioned as intention in the upcoming section of the research paper, the independent variables are attitude, perceived usefulness, perceived ease of use, perceived financial risk, perceived performance risk, perceived social risk, perceived time risk, perceived psychological risk and perceived privacy risk. The questions used in this research

is already tested by other researchers and they are related to each other in the survey to get consistent results from the participants.

While evaluating the findings obtained in the study, a quantitative method was applied and IBM SPSS Statistics 22 program was used for statistical analysis.

3.4.1. Sampling Method

There are several sampling methods that a researcher can use while conducting a research, in this paper purposive sampling method is used. The researcher uses purposive sampling to pick participants based on certain characteristics, such as their competence or experience in a particular area and this strategy is effective when the researcher wants to choose participants who are most likely to contribute important information even though it can be biased (Babbie, 2016). As the time is limited, and the topic of consumer behavior is too wide, this paper aims to focus on specifically the university students buying behavior.

Therefore, the participants are chosen specifically to be studying at the university regardless of their degree. Another important element is to reach out two different faculties; faculty of sciences and faculty of social sciences in order to analyze if there are any differences on their buying behavior.

Other sampling method applied in this paper is snowball sampling method. Participants in snowball sampling are chosen based on referrals from other participants and this method is applied when the target population is difficult to reach or the researcher is interested in a specific subset within the larger population (Bryman, 2016). As the research is prepared to reach out the consumers which are university students and from either of faculty of sciences and faculty of social sciences, the support of the participants is needed in order to reach a meaningful result by reaching out enough amount of people.

3.4.2. Data collection instrument

The methods and tools utilized by the researcher to collect data from research participants are referred to as data collection instruments and the researcher explores different data collection tools, such as surveys, interviews, and

observations (Kothari, 2004). Survey research is a common method of data obtaining in the social sciences that can be used for quantitative, qualitative, or mixed-methods research. Paper-based questionnaires, online surveys, and telephone interviews can all be used for carrying out surveys (Fink, 2019).

It is critical to examine the research question, the target group, and the sort of data to be collected when creating a questionnaire for a thesis, therefore the questionnaire to be used should be created in such a way that the questions are straightforward, unambiguous, and objective. Researchers may want to look into correlations between various questions or variables by employing techniques such as factor analysis or regression analysis to investigate the link between variables (Bryman, 2016).

Open-ended or closed-ended questionnaires can be used in questionnaires; closed-ended questions offer a set of prepared response alternatives that the participants are obliged to choose from, whereas open-ended questionnaires allow participants to respond in their own terms. If the researchers aim to analyze certain attitudes, beliefs, or actions, closed-ended surveys can be effective; however, there are some limitations of this data collection tool as the participants might not answer truthfully or accurately if they do not wish to share specific information or they are having hard time recalling the details of the matter, despite all these, the researchers might minimize the effect of these issues by using anonymity or confidentiality to help participants attend he questionnaires with an open heart. (Babbie, 2016).

The questionnaire used in this research paper is shared on social media platforms such as Instagram and WhatsApp. There are open-ended and close-ended questions in the questionnaire and the questionnaire has three sections. The first section aims to understand the buying behavior of the participants during online shopping by exploring the amount of time they spend on the Internet, there frequency of buying online, their mostly used websites that they buy online and their intention to use the Internet. The second section aims to examine the factors affecting the online shopping buying behavior of the consumers through the scope of TAM. The third and last section concerns about the demographic effects on buying behavior by questioning the age, gender, the faculty that they study in and so forth.

All the questions are measured on a point of 5 Likert scale ranging 1= Strongly disagree, 2= disagree, 3= Neutral, 4= Agree and 5= Strongly agree.

3.4.3. Operationalization of the Variables

Table 1: Scales used in Research

Scale Name	Source	Item Number
Intention	Taylor et al., Gefen et al. (1995;2000)	**4**
Attitude	Taylor & Todd (1995)	**3**
Perceived Usefulness	Taylor et al., Heijden et al. (1995;2003)	**4**
Perceived Ease of Use	Taylor et al., Heijden et al. (1995;2003)	**4**
Perceived Financial Risk	Stone et al., Todd et al., Pavlou et al. (1993;1997;2003)	**3**
Perceived Performance Risk	Stone et al., Todd et al., Pavlou et al. (1993;1997;2003)	**3**
Perceived Social Risk	Stone et al., Todd et al., Pavlou et al. (1993;1997;2003)	**3**
Perceived Time Risk	Stone et al., Todd et al., Pavlou et al. (1993;1997;2003)	**3**
Perceived Psychological Risk	Stone et al., Todd et al., Pavlou et al. (1993;1997;2003)	**3**
Perceived Privacy Risk	Stone et al., Todd et al., Pavlou et al. (1993;1997;2003)	**3**

Source: Crespo et al. (2009)

3.4.4. Validity and Reliability of Scales

The extent to which a research study measures what it is intended to evaluate is referred to as validity, which is an essential consideration in thesis research. In other words, if a study appropriately examines the phenomenon under study, it is called

valid. There are three types of validity which are content validity, construct validity and criterion-related validity, they evaluate distinct components of a research study (Creswell, 2014).

Content Validity

Content validity is a vital component of thesis research for the reason that it assures that the items in a measurement tool accurately represent the construct or phenomenon under research and in order to achieve content validity, the items to be used should be picked carefully and they should be relevant to the construct being measured and the researcher must ensure that the items cover the whole range of the construct (Bolarinwa, 2015).

Construct Validity

Construct validity is the degree to which a measurement tool genuinely measures the construct or concept that it is designed to measure and in order to establish construct validity, researchers must show that the measurement tool is measuring the construct in question and not another construct. Several methods can be used in order to establish construct validity such as comparing scores on the measurement tools with the other measurement tools that are proven to validated, conducting factor analysis also is a way to measure the construct validity (Trochim & Donnelly, 2008).

Criteria Validity

The degree to which a measurement tool accurately predicts or correlates with an established external criterion is referred as criterion validity. Criterion validity is classified into two types: concurrent validity and predictive validity. Concurrent validity is established when the measurement tool is compared to an external criterion at the same time, whereas predictive validity is established when the measurement tool is utilized to forecast a future outcome (DeVellis, 2017).

The consistency and stability of a measurement tool over time and across varied situations is referred to as its reliability. Researchers utilize statistical tools to examine the degree of agreement or consistency between repeated measurements

to establish reliability (DeVellis, 2017). There are different types of reliability, such as test-retest reliability, inter-rater reliability, and internal consistency reliability.

Test-Retest Reliability

To establish test-retest reliability, researchers administer the same measurement tool to the same group of participants twice and then compare the scores. The period between administration should be long enough to guarantee that participants are not just recalling their prior replies, and short enough that the construct being measured has not changed drastically. The degree of correlation between the scores on the two administrations is used to establish the measurement tool's test-retest reliability (DeVellis, 2017).

Inter-Rater Reliability

Inter-rater reliability evaluates the degree of agreement between various raters or observers that use same measurement tool to rate or see the same phenomena, and in order to determine the level of agreement amongst the raters, researchers often compute a statistic such as Cohen's kappa or intraclass correlation coefficient (ICC). Higher levels of agreement imply more inter-rater reliability, whereas lower levels of agreement suggest less reliability (DeVellis, 2017).

Inter Consistency Reliability

Internal consistency reliability is a sort of dependability that assesses how well items on a scale or test measure the same construct or idea and it can be assessed using a variety of approaches, including coefficient alpha, also known as Cronbach's alpha. All of these strategies entail comparing scores on several items or subscales within the assessment tool to evaluate how closely they correlate: higher correlations suggest higher dependability of internal consistency, while lower correlations indicate less reliability (DeVellis, 2017; Trochim & Donnelly, 2008).

3.4.5. Data Analysis Method

While evaluating the findings obtained in the study, IBM SPSS Statistics 22 program was used for statistical analysis. The suitability of the parameters to the normal distribution was evaluated with the Kolmogorov-Smirnov test and it was determined that the parameters did not show normal distribution. While evaluating the study data, descriptive statistical methods (minimum, maximum, mean, standard deviation, median, frequency) as well as quantitative data are compared.

Kruskal Wallis test was used for the comparison of the parameters between more than two groups and Dunn's test was used to determine the group that caused the difference.

Mann Whitney U test was used for the comparison of parameters between two groups.

Spearman's rho correlation analysis was used to examine the relationships between the parameters.

3.4.6. Ethical Consideration

"Ethics in research refers to the principles and values that guide researchers in carrying out their studies and ensuring that the research is carried out in a respectful, responsible, and transparent manner" (American Psychological Association, 2017).

Informed consent, confidentiality and privacy, risk assessment, respect for participants, and responsible behaviour are some of the important ethical aspects that should be addressed in a thesis (National Institutes of Health, 2018; University of California, Berkeley).

Therefore, the questionnaire includes the following information in the description of the form:

1. The purpose of the study,

2. Participating is voluntary and the data collected will be anonymous.

3. The information of the participants shared was mentioned to be used only for the purpose of the research.

3.4.7. Variables (Independent and dependent variables)

This research aims to address understanding the factors that has an effect on consumer behavior of Turkish students when they are shopping online, and how these factors affect or change their buying behavior.

The dependent variable is buying intention, which is referred as intention in short in the upcoming section of the paper, the independent variables are attitude, perceived usefulness, perceived ease of use, perceived financial risk, perceived performance risk, perceived social risk, perceived time risk, perceived psychological risk and perceived privacy. The demographic factors of the participants will also be evaluated during the research analysis to examine whether they have any impact on the buying behavior or not.

These variables are stated in **"3.3.3 Operationalization of the Variables"** part and address understanding of the main factors that are examined in this research.

3.5. Data Analysis, Findings and Discussion

This section of the research presents the conducted questionnaire results, their interpretation and the final findings with discussion at the end with the limitations of the research and discussion part. Linear regression analysis was applied for multivariate analysis for this research.

3.6. Reliability Analysis

Exploratory factor analysis (EFA) was used to test the structural validity of the online shopping buying behavior scale. The adequacy of the sample for factor analysis was evaluated using the Kaiser–Meyer–Olkin (KMO) test. Bartlett test revealed the correlation between variables. KMO indicates sampling adequacy, and KMO greater than or equal to 0.80 indicates valuable discrimination. The Bartlett test result being significant means that the correlation matrix is suitable for the factor.

Cronbach's alpha coefficient was calculated for the reliability of the scale scores.

Significance was evaluated at the $p<0.05$ level.

3.7. Statistical Findings

The statistical findings of the research will be shown in the upcoming sections by their relationship with the research topic and scale through a statistics of descriptive frequency tables and percentages.

3.7.1. Descriptive Statistical Findings Regarding the Scales Applied to the Participants

Descriptive statistical findings regarding the scales applied to the participants were examined and are shown in this section. The participants of the survey have been 300 university students varying from 16 to 54. The average age is 24.39±6.01 years and, 23 median age. The demographic statistical findings are shown in Table 2.

Table 2: Descriptive Statistical Findings of the Participants Participating in the Study

		n	**%**
Gender	Female	186	62
	Male	114	38
Age	<25 age	179	59,9
	≥25 age	121	40,1
Current Education Status	Associate Degree	4	1,3
	Bachelor's Degree	253	84,3
	Master's Degree	31	10,3
	Doctoral Degree	12	4
Faculty	Faculty of Sciences	145	48,3
	Faculty of Social Sciences	155	51,7

When the gender of the participants is examined 62% are female and 38% are male. The data obtained from the research has shown that 59.9% of the participants are under the age of 25 and 40.1% are above the age of 25.

When their current education status has been examined, the results have shown us that 1.3% of the participants are currently in their Associate Degree, 84.3% are in their Bachelor's Degree and 4% are in their Doctoral Degree.

Also the data obtained has shown that 48.3% of the participants' study in Faculty of Sciences and 51.7% study in Faculty of Social Sciences.

The descriptive statistical findings of the participants' internet usage are shown in Table 3.

Table 3: Descriptive Statistical Findings of the Participants' Internet Usage

		n	**%**
How many hours do you spend on the Internet?	Less than 1 hour	5	1,7
	1-2 hours	40	13,3
	3-5 hours	146	48,7
	6-9 hours	69	23
	More than 9 hours	40	13,3
What is your purpose of using the Internet?	E-mail	8	2,7
	Education	18	6
	Entertainment	64	21,3
	Shopping	4	1,3
	Social Media	188	62,7
	Others	18	6
How often do you shop Online?	At least twice a week	39	13
	Once a week	54	18
	Every other week	67	22,3
	Once a month	124	41,3
	Once a year	16	5,3
Do you recommend shopping Online?	No	4	1,3
	Neutral	33	11
	Yes	165	55
	Definitely yes	98	32,7
Do you think Online shopping has changed your shopping behavior?	Yes	242	80,7
	No	58	19,3
From which category do you shop the most?	Clothes-Accessorizes	188	62,7
	Electronic Devices	17	5,7
	Personal Care	19	6,3
	Furniture	3	1
	Book-Hobby	25	8,3
	Supermarket	48	16

The study has shown that 48.7% of the participants spend 3-5 hours in a day, 23% of the participants spend 6-9 hours in a day, 13.3% of the participants spend 1-2 hours in a day, 13.3% of the participants spend more than 9 hours in a day and 1.7% of the participants spend less than 1 hour in a day.

When the purpose of using the internet is examined, it is seen that 62.7% of the participants use the internet for social media, 21.3% of the participants use the internet for entertainment, 6% of the participants use it for education, 2.7% of the participants use it for E-mail, 1.3% of the participants use it for online shopping and 6% of the participants use it for other reasons.

When the frequency of the internet consumption is examined, it is seen from the data obtained that 41.3% shop online once in every month, 22.3% of the participants shop online every other week, 18% of the participants shop online once a week, 13% of the participants shop online twice a week and %5.3 of the participants shop once a year.

When the recommendation rates of the participants are examined, it is seen that 55% of the participants recommend shopping online, 32.7% of the participants definitely do not recommend shopping online, 11% of the participants are neutral and 1.3% of the participants do not recommend shopping online.

When the online shopping effect on buying behavior of the consumers are examined, it is seen that 80.7% of the participants believe that online shopping has changed their buying behavior. When the categories that participants shop from the most is examined, it is seen that 62.7% of the participants shop clothes and accessories, %16 of the participants shop from supermarket, 8.3% of the participants shop for books and hobbies, 6.3% of the participants shop for personal care, 5.7% of the participants shop for electronic devices and 1% of the participants shop for furniture.

The descriptive statistical findings of the websites that the participants shop the most frequently is shown in Table 4. The first website that the participants shop online the most frequently is Trendyol with the rate of 73.7%

Table 4: Websites that Participants Shop the Most Frequently

Websites that Participants Shop the Most Frequently	**n**	**%**
Trendyol	**221**	**73,7**
Hepsiburada	15	5,0
Zara	7	2,3
Getir	6	2
Yemeksepeti	4	1,3
Others	47	15,7
Total	300	100

The descriptive statistical findings of the second websites that the participants shop the most frequently is shown in Table 5. The second website that the participants shop online the most frequently is Hepsiburada with the rate of 22,3%.

Table 5: The Second Websites that Participants Shop the Most Frequently

The Second Websites that Participants Shop the Most Frequently	**n**	**%**
Hepsiburada	**67**	**22,3**
Trendyol	43	14,3
Getir	31	10,3
Amazon	27	9,0
Yemeksepeti	14	4,7
Others	118	39,4
Total	300	100

The descriptive statistical findings of the third websites that the participants shop the most frequently is shown in Table 6.

Table 6: The Third Websites that Participants Shop the Most Frequently

The Third Websites that Participants Shop the Most Frequently	**n**	**%**
Hepsiburada	**63**	**21,0**
Yemeksepeti	27	9,0
Getir	23	7,7
N11	16	5,3
H&M	7	2,3
D&R	3	1,0
Others	164	53,7

The third website that the participants shop online the most frequently is Hepsiburada with the rate of 22,3%.

3.7.2. Validity of the Online Buying Behavior Scale

In order to test the validity of the research scale, KMO and Barlett's test results have been applied, the results are shown in Table 7.

Table 7: Validity of the Online Shopping Buying Behavior Scale – KMO and Barlett's Test Results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,847
Bartlett's Test of Sphericity	Approx. Chi-Square	3941,643
	df	528
	Sig.	0,001*

The validity of the online shopping buying behavior scale has been tested with Exploratory Factor Analysis has been conducted. Principal Component Analysis and Varimax Rotation approaches has been applied in order to conduct Factor analysis.

The scale has been valid with the Kaiser Mayer Olkin (KMO) sample validity rating of 0.847. This score shows that the sample is adequate for the factor analysis. Barlett test result (χ^2=3941.643; df=528, p=0.001) has been found meaningful. The results have shown that the correlation matrix of the data group is suitable for factor analysis.

Total Variance Explained for Online Shopping Buying Behavior is shown in Table 8.

Table 8: Total Variance Explained for Online Shopping Buying Behavior

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6,768	20,508	20,508	6,768	20,508	20,508	3,379	10,24	10,24
2	4,548	13,783	34,291	4,548	13,783	34,291	2,935	8,895	19,135
3	2,372	7,187	41,479	2,372	7,187	41,479	2,855	8,653	27,788
4	1,48	4,484	45,962	1,48	4,484	45,962	2,700	8,181	35,969
5	1,374	4,164	50,126	1,374	4,164	50,126	2,373	7,190	43,159
6	1,187	3,598	53,725	1,187	3,598	53,725	2,107	6,386	49,545
7	1,138	3,449	57,174	1,138	3,449	57,174	1,788	5,418	54,963
8	1,083	3,283	60,457	1,083	3,283	60,457	1,285	3,894	58,857
9	1,037	2,841	63,298	1,037	2,841	63,298	1,198	3,631	62,488
10	1,004	2,728	66,026	1,004	2,728	66,026	1,167	3,538	66,026
.	.	.	.						
.	.	.	.						
.	.	.	.						
.	.	.	.						
.	.	.	.						
33	0,122	0,371	100						

Principal Components Analysis and Varimax Rotation approaches were applied to the 33-item Online shopping buying behavior scale as exploratory factor analysis. Table 8 shows that, as a result of factor analysis on the 33-item scale, it was observed that a structure with 10 factors, which explained 66,026% of the total variance and whose eigenvalues were above 1, emerged. The first factor accounted for 10.24% of the total variance, the second factor 8.895% of the total variance, the third factor 8.653%, the fourth factor 8.181%, the fifth factor 7.19%, the sixth factor 6.386%, the seventh factor 5.418%. The eighth factor explains 3.894%, the ninth factor 3.631% and the tenth factor 3.538%. The factor loads of online shopping buying behavior scale is shown in Table 9.

Table 9: Factor Loads of Online Shopping Buying Behavior Scale

	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
INTEN13	0,817									
INTEN14	0,756									
INTEN12	0,729									
INTEN11	0,661									
ATTIT17		0,819								
ATTIT16		0,798								
ATTIT15		0,685								
PU18			0,799							
PU19			0,758							
PU20			0,661							
PU21			0,641							
PEOU24				0,627						
PEOU 22				0,553						
PEOU 25				0,551						
PEOU 23				0,484						
RSK_FIN26					0,577					
RSK_FIN27					0,562					
RSK_FIN28					0,458					
RSK_PER30						0,811				
RSK_PER29						0,633				
RSK_PER31						0,546				
RSK_SOC33							0,898			
RSK_SOC32							0,831			
RSK_SOC34							0,799			
RSK_TIM36								0,701		
RSK_TIM35								0,650		
RSK_TIM37								0,532		
RSK_PSI39									0,807	
RSK_PSI40									0,803	
RSK_PSI38									0,765	
RSK_PRI42										0,750
RSK_PRI43										0,745
RSK_PRI41										0,743

Four items were collected under the first factor. Loads of the factor called “buying intention” and it is shortened to “INTEN” at the Table 9, the factor loads vary between 0.661 and 0.817.

Three items were collected under the second factor. Loads of the factor called “buying attitude” and it is shortened to “ATTIT” at the Table 9, the factor loads vary between 0.685 and 0.819.

Four items were collected under the third factor. Loads of the factor called “perceived usefulness” and it is shortened to “PU” at the Table 9, the factor loads vary between 0.641 and 0.799.

Four items were collected under the fourth factor. Loads of the factor called “perceived ease of use” and it is shortened to “PEOU” at the Table 9, the factor loads vary between 0.484 and 0.627.

Three items were collected under the fifth factor. Loads of the factor called “perceived financial risk” and it is shortened to “RSK_FIN” at the Table 9, the factor loads vary between 0.458 and 0.577.

Three items were collected under the sixth factor. Loads of the factor called “perceived performance risk” and it is shortened to “RSK_PER” at the Table 9, the factor loads vary between 0.546 and 0.811.

Three items were collected under the seventh factor. Loads of the factor called “perceived social risk” and it is shortened to “RSK_SOC” at the Table 9, the factor loads vary between 0.799 and 0.898.

Three items were collected under the eight factors. Loads of the factor called “perceived time risk” and it is shortened to “RSK_TIM” at the Table 9, the factor loads vary between 0.532 and 0.701.

Three items were collected under the ninth factor. Loads of the factor called “perceived psychological risk” and it is shortened to “RSK_PSI” at the Table 9, the factor loads vary between 0.765 and 0.807.

Three items were collected under the tenth factor. Loads of the factor called “perceived privacy risk” and it is shortened to “RSK_PRI” at the Table 9, the factor loads vary between 0.743 and 0.750.

Cronbach's Alpha values of the scale and its sub-dimensions of online shopping buying behavior and reliability analysis' statistics results are shown in Table 10.

Table 10: Cronbach's Alpha Values of the Scale and its Sub-Dimensions of Online Shopping Buying Behavior and Reliability Analysis

	Item number	**Min**	**Max**	**Mean**	**SD**	**Median**	**Cronbach's alpha**
Intention	4	1,75	5	3,38	0,54	3,3	0,793
Attitude	3	1	5	4,05	0,80	4,0	0,780
Perceived Usefulness	4	1	5	4,08	0,64	4,0	0,781
Perceived Ease of Use	4	1,75	5	3,62	0,58	3,5	0,765
Perceived Financial Risk	3	1	5	2,85	0,94	2,7	0,833
Perceived Performance Risk	3	1	5	2,95	0,96	3,0	0,769
Perceived Social Risk	3	1	5	1,84	0,92	1,7	0,878
Perceived Time Risk	3	1	5	2,81	1,02	2,7	0,774
Perceived Psychological Risk	3	1	5	2,08	0,97	2,0	0,878
Perceived Privacy Risk	3	1	5	3,53	0,96	3,7	0,785

Min.: Minimum, Max.: Maximum, Mean: Mean, SD: Standard deviation

The intention scores range from 1.75 to 5, with the mean and standard deviation of 3.38±0.54, a median value of 3.3, and a Cronbach's alpha coefficient of 0.793.

The attitude scores range from 1 to 5, with the mean and standard deviation of 4.05±0.80, median value 4 and Cronbach's alpha coefficient 0.780.

Perceived Usefulness scores range from 1 to 5, with the mean and standard deviation of 4.08±0.64, a median value of 4, and a Cronbach's alpha coefficient of 0.781.

Perceived ease of use scores range from 1.75 to 5, with the mean and standard deviation of 3.62±0.58, a median of 3.5, and a Cronbach's alpha coefficient of 0.765.

Perceived financial risk scores range from 1 to 5, with the mean and standard deviation of 2.85±0.94, a median value of 2.7, and a Cronbach's alpha coefficient of 0.833.

Perceived performance risk scores range from 1 to 5, with the mean and standard deviation of 2.95±0.96, a median of 3, and a Cronbach's alpha coefficient of 0.769.

Perceived social risk scores range from 1 to 5, with the mean and standard deviation of 1.84±0.92, a median value of 1.7, and a Cronbach's alpha coefficient of 0.878.

Perceived time risk scores range from 1 to 5, with the mean and standard deviation of 2.81±1.02, a median value of 2.7, and a Cronbach's alpha coefficient of 0.774.

Perceived psychological risk scores range from 1 to 5, with the mean and standard deviation of 2.08±0.97, a median value of 2, and a Cronbach's alpha coefficient of 0.878.

Perceived privacy risk scores range from 1 to 5, with the mean and standard deviation of 3.53±0.96, a median value of 3.7, and a Cronbach's alpha coefficient of 0.785.

3.7.3. Correlation Analysis of the Online Shopping Buying Behavior Scale Sub-dimension

The correlation coefficient ranges from +1 to -1 and shows the strength of the relationship between two quantitative variables. A negative correlation coefficient indicates that there is an inverse relationship between the variables (as one increases, the other decreases), while a positive coefficient indicates that there is an inverse relationship (as one increases, the other increases). Nakip (2013) stated these coefficient ranges as follows:

- The absolute value range of 1.00-0.91 indicates a very strong relationship;
- The absolute value range of 0.90-0.81 indicates a relatively strong relationship;
- The absolute value range of 0.80-0.71 indicates a strong relationship;
- The absolute value range of 0.70-0.61 indicates a relatively strong relationship;
- The absolute value range of 0.60-0.51 indicates slightly strong relationship;

- The absolute value range of 0.50-0.41 indicates slightly weak relationship;
- The absolute value range of 0.40-0.31 indicates a relatively weak relationship;
- The absolute value range of 0.30-0.21 indicates a weak relationship;
- The absolute value range of 0.20 to 0.11 indicates a relatively very weak relationship;
- The absolute value range of 0.10-0.01 indicates very weak relationship;
- A value of 0 means that there is no relationship.

The correlation analysis of the online shopping buying behavior scale sub-dimension statistic results are shown in Table 11 and evaluated.

Table 11: Correlation of the Online Shopping Buying Behavior Scale Sub-dimension

		Intention	**Attitude**	**Perceived Usefulness**	**Perceived Ease of Use**	**Perceived Financial Risk**	**Perceived Performance**	**Perceived Social Risk**	**Perceived Time Risk**	**Perceived Psychological**	**Perceived Privacy Risk**
Intention	r	1,000									
	p	.									
Attitude	r	**0,307**	1,000								
	p	**0,001***	.								
Perceived Usefulness	r	**0,276**	**0,525**	1,000							
	p	**0,001***	**0,001***	.							
Perceived Ease of Use	r	**0,191**	**0,397**	**0,460**	1,000						
	p	**0,001***	**0,001***	**0,001***	.						
Perceived Financial Risk	r	0,051	-0,053	0,005	**0,135**	1,000					
	p	0,375	0,360	0,925	**0,019***	.					

Table 11. Continued

Perceived Performance Risk	r	-0,006	0,003	-0,041	0,096	**0,612**	1,000				
	p	0,924	0,952	0,475	0,097	**0,001***	.				
Perceived Social Risk	r	0,023	0,027	-0,012	0,064	**0,290**	**0,314**	1,000			
	p	0,686	0,642	0,837	0,266	**0,001***	**0,001***	.			
Perceived Time Risk	r	0,079	-0,007	-0,037	**0,162**	**0,447**	**0,487**	**0,374**	1,000		
	p	0,171	0,909	0,518	**0,005***	**0,001***	**0,001***	**0,001***	.		
Perceived Psychological Risk	r	**0,114**	0,049	-0,037	0,086	**0,502**	**0,519**	**0,531**	**0,492**	1,000	
	p	**0,049***	0,393	0,526	0,138	**0,001***	**0,001***	**0,001***	**0,001***	.	
Perceived Privacy Risk	r	-0,051	0,010	0,106	0,103	**0,364**	**0,282**	0,051	**0,256**	**0,217**	1,000
	p	0,381	0,866	0,067	0,075	**0,001***	**0,001***	0,379	**0,001***	**0,001***	.

Spearman's rho Correlation Analysis **p<0.05*

As table 11 is evaluated according to the information stated above, the results show that:

There is a positive, weak (30.4%) and statistically significant relationship between intention and attitude scores (p:0.001; p<0.05).

There is a positive, weak (27.6%) and statistically significant relationship between intention and perceived usefulness (p:0.001; p<0.05).

There is a positive, relatively weak (19.1%) and statistically significant relationship between intention and perceived ease of use scores (p:0.001; p<0.05).

There is a positive, relatively weak (11.4%) and statistically significant relationship between intention and perceived psychological risk scores (p:0.049; $p<0.05$).

There is no statistically significant relationship between intention and perceived financial risk, perceived performance risk, perceived social risk, perceived time risk, perceived psychological risk and perceived privacy risk ($p>0.05$).

There is a positive, slightly strong (52.5%) and statistically significant relationship between attitude and perceived usefulness scores (p:0.001; $p<0.05$).

There is a positive, relatively weak (39.7%) and statistically significant relationship between attitude and perceived ease of use scores (p:0.001; $p<0.05$).

There is no statistically significant relationship between attitude and perceived financial risk, perceived performance risk, perceived social risk, perceived time risk, perceived psychological risk and perceived privacy risk ($p>0.05$).

There is a positive, slightly weak (46%) and statistically significant relationship between the perceived usefulness and the perceived ease of use scores (p:0.001; $p<0.05$).

There is no statistically significant relationship between perceived usefulness and perceived financial risk, perceived performance risk, perceived social risk, perceived time risk, perceived psychological risk and perceived privacy risk ($p>0.05$).

There is a positive, relatively weak (13.5%) and statistically significant relationship between perceived ease of use and perceived financial risk scores (p:0.019; $p<0.05$).

There is a positive, relatively weak (16.2%) and statistically significant relationship between perceived ease of use and perceived time risk scores (p:0.005; $p<0.05$).

There was no statistically significant relationship between perceived ease of use and perceived performance risk, perceived social risk, perceived psychological risk and perceived privacy risk scores ($p>0.05$).

There is a positive, relatively strong (61.2%) and statistically significant relationship between perceived financial risk and perceived performance risk scores (p:0.001; p<0.05).

There is a positive, weak (29%) and statistically significant relationship between perceived financial risk and perceived social risk scores (p:0.001; p<0.05).

There is a positive, slightly weak (44.7%) and statistically significant relationship between perceived financial risk and perceived time risk scores (p:0.001; p<0.05).

There is a positive, slightly weak (50.2%) and statistically significant relationship between perceived financial risk and perceived psychological risk scores (p:0.001; p<0.05).

There is a positive, relatively weak (36.4%) and statistically significant relationship between perceived financial risk and perceived privacy risk scores (p:0.001; p<0.05).

There is a positive, relatively weak (31.4%) and statistically significant relationship between perceived performance risk and perceived social risk scores (p:0.001; p<0.05).

There is a positive, slightly weak (48.7%) and statistically significant relationship between perceived performance risk and perceived time risk scores (p:0.001; p<0.05).

There is a positive, slightly strong (51.9%) and statistically significant relationship between perceived performance risk and perceived psychological risk scores (p:0.001; p<0.05).

There is a positive, weak (28.2%) and statistically significant relationship between perceived performance risk and perceived privacy risk scores (p:0.001; p<0.05).

There is a positive, relatively weak (37.4%) and statistically significant relationship between perceived social risk and perceived time risk scores (p:0.001; p<0.05).

There is a positive, slightly strong (53.1%) and statistically significant relationship between perceived social risk and perceived psychological risk scores (p:0.001; p<0.05).

There was no statistically significant relationship between perceived social risk and perceived privacy risk scores (p>0.05).

There is a positive, slightly weak (49.2%) and statistically significant relationship between perceived time risk and perceived psychological risk scores (p:0.001; p<0.05).

There is a positive, weak (25.6%) and statistically significant relationship between perceived time risk and perceived privacy risk scores (p:0.001; p<0.05).

There is a positive, weak (21.7%) and statistically significant relationship between perceived psychological risk and perceived privacy risk scores (p:0.001; p<0.05).

The correlation of age analysis of the online shopping buying behavior scale sub-dimension statistic results are shown in Table 12 and evaluated.

Table 12: Correlation of Age and Online Shopping Buying Behavior Scale sub-dimension Scores

	Age	
	r	**p**
Intention	-0,058	0,320
Attitude	0,014	0,812
Perceived Usefulness	0,018	0,754
Perceived Ease of Use	-0,097	0,093
Perceived Financial Risk	**-0,139**	**0,016***
Perceived Performance Risk	**-0,149**	**0,010***
Perceived Social Risk	-0,044	0,448
Perceived Time Risk	**-0,220**	**0,001***
Perceived Psychological Risk	**-0,169**	**0,003***
Perceived Privacy Risk	-0,086	0,135

Spearman's rho Correlation Analysis **p<0.05*

There is a negative (reverse), relatively weak (13.9%) and statistically significant relationship between age and perceived financial risk scores (p:0.016; p<0.05). As age increases, perceived financial risk decreases.

There is a negative, relatively weak (14.9%) and statistically significant relationship between age and perceived performance risk scores (p:0.010; p<0.05). As age increases, perceived performance risk decreases.

There is a negative, weak (22%) and statistically significant relationship between age and perceived time risk scores (p:0.001; p<0.05). As age increases, the perceived time risk decreases.

There is a negative, relatively weak (16.9%) and statistically significant relationship between age and perceived psychological risk scores (p:0.003; p<0.05). As age increases, perceived psychological risk decreases.

There is no statistically significant relationship between age and intention, attitude, perceived usefulness, perceived ease of use, perceived social risk and perceived privacy risk scores (p>0.05).

The correlation of gender analysis of the online shopping buying behavior scale sub-dimension statistic results are shown in Table 13 and evaluated.

Table 13: Correlation of Online Shopping Buying Behaviour Scale sub-dimension Scores by Gender

	Female	**Male**		
	Ort±SS (median)	**Ort±SS (median)**	**Z**	**p**
Intention	3,39±0,53 (3,3)	3,36±0,56 (3,3)	-0,943	0,346
Attitude	4,04±0,79 (4)	4,06±0,83 (4)	-0,206	0,837
Perceived Usefulness	4,06±0,61 (4)	4,12±0,68 (4)	-1,072	0,284
Perceived Ease of Use	3,62±0,58 (3,5)	3,63±0,59 (3,8)	-0,100	0,920
Perceived Financial Risk	2,92±0,93 (3)	2,73±0,95 (2,7)	-1,799	0,072
Perceived Performance Risk	2,95±0,92 (3)	2,95±1,04 (2,7)	-0,347	0,729
Perceived Social Risk	1,79±0,88 (1,7)	1,91±0,98 (1,8)	-0,786	0,432
Perceived Time Risk	2,86±0,98 (3)	2,73±1,07 (2,7)	-1,286	0,199
Perceived Psychological Risk	2,12±0,98 (2)	2,01±0,94 (2)	-1,006	0,314
Perceived Privacy Risk	3,48±0,95 (3,7)	3,60±0,97 (3,7)	-1,122	0,262

Z: Mann Whitney U test

There is not a statistically significant difference between men and women in terms of intention, attitude, perceived usefulness, perceived ease of use, perceived financial risk, perceived performance risk, perceived social risk, perceived time risk, perceived psychological risk, and perceived privacy risk scores ($p>0.05$).

The correlation of education level analysis of the online shopping buying behavior scale sub-dimension statistic results is shown in Table 14 and evaluated.

Table 14: Correlation of Online Shopping Buying Behavior Scale Sub-dimension Scores by Education Levels

	Associate Degree	**Bachelor's Degree**	**Master's Degree**	**Doctoral Degree**		
	Ort±SS (median)	**Ort±SS (median)**	**Ort±SS (median)**	**Ort±SS (median)**	**Chi-square**	**p**
Intention	3,44±0,38 (3,3)	3,39±0,55 (3,3)	3,27±0,53 (3,3)	3,4±0,31 (3,3)	1,892	0,595
Attitude	4,17±0,19 (4,2)	4,02±0,8 (4)	4,15±0,91 (4,3)	4,33±0,6 (4,3)	3,191	0,363
Perceived Usefulness	4,31±0,31 (4,3)	4,08±0,65 (4)	4,03±0,66 (4)	4,06±0,47 (4)	1,063	0,786
Perceived Ease of Use	3,44±0,75 (3,5)	3,65±0,57 (3,8)	3,46±0,67 (3,3)	3,67±0,59 (3,6)	3,382	0,336
Perceived Financial Risk	2,17±0,96 (2,2)	2,85±0,88 (2,7)	2,8±1,2 (2,7)	3,11±1,39 (3)	3,193	0,363
Perceived Performance Risk	2,25±0,88 (2,5)	2,96±0,94 (3)	2,91±1,14 (3)	3,06±1,1 (3)	2,083	0,555
Perceived Social Risk	1,67±0,82 (1,5)	1,82±0,92 (1,7)	1,98±0,98 (2)	1,81±0,87 (2)	0,848	0,838
Perceived Time Risk	2,17±0,96 (2,2)	2,83±1 (2,7)	2,67±0,97 (2,7)	3,03±1,42 (2,8)	2,063	0,56
Perceived Psychological Risk	1,5±0,58 (1,5)	2,08±0,96 (2)	2,14±1,05 (2)	2,11±1,11 (2)	1,663	0,645
Perceived Privacy Risk	2,25±1,26 (2)	3,51±0,94 (3,7)	3,63±0,87 (3,7)	3,92±1,08 (4,2)	7,687	0,053

Chi square: Kruskal Wallis Test

There is no statistically significant difference between education levels in terms of intention, attitude, perceived usefulness, perceived ease of use, perceived financial risk, perceived performance risk, perceived social risk, perceived time risk, and perceived psychological risk scores (p> 0.05).

Although it is very close to significance in terms of perceived privacy risk scores between education levels, there is no statistically significant difference (p:0.053; p>0.05). Even though the difference is not significant, it is remarkable that the perceived privacy risk scores of associate degree students (2.25±1.26(2)) are lower than other education levels.

The correlation of faculty analysis of the online shopping buying behavior scale sub-dimension statistic results is shown in Table 15 and evaluated.

Table 15: Correlation of Online Shopping Buying Behavior Scale Sub-dimension Scores by Faculty

	Faculty of Sciences	**Faculty of Social Sciences**		
	Mean±SS (median)	**Mean±SS (median)**	**Z**	**p**
Intention	3,41±0,57 (3,3)	3,35±0,51 (3,3)	-0,567	0,571
Attitude	4,06±0,78 (4)	4,04±0,82 (4)	-0,064	0,949
Perceived Usefulness	4,03±0,66 (4)	4,13±0,61 (4)	-1,364	0,172
Perceived Ease of Use	3,57±0,59 (3,5)	3,68±0,57 (3,8)	-1,619	0,106
Perceived Financial Risk	2,91±0,91 (2,7)	2,78±0,96 (2,7)	-0,934	0,350
Perceived Performance Risk	2,98±1,03 (3)	2,93±0,90 (3)	-0,031	0,975
Perceived Social Risk	1,91±0,93 (2)	1,76±0,91 (1,7)	-1,659	0,097
Perceived Time Risk	2,84±1,02 (2,7)	2,79±1,02 (2,7)	-0,453	0,650
Perceived Psychological Risk	2,10±0,97 (2)	2,06±0,96 (2)	-0,245	0,807
Perceived Privacy Risk	3,50±0,91 (3,7)	3,55±0,99 (3,7)	-0,776	0,437

Z: Mann Whitney U test

There is no statistically significant difference between faculty of sciences and faculty of social sciences students in terms of intention, attitude, perceived usefulness, perceived ease of use, perceived financial risk, perceived performance risk, perceived social risk, perceived time risk, and perceived psychological risk, perceived privacy risk scores (p> 0.05).

The correlation of the online shopping buying behavior change analysis of the online shopping buying behavior scale sub-dimension statistic results are shown in Table 16 and evaluated.

Table 16: Correlation of Sub-dimension Scores of Online Shopping Buying Behavior Scale According to the Effect on the Change of Online Shopping Buying Behavior

	Do you think Online shopping has changed your shopping behavior?			
	Yes	**No**		
	Mean±SS (median)	**Mean±SS (median)**	**Z**	**p**
Intention	3,38±0,54 (3,3)	3,34±0,55 (3,3)	-0,153	0,878
Attitude	4,12±0,76 (4)	3,76±0,90 (4)	-2,825	0,005*
Perceived Usefulness	4,15±0,6 (4)	3,77±0,70 (4)	-4,305	0,001*
Perceived Ease of Use	3,65±0,55 (3,8)	3,53±0,69 (3,5)	-1,267	0,205
Perceived Financial Risk	2,81±0,90 (2,7)	3,01±1,08 (3)	-1,301	0,193
Perceived Performance Risk	2,95±0,94 (3)	2,97±1,07 (3)	-0,225	0,822
Perceived Social Risk	1,83±0,90 (2)	1,89±1,02 (1,7)	-0,065	0,948
Perceived Time Risk	2,78±1,01 (2,7)	2,97±1,04 (3)	-1,276	0,202
Perceived Psychological Risk	2,04±0,91 (2)	2,26±1,16 (2)	-0,992	0,321
Perceived Privacy Risk	3,52±0,95 (3,7)	3,53±0,98 (3,7)	-0,026	0,979

Z: Mann Whitney U test **p<0.05*

Attitude scores of the participants who think that online shopping changed their buying behavior found to be statistically significantly higher than those who think that it does not change their purchasing habits (p:0.005; p<0.05).

Perceived usefulness scores of the participants who think that online shopping changed their purchasing habits were found to be statistically significantly higher than those who thought that it did not change their purchasing habits (p:0.001; p<0.05).

There is no statistically significant difference in terms of other sub-dimension scores between the states of thinking that shopping over the internet changes the purchasing habits (p>0.05).

The correlation of shopping frequency analysis of the online shopping buying behavior scale sub-dimension statistic results are shown in Table 17 and evaluated.

Table 17: Correlation of Sub-dimension Scores of Online Shopping Buying Behavior Scale by Shopping Frequency

	How often do you shop online?						
	At least twice a week	**Once a week**	**Every other week**	**Once a month**	**Once a year**		
	Mean±SS (median)	**Mean±SS (median)**	**Mean±SS (median)**	**Mean±SS (median)**	**Mean±SS (median)**	**Chi-square**	**p**
Intention	3,33±0,54 (3,3)	3,31±0,51 (3,3)	3,39±0,53 (3,3)	3,42±0,54 (3,3)	3,31±0,72 (3,5)	1,576	0,813
Attitude	4,15±0,75 (4)	4,2±0,65 (4)	4,14±0,7 (4)	3,96±0,87 (4)	3,56±1,05 (3)	6,785	0,148
Perceived Usefulness	4,06±0,7 (4)	4,19±0,48 (4)	4,21±0,45 (4,3)	4,02±0,7 (4)	3,64±0,87 (3,8)	10,352	0,035 *
Perceived Ease of Use	3,56±0,62 (3,5)	3,63±0,56 (3,5)	3,64±0,48 (3,5)	3,67±0,59 (3,8)	3,34±0,86 (3,5)	2,966	0,563
Perceived Financial Risk	2,66±1,11 (2,7)	2,64±0,91 (2,3)	2,84±0,95 (2,7)	2,94±0,88 (2,8)	3,38±0,8 (3,5)	11,009	0,026 *
Perceived Performance Risk	2,85±1,18 (2,7)	2,8±0,91 (2,7)	2,9±0,99 (3)	3,02±0,91 (3)	3,42±0,74 (3,3)	7,392	0,117
Perceived Social Risk	2,1±1,18 (2)	1,77±0,99 (1,7)	1,61±0,71 (1,3)	1,88±0,9 (2)	2,02±0,76 (2)	7,456	0,114
Perceived Time Risk	2,61±1,22 (2)	2,67±1,02 (2,3)	2,88±0,9 (3)	2,89±1,02 (2,8)	3±0,89 (3)	6,456	0,168
Perceived Psychological Risk	1,96±1,02 (2)	1,81±0,89 (2)	1,97±0,83 (2)	2,22±1,01 (2)	2,65±0,94 (2,7)	18,6	0,001 *
Perceived Privacy Risk	3,09±1,16 (3,3)	3,34±1,01 (3,7)	3,71±0,8 (3,7)	3,61±0,92 (3,7)	3,81±0,75 (3,8)	10,758	0,029 *

Chi square: Kruskal Wallis Test **p<0.05*

There is a statistically significant difference between the frequencies of online shopping in terms of perceived usefulness scores (p:0.035; p<0.05). As a result of the post hoc Dunn's Test conducted to determine the frequencies of significance; perceived usefulness scores of the participants who shopped once a year were found to be significantly lower than the scores of those who shopped once a week (p:0.013) and every other week (p:0.039) (p<0.05).

There is no statistically significant difference in terms of perceived usefulness scores among other online shopping frequencies (p>0.05).

There is a statistically significant difference between the frequencies of shopping over the Internet in terms of perceived financial risk scores (p:0.026; p<0.05). As a result of the post hoc Dunn's Test conducted to determine the frequencies of significance; perceived financial risk scores of the participants who shop once a year were found to be significantly higher than those who shopped at least twice a week (p:0.013), once a week (p:0.034), and every other week (p:0.028) (p<0.08). 0.05).

There is no statistically significant difference in terms of Perceived Financial Risk scores among other online shopping frequencies (p>0.05).

There is a statistically significant difference between the frequencies of shopping on the Internet in terms of Perceived Psychological Risk scores (p:0.001; p<0.05). As a result of the post hoc Dunn's Test conducted to determine the frequencies of significance; perceived psychological risk scores of the participants who shop once a year were found to be significantly higher than those who shopped at least twice a week (p:0.030), once a week (p:0.003) and every other week (p:0.038) (p< 0.05). Perceived psychological risk scores of the participants who shopped once a month were found to be significantly higher than the scores of those who shopped once a week (p:0.026) (p<0.05).

There is no statistically significant difference in terms of Perceived Psychological Risk scores among other online shopping frequencies (p>0.05).

There is a statistically significant difference between the frequencies of online shopping in terms of Perceived Privacy Risk scores (p:0.029; p<0.05). As a result of the post hoc Dunn's Test conducted to determine the frequencies of significance; Perceived Privacy Risk scores of the participants who shopped at least twice a week, were found to be significantly lower than those who shopped once every two weeks (p:0.008), once a month (p:0.022), and once a year (p:0.031) (p<0.01). 0.05).

There is no statistically significant difference in terms of Perceived Privacy Risk scores among other online shopping frequencies (p>0.05).

3.7.4. Regression Analysis of Online Shopping Buying Behavior Scale Sub-Dimensions on Buying Intention

Regression analysis is a statistical tool used in thesis research to investigate the relationship between one or more independent variables and one or more dependent variables. It entails generating a regression equation that defines the relationship between the variables of interest and using this equation to predict the value of the dependent variable for different independent variable values (Field, 2013).

The regression analysis of the online shopping buying behavior scale is shown in Table 18 and evaluated in the following.

The regression analysis of the online shopping buying behavior scale sub-dimension on buying intention results are shown in Table 18 and evaluated.

Table 18: Regression Analysis of Online Shopping Buying Behavior Scale Sub-Dimensions on Buying Intention

Coefficients	**Unstandardized Coefficients**		**Standardized Coefficients**		
	B	**Std.Error**	**Beta**	**t**	**p**
(Constant)	2,227	0,250		8,901	0,001
Attitude	0,141	0,045	0,210	3,153	**0,002***
Perceived Usefulness	0,127	0,062	0,149	2,051	**0,041***
Perceived Ease of Use	0,023	0,063	0,025	0,371	0,711

Table 18. Continued

Perceived Financial Risk	0,058	0,044	0,102	1,342	0,181
Perceived Performance Risk	-0,070	0,043	-0,125	-1,637	0,103
Perceived Social Risk	-0,034	0,039	-0,058	-0,889	0,374
Perceived Time Risk	0,051	0,037	0,096	1,370	0,172
Perceived Psychological Risk	0,059	0,042	0,105	1,416	0,158
Perceived Privacy Risk	-0,053	0,035	-0,095	-1,545	0,123

Model summary

Model	**R**	**R Square**	**Adjusted R Square**	**F**	**p**
	0,356	0,127	0,100	4,671	0,001*

Dependent Variable: Intention

When the effect of the online shopping buying behavior scale sub-dimension scores on the buying intention score is evaluated by regression analysis; The model was found to be significant (p:0.001; $p<0.05$) and the R square value was found to be 0.127.

The effects of attitude and perceived usefulness scores on the model were found to be statistically significant ($p<0.05$).

A one-unit increase in the attitude score increases the intention score by 0.141 units.

A one-unit increase in the perceived usefulness score increases the intention score by 0.127 units.

The effect of other sub-dimensions; perceived ease of use, perceived financial risk, perceived performance risk, perceived social risk, percived time risk, perceived psychological risk and perceived privacy risk, of online shopping buying behavior scale on intention is statistically insignificant ($p>0.05$).

3.7.5. Summary Results of the Hypotheses

The results that have been evaluated in the previous sections have been concluded as following :

Hypothesis	**Result**
HP1: Perceived usefulness has a positive influence on the intention to shop online.	SUPPORTED
HP2: Attitude has a positive influence on the intention to shop online	SUPPORTED
HP3: Perceived ease of use has a positive influence on the intention to shop online.	NOT SUPPORTED
HP4: Perceived risk has a negative influence on the intention to shop online.	NOT SUPPORTED
HP4a: Financial performance risk has a negative influence on the intention to shop online.	NOT SUPPORTED
HP4b: Perceived Performance risk has a negative influence on the intention to shop online.	NOT SUPPORTED
HP4.c : Social risk has a negative influence on the intention to shop online.	NOT SUPPORTED
HP4.d : Time risk has a negative influence on the intention to shop online.	NOT SUPPORTED
HP4.e : Psychological risk has a negative influence on the intention to shop online.	NOT SUPPORTED
HP4.f : Privacy risk has a negative influence on the intention to shop online.	NOT SUPPORTED

3.7.6. Analysis of Findings

This research has revealed that the 48.7% of Turkish university students that participated in the questionnaire spend three to five hours on the internet, which has proven the importance of technology in our lives. The effect of technology has increased on every field that the humanity exists. From social media to entertainment, work related issues such as emailing, and shopping, people has been using the internet which is probably the most important outcome of the improvements in technology. The results have shown that more than half of the students that have participated the questionnaire use the internet for social media with the highest rate, and the usage of internet also caused by entertainment, education, online shopping and other activities.

When the frequency of online shopping has been examined, almost half of the participants shop online once in every month, almost the quarter of the participants shop online every other week and only 5.3% of them use the Internet for online shopping once a year, which shows that the majority of the participants have the habit of buying online. Also, more than the half of the population recommend online shopping, and this indicates that they are content with their online shopping experiences and the results.

Another results that has emerged from this research is that the participants believe that their buying behavior has been changed after shopping online. The 80.7% of the participants believe that their buying behavior has changed and this also an important indication of the great effect of the Internet and it can cause great changes in human life. Even ten years ago, buying clothes, accessorizes, furniture etc. was not a common method of shopping whereas now it has become such a convenient and easy thing to do and the results of this change is visible in this research. Now people can buy almost everything from the Internet, very important decisions such as buying a house or a car or a yacht can also be made through the Internet. The variety of the items that can be bought online are various even though the results of the questionnaire show that more than half of the Turkish university students buy clothes and accessories the most, groceries the second, book and hobby items the third and even the furniture is on the list. Furthermore, the perceived usefulness

scores of the participants who believe that online shopping has changed their buying behavior is significantly higher than those who think that online shopping has changed their buying behavior; therefore, it can be explained as the participants who believe their buying behavior has changed actually think that it has changed in a good way. This situation shows that window shopping has started to leave its place to online shopping.

This questionnaire specifically focuses on the consumer behavior of Turkish university students therefore the majority of the participants are aged less than 25 years, however, there are also participants above that age. The results have also highlighted some important outcomes of the correlation of age and how the variables that are tested in this paper varies such as the perceived financial risk, perceived performance risk, perceived time risk, perceived psychological risk has an inverse direction as perceived risk factors decreases as the age increases. It can be concluded from this results that the university students that are older has a different perceived risk perspective compared to the younger population. However, between intention, attitude, perceived usefulness and perceived ease of use, perceived social risk and privacy risk are not observed to have such differences according to the age correlation. Also, there is no correlation between the variables and the gender, education level or the faculty of education, which means that these demographic and educational factors are not related with the variables tested during the research analysis.

This research paper also highlighted one important element which is the people who shop online find online shopping more useful as the perceived usefulness scores of the participants who shopped once a week and every other week has significantly higher scores on perceived usefulness compared to the participants who shop once a year. The scores can be interpreted as people who shops online more frequently actually enjoy this process therefore they find is useful and shape their buying behavior accordingly. Furthermore, the results have shown that the participants who shop less frequently have higher scores in terms of perceived financial risk, perceived psychological risk and privacy risk compared to the participants which shops more frequently. This also explains that the people who shop more often worry less about the online shopping process maybe as they are familiar with it and

trust the Internet more when buying online, and the people who shop less frequently such as once a year, have questions in their mind, they do not feel safe financially, psychologically and in privacy therefore they might be choosing traditional shopping instead.

Last but not least, the regression analysis has shown that when the effect of online shopping buying behavior is evaluated, the model was found significant and the effects of attitude and perceived usefulness were found to be have a statistically significant relationship while the other sub-dimensions such as perceived ease of use, perceived financial risk, perceived performance risk, perceived social risk, perceived time risk, perceived psychological risk and perceived privacy risk are statistically insignificant.

CONCLUSION

According to the report of Statista (retrieved in 2021), as of 2021 the number of online shoppers worldwide is estimated to be around 2.14 billion, and this figure is expected to increase to 2.72 billion by 2023. Another report according to Datareportal (2022) claims that there are 4.9 billion active internet users globally as of January 2022, accounting for around 63% of the world's population and 55% of the population have made an online purchase in the last month, therefore the percentage of online shoppers in the global population is expected to be around 34%.

As the technology is being improved, the amount of time we spend online is getting higher for similar or different reasons. Nevertheless, the fact that our behaviors change is unquestionable. Traditional shopping has started to shift to online shopping which offers different experiences for the consumers every day and there is no doubt that this change will continue by increasing. People are afraid of what they do not know, and Internet has become a tool that even the toddlers can use and take advantage of it. Therefore, the perceived risks that are mentioned above has become insignificant because the access to every single detail of your purchase is available and you can take control of it. Once the people were not familiar with the process when making a purchase on the Internet because they knew little about the process and how it worked therefore they perceived the unknown features of the Internet as a risk, but nowadays especially younger generations like in this research population who are educated, are familiar with the pros and cons of the Internet and the power of buying online, therefore they are not afraid of facing the risks because they take control of the process. So, when they are making a decision, they do not consider the above-mentioned risk that might affect their buying behavior negatively, they think about the pros such as how online shopping is making their buying experience more clever and this factor affect their decision making process in a positive way.

This research paper can highlight some important facts about how Turkish University students perceive online shopping experience and the factors that are related to decision making progress. Therefore, companies and marketers who wish to understand what drives consumers to shop online and to know what they are afraid of when shopping online is important and should be analyzed well in order to reach out the consumers and stay connected with the technology. Due to the limited time and resources, a more comprehensive research might be conducted to gain an inner vision of the factors on online shopping behavior of the consumers with a broader perspective.

Consumer behavior is a wide topic that the researchers and business people have been analyzing and evaluating for decades. In order to understand how technology has changed consumer behavior, the development process of the technology should be understood and analyzed well. How technological advancements influence consumer behavior, decision-making processes, and purchasing patterns should be investigated in order to relate these two specific terms. The needs, motivations, and preferences of the consumers should be detected to uncover insights that can drive the development of innovative technologies and enhance user experiences. Furthermore, researchers should be stay in touch with the latest technological trends and advancements by continuously monitor emerging technologies such as artificial intelligence, virtual reality, and internet of things, and explore their implications on consumer behavior. As the technology improves, the buying behavior of consumers change therefore it is important to follow up the latest trends and the studies regarding this topic.

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APPENDICES

Appendix 1. Survey Form in English

Online Shopping Buying Behavior Survey

Dear Participant,

This survey is conducted for my MA Thesis from Istanbul Commerce University, Graduate School of Social Sciences, Marketing Management Programme.

It will take approximately 5 minutes.

The aim of this survey is to investigate the relationship between online shopping and buying behavior. Kindly read the questions carefully and answer the questions properly in order to contribute to the success of this research. The answers are collected anonymously and under no circumstances your personal information will be shared.

Thank you for your generous time.

1. I accept to participate to the survey. *

- [ ] Yes
- [ ] Others

2. How many hours do you spend on the Internet? *

- ◯ Less than 1 hour
- ◯ 1-2 hours
- ◯ 3-5 hours
- ◯ 6-9 hours
- ◯ more than 9 hours

3. What is your purpose of using the Internet? *

- [ ] E-mail
- [ ] Education
- [ ] Entertainment
- [ ] Shopping
- [ ] Social Media
- [ ] Others

4. How often do you shop Online? *

- [ ] At least twice a week
- [ ] Once a week
- [ ] Every other week
- [ ] Once a month
- [ ] Once a year

5. Do you recommend shopping Online? *

- [ ] No
- [ ] Neutral
- [ ] Yes
- [ ] Definitely yes

6. Do you think Online shopping has changed your shopping behavior? *

- [ ] Yes
- [ ] No

7. What is the website you shop the most frequently? *

_____

8. What is the second website you shop the most frequently? *

_____

9. What is the third website you shop the most frequently? *

_____

10. From which category do you shop the most? *

- [ ] Clothes - Accessorizes
- [ ] Electronic Devicces
- [ ] Personal Care
- [ ] Furniture
- [ ] Book - Hobby
- [ ] Supermarket

11. I intend to use the Internet to purchase in the next 6 months. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

12. I expect to use the Internet to purchase in the next 6 months. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

13. It is likely that I will use the Internet to purchase in the next 6 months. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

14. I will not use the Internet to purchase in the 6 months. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

15. I like the idea of using the Internet to purchase in the next 6 monhts. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

16. Using the Internet to purchase in the next 6 months is a wise idea. *

- Definitely Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

17. Using the Internet to purchase in the next months is a positive idea. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

18. Using the Internet to purchase in the next 6 months would make shopping easier. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

19. Using the Internet to purchase in the next 6 months would enable to shop more quickly. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

20. Using the Internet to purchase in the next 6 months would be useful to get better purchases. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

21. Using the Internet to purchase in the next 6 months would enhance my shopping effectiveness. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

22. Using the Internet to purchase in the next 6 months would be easy to learn for me. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

23. Using the Internet to purchase in the next 6 months would be easy to do for me. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

24. Using the Internet to purchase in the next 6 months would require a lot of mental effort. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

25. Using the Internet to purchase in the next 6 months would be easy following the instructions provided in virtual shops. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

29. If I used the internet to purchase, I would find it very difficult evaluate the characteristics of the products accurately. *

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

30. If I used the internet to purchase, I would be concerned that the product would not provide the level of benefits advertised in the Web. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

31. If I used the internet to purchase, there would be many possibilities that the product would not perform as it is supposed to. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

32. If I used internet to purchase, it would negatively affect the opinion that my friends or relatives have about me. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

33. If I used internet to purchase, some people whose opinion I value would think that I am not behaving correctly. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

34. If I used internet to purchase, my friends and relatives would think that I am unwise *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

35. If I used internet to purchase, I would feel concerns about wasting too much time making the order. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

36. If I used internet to purchase, there would be many possibilities that I have to spend too much time searching for the product. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

37. If I used internet to purchase, I would be concerned that I have to wait too long for the delivery of the product. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

38. If I used internet to purchase, I would feel uneasy. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

39. If I used internet to purchase, it would give me a feeling of anxiety. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

40. If I used internet to purchase, I would cause me to experience unnecessary tension. *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

41. If I used internet to purchase, there would be many chances that my personal information would be used without my knowledge. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

42. If I used internet to purchase, it would increase the possibilities that I would receive unwanted e-mails. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

43. If I used internet to purchase, it would lead to a loss of privacy because of the improper use of my personal information. *

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

Demographic Questions

Please answer the questions.

44. What is your gender? *

- ◯ Female
- ◯ Male
- ◯ Prefer not to say

45. How old are you? *

_____

46. What is your current education status? *

- ◯ Associates Degree
- ◯ Undergraduate
- ◯ Post Graduate
- ◯ Doctorate

47. What is your faculty? *

_____