



YAŞAR UNIVERSITY  
GRADUATE SCHOOL

PHD IN BUSINESS ADMINISTRATION THESIS

**CONSUMER ENGAGEMENT PERSPECTIVE  
IN OMNI-CHANNEL MARKETING**

AHMED CÜNEYD DENİZ

THESIS ADVISOR: PROF. (PHD) İGE PIRNAR

PHD IN BUSINESS ADMINISTRATION

PRESENTATION DATE: 07.09.2022

BORNOVA / İZMİR  
SEPTEMBER 2022

We certify that, as the jury, we have read this thesis and that in our opinion it is fully adequate, in scope and in quality, as a thesis for the degree of the Doctor of Philosophy.

**Jury Members:**

**Signature:**

Prof.(PhD) İge Pınar

Yaşar University

.....

Prof.(PhD) Aykan Candemir

Ege University

.....

Prof.(PhD) Engin Deniz Eriş

Dokuz Eylül University

.....

Assoc./Prof.(PhD) Görkem Ataman

Yaşar University

.....

Assoc./Prof.(PhD) Emel Yarımoğlu

Yaşar University

.....

---

Prof. (PhD) Yücel Oztürkoğlu  
Director of the Graduate School

**ABSTRACT**

**CONSUMER ENGAGEMENT PERSPECTIVE IN OMNI-  
CHANNEL MARKETING**

DENİZ, Ahmed Cüneyd

PhD in Business Administration

Advisor: Prof. (PhD) İge PIRNAR

September 2022

With globalization and the new digital age, an era has begun with innovations in technology and transfers. In particular, technological advances, the communication method of consumers and companies began to move from the traditional structure to a digital environment. As a result of these interactions, it started to experience very important changes in consumer behavior. As new technologies come to life, new ways of doing business have begun to emerge. By adopting these models, the Internet has been and continues to be the trigger of new business models. Today, the use of wireless smart devices is expected to provide information and service to customers anytime and anywhere. The rapid development of information and communication technologies has brought new opportunities to the business world, and the widespread use of internet access among people has brought comfortable and secure online and offline shopping to the agenda. However, traditional retailing, with continued digitalization, has given rise to the online channel. Thus, the online channel began to become very dominant and changed significantly for reasons that can be considered a disruptive development. Today, the main wheels of current retailing have started to turn with developments in e-commerce, social media combinations, local mobile services and mobile commerce. The widespread use of the Internet has caused the distribution channels to change by enabling consumers to search for the products and services they want from many channels in a fast and reliable way. At this point, consumers are looking for the most suitable one in terms of both speed and cost. Consumers focus on which channels are suitable for them at every stage of the consumption process and how they can

achieve maximum results with minimum cost. It is therefore vital for businesses to successfully manage all channels that have access to consumers. The harmonious and flexible management of these channels and the coordination between channels are examined under the concept called omni-channel.

Omni-channel is one of the most important retail revolutions of recent years, affecting various fields such as marketing, retailing, communication or information systems. In a omni-channel environment, customers move freely between channels simultaneously (online, mobile and physical store) in a single transaction process. Channel-independent consumers don't care whether they buy in-store, online, or mobile, as long as they get the product they want, when they want it, and at the right price. For today's consumers, mobile devices have become an indispensable part of life day by day.

**Keywords:** Omni-channel, consumer engagement, consumer behaviors, unified theory of acceptance and use of technology, structural equation model, digital elements in physical stores.

**ÖZ**

**OMNİ-KANAL PAZARLAMADA**  
**TÜKETİCİ KATILIM PERSPEKTİFİ**

Deniz, Ahmed Cüneyd

PhD, İşletme

Danışman: Prof. Dr. İge PIRNAR

Eylül 2022

Küreselleşme ve yeni dijital çağ ile birlikte teknoloji alanında yeniliklerin olduğu bir dönem başlamıştır. Özellikle bu teknolojik gelişmeler, tüketicilerin ve şirketlerin iletişim yöntemi, geleneksel yapıdan dijital ortama geçmeye başlamıştır. Bu etkileşimler sonucunda tüketici davranışlarında çok önemli değişimler yaşamaya başlamıştır. Yeni teknolojilerin hayat bulmasıyla birlikte yeni iş yapma biçimleri de ortaya çıkmaya başlamıştır. Bu modellerin benimsenmesiyle internet, yeni iş modellerinin tetikleyicisi olmuştur ve olmaya devam etmektedir. Günümüzde kablosuz akıllı cihazların kullanımının tüketicilere her zaman ve her yerde bilgi ve hizmet sağlaması beklenmektedir. Bilgi ve iletişim teknolojilerinin hızlı gelişimi iş dünyasına yeni fırsatlar getirmiş, internet erişiminin insanlar arasında yaygınlaşması rahat ve güvenli çevrim içi ve çevrim dışı alışverişi gündeme getirmiştir. Bununla birlikte, devam eden dijitalleşmeyle, geleneksel perakendecilik, çevrimiçi kanalın doğmasına neden olmuştur. Böylece çevrimiçi kanal çok baskın olmaya başlamış ve yıkıcı bir gelişme olarak kabul edilebilir düzeye ulaşmıştır. Günümüzde e-ticaret, sosyal medya kombinasyonları, yerel mobil hizmetler ve mobil ticaretteki gelişmelerle mevcut perakendeciliğin ana çarkları dönmeye başlamıştır. İnternet kullanımının yaygınlaşması, tüketicilerin istedikleri ürün ve hizmetleri birçok kanaldan hızlı ve güvenilir bir şekilde aramasını sağlayarak dağıtım kanallarının değişmesine neden olmuştur. Bu noktada tüketiciler hem hız hem de maliyet açısından en uygununu aramaktadır. Tüketiciler, tüketim sürecinin her aşamasında hangi kanalların kendilerine uygun olduğuna ve minimum maliyetle maksimum sonuçlara nasıl ulaşabileceklerine odaklanmaktadır. Bu nedenle işletmelerin tüketicilere erişimi olan tüm kanalları başarılı bir şekilde yönetmesi onlar için hayati

önem taşımaktadır. Bu kanalların uyumlu ve esnek yönetimi kanallar arasındaki koordinasyon omni-kanal adı verilen kavram altında incelenmektedir.

Omni-channel, pazarlama, perakendecilik, iletişim veya bilgi sistemleri gibi çeşitli alanları etkileyen, son yılların en önemli perakende devrimlerinden biridir. Omni kanallı bir ortamda, müşteriler tek bir işlem sürecinde aynı anda (çevrimiçi, mobil ve fiziksel mağaza) kanallar arasında serbestçe hareket eder. Kanaldan bağımsız tüketiciler, istedikleri ürünü, istedikleri zaman ve doğru fiyata aldıkları sürece mağazadan, çevrimiçi veya mobil satın alıp almadıklarını umursamazlar. Günümüz tüketicileri için mobil cihazlar gün geçtikçe hayatın vazgeçilmez bir parçası haline gelmiştir.

**Anahtar Kelimeler:** Omni-kanal, tüketici katılımı, tüketici davranışları, birleşik teknoloji kabul ve kullanım teorisi, yapısal eşitlik modeli, fiziksel mağazalarda dijital Öğeler.

## ACKNOWLEDGEMENTS

I would like to express my special thanks of gratitude to my thesis adviser of Prof. Dr. İGE PIRNAR and my thesis minotoring committee members who are Prof. Dr. ENGİN DENİZ ERİŞ and Assoc. Prof. Dr. GÖRKEM ATAMAN as well as who gave me unıqe opportunity to do this project on the research of my thesis, which also helped me in doing a lot of research and I came to know about so many new things I am really thankful to them. I would also like to thank my wife and children who helped me a lot in completing this thesis within the limited time.

Ahmed Cüneyd DENİZ

İzmir, 2022

## **TEXT OF OATH**

I declare and honestly confirm that my study, titled “CONSUMER ENGAGEMENT PERSPECTIVE IN OM-CHANNEL MARKETING” and presented as a PhD thesis, has been written without applying to any assistance inconsistent with scientific ethics and traditions. I declare, to the best of my knowledge and belief, that all content and ideas drawn directly or indirectly from external sources are indicated in the text and listed in the list of references.

Ahmed Cüneyd Deniz

September 2022

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## ABBREVIATIONS

AI	Artificial Intelligence
APPS	Application
AR	Augmented Reality
ART	Assistive Retailer Technologies
AV	Augmented Virtuality
AVE	Explained Variance Average
BI	Behavioral Intention
BU	Behavior Use ,
CE	Customer Engagement
EE	Effort Expectancy
FC	Facilitating Condition
HM	Hedonic Motivation
ICT	Information and Communication Technology
IN	Innovativeness
IOT	Internet of Things
JBRMR	Journal of Business and Retail Management Research.
MS	Marks and Spencer
PE	Performance Experience
POS	Point of Sale
PV	Price Value
PT	Perceived Trust

RFID Radio Frequency Identification

ROI Return of Investment

SI Social Influence

SO-LO-MO Social Local, Mobile.

OCS Omni-Channel Shopper

UTAUT Unified Theory of Acceptance and Use of Technology

VFS Virtual fashioning Shows

VIF Variance Inflation Factor

VIR Virtual Fitting Romm

WOM Word of Mouth

# CHAPTER 1

## INTRODUCTION

### 1.1. Chapter Overview

With the 21st century, a new era begins with innovations in technology and transfers. Technological developments drive changes in the behavior of customers and companies in their interaction. Communication shifts from traditional to digital ( Kotler et al., 2017). For example, new technologies have started to reveal new ways of doing business. The Internet started as a trigger for new business models by embracing these models. Jo Ho and Myeong-Cheol (2005), claimed that the use of internet via wired network changed the way of delivering, it becomes effective and easy. However the use of wireless device is expected to deliver information and service at anytime and anywhere for customers. The rapid development of information and communication technologies have brought new opportunities and to the business world and the spread of internet access among people has brought up convenient and secure online shopping (Bernstein, Song, & Zheng, 2005), so retailing has changed dramatically due to the advent of the online channel and ongoing digitilization. Thus, online channel has become very dominant and can be considered a disruptive developments ( Verhoef et al. 2015) .

Successful models from the late twentieth century such as Borders for selling books, blockbuster for renting videos, and Circuit City for selling consumer electronics have gone out of business. ( Chopra, 2017) Rapid digitilisation has many implications for the retail industry, marketing and operations processes in particular (Blut et al., 2018; Hagberg et al., 2016).

Today, the main wheels of the current retailing have started to revolve with advances in e-commerce, combinations of social media, local mobile services and mobile commerce. Which is known as SO-LO-MO (Hüseyinoğlu et al., 2017). These advances have started to emerge as a means of pressure in retailing some of the consumer-based stores in terms of retailing. As a result of these developments, it emerged as a serious pressure tool that directs from the existing retail store-based shopping to on-line virtual stores, and as a result, it has been the subject of research and discussion. While in the past it was adequate to offer a web

presence with a potential sales opportunity ( Kotzab and Madlberger, 2001). With the adoption of technological developments by consumers, smart phones and other mobile devices have made access to information cheaper and faster. The combination of today's mobile phone subscriptions and internet usage “on mobile” created a new form of digital media in the first decade of this century. This form of digital media has changed consumer behaviour (Burton and Soboleva, 2011; Blázquez, 2014; Wang et al., 2016).

The widespread use of the Internet has allowed consumers to research the products and services they want from many channels in a cheap, fast and reliable manner and accordingly caused the distribution channels to change. In addition to these, the options of consumers to access a product or service are varied. Especially with the development of e-commerce in the retailing sector, not only the consumers want to buy or store design but also the channel where the purchase will take place plays an important role in the decisions of the consumers. At this point, consumers are in search of the most suitable for them both in terms of speed and cost.

Consumers focus on which channels are suitable for them at every stage of the consumption process and how they can achieve the maximum result with minimum cost? (Van Dijk et al.,2005). Therefore, it is vital for businesses to successfully manage all channels that have access to consumers. Managing these channels in a compatible and flexible manner and ensuring coordination between channels are examined under the concept called omni-channel.

Omni-channel is one of the most important retail revolutions of recent years, impacting a variety of areas marketing, retailing, communication or information systems. An omni channel strategy is a form of retailing that, by enabling real interaction allow customers to shop across channels anywhere, at any time, thereby providing them with a unique, complete and seamless shopping experience that breaks down the barriers between online and offline channels ( Verhoef, Kannan and Inman 2015). The omnichannel concept is perceived as an evolution of multichannel retailing, which implies a division between the physical and online store. In the omnichannel environment, customers move freely among channels simultaneously (on-line, mobile devices, and physical store), all within a single transaction process. Because the channels are managed together, the perceived interaction is not with the channel, but rather the brand (Juaneda-Ayensa et al. 2016). Described as channel agnostic, these consumers do not care whether they buy in-store, online or via mobile as long as they get the product they want when they want it at the right price (Aubrey and Judge, 2012),



because what they ultimately want is to have the same brand experience regardless of the channel used (Dholakia et al., 2005; Eaglen, 2013; Juaneda Ayensa et al., 2016; Zhang et al., 2010).

For today's consumers, mobile devices are everyday it has become an indispensable part of life. In the studies conducted on the subject, it has been observed that consumers use mobile technologies for reasons such as personalizing mobile activities, accessing services without any location restrictions, and providing time/cost advantages.

## **1.2. Research Purposes**

Specifically, the aims of this thesis are (1) to explore the omni-channel retailing model concept and examine in depth the behavior of the consumers when shopping, (2) to analyze the benefits of an integrated omni channel that consumers use in their purchasing activities by focusing on current role of technology in a deeper and broader perspective, (3) to examine the underlying motivational factors of multichannel shoppers. Within the framework of the UTAUT models, determining the adaptation to mobile applications that are spreading rapidly around the world and used by very different consumer groups for shopping and determining the factors affecting technology acceptance. In addition, it is to try to measure which applications in the on-line and offline retail stores on this holistic channel are preferred by consumers. What purchasing behavior and loyalty to the brand, and what factors and roles affect or trigger to consumers in omni-channel marketing when they are shopping.

Uncovering what causes consumers to purchase or trigger them in purchasing journey within the framework of omni channel marketing involves how consumers' loyalties to the brand is affected within this holistic channel. In this study, it is also aimed to determine the factors affecting the intention to use mobile applications. Thus, it is aimed to determine the factors that make people adapt to mobile applications and enable them to be used, to determine the reasons that keep consumers away from mobile applications and to propose appropriate solutions. Thus, people's approaches to mobile applications, which are starting to enter our lives more and more every day, have been researched, and it has been tried to understand how they will behave towards such applications in the future. The sub-objectives of the study are; To predict consumer behavior within the framework of technology adaptation, to determine which factors are effective for consumers to adapt to mobile applications. In the study, factors such as "performance expectation", "effort expectation", "social influence", "facilitating conditions", "hedonic motivations", "price values", "trust" and "innovation"

through omni-channel, "purchase intention" (behavioral intention) and the relationship between online and offline purchasing behaviour (use behavior). Within these relationships, the roles played by age, gender and experience, which are demographic indicators of consumers, are also investigated.

### **1.3. Problem Statement**

The concrete problem in consumer engagement in omnichannel marketing, within the approach factors of the UTAUT, is the conditions under which consumer behavior can accept and use new technologies while shopping, and whether it continues in the current period. In order to better understand consumer behavior and reveal solution methods, facilitating factors or resistances in omnichannel marketing need to be revealed in the light and analysis of data. It should not be ignored that there may be unknown opportunities in the participation of the consumer. Meanwhile, the emergence of inconsistencies in consumer engagement is another requirement. Whether these conditions have certain enabling conditions or not, there must be approaches that can help solve this problem, and vice versa. The primary consumer engagement perspective in omni-channel marketing is to assess that, under the UTAUT, marketers still struggle to achieve and demonstrate sales results in an increasingly omnichannel world, despite significant investment in data and technology, the prevalence of new advertising and promotional channels ( Solomon E., 2018).

### **1.4. Research Questions**

Research questions of this research are those in below:

1. Why do consumers intend to purchase from OC marketing strategy based on UTAUT and UTAT2 theories? which variables ( direct or moderate) are more effective in determining their final preferences with using technology.

2. What are the difficulties experienced by consumers in OC marketing and what are the sources of these challenges?

3. What opportunities and conveniences marketing provide to consumers on their shopping journeys? ( to examine the underlying motivational factors and involvement of omni-channel shoppers)

4. How can brand perception and loyalty be maintained as a sustainable utilitarian model by consumers within the concept of OC marketing ?

### **1.5. Theoretical Framework**

The research aims to determine the factors affecting the behavior of consumers who shop through using mobile devices and applications within the framework of omni-channel in-store or out-of-store. examined. These basic theories and models include; There are Theory of Reasoned Action, Technology Acceptance Model, Theory of Planned Behavior, Unified Theory of Acceptance and Use of Technology-II.

In addition, the basis of the literature review in the mobile field in the research was the review studies in this field. The articles examined in the previous studies were scanned in line with the research purpose. On the other hand, studies in the mobile field were scanned in Web of Science, Research Gate, Dergi Park, Google Academics, YÖK National Thesis Center, Proquest, Ebscohost, Emerald Insight, Elsevier databases. It has been understood that many studies have been carried out in the literature. As a result of the examination, consumer behavior and the role of technology in omni-channel marketing (Masquera et al., 2017; Kazançoğlu, Aydın., 2018; Hüseyinoğlu et al., 2017; Ayensa et al., 2016; Kaczorowska, Spsychalska , 2017; Jardat et al., 2013; Alghizzawi, 2019; Marangoz and Aydin, 2017; Payne et al., 2017; Hansen and Sia., 2014; Gao and Yang, 2015; Morluchi, 2019; Chopra, 2016; Hendriani and Chan, 2018; Hole et al., 2012019; Valerie et al., 2017; Payne et al., 2017; ), omni-channel retailing (Pawar and Sarmalt, 2017; Schnabel and Bug, 2016; Erdem et al., 2017; ), consumer experiences (Melero et al.,2016; Siva et al., 2018; Leonas, 2018; Mosquera et al., 2019; Foxall, 2003), the effects of information technologies on innovation processes (Ashok et al., 2017; Andre et al., 2017; Emsenhuber, 2016; Leana & Kilde, 2011), unified acceptance and use of technology by consumers (Vankatesh et al., 2003, 2012, 2016; Uyar, 2019; Yılmaz and Kavanoz, 2018; Chang, 2012; Namlı, 2010; Guritno and Siringoringo, 2013; Kalyoncuoğlu, 2018; Chang and Kim, 2011; Bauer et al., 2007; Göğüş, 2014; Ajzen and Fishbein, 1980; Ajzen , 1991; Davis, 1989; Davis et al., 1989; ); In addition, it has been determined that studies have been carried out in these areas to determine which factors are effective on the attitude and behavioral intention of the consumer.

## **1.6. Research Gap**

Today, consumers reach retailers using many channels and touch points and try to have a seamless shopping experience. Undoubtedly, technology has great benefits for the perfect shopping experience.

In recent years, multi-channel strategy has emerged and has become an important position to provide competitive advantage among retailers. However, the study to examine the difficulties faced by consumers in their purchasing experience using technology in the omni-channel strategy has not been done much on Turkish customers.

## **1.7. Research Limitation**

One of the limitations of the research is that the research sample consists of people living in Turkey who shop both inside and outside the store using mobile applications. In terms of mobile, the existence of a developing market instead of an established market in Turkey is another research limitation. The fact that the structures such as the platform on which the applications on mobile devices are developed and the software technical features it has are not included in the research model are among the research limitations. Finally, apart from these, the fact that Omni channel retail stores are considered in general terms and cannot be analyzed on a sectoral basis is another limitation of the research.

## **CHAPTER 2**

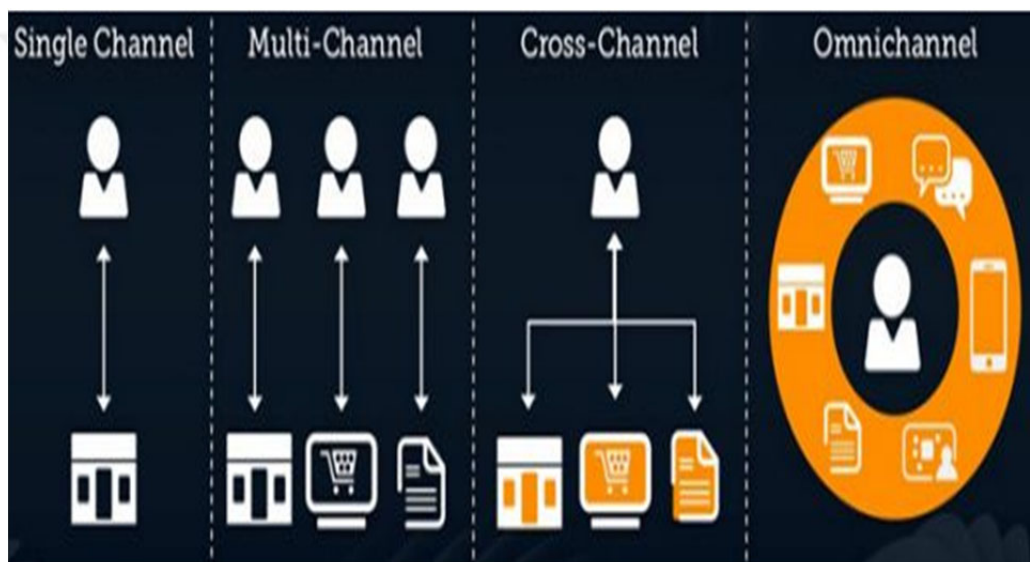
### **LITERATURE REVIEW**

#### **2.1. Evolution of the Omni-Channel Marketing**

The OC uses cross-channel strategy to integrate user experience with better communication, orchestrated and designed to cooperate. Therefore, OC supplants multichannel like e-commerce, social media, mobile applications, and physical locations, to enhance customer values and engage them with multiple avenues for application in healthcare, government, financial service, and telecommunication industry. The method and technology the retailer use of their communication to select and offer the product, customer needs are critical and decisive to customer involvement, engagement, and competitive success (Lazaris, 2014).

## 2.2. From Single Channel Marketing to Omni-Channel Marketing

Channels define the point where consumers communicate with businesses or the tools and environments in which consumers interact (Neslin et al., 2006). Previously, the traditional distribution channel understanding of enterprises aimed to reach consumers through a single channel. However, with the tremendous change in technology over the years and parallel consumer demands, this situation has led to the transition from a single channel to a multi-channel era. As a result of all these, the increasing desire of the user to have the service they want in both digital and physical channels, whenever they want, gave birth to the omni-channel marketing model.



**Figure 2.1.** Transition from the Single-Channel Era to the Omni- Channel

Source <https://www.aykutaslantas.com/dijitalde-yeni-cag-omni-channel/Aslantaş>, 2018

At the beginning, businesses thought to reach consumers through a single channel. In the marketing activities carried out through conventional distribution channels, a single brand tried to establish contact with consumers through a single channel.

Multi-channel marketing is explained as selling products or services through more than one channel. In multi-channel, customers now have more choices (with the same retailer in different channels or with different retailers in different channels) about where to shop and buy. Customers can order through catalogs, shop from websites, and buy from retail stores. In addition, they can easily access information and customer services when necessary, and

receive promotional offers tailored to their needs and interests. So businesses not only have the opportunity to target customers more precisely; they can also better meet the changing needs of each customer (Mcgoldrick and Collins, 2007). In omnichannel retailing, businesses reduce the costs of accessing new markets and increase sales; They can create more loyal and satisfied customers. However, negative aspects such as channel cannibalism (reduced sales of a company's own products as a result of the launch of another similar product) and free use (consumers can take advantage of free access to product information from a retailer and order from a lower-priced retailer) have also been identified (Heitz- Spahn, 2013).

In cross-channel, on the other hand, it is the set of activities related to the sale of products or services through multiple or all common channels, where the customer can trigger partial channel interaction and/or businesses control partial channel integration (Beck and Rygl, 2015: 175). Cross-channel marketing refers to the ability to run a single campaign with a coherent message coordinated across channels. A key enabler for cross-channel marketing is to have a single marketing view of customer and prospect data using a central database. With this one up-to-date record system, businesses can target and segment profiles, track all past cross-channel marketing interactions in detail, personalize and automate marketing efforts across multiple channels, and accurately measure audience response and effectiveness ( Dietrich, 2009 ). Cross-channel marketing strategy can be defined as the interchangeability of various channels and combining them into a single distribution system that promotes the transfer of customers between channels. Integrated cross-channel marketing is a set of integrated processes and decisions that support a unified view of a brand from the perspective of product purchase, returns and exchange, regardless of channel (in-store, online, mobile, call center or social). Cross-channel integration is designed to improve customer reach and interaction with on-line and offline channels to enhance customer experience and retain customers. Customer retention is considered one of the key goals of cross-channel integration. Content and process consistency, trust, and trust as sub-factors of channel integration quality also increase customer retention. Therefore, content and process consistency increases consumer retention through trust (Choi, 2020).

The best way to think about omni-channel is to think about the evolution of retailing. It has been a 20-year journey, and it was not that long ago that retail was synonymous with brick and mortar (Harris, 2012).

Omnis is a Latin word meaning 'all' or 'universal'. So, 'omni-channel' means all channels together (Lazaris and Vrechopoulos, 2014) while Neslin et al. (2006) state that

channel is a customer contact point or a medium in which the company and the customer interact.

Omni channel is a cross-channel business model that companies use to improve customer experience. Frost and Sullivan (2015) defined omni-channel business as “seamless and effortless, high quality customer experiences which occur within and between contact channels.” Omni-channel retailing is an expansion of multi-channel retailing (Verhoef et al., 2015). The major difference between the two is the level of integration. Multi-channel is usually identified as non-integrated way to approach customers while omni-channel requires coherent and absolute integration (Kersmark and Staflund, 2015). The omni-channel marketing system is a type of marketing where all channels are integrated without any interruption and its aims to give consumers a “holistic“ experience from shopping ( Lazaris and Vrechopoulos, 2014; Kazancoglu and Aydin, 2018). The consumer can access from a desktop or by mobile device, by phone, by tablet, etc. or shop online in a real store, and that customer's shopping experience will be seamless.



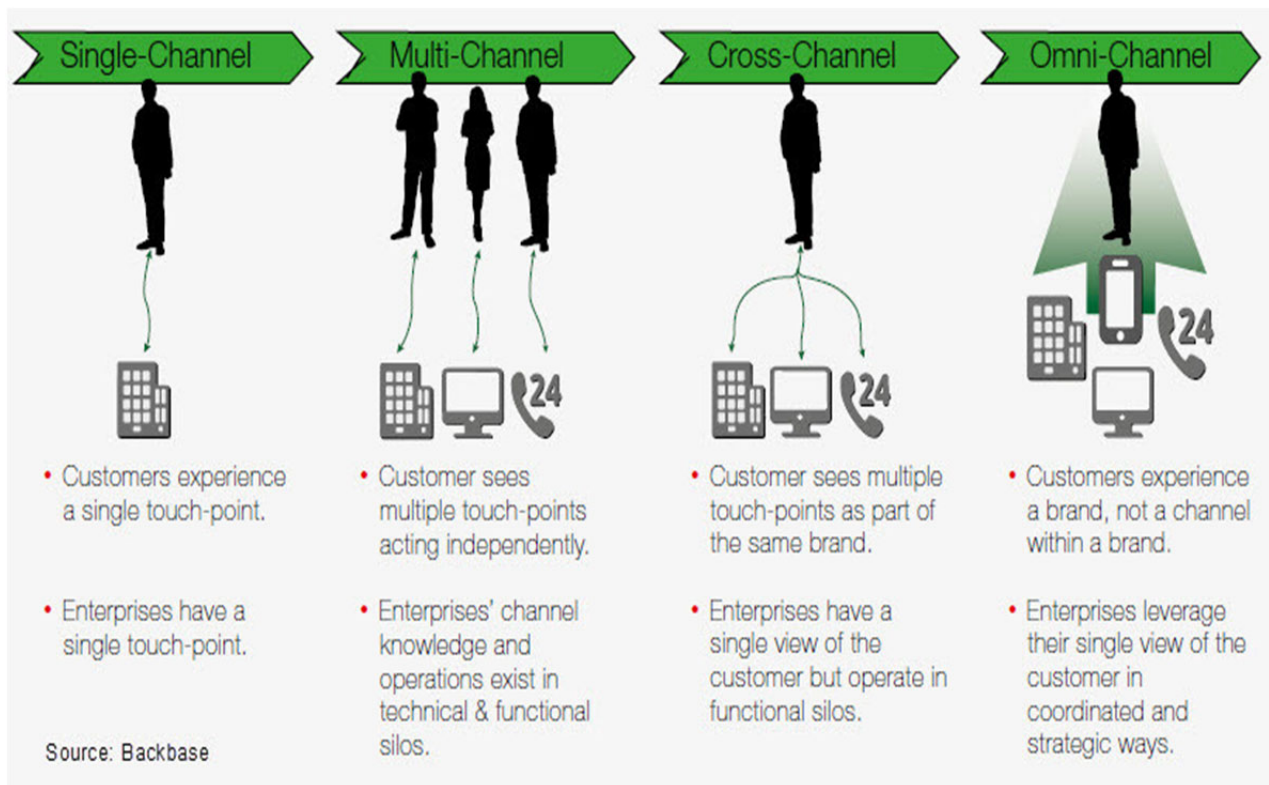
**Figure 2.2.** Concept and Scope of Omnichannel Retailing (Hole Y., et al., 2020).

I have stated that the most triggering factor in the use of omni channel marketing by consumers is the technological developments. Naturally, it is of course necessary to be accepted and used by consumers in the use of this technology. Thus, technology is redefining the store experience and store layouts through “click-and-collect,” “ordering instore,” “delivering to home,” “order online, return to store” and other combinations of online and traditional retail activities that make the shopping process easier (Bell et al., 2014). Despite the increase recorded in research on information and communication technology ( ICT) and

multichannel, it is important to continue investigating in the field of omni channel consumer behavior and especially to determine how consumers' attitudes toward technology influence the purchasing decision process in the new context ( Escobar-Rodriguez and Carvajal-Trujillo, 2014; Jueneda-Ayensa et al., 2016 ).

The omni- channel retailer's distribution system includes not only the delivery of products to stores and customers, but also the concepts of reverse distribution. Because products purchased on-line also provide customers with return options. Forward distribution system distribution places, destinations are characterized by their respective connections. The reverse distribution system includes the physical flow of product returns from the customer to the retailer and the return centers where the returns are processed and can be termed as reverse logistics (Hubner et al., 2016). Integration, on the other hand, is at the heart of omni channel marketing. Holistic channel customers perceive the quality of all the channels they use and transform them into a general perception of service quality. Integration quality within holistic marketing is defined as the ability to provide customers with a seamless service experience across multiple channels .





**Figure 2.3.** The Omnichannel

Source: (<https://www.linkedin.com/pulse/omni-channel-marketing-nedir-aykut-aslanta%C5%9F/>)

### 2.3. Switch From Multi-Channel to Omni-channel

More specifically, the retail landscape continues to change, with the birth of the mobile channel, tablets, social media and the integration of these new channels into on-line and offline retailing. The popular research suggests that we are moving from a multi-channel retail to an omni-channel retail model. In the past, retail stores operating in real space was a process that allowed consumers to touch and feel products and provide instant gratification; Meanwhile, Internet retailers have sought to integrate shoppers with a wide range of products, low prices, and content such as product reviews and ratings. As the retail industry evolves towards a seamless "omni-channel retailing" experience, the distinctions between physical and on-line will disappear, turning the world into a showroom without walls. Interestingly, the omnichannel retailing movement has not been conceptualized until recently, despite its growing importance in practice. Most previous research has considered traditional direct

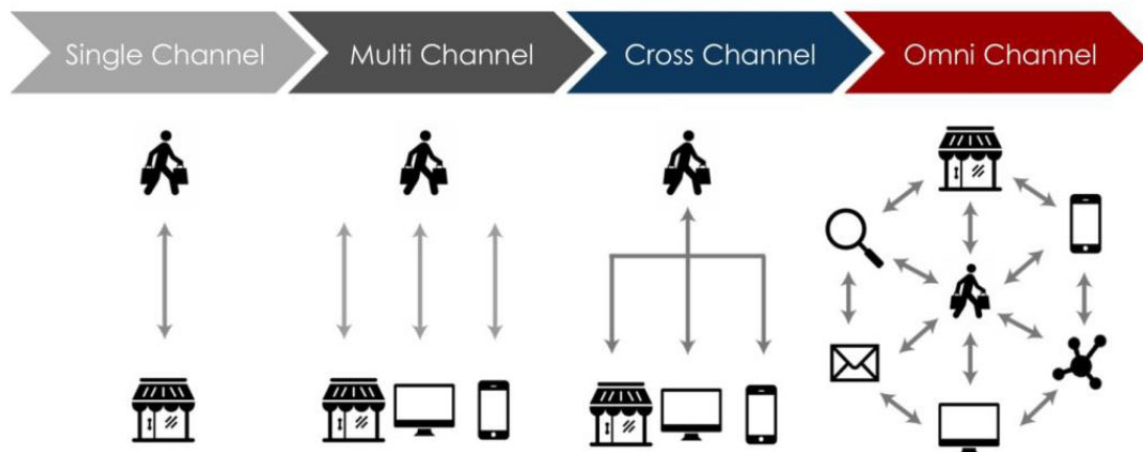
marketing channels, mostly offline channels (stores), online channels (i.e. Web store), and catalogs. Redesign, distribution, coordination and evaluation of channels are defined to increase customer value through multi channel customer management, new and effective customer acquisition, retention and development. Thus, the channels; They accept it as customer touch points or an environment where the company and the customer interact. By emphasizing interaction in their definitions, they limit the field specifically to channels that provide two-way communication, excluding traditional one-way mass media channels such as TV (advertising).



**Table 2.1.** The Evolution of Omnichannel Over the Years (Journal of Business and Retail Management Research, 2008 )

<b>Single Channel ( The Past )</b>	<b>Multi Channel (The First Step)</b>	<b>Cross Channel (The Current State )</b>	<b>Omni-Channel ( The Future )</b>
Retailer most often had only one channel, example a shop or only catalogues ( mail orders)	Channels are stand alone	Alignment in brand experience, assortment, prices etc.	Consistent experience across all channels.
	Customer comforted with different assortment, prices, deals etc.	Back office (Organization, systems) however not integrated.	Marketing not scattered, systems integrated, customer has seamless experience while moving, between channels.
	E-commerce is separate systems are silo-ed	Aligned brand messages and channel offerings.	Brand experience
	Inconsistencies in brand appearances	Extended online capabilities	Different responsibility for each channel.
	Online limited to must have features, services.	Comprehensive assortment concepts.	Assortment strategies aligned with how customer shops
	Online assortment less purposefully defined. No specific price for online market	Dynamic pricing Focused marketing to specific segments	Flexible order and fulfillment
			Individualized marketing,
		Personalized customer service.	
Unconnected Marketing		Cross-Channel organizational structure and metrics	

Source: Journal of Business and Retail Management Research ( JBRMR) Volume 12 Issue 4 P. 204-205-July 2008



**Figure 2.4.** Different Channels in Reaching the Consumer.

Source: Data&Marketing Association, 2016

## 2.4. Motivation for the Omni-Channel Shopping

Using a mix of marketing channels is essential because customers have many ways to purchase like going in store, online or engaging with more traditional channels such as mail and TV. The growth of omni-channel retailing is causing consumers to change their habits and shopping behaviour. It is essential to understand the factors on purchase intention within the consumer context. ( Kazancoglu and Aydin, 2018 )

Understanding motivations of multichannel shoppers is critical for retailers, especially in terms of how retailers can best attract shoppers to and orient shoppers across different channel options. Our study thus seeks to understand multichannel shopping through non traditional retail formats by studying the effects of shoppers' hedonic and utilitarian motives. (Nan Know and Jain, 2009) Consumers engage in variety seeking to satisfy a desired stimulation level, especially when shoppers' psychological arousal level is lower than their desired level (Mowen & Minor, 2001)

Brand-switching behavior is a way to increase arousal level (Lattin & McAlister, 1985; Mosche, 1985).

OC marketing provides an important opportunity to develop a data-driven channel strategy. OC sales information can be supported by cloud and electronic point of sale and machines that record transaction information. In addition, businesses can obtain large amounts of customer data through different touch points such as social media, loyalty programs and

mobile applications (Hossain et al., 2017). OC marketing offers customers a customized and immersive shopping experience across platforms. Leveraging technologies such as artificial intelligence, augmented reality / virtual reality, and IoT make it possible for customers to interact through various platforms (Sharma and Dutta, 2020 ). A successful OC marketing campaign can lead to better customer experience, increased customer loyalty, increased brand visibility, better analytics, accurate target marketing and therefore higher ROI. Song et al. (2020) found that the use of the on-line purchase-store pickup system by businesses had significant positive effects on the frequency of offline purchases and the amount of on-line purchases. Gao and Su (2017) highlight three key findings: (i) Not all products are available for in-store pickup; in particular, it may not be profitable to apply the online buy-and-pick system to products that sell well in stores (ii) online purchase and in-store pickup enable retailers to reach new customers (iii) in a decentralized retail system where store and online channels are managed separately, buy online and buy from store receiving system revenue can be shared across channels to mitigate incentive conflicts; Allocating all revenue to a single channel is rarely effective. Kong et al.(2020) argue that the online buy-in-store pickup system is more beneficial for the business when the unit operating cost in the channel is lower and under variable pricing. OC marketing provides customers with coupons that they can use in on-line and physical stores; providing inventory availability information for online and mobile customers; sending highly targeted emails to customers for selected products and services based on past purchases; reducing warehouse costs and faster shipping by sending web and mobile-based purchases from the nearest store; online customers in their region of new store openings, events, sales, etc. to inform about; It allows to increase bargaining power through joint purchasing between channels and lower inventory investment and risk due to the use of drop shipping (from the manufacturer directly to the retailer) for selected products in certain channels (Berman and Thelen, 2018). Wojciechowski and Hadas (2020) emphasize that by integrating OC marketing, more customers can be reached because there are more channels, the behavior of customers can be better monitored with more data that can be collected, and it is possible to adjust the latest technology according to changing market needs. OC marketing helps to increase customer satisfaction and word of mouth (<https://www.vinle.com/>, 2019). According to a 2013 Zendesk survey of 7,000 people, 75% of respondents said they would return to a business with excellent service and 33% would spend more. However, only 7% of respondents are extremely satisfied that brands provide a seamless, integrated and consistent customer service experience across channels, and 87% think brands should work harder to create a seamless experience for customers (Zendesk,

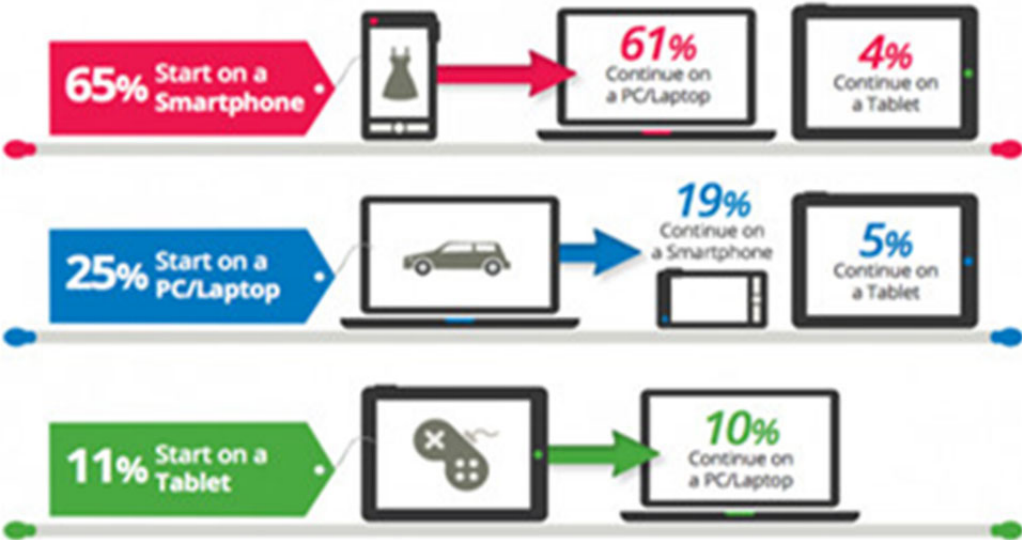
2013). According to the Nielsen Global Trust in Advertising Report, published in 2015 with the participation of 30.000 people from 60 countries, 83% of respondents say they trust the recommendations of their friends and family (<https://www.nielsen.com/>, 2015). OC communication campaigns are highly measurable. Therefore, businesses can learn which channels are most efficient in reaching customers and optimizing communication campaigns. Every dollar spent monitoring the results of the channels provides a return on investment of \$13 (Degeis, 2015).

## **2.5. Mobile Apps. and Consumer Engagement Across Omni-Channel**

The reason for the widespread use of mobile applications is that they allow people to do the things they need to do on time and quickly without being connected to a fixed computer. This gives to shoppers freedom of action. Due to these advantages, many companies are designing a wide variety of mobile applications or updating their existing applications. Apple established the first Apps Store in 2008. Again in October 2008, Android Market was established. Designed for phones with Android operating system, this store continues to serve as Google Play since 2012 (Rosenberg, 2012). A significant portion of the applications used by consumers are covered by these two retail stores. When mobile phones first appeared, they were introduced as a different method of interpersonal communication because they provided consumers with the opportunity to communicate without being in a fixed place. Over time, mobile marketing has started to gain importance by businesses due to advances in infrastructure and technology, and the mobile industry has taken on a complex structure with the development of multimedia services (Varnalı et al., 2011). Since it appeals to a wide audience, businesses have begun to attach great importance to mobile applications. The contributions of mobile applications, which provide the opportunity to communicate with customers at all hours of the day, to consumers and companies are as follows (Ryan, 2016; Smutkumt et al., 2010);

Mobile applications provide an interactive communication environment between the customer and the business, resulting in the emergence of new products and services. It develops the open innovation system. Information obtained from consumers through mobile applications helps product diversification and expansion. Mobile applications serve to create consumer groups by creating on-line communities. Provides a suitable environment for methods and techniques to be developed for customer loyalty. It leads to viral marketing by

enabling people to communicate opinions among themselves about companies. It contributes to the business in increasing the brand image and providing brand awareness. It enables consumers to have a deeper brand experience. It strengthens the bond between the customer and the company by enabling consumers to reach the business more easily. It causes complaints and requests to be forwarded more quickly. It enables better segmentation of the market by age, gender, income and location. Allows direct selling. It increases the capacity of marketing methods such as advertising, public relations, promotion and causes the development of new techniques. It facilitates the shoppers to obtain information about the price.



**Figure 2.5.** Consumers Take a Multi-Device Path to Purchase

Source: (<https://www.linkedin.com/pulse/omni-channel-marketing-nedir-aykut-aslanta%C5%9F/>)

## CHAPTER 3

### CONSUMER ENGAGEMENT BEHAVIOR

Engage and engagement are often used for topics related to co-creation, development of decisions, and interaction. According to Hollebeek (2011), engagement is potentially attachment-oriented and can be influenced by consumers' decisions regarding certain objects of participation. In the field of marketing, Algesheimer et al. (2005) developed studies on community engagement by emphasizing the role of brand community commitment in consumers' attitudinal loyalty and repurchase intentions, claiming that consumers' motivation to interact with others will positively affect interaction with the brand community. Other authors define engagement as the level of physical, cognitive and emotional presence of a customer in their relationship with a service organization (Patterson et al., 2006).

Consumer engagement is an attempt to distinguish consumer attitudes and behaviors that go beyond purchasing behaviors (van Doorn et al., 2010; Vivek et al., 2012). On the other hand, it is concerned with the role of the consumer in the concept, which is considered active, involved and co-creative rather than merely the recipient of firms' initiatives (Brodie et al., 2011; Gambetti et al., 2016; Hollebeek et al., 2019; Kumar et al., 2010).

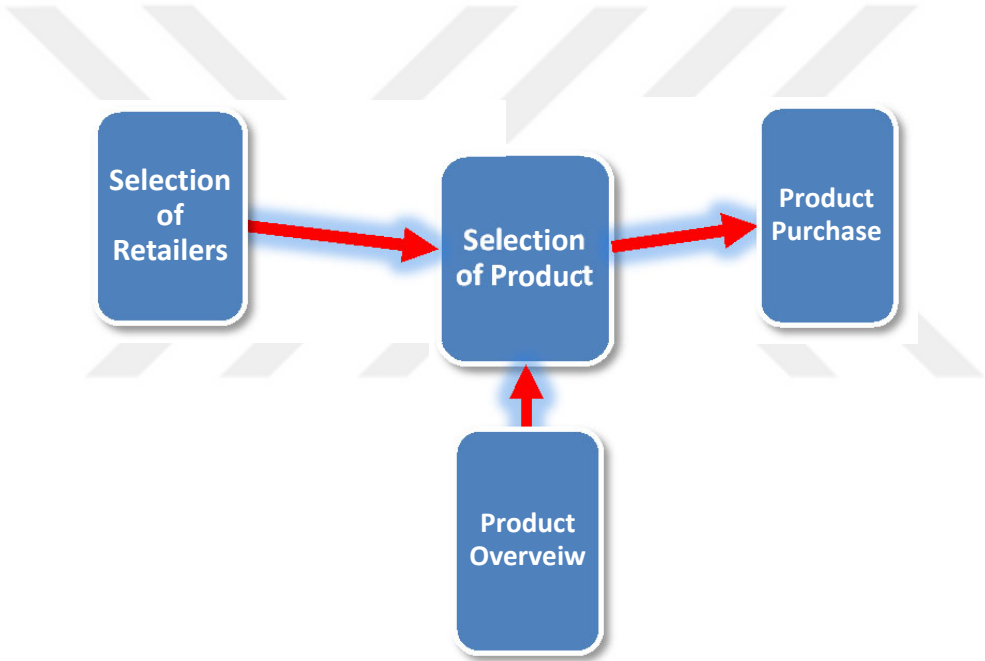
Researchers also consider using different perspectives to conceptualize consumer engagement (Schultz & Peltier, 2013). Focusing on an attitudinal perspective, Brodie et al. (2011) discussed the role of interactive consumer experience and co-created value as the foundation of structure, they discussed the nature of consumers' interactive participation experiences across contexts, and the value of consumers' dynamic and interactive co-creation role with cognitive, emotional and behavioral dimensions.

#### **3.1. The Evolution of Consumer Engagement Behavior**

Consumer behavior is defined as “the mental, emotional and physical activities that people engage in while choosing, purchasing, using and disposing of products and services in order to satisfy needs and desires” (Naveen, 2013; Wilkie, 1994). It provides an explanation of the stages a customer goes through in making their purchasing decision, as well as an estimate of the line of action. Accordingly, it is extremely important for retailers to understand this, especially in today's ever-changing conditions. The main interests of the consumer are to



be inspired and to meet their needs. To fulfill these demands, he must select a retailer of his choice by collecting and verifying information based on his subjective needs and expectations. After choosing a retailer, the customer starts the actual purchasing process (Rudolph, 2009). When a consumer arrives at the point of sale (POS), they get an overview of the products available, shop around, and consider whether to make a purchase. Retailers who advise as much as price ratio contributes either to actual practice or to the customer leaving to compete. The sales point of the customer following the classical purchasing process and the decision point overlap. As a result, selection and decision-making move on the spot, so that all of the added value happens at retailers' points of sale and there is no need to share the fee for their services (Gehrckens & Boersma, 2013).



**Figure 3.1.** The Traditional Buying Process ( Hapf, V., et al. 2017)

Engagement has been recognized as an important and meaningful concept in organizational behavior, marketing, social psychology, and education. Academic and managerial interest in customer engagement (CE) is considerable (Hollebeek, Srivastava, & Chen, 2017), increasing (Roy, Balaji, Soutar, Lassar, & Roy, 2018), and expected to persist (Beckers, van Doorn, & Verhoef, 2018). Marketing practitioners expect increased brand equity, sales, and profits from truly engaged customers. For example, a study from Rosetta Consulting (2014) shows that highly engaged consumers spend 60% more in each transaction, make 90% more frequent purchases, and are four times more likely to advocate for the brand.

Marketing academics emphasize CE's potential to develop relationships with customers beyond monetary transactions (Venkatesan, 2017) and achieve sustainable competitive advantage (Kumar & Pansari, 2016).

### **3.1.1. Consumer Decision Making Process Along Omni-Channel**

With the advent of the Internet age, a major change has occurred in the purchasing behavior of the consumer. While it allows shopping to be done faster and easier, it also provides a wide range of information content. Test reports, product ratings, and especially social media aid in decision-making, potentially even better than a store manager. Especially, new technologies have a big impact on emotion-oriented buying. Historically, the customer's purchase of information on existing retailers and products has been done either by word of mouth (WOM) or by own experience (Simonson, 2016). Today, it is social media that takes on this role. Therefore, the customer's choice of product takes place before he chooses the retailer. This change leads to decoupling of the customer's decision-making process. The decision point no longer needs to be aligned with the point of sale. As a result, revenues are distributed across the entire value chain and pose a danger to retailers. With this decreasing importance, retailers are seen literally only as sales points (Heinemann and Gaiser, 2016). In addition, the customer's POS turns into the most valuable step of the value chain, contributing to the greatest benefit. For example, about 97 percent of German households with an Internet connection do an online search before purchasing. Only thirty percent of them get information from the manufacturer's website, check prices, and both observe and read other consumers' comments on the ad. (Gehrckens & Boersma, 2013).

Researchers define the channel concept as “a customer touchpoint or an environment where business and customer interact” (Neslin et al. 2006; Beck, Rygl 2015). As the increase in on-line shopping changes customer behaviors and expectations at retail points, various store retailers are combining the physical and digital spaces to create new age experiential retail environments (Kotler, Armstrong 2017). This situation reveals the omnichannel behavior. On the other hand, in a world that can move freely between marketing channels, it is consumers, not retailers, who control channel selection (Piotrowicz & Cuthbertson, 2014). Customers don't think about channels. They don't think about cross-channel, multi-channel or omni-channel. The only thing customers are really worried about is finding a response that fits their current needs and wants, is fun, and offers good value for both money and time.

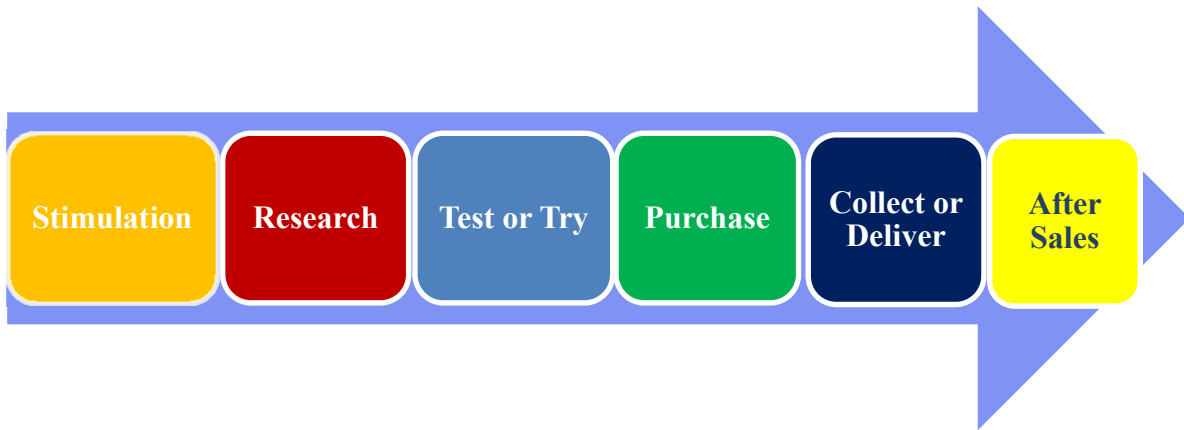
Many retailers that have embraced digital channels have seen them as an opportunity to reduce their overhead and compete with digital-only specialist players. But only digital retailers that have succeeded have understood both their product lines and how consumers buy these? Products that were initially successful included travel, books, music and video games. Compared with these goods, for example clothing and electrical or durable consumer goods, one of the main differences is the experience with research and evaluation. The purchasing process for these types of products is not very tactful; Consumers don't buy them based on how they look, texture, or aesthetic feel. For these reasons, they are ideal products for digital channel-based sales. The challenge faced by retailers of clothing, household and durable appliances is that customers tend to take a tactile approach when purchasing. When it comes to electrical products, aesthetics or 'fit' into a living space or kitchen can be just as important as functionality. The difference is that the decision-making process requires a physical visual test: How does it feel? What kind of feedback or light effect does the product give the user when opening or closing a door? The more expensive the product, the more important it becomes to the consumer in the decision-making process. After that, the retailer has the opportunity to close the sale in the store, making the purchasing process easy and convenient.

Today's consumers have access to a wider range of technologies than previous generations, with many consumer segments that have grown with or been greatly influenced by technology

Omni-channel consumer experience can be handled in many ways. First, who is the omni-channel consumer and what does he desire? And what is the role of the respective store in the omni-channel purchasing process?

Consumers' decision-making processes have changed due to their online shopping behavior. A substantial amount of literature has been published on the consumer decision-making process. Steinfield, Bouwman, and Adelaar (2002) describe the purchasing process in three stages. The first stage is the pre-purchase stage, followed by the purchasing stage, and the process ends with the post-purchase stage (Kollmann et al., 2012). Suominen (2005) divides the purchasing process into five phases: activation, browsing, configuration, decision making, and purchasing. Solomon, Bamossy, Askegaard, and Hogg (2002) describe the following stages: problem recognition, information seeking, evaluation of alternatives, and finally, product selection (Lihra and Graf, 2007). According to Engel et al. (1995), the consumer decision-making process has seven stages: need recognition, information seeking,

pre-purchase alternative evaluation, purchase, consumption, post-purchase alternative evaluation, and disposal. The problem recognition phase of Solomon et al. (2002) show similarities with Suominen's (2005) activation phase and Engel et al.'s (1995) need recognition. When consumers differ significantly between their current state and their desired state, a problem is noticed: the consumer needs a product. Recognition of the problem/need is a natural process that can be promoted by marketing. Consumers want information after they notice the problem. This information can be found in consumers' memory (internal search) or obtained from the environment (external search). Because the purchase is more expensive, the consumer often wants to know more about the product. The scope of information search may differ according to product type and consumer characteristics such as age, education level and gender (Lihra and Graf, 2007; Engel et al., 1995). When information about possible products is obtained, the customer can evaluate alternatives. Consumers can carefully consider different products based on expected benefit or make a routine decision based on product category. Once the relevant options are known, the customer must choose between the product options. Consumers can be influenced by experience, available knowledge and brand loyalty in decision making. In addition, Engel et al.,(1995) stated that, post-purchase evaluation is the consumption of satisfaction with the purchased product. The final stage of the consumer decision-making process is the disposal stage, in which the unused product or its residue is discarded. For this research, a customer's purchasing process is called the 'customer journey'. This customer journey is more advanced than the purchasing process of Steinfield et al. (2002) and Solomon et al. (2002). The customer journey for this research consists of five stages; stimulation, information search, purchase, delivery and after-sales service. The stages are illustrated in Figure 5 and explained below. These stages are the most relevant for retailers. The delivery phase is added to the customer journey as customers (among others via online shopping) have several options for delivery of their products (Delft , 2013).



**Figure 3.2.** Adjusted Typical Stages of Consumer Decision Making Process (Cook, 2014)

Omni-channel's new approach to the consumer experience is the opportunity for consumers to undertake the purchasing process on their own terms and whenever they want. Omni-channel provides the opportunity for the consumer to come to the retailer for uninterrupted and problem-free re-shopping.

The omni-channel customer is highly mobile-connected and immersed in technology in their daily lives. It is suggested that OC customers have the following three segments.

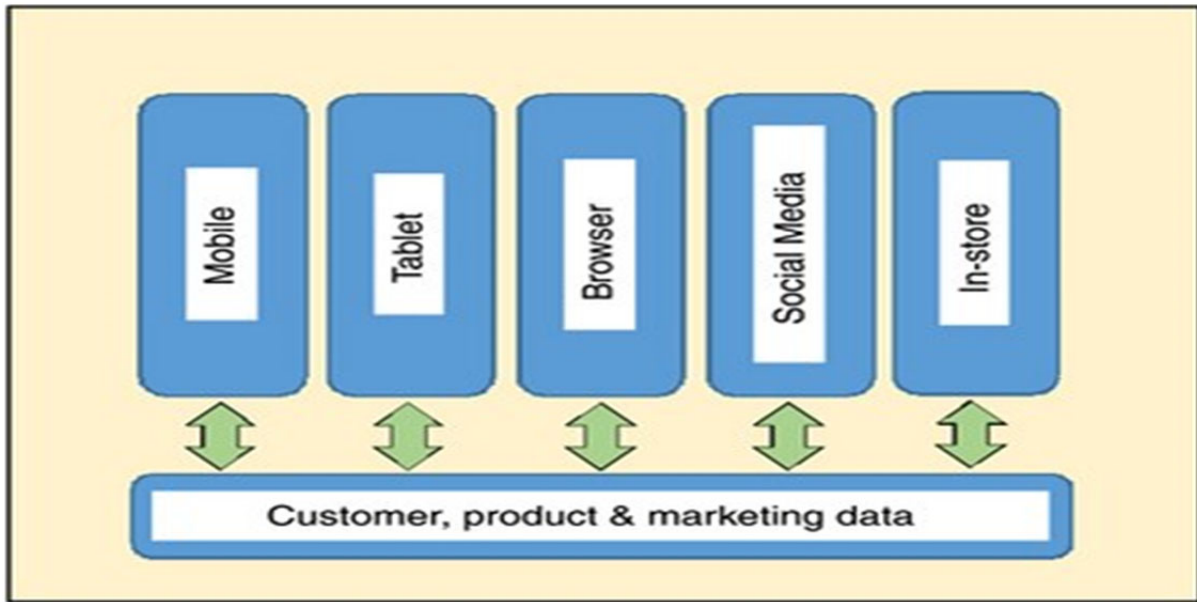
**Table 3.1.** Omni-Channel Consumer Segments

<b>Omni Integrated</b>	Affluent, home oriented, well connected aged 30-50 years old.
<b>Young Mobile</b>	Under 30 years, constantly on move, SMS is their primary communication channel.
<b>Social Networker</b>	Spells all age groups, highly connected by interest rather than demographics.

Consumer segmentation was first introduced to marketing science by Wendell Smith in 1956. Differences between consumer groups are seen as opportunities for the market (Raaij

& Verhallen, 1994). Consumer segmentation assumes that consumers exhibit heterogeneity in their product preferences and purchasing habits (Dibb, 1998). Segmentation is the process of segmenting a heterogeneous market into customer groups based on similar characteristics, wants, needs, purchasing habits or responses to marketing activities. Table 3.1. shows that consumer segments can become very loyal customers once fully engaged through digital and social media channels. Behaviorally, these consumer segments demand a convenient and enjoyable environment to conduct product research at a time and place that suits them. Often, this research takes place over a long period of time or involves more than one type of device.

This poses one of the biggest challenges for many retail organisations, namely how to ensure service and information consistency while making the customer's life as easy as possible? For many retail organizations, web and mobile platforms have been developed as features bolted to existing channels. Often times this causes them to have limited assortments or special on-line offers. For an omni-channel customer, walking into the store for a product only to make the final purchase decision and being faced with a different price or more options may surprise that customer. This situation can create an inextricable situation for that customer. To prevent this from happening, each channel must have access to the same assortment, the same product data, and the same prices and promotions. In addition, each channel needs to be aware of the customer's experiences to date through other channels, such as what they viewed, what they compared, what the last page they visited was. Having this competence means that the purchasing process becomes continuous and uninterrupted as the customer changes channels or enters the store.



**Figure 3.3.** Omni-channel Data Integration Schema

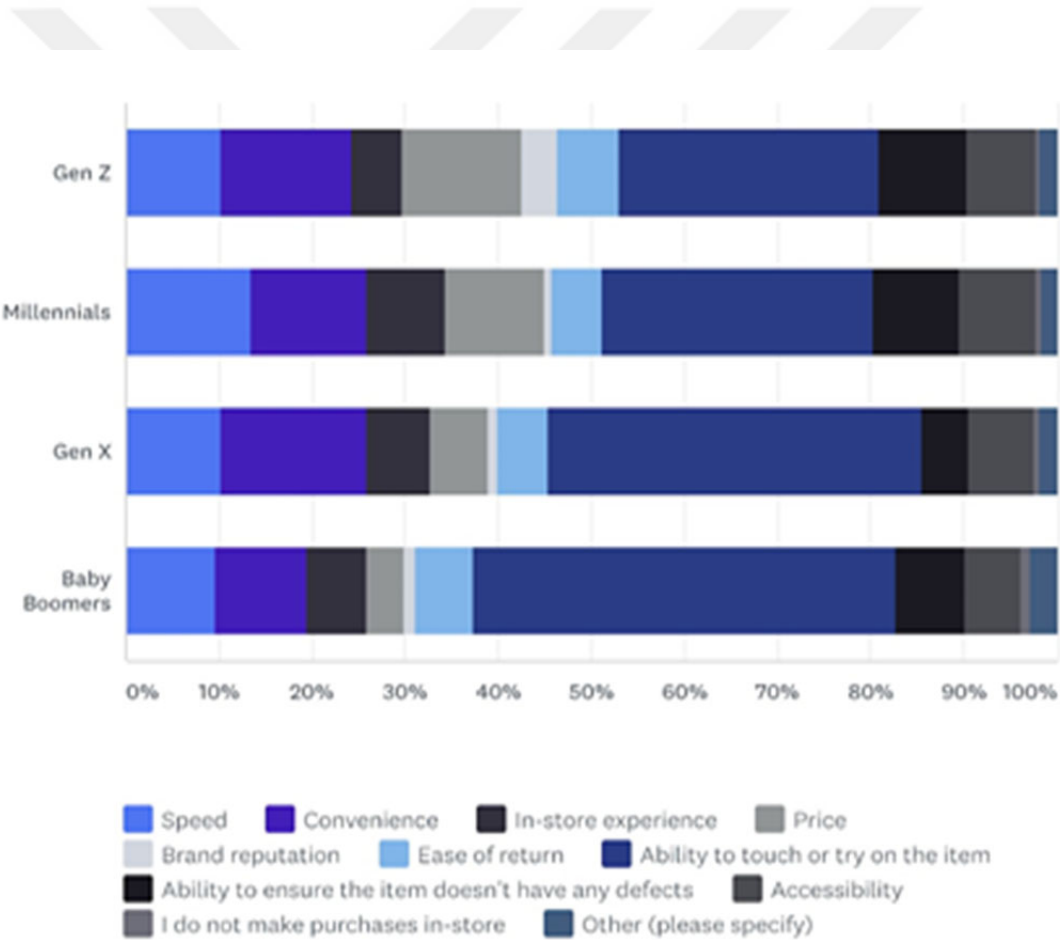
Above figure illustrates a real-time channel data schema that will enable a retailer to share data across all channels. From a technology point of view, the role of OC stores in these processes has to be reconsidered, as many technological integrations and platforms are provided and used for only consumer satisfaction.

### **3.2. The Omni-channel Retailing Environment**

With the widespread use of mobile technologies and social media, the simultaneous use of different channels has led to the emergence of new behaviors such as showrooming and webrooming (Mosquera, Pascual, Ayensa 2017). Customers and businesses use an increasing number of touchpoints to interact more seamlessly with each other, necessitating the shift to omnichannel management (Verhoef., 2021). The existence of more than one channel and the inability to manage different channels led to the emergence of complaints over time (price inconsistencies, product differences, physical testing due to return difficulties, purchasing from one channel while searching for information) and deficiencies in channel management. This has revealed channel behaviors such as webrooming and showrooming, click and collect, in-store order creation. Consumer behavior that examines or conducts research in the store before purchasing the product on-line or via mobile is called "showrooming" and those who use this application are called showroomers. Consumer behavior that examines or researches the product on-line or via mobile before purchasing it in the store is called webrooming, and

those who use this application are called webroomers (Kang, 2018). These applications are widely used by consumers using omnichannel (Flavián, Gurrea, Orus., 2020). In the consumer decision process, consumers evaluate the costs and benefits of multiple channels and choose a channel-combination that minimizes costs such as time, effort, money and risk and maximizes shopping gains such as the right purchase and better deals (Goraya et al. Neslin, Verhoef 2017; Pauwels, Neslin 2015).

Click&collect is when a customer orders (clicks) on-line from a website or mobile app. and then picks it up (collect) at a pick-up point. This new on-line customer experience with the offline retailer becomes a core component of the customer relationship and leads to sustainable value creation (Jara et al., 2018).



**Figure 3.4.** What is the Primary Reason People Decide to Buy from a Physical Store Rather than an On-line Store

Source:(<https://www.bigcommerce.com/blog/omni-channel-retail/#why-us-consumers-shop-where-they-shop> )



### 3.2.1. Digital Elements Embedded into The Physical Store

These technologies (e.g. mobile devices, in-store technologies, augmented reality, location-based services) appeared both online and offline, blending all the retail channels together, providing a seamless integrated experience for the consumers, while empowering retailers with valuable tools, often only available to e-commerce environments ( Lazaris et al., 2014 ). Omni-channel retailing is a ‘truly integrated approach across the whole retail operation that delivers a seamless response to the consumer experience,’ (LCP Consulting, 2013). But, as Rigby et al. (2012) explain, this is also ‘hard and disruptive and critical to get right’. One example of this is British retailer Marks & Spencer (M&S) that is integrating its on-line and offline operations, offering free Wi-Fi and touch screen kiosks throughout its stores (Baldwin, 2013; Eaglen, 2013). The latest fashion trends are presented on 70-inch ‘inspirational’ video screens while sales staff armed with tablets assist customers with finding the right products (Wood, 2012).

Another Omni-channel approach is by the upscale American fashion retailer Nordstrom that has integrated *ART* to allow sales assistants to check customers out from anywhere in the store. This streamlines shopping and eliminates queues (Schröder and Bach, 2013; O’Donnell, 2012). Nordstrom’s customers also have a ‘click-and-collect’ option to order online and pick up in store (Anderson et al., 2012). The French cosmetics brand Sephora has designed a strategy using touch point technology e.g. Scentsa Fragrance Finder, Skincare IQ touchscreen kiosk and Beauty Studio iPads to provide easy access to product information through QR scanning. It also has tools to share content in social media and a mobile app that allows customers to scan products, look up product information, track their buying history and access customer reviews to help them with their decision-making (Trout, 2014). Another example is Adidas, whose in-store technology offers ‘consumers an immersive experience that puts all of Adidas’ shoes at their fingertips, ready to buy’ (Aubrey and Judge, 2012). A life-size virtual wall displays the entire product range in a 3D catalogue, which can zoom and rotate products and access customer reviews. When a customer selects a product, a sales assistant checks the availability on a tablet. The customer can then pay immediately or order the product for delivery (Burdett, 2013; Bodhani, 2012).

Pantano and Viassone (2013) categorise technologies as touch screen displays or in-store technology, systems for mobiles or mobile applications, and hybrids (e.g. a retailer's app that allow customers 'to move around in the store'. Using a combination of Meuter et al.'s taxonomies (2000) and Pantano and Viassone (2013) this research focuses specifically on the physical point of sale, hence all findings represent in-store technologies.

**Digital signs** are large (greater than 30 inches) flat panel monitors with a continuous advertising loop and editorial material (Burke, 2009). Content can be changed in real time to deliver targeted messages to selected audiences (Buterbaugh, 2013) and when combined with point-of-sale scanners and video cameras, retailers can observe customer behaviour and reactions to advertisements and targeted information or offers (Burke, 2009).

**Free in-store Wi-Fi** enables customers to use a retailer's mobile app to locate products in the shop, access loyalty programs, coupons, in-store deals, and so on (Adweek, 2013). Some retailers, e.g. Macy's, Clarks and Timberland have beacon Bluetooth devices in stores that detect shoppers and automatically interact with them through personalised messages to their mobiles (Joseph, 2014; Whiteside, 2014). Beacons also gather shopper data (Taylor, 2014) and according to Miles (2014), are a bridge between physical locations and digital experiences that allow developers and businesses to interact with consumers.

**RFID** systems collect data from product tags and bar codes, and match those items with customer profiles in the store. The main components are: an RFID tag, an antenna and a RFID reader. Tags can be attached to any product and when it is close to the antenna, product codes are transmitted to the reader (Wong et al., 2012). This is useful for customers, but is especially beneficial for retailers in improving customer service (Hardgrave, 2012). Some retailers equip employees with tablets or iPads to provide information, payment or delivery options (Buterbaugh, 2013). Some stores also provide tablets or iPads for customers to access product reviews or run 'dressing room' applications to create their own outfits to share on social media (Rigby et al., 2012). The data collected also allows retailers to maintain contact after customers have left the store (Ellwood cited in Miles, 2014).

**Self-service technology** (SST) refers to 'technological interfaces that allow customers to produce a service independent of direct service employee involvement' (Meuter 2000, Curran et al., 2003). Interactive kiosks may be public-access computers, often with touch screens and are ubiquitous in banking (ATM) and travel (check-in). They are also used in retail environments such as supermarkets and department stores (Cho & Fiorito, 2010).

***Scan and Go*** technology is also a kind of cashierless, self-service payment method. It is a system based on making the payment from a defined credit card by using the scanner feature of mobile phones, scanning the purchased products, connecting to the payment software with RFID or WI-FI wireless connection technology.

***A smart mirror*** (Bodhani, 2012) or ‘virtual garment fitting system,’ allows customers to virtually try clothes through 3D body scanning systems’ (Choi & Cho, 2012 cited in Pantano & Viassone, 2013). This ‘augmented reality’ technology scans a customer to create an avatar that virtually tries on clothing. The technology is also available as a mobile app that allows consumers to scan each other and share pictures on social networks.

***Life-size interactive walls*** allow customers to view products on a virtual shelf, access product information and reviews and sometimes order products (Aubrey & Judge, 2012; Burdett et al., 2013). Some walls are touchscreens while others react to gestures and movements (Bodhani, 2012). They ‘create a link between channels’ by combining the best of the physical and the virtual shopping world (Aubrey & Judge, 2012)

***Beacon*** is a technology that emerged with the internet of things technology (Proente, 2020) and enables smart phones to interact with bluetooth technology (Sen, 2020). Thanks to the beacon technology, when customers pass in front of a physical store, a customer-specific offer about that store is sent to their smartphones (Brynjolfsson et al., 2013). For example, a company named Blesh operating in Turkey and the United States uses Blesh Beacons for the iBeacon technology developed by Apple instead of NFC, and small devices called Blesh PW Beacon for a technology similar to this technology, developed by Google and called the Physical Internet (Internet of Things). developed. At the same time, with the free wifi service, they can access detailed information about the product online via their smart phones by scanning the QR codes or barcodes of the product.



**Figure 3.5.** The iBeacon

Source:(<https://www.webtekno.com/zimbirtilar/turk-sirketten-30-ulkeye-ihracat-yaptiran-beacon-h4436.html> )

The beacon devices as seen in the image are a system that gives information about the place where they are placed and connects to iPhones with the iBeacon feature. With this system, for example, beacons placed at the airport of a flight company and automatic check-in process are carried out by recognizing the beacons for the flight to the smart device. In addition, when you enter a store, market or cafe, you can be informed quickly with the beacons used in the store and the notifications about new products in the store, discounts or consumer special offers to the smartphone. On the other hand, with the beacons to be used in a museum and notifications containing information about the museum and the artifacts in the mobile device, the museum can be visited more quickly and by obtaining detailed information. In addition to all these, thanks to the beacons to be found in a bank, the beacons determine the order of the customer and come to the smart mobile device as a notification without the need to take a queue. We can easily define it as a system where the owner of the business using this system can get information about the customer status in the workplace and the number and frequency of daily-monthly-yearly customers at the end of the day or instantly.

*IoT technology*, which connects both physical and online stores, streamlines the customer database, making it possible to send personalized offers to the customer in real time, and also provides great opportunities for retailers to increase their efficiency by integrating

the technology (Mosquera et al., 2018). With the Dash Button application, Amazon's first Internet of Things initiative, customers can automatically renew their orders for recurring orders such as coffee and detergent (Kotler et al., 2017).

**Augmented Reality (AR)** is defined as a real-time direct or indirect view of a physical real-world environment that has been enhanced/augmented by adding virtual computer-generated information to it. AR is both interactive and registered in 3D as well as combines real and virtual objects. Milgram's Reality-Virtuality Continuum is defined by Paul Milgram and Fumio Kishino as a continuum that spans between the real environment and the virtual environment comprising Augmented Reality (AR) and **Augmented Virtuality (AV)** in between, where AR is closer to the real world and AV is closer to a purely virtual environment. Augmented Reality aims at simplifying the user's life by bringing virtual information not only to his immediate surroundings but also to any indirect view of the real-world environment, such as a live video stream. AR enhances the user's perception of and interaction with the real world. While Virtual Reality (VR) technology, or Virtual Environment as called by Milgram, completely immerses users in a synthetic World without seeing the real world, AR technology augments the sense of reality by super imposing virtual objects and cues upon the real world in real-time (Carmigniani J., et al., 2011).

**Artificial intelligence (AI)** has the potential to revolutionise the way businesses interact with their customers (McLean & Osei-Frimpong, 2019). AI differs from human intelligence in that it is based on the rapid processing of data. In AI, intelligence may be generally defined as the ability to process and transform data into information to inform goal-directed behaviour (Paschen, Kietzmann, & Kietzmann, 2019). More specifically, AI refers to "computational agents that act intelligently" (Poole and Mackworth, 2010, Ameen N., et al., 2021), designed to imitate the capability of human power while exceeding their ability for accuracy (Dwivedi et al., 2019, Ameen N., et al., 2021). This is accomplished through the modelling of biological and natural intelligence using a set of algorithmic models (Gupta, Drave, Dwivedi, Baabdullah, & Ismagilova, 2019, Ameen N., et al., 2021). AI technologies supported by data analytics are increasingly embraced by companies as a response to sustained margin pressures, shorter strategy cycles, and increased expectations from customers. This alters the way firms interact with their customers with the potential to achieve better customer-brand relationships (Evans, 2019). Specifically, advances in AI have the potential to improve the customer experience by increasing companies' knowledge about those customers' preferences and patterns of shopping (Evans, 2019). Deploying AI

technologies strategically at different key customer touch points may therefore bring significant benefits to companies and a possible increase in customer satisfaction. Retailers are using AI in various ways, such as through AI-powered chatbots, content generation, and customer insights. AI technology can personalise services and product recommendations by processing customer's past purchases and preferences. This has implications for a wide variety of sectors, such as beauty brands to effectively generate personalised styles and product recommendations based on their demands and preferences (Maras, 2020; Ameen N., et al.,2021 ).

*Virtual fitting rooms ( VFR ) and virtual fashion shows (VFS)* are ways to simulate the trying-on of a product. Virtual fitting rooms provide a virtual experience similar to the video game version of a fitting room. According to researchers, the visual fitting room is a technology that provides a virtual product experience. Virtual fitting rooms generally utilize augmented technology, and more advanced virtual fitting room programs, presenting the fashion items either on a video of the consumer or on a virtual avatar reflecting the consumer's body characteristics.

*Virtual salespeople:* According to Eastin et al. 2011 ", a virtual salesperson is an employee avatar of the virtual store that supports virtual consumers. By providing product information and recommending products ". The range of automation variance, but currently many parts of visual salespeople are controlled by real human beings ( Lee H., and Leonas, K., 2018 )

### **3.3. Consumer Benefit Seeking**

It is stated that consumers, called omni-channel customers and connected to the digital world, are more powerful and knowledgeable than ever before. These consumers are constantly connected to the digital environment. These people are extremely knowledgeable about their preferences, find the best deals, and expect each purchase to be concluded when and where they want it. In omni-channel marketing, consumers act as partners of retailers. The main reason for this is the attitudes of consumers when visiting websites, the shares they have made on social media, the applications they have downloaded with smart devices, the retail points on the blogs or the recommendations they have made about products. It is observed that omni-channel consumers exhibit a beneficial behavior that attracts the attention of other consumers, conveys the opportunities or offers of retailers to other consumers, shares information, and often directs other consumers to shop and buy. As a lifestyle, today,

consumers who share opportunity products, comment on the products and services they buy, and have thousands of followers on many social media channels act as if they are an opinion leader in this regard (Eru, 2019).

### **3.4. Changing Life Style of the Consumers**

Changing lifestyles mean that today's customers want to undertake the purchasing process at a time and place that suits their needs, using the technology at their disposal. In the consumer decision process (see figure 3.2.), we first search for, touch, wear, or try on what we need. We look for the best price before we leave. We then pick it up or wait for it to be delivered to our homes. If we are lucky in this process, we may not need more customer service. However, if something goes wrong, we would of course like to have it properly repaired or replaced or our money back. In this last process, there is an after-sales feedback.

It is natural for Omnicanal customers to expect benefits from the shopping they want to do with rapidly changing technology and modern lifestyles. At the beginning of these, consumers expect time saving, speed expectation, benefit expectation, price expectation, product expectation, expectation from supplier companies, expectation of personalized offer in performance expectation from Omnicanal marketing.

On the other hand, in this channel, customers expect effort. For example, customers have expectations of ease of use in their in-store or out-of-store purchases. Within these expectations, it will be easier for them to access the product, its features, quality and price, to compare it with different products and brands, to information about payment processes (Installation, etc.), to reserve the product, and to all information on this subject ( Kazançoğlu and Aydın, 2018 ) .

## **CHAPTER 4**

### **BACK GROUND OF THE THEORY**

#### **4.1. The Unified Theory of the Acceptance and Use of the Technology**

In the literature, this situation has become a pioneer by Vankatesh et al., and has been a pioneer in making it available for use in many academic fields just like omni-channel

marketing and education. This theory is briefly called UTAUT (Unified Theory of Acceptance and Use of Technology).

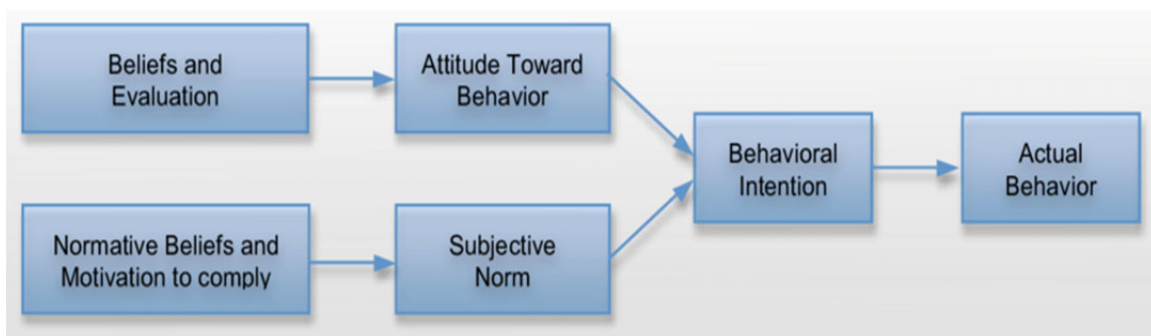
Unified Technology Acceptance and Use Theory or UTAUT is a framework designed by Venkatesh and others to predict technology acceptance in organizational settings in 2003 (Chang, 2012). UTAUT related to predicting behavioral intention to use a technology and actual technology use primarily in organizational contexts. According to UTAUT, performance expectancy, effort expectancy, and social influence were theorized and found to influence behavioral intention to use a technology, while behavioral intention and facilitating conditions determine technology use. Moreover, various combinations of the four moderators were theorized and found to moderate various UTAUT relationships. (Vankatesh et al., 2014)

The purpose of UTAUT is to reveal how people and the communities formed by it perceive technology and create a model for it (Uyar, A., 2019). Many theoretical models have been proposed to explain the acceptance behavior of users. UTAUT proceeds on the basis of consolidating the structures of eight previous models, from human behavior to computer science. It combines several previous theories into a more comprehensive and complete model of human behaviour. The eight models are respectively Theory of Reasoned Action (Fishbein & Ajzen, 1975), Technology Acceptance Model (Davis, 1989), Motivational Model (Davis, et al. 1992), Theory of Planned Behavior (Ajzen, 1991), Model of PC Utilization -MPCU (Thompson, et al., 1991), Combined TAM and TPB (Taylor & Todd, 1995), Social Cognitive Theory (Compeau, et al., 1999) and Innovation Diffusion Theory (Moore & Benbasat, 2001). With these models since 2002, researches examining the use and acceptance of technology in many different areas such as internet banking, medical technologies, mobile technologies and tourism are frequently encountered.

Thus, above various theories have been developed to reveal how consumers adapt to technology. One of the oldest of these is the theory of reasoned behavior. The Theory of Reasoned Action (TRA) is a method used to determine the conscious relationship between people's attitudes and behaviors (Ajzen & Fishbein, 1980). According to the theory, the factors that determine a person's intention (BI) are attitude (A) and norm (SN). The Theory of Reasoned Behavior is formulated as  $BI = A + SN$  (Davis, 1989).



Figure illustrates the Reasoned Behavior Theory. According to the figure, while the person's beliefs and values form the attitude, normative beliefs determine subjective norms. Attitudes and norms, on the other hand, create intention, and intention causes behavior that occurs as a result. In theory, only the behaviors performed by the person himself and under his own control are explained (Erten, 2002). However, the theory is insufficient since the situations that develop all the time may not be suitable for this and there are situations that require the help of other people (Erdem, 2011).



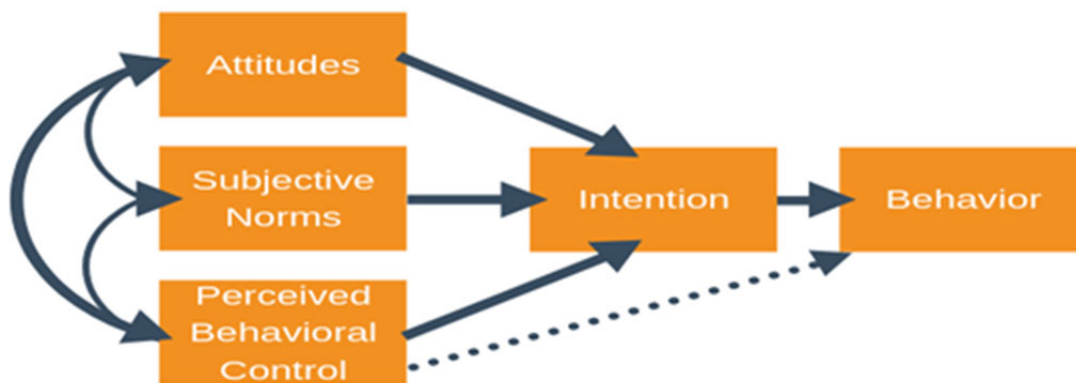
**Figure 4.1.** Theory of Reasoned Action (Fishben & Ajzen-1975 )

A planned behavior model was created by Ajzen (1991) in order to eliminate the deficiencies of the Reasoned Behavior Theory in 1991 (Çam, 2012). According to the theory, intention has not two but three determinants. Perceived behavioral control was added to the model as a determining factor on intention. Thus, not only the attitudes of people and their thoughts formed by social pressure, but also their behaviors affect intention. For example, a person who wishes to support a charity (attitude) may not be able to do so (Perceived Behavioral Control) if he does not have enough financial power (Perceived Behavioral Control), even if he has convinced the society (subjective norm). The existence of unexpected or automatic, non-rational behaviors has led to criticisms of the Planned Behavior Theory (Kağıtçıbaşı, 2005).

**Table 4.1.** List of Technology Acceptance Theories (Iskandar et al.,2020).

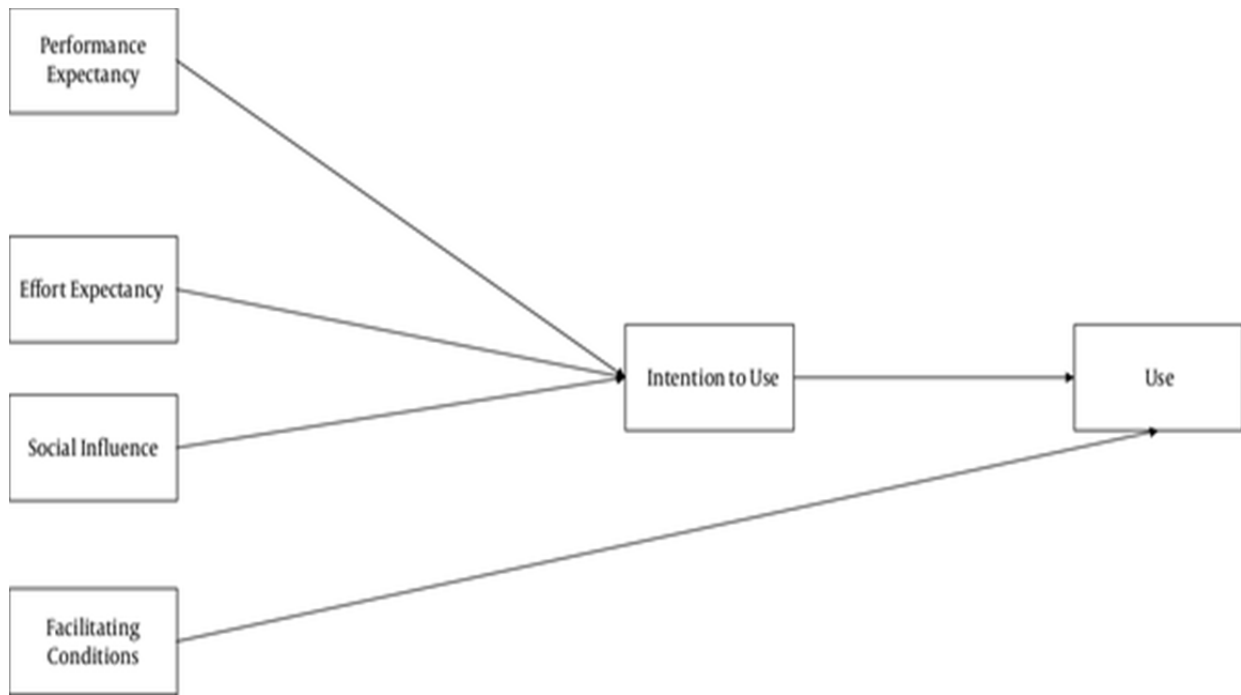
<b>Theory</b>	<b>Abbreviation</b>	<b>Initiator</b>	<b>Year</b>
Theory of reasoned action	TRA	Ajzen and Fishbein	1975
Innovation diffusion technology	IDT	Rogers	1983
Social cognitive theory	SCT	Bandura	1986
Theory of planned behavior	TPB	Davis et al.	1989
Model of PC utilization	MPUC	Thomson et al.	1991
Motivational model	MM	Taylor and Todd	1992
Technology acceptance model	TAM	Taylor and Todd	1995
Combined TAM and TPB	C-TAM-TPB	Taylor and Todd	1995
Unified theory of acceptance and use of technology	UTAUT	Vankatesh et al.	2003
Unified theory of acceptance and use of technology 2	UTAUT	Vankatesh et al.	2012

Another model developed after the Reasoned Behavior Theory and Planned Behavior Theory is the Technology Acceptance Model. Its aim is to reveal how people and their communities perceive technology and to create a model for it. It claims to determine which variables are important in terms of technology use by determining the factors affecting human behavior, and to develop systems suitable for this by measuring the satisfaction level of consumers as a result of technological applications.



**Figure 4.2.** Planned Behaviour Theory (Davis et al. 1989)

Originally, UTAUT identifies four key factors (i.e., performance expectancy, effort expectancy, social influence, and facilitating conditions) and four moderators (i.e., age, gender, experience, and voluntariness) related to predicting behavioral intention to use a technology and actual technology use primarily in organizational contexts. It also identifies four key factors (i.e., performance expectancy, effort expectancy, social influence, and facilitating conditions) and four moderators (i.e., age, gender, experience, and voluntariness) related to predicting behavioral intention to use a technology and actual technology use primarily in organizational contexts. According to UTAUT, performance expectancy, effort expectancy, and social influence were theorized and found to influence behavioral intention to use a technology, while behavioral intention and facilitating conditions determine technology use.



**Figure 4.3.** Unified Theory of Acceptance and Use of Technology (UTAUT- Vankatesh, 2003)

Performance expectancy is known as the degree to which using a technology will provide benefit to consumers in performing certain activities; The theoretical background of this variable comes from usefulness perceptions (TAM- Technology Acceptance Model), extrinsic motivation (Motivational Model- MM), job-fit (Model of PC Utilization), relative advantage (Innovation Diffusion Theory- IDT) and outcome expectations (Social Cognition Theory – SCT). Three factors which are perceived usefulness, extrinsic motivation and job fit effect performance expectancy (Chang, 2012; Shin, 2009).

Effort expectancy is the degree of ease associated with the consumers' use of technology; According to Vankatesh et al. (2003), this factor was extracted from perceived ease of use factor proposed in Technology Acceptance Model (Chang, 2012). Both Performance expectancy and Effort expectancy are significant predictors of the intention to use WBQAS (Web Based Questions and Answers Service) by Deng, et al. (2011).

Social Influence is the degree to which a user perceives that significant persons believe technology use to be important (Diaz and Loraas, 2010). It is an extension of Technology Acceptance Model (TAM). Social Influence is the extent to which consumers perceive that important others (e.g., family and friends) believe they should use particular

technology; and lastly facilitating conditions reflect to consumers' perceptions of the resources and support available to perform a behaviour ( Vankatesh, et al., 2012; Chang, 2012 ).

Facilitating Conditions refer as the degree to which an individual believes that organizational and technical infrastructure exist to support use of the system and also define to consumers' perceptions of the resources and support available to perform a behaviour ( vankatesh et al., 2015 ).

Again, according to UTAUT, performance expectancy, effort expectancy and social influence are theorized to influence behavioral intention to use a technology, while behavioral intention and facilitating conditions determine technology use. Moreover, various combinations of the four moderators were theorized and found to moderate various UTAUT relationships ( Vankatesh et al.,2014). After the acceptance of UTAUT, Vankatesh and friends consolidate to different three constructs into UTAUT those are hedonic motivations, price value and lastly habit. Because UTAUT model could not explain alone consumer expectation well, so UTAUT2 was created by adding them to UTAUT ( Vankatesh et al., 2012). Individual differences—namely, age, gender, and experience—are hypothesized to moderate the effects of these constructs on behavioral intention and technology use.( Chang, 2012 )

When the literature is evaluated as a whole, it is seen that the studies showing how the omni-channel marketing is adopted by the consumers are quite limited. In this context, the holistic channel marketing was evaluated within the scope of the UTAUT and UTAUT2 model, and the new variables will be added to the model and the model are tried to be determine

#### **4.2. Utaut 2: Constructs to be Included to Utaut**

The results of the studies using UTAUT have emerged that there is a need for a transformation from individuals' acceptance and use of technology to consumer acceptance and use. Meta-analysis studies conducted on the findings of experimental studies, especially in social sciences, suggest that the quartile structure of UTAUT is questionable and weakens the accuracy of the model (Tawio and Dawne, 2013). In this case, Vankatesh et al. 2012, UTAUT model was developed by restructuring UTAUT based on the consumer. From the theorized UTAUT2, the voluntary moderated variable regarding the usage included in the first model was removed and three new structures were added. These structures are hedonic structures, price value and habit, respectively. Individual differences namely, age, gender and

experience are hypothesized to moderate the effects of these constructs on behavioral intention and technology use. Results showed that compared to UTAUT, the extensions proposed in UTAUT2 produced a substantial improvement in the variance explained in behavioral intention increased from 56 percent to 74 percent and technology use increased from 40 percent to 52 percent. In addition, this, Vankatesh et al.'s data (2012) also revealed that the impact of hedonic motivation on behavioral intention is moderated by age, gender and experience, the effect of price value on behavioral intention is moderated by age and gender and lastly, habit has both direct and mediated effects on technology use, and these effects are moderated by individual differences (Chang, 2012).

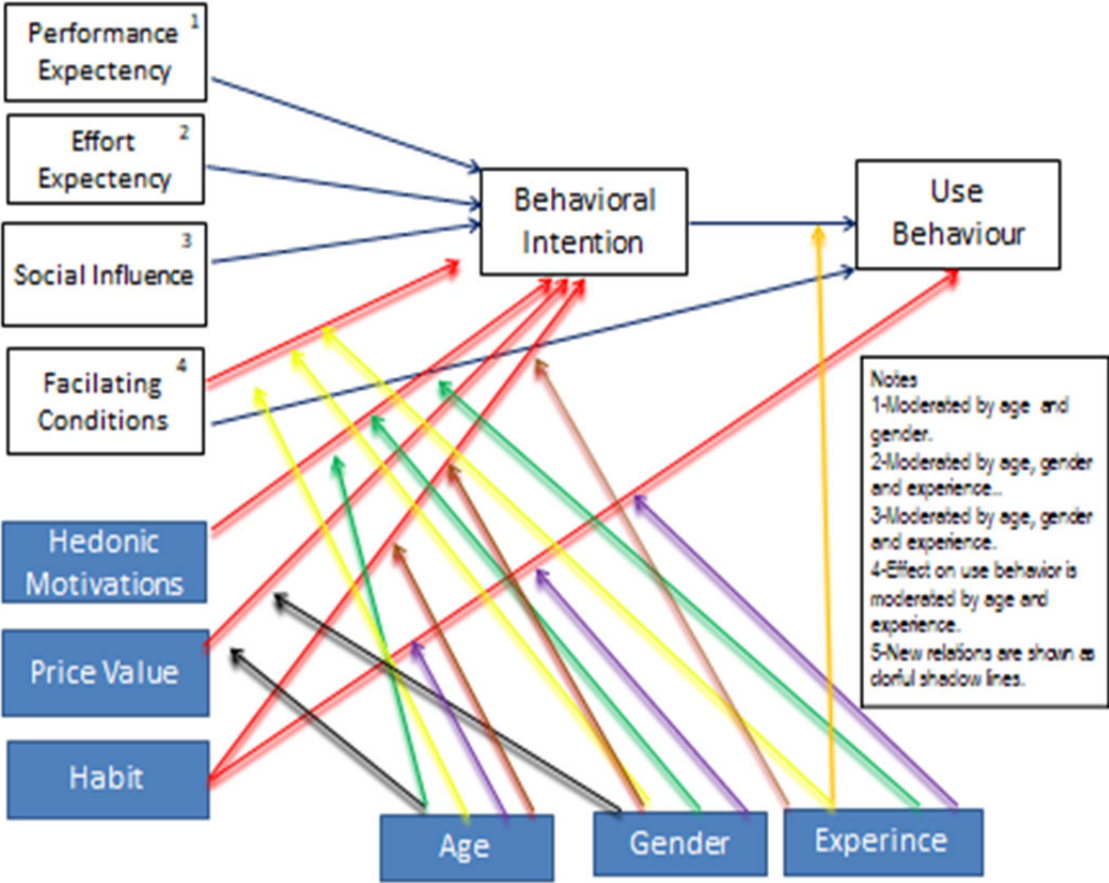
Hedonic motivation is generally defined as the fun or pleasure that the user gets by using a technology (Yilmaz and Kavanoz, 2018), and it has been shown to play an important role in determining technology acceptance and use (Brown and Vankatesh 2005). In the consumer context, HM has also been found to be an important determinant of technology acceptance and use. Thus, we can add hedonic motivation as a predictor of consumers' behavioral intention to use a technology (Chang, 2012).

For instance, Yang (2010) found that utilitarian and hedonic performance expectancy, social influence and facilitating conditions are critical determinants of US consumers' intentions to use mobile shopping services and that the hedonic or entertainment aspect of mobile shopping services is the most critical driver of US consumers' intentions to use mobile shopping services.

Price value is defined as the relationship between the cost paid for using the technology and perceived. The cost and pricing constructs may have a significant impact on consumers' technology use. For instance, there is evidence that the popularity of short messaging services (SMS) in China is due to the low pricing of SMS relative to other types of mobile Internet applications (Chan et al. 2008). In marketing research, the monetary cost / price is usually conceptualized together with the quality of products or services to determine the perceived value of products or services (Zeitham, 1988). Price value has a positive impact on intention. Therefore, the price value as a predictor of behavioral intention is added to use a technology.

Finally, we add the habit as a construct to UTAUT. Habit is the tendency of the user to execute their behavior automatically. Vankatesh et al. (2003) operated experience as three levels based on passage of time: (1) post-training was when the system was initially available

to use; (2) one month later; (3)three months later. Habit also defined by Limayel et al. (2007) as the extent to which people tend to perform behaviours automatically because of learning. Although conceptualized rather similarly, habit has been organized in two different ways: first, habit is viewed as prior behaviour, secondly habit is measured as the extent to which an individual believes the behaviour to be automatic ( Chang, 2012 ).



**Figure 4.4.** Consumer Acceptance and UTAUT 2 ( Venkatesh et al., 2012)

### 4.3. External Variables Added to Utatut-2 Extention

When shoppers encounter a new technology or innovation, they have the opportunity to adopt or reject it. Previous research has shown that innovative omnichannel customers prefer to explore and use new alternatives (for example, Steenkamp and Baumgartner, 1992; Rogers, 1995; Talk et al., 2008). In addition, many studies in the e-commerce literature have shown the important role that innovation plays in purchase intention in different contexts (eg, Herrero and Rodriguez del Bosque, 2008; Lu et al., 2011; San Martín and Herrero, 2012; Escobar-Rodriguez et al. Carvajal-Trujillo, 2014).

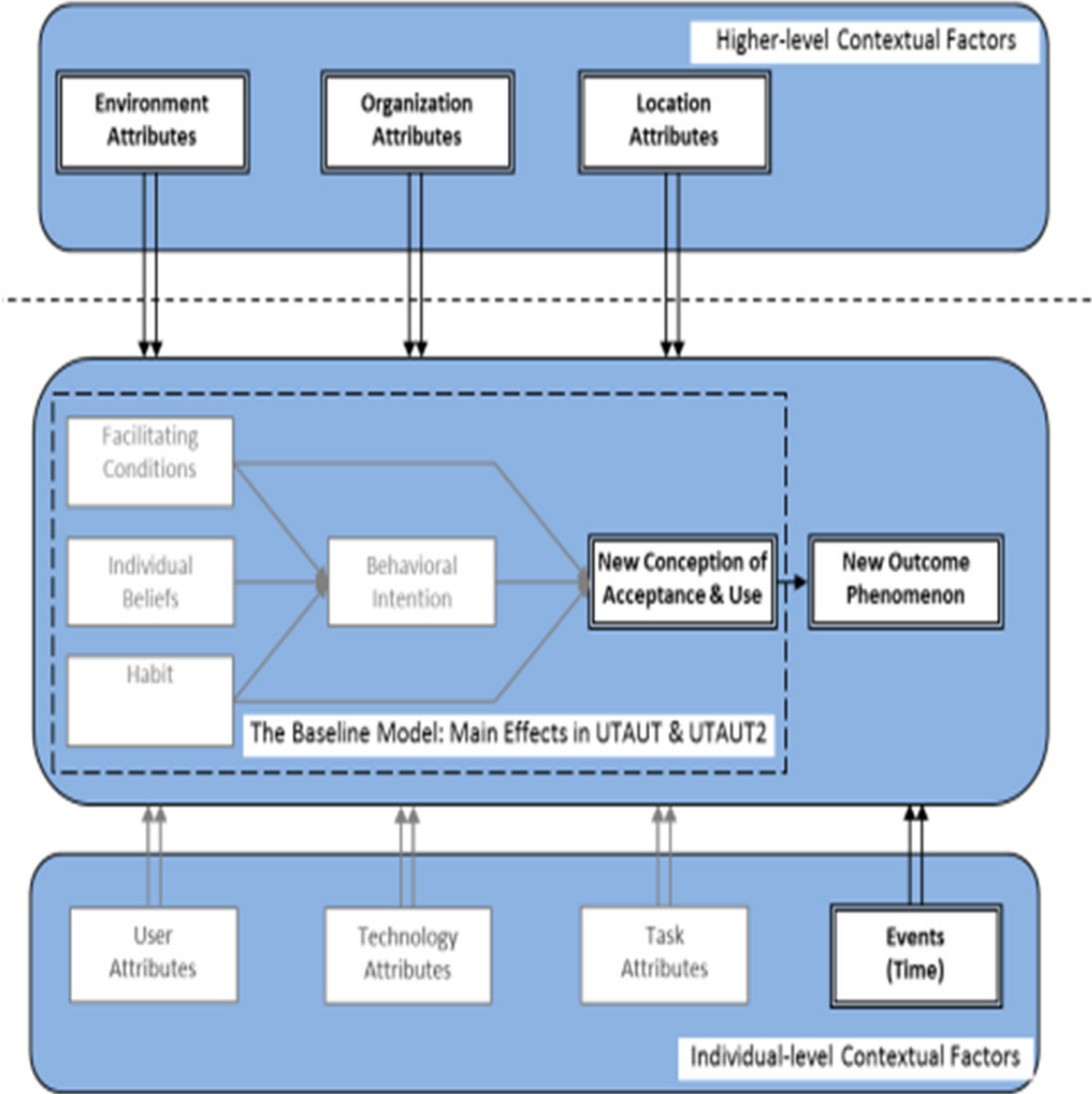
Personal innovativeness is also defined as the degree to which a person prefers to try new and different products or channels and to seek out new experiences requiring a more extensive search (Midgley and Dowling, 1978). Many papers have highlighted that consumer innovativeness is a highly influential factor in ICT adoption and on purchase intention (e.g., Agarwal and Prasad, 1998; Citrin et al., 2000; Herrero and Rodriguez del Bosque, 2008; San Martín and Herrero, 2012; Escobar-Rodriguez and Carvajal-Trujillo, 2014).

It also includes the perceived trust of on-line channels, referring to the belief that the Internet is a safe option for sending personal data to omnichannel stores. We can add this to the UTAUT-2 theory structure. (Escobar-Rodriguez and Carvajal-Trujillo, 2014; Bonsón Ponte et al., 2015). Perceived security can be defined as the perception by consumers that the omnichannel companies' technology strategies include the antecedents of information security, such as authentication, protection, verification, or encryption (Kim et al., 2008). If consumers perceive that the online channels have security attributes, they will deduce that the retailer's intention is to guarantee security during the purchasing process (Chellappa and Pavlou, 2002). There is some evidence that the perceived trust of online channels positively affects the intent to purchase using these kind of channels (e.g., Salisbury et al., 2001; Frasquet et al., 2015).

Vankatesh, who introduced the Utaut theory, added and removed some mechanisms from the model. As figure 4.4. illustrates, the figure is suggested by Vankatesh et al., (2012) for a multi-level framework of technology acceptance and use theory highlighting important areas for future research. As the middle of figure 4.4. shows, they first extended UTAUT by theoretical mechanisms from UTAUT2 (Venkatesh et al., 2012). These mechanisms are; These include individual beliefs, performance expectancy, effort expectancy, social influence, hedonic motivation, and price value that affect behavioral intention. Facilitating conditions and habituation influence both behavioral intention and technology use. All of the above relationships form the baseline model of UTAUT/UTAUT2 (as the dotted box in the middle of



figure 4.5. shows) to help researchers identify new context-impact theories or improve existing context effects (Whetten, 2009). Finally, they add the individual consequences of technology acceptance and use to the basic model. In their assessment of UTAUT's frugality, they excluded the moderation effects of age, gender, experience, and volunteering from the baseline model. Therefore, they described the base model with only the main effects.



**Figure 4.5.** A Multi-Level Research Framework for Technology Acceptance and Use (Adapted from Venkatesh et al., 2016).

Notes:

1. Single arrow represents the main effects of UTAUT2.
2. Double arrow represents the main /moderation effects of contextual factors.
3. Bolder boxes represent the important future research directions on UTAUT2.

## **CHAPTER 5**

### **METHODOLOGY**

The following section considers the scientific approach of this study. It highlights how data was collected through surveys and explains the context in which the survey was developed. Additionally, it clarifies the literature review. It also provides a vital background for hypothesis development. In the last step, the chapter demonstrates the data analysis approach using a software package program that achieves accurate results during analysis.

#### **5.1. Pilot Study**

In order to examine the intelligibility, reliability and content validity of the statements in the research form, the first questionnaire created before starting the data collection process was reviewed by three academicians. It was directed to the participants in order to understand whether the questionnaire, which was adapted based on the feedback obtained, was understood by the respondents. Based on the pre-test results, it was understood that the questionnaire statements accurately and completely reflected the scales. Then, the final questionnaire form was directed to all participants.

#### **5.2. Data Collection Method**

Data for this survey was retrieved from an online survey focusing on Turkish omnichannel retail customers. The survey was conducted in the summer of 2021. For the purpose of this survey, I define omnichannel shoppers as those shoppers who use at least two channels of the same retailer during their shopping journey. The respondents were scanned to select those members that fit my definition of omnichannel shoppers. In all, 456 respondents

indicated their behavior with regard to their most recent purchase in the last twelve months prior to the collection of the data.

### **5.3. Survey Development**

The questions of the survey were adapted from previous articles examining the impact of omnichannel marketing and consumer engagement perspective under the UTAUT-2 model in different areas. The all scale items of the entire thesis were adopted from the previous literature to ensure the availability of sufficient items for the data analysis. In order to test the proposed model, the quantitative was utilized. The quantitative model was utilized to test the proposed model. The questionnaire was distributed to a representative sample. All participants were purposefully selected for an on-line survey in Turkey using social media users (Facebook, Whatss up, Linked-in groups, etc.). The objective of quantitative research is to examine specific relationships among variables based on the analysis of quantitative data. Quantitative research takes the post-positivist view focusing on testing and verifying theories by proposing hypotheses and collecting data for analysis. It is applicable to phenomena that can be expressed in terms of quantity (Kothari, 2004).

This questionnaire consists of two parts: In the first part, demographic information about the respondents (gender, age, education level, income, etc.), and the second part briefly consists of measurement scales borrowed from the previous marketing literature and scale items related to purchase intention of consumers in omnichannel shopping, taken from the model of UTAUT-2 with 33 questionnaires (Vankatesh et al., 2012) are included.

The demographic variables include nominal and ordinal level questions. The values of nominal variables are words that describe the categories or classes of responses. The values of the gender variable are male and female can be given as examples of nominal data.

Nominal data are considered the lowest or weakest type of data, since numerical identification is chosen strictly for convenience and does not imply ranking of responses. Just like female respondent is 0 and male respondent is 1.

Ordinal data indicate the rank ordering of items, and similar to nominal data the values are words that describe responses. Some examples of ordinal data and possible codes are as follows:

1. Product quality rating (1: poor; 2: average; 3: good)
2. Satisfaction rating with your current Internet provider (1: very dissatisfied; 2: moderately dissatisfied; 3: no opinion; 4: moderately satisfied; 5: very satisfied)

#### **5.4. Population and Sampling**

A population is the complete set of all items that interest an investigator. The population of this research will be shoppers that are over the age of 18 years old both visited a shop and internet market place in Turkey.

Population size,  $N$ , can be very large. A sample is an observed subset (or portion) of a population with sample size given by  $n$ .

In this survey, one of the non-probabilistic methods, convenience sampling method is used for data collection. Because the convenient sampling attempts to obtain a sample of convenient elements. The selection of sampling units is left primarily to the interviewer. Often respondents are selected because they happen to be in the right place at the right time. The sampling units are accessible and cooperative ( Malthora, N., 2004).

The main body of the research consists of consumers using omnichannel applications in all provinces of Turkey. Convenience sampling, which is one of the non-random sampling methods, was preferred as the sampling method in the study. Convenience sampling involves the individuals to be selected for the sample only included in the sample due to time and budget constraints. The shortest way to obtain data in a fast and cheap way is to easily sample; The choice of units is largely left to the researcher. The researcher proposes to the person he/she deems appropriate to fill out the questionnaire. People who walking around the mall can be given as an example (Nakip, 2013).

##### **5.4.1. Estimating Response Rates and Actual Sample Size**

In this survey, we estimated that the respondents rate must at least 30 percentage. So formula indicates that  $n^2$  equals actual sample size required,  $n$  equals the minimum sample

### **Calculation of Sample Size**

$$n^2 = \frac{n \times 100}{re \%}$$

size ( or adjusted minimum) and lastly respond percentage is the estimated respond rate exsperessed as percentage. By formula, n<sup>2</sup> is equal to 1463, the number 1463 means that we must reach the minimum number of survey respondents to which we will send the survey ( Saunders, et al.,2015).

Due to its nature, the participants could not respond to the survey questions sent to 1463 people due to different reasons. The main ones can be listed as refusing to respond, not responding, not being able to find the participant, and incomplete communication despite the presence of the participant.

In this research, one of the non-probabilistic methods, convenience sampling method is used for data collection. Because the convenient sampling attempts to obtain a sample of convenient elements. The selection of sampling units is left primarily to the interviewer. Often respondents are selected because they happen to be in the right place at the right time. The sampling units are accessible and coopeartive ( Malthora, N., 2004)

### **5.5. Scales**

Within the scope of consumer engagement perspective in omnichannel marketing, Vankatesh et al.'s (2003) study was used for performance expectation (PE), effort expectancy (EE), social influence (SI), facilitating conditions (FC) and price value scale items (PV), which belong to UTAUT-2 model. The behavioral intention (BI) scale items were derived from both study of Pantano and Viassone (2015) and Vankatesh et al. (2003), while the hedonistic motivation (HM) scale items were developed by Kim et al. (2005), Coşkun T. – Marangoz M.( 2017) and Childers et al. (2001) studies were used. In addition, the innovation (IN) scale items were taken from Goldsmit and Hofacer, (1991) and Lu et al., (2005), and finally, the perceived trust (PT ) scale items were adopted from the work of Cha, (2011).

**Table 5.1.** Theory Of Acceptance And Us Of Technology in An Omni-channel Context Scale Adaptation

DIMENSION	ITEM and DEFINITION
P.E. (Venkatesh et al.,2003)	<p>PE1. I find it useful to use mobile internet in my daily life while shopping at OCS.</p> <p>PE2. Using the internet while shopping at OCS. helps me make my purchase quickly</p> <p>PE3. Using the internet while shopping at OCS. increases my time efficiency.</p>
E.E. (Venkatesh et al. ,2003)	<p>EE1. I find the different on-line platforms (website and mobile apps) easy to use when shopping at OCS.</p> <p>EE2. My interaction with the internet is clear and understandable when shopping from OCS.</p> <p>EE3. I can shop easily using the internet as I am skilled at OCS.</p>
S.I. (Venkatesh et. al., 2003)	<p>SI1. People who are important to me think that I should use the Internet when shopping at OCS.</p> <p>SI2. People who influence my behavior think that I should use mobile internet when shopping from OCS.</p> <p>SI3. People whose opinions I value prefer to use mobile internet when shopping from OCS.</p>
F.C. (Venkatesh et. al., 2003)	<p>FC1. I have the necessary resources and facilities to use the mobile internet while shopping at OCS.</p> <p>FC2. I have the necessary knowledge and equipment to use the mobile internet while shopping at OCS.</p> <p>FC3. Mobile Internet applications are compatible with other information technologies that I use for shopping in OCS. (in-store wifi service etc.).</p> <p>FC4. I can seek help from others when I have difficulty using mobile Internet while shopping at OCS</p>

---

H.M. ( Kim et al. (2005 )

HM1. It's fun to shop using mobile internet from OCS.

H.M. ( Kim et al. (2005 )

HM2. It is enjoyable to use mobile internet while shopping at stores with OCS.

H.M. (Coşkun and Marangoz 2019)

HM3. It is very exciting to shop at OCS. using mobile internet.

H.M. (Childers et al,2001)

HM4. It is interesting to be able to use more than one channel during the shopping journey (order online and receive in-store or vice versa).

---

P.V. (Vankatesh et al. (2003 )

PV1.The product or service I purchased while using mobile internet while shopping at OCS is reasonable .

PV2. Mobil internet is a good value for the Money at OCS.

PV3. At the current price, mobile internet provides good value for my purchases from such OCS.

---

I.N. (Goldsmi t &Hofacer, 1991; Lu, 2005)

IN1. When I hear about a new technology, I search for a way to try it.

IN2. Among my friends and family, I am usually the first to try new technology.

IN3. Before testing a new product or brand, I seek the opinion of people who have already tried it.

IN4. I like to experiment and try new technologies.

---

P.T. ( Cha, 2011 )

PT1. Using credit cards to make purchases over the internet is safe.

PT2. Using credit cards to make purchases over the internet is safe.

PT3. Giving my personal data to Omnichannel store seems safe.

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B.I. (Vankatesh et al. (2003 )

BI1. I intend to continue using mobil internet in the future.

BI2. I will always try to use mobil internet in my daily life.

BI3. I plan to continue to use mobile internet frequently.

( Pantano and Viassone, 2015)

BI4. I would purchase in this kind of OCS.

BI5. I would tell my friends to purchase in this kind of OCS.

BI6. I would like to repeat my experience in this kind of OCS.

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Each item in the questionnaire is rated on a seven-point “Likert Scale” anchored at the numeral 1 with the verbal statement “Strongly Disagree” and at the numeral 7 with the verbal statement “Strongly Agree” (Malhotra & Birks, 2007).

In this study, data were analyzed using IBM SPSS-25 and Smart Pls statistical package programs.

**5.6. Research Model**

A proposed model for the study was presented in figure 4.4. The relevant independent variables in the model are performance expectancy (PE), effort expectancy (EE), social influences (SI), facilitating conditions (FC), hedonic motivation (HM), price value (PV), innovativeness (IN), perceived trust (PT).

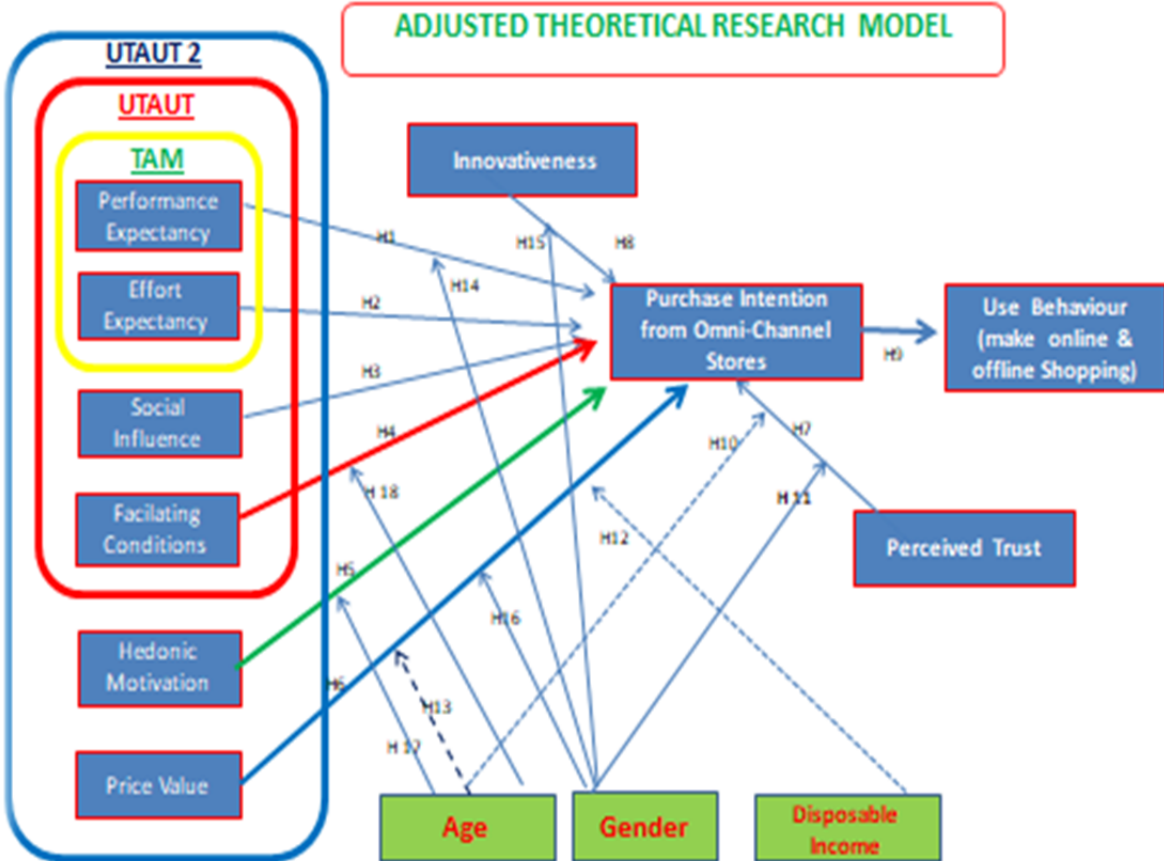


Figure 5.2. The Proposed Model Adapted from Vankatesh et. al. (2003)

## 5.7. Research Hypothesis

Hypotheses are derived from Venkatesh et al. (2012)'s and Mosquera et al. (2017)'s proposed model shown in figure 5.2. The hypothesis is as follows:

Performance expectancy is identified as the degree to which using different channels and/or technologies during the shopping journey will ensure customers with benefits when they are buying products and services (Venkatesh et al., 2003, 2012; Chang, 2012). Performance expectancy has consistently been shown to be the strongest predictor of behavioral intention (purchase intention) (e.g., Venkatesh et al., 2003, 2012; Escobar-Rodríguez and Carvajal-Trujillo, 2014; Ayensa et al., 2016; Pascual-Miguel et al., 2015). Thus, the following hypothesis is proposed for this structure:

***H1- Performance expectancy has a positive effect on omnichannel purchase intention in OCS in Turkey.***

Effort expectancy is the degree of convenience associated with consumers using different touchpoints in the shopping process. Current technology acceptance models include the concept of effort expectancy as perceived ease of use (TAM/TAM2) or ease of use (Innovation diffusion theory). According to previous studies (Karahanna and Straub, 1999), the effort expectancy construct is important in both voluntary and mandatory use contexts (e.g. Venkatesh et al., 2003; Ayensa et al., 2016) and positively influences purchase intention (Venkatesh et al., 2012). Consistent with the literature, I propose the following hypothesis.

***H2- Effort expectancy has a positive effect on omnichannel purchase intention OCS in Turkey.***

Social influence is the perception that consumers believe that people who are important to them (family, friends, role models, etc.) should use different channels according to their needs. Social influence, understood as a direct determinant of behavioral intentions, is included as a subjective norm in TRA, TAM2, and TPB and as an image in IDT (Fishbein and Ajzen, 1975; Schiffrin and Ajzen, 1985; Davis, 1989; Davis et al., 1989; Moore and Benbasat, 1991). Social influence, subjective norm, and social norm constructs all include the explicit or implied notion that individual behavior is influenced by how people believe others will see them as a result of using technology (Venkatesh et al., 2003) and positive effects purchase intention (Venkatesh et al., 2012; Ayensa et al., 2016). Therefore, consistent with the literature, I propose the following hypothesis

***H3- Social influence has a positive effect on omni channel purchase intention to OCS in Turkey.***

The first change made by Vankatesh et al. to adapt UTAUT to the consumer technology usage context is the addition of a direct relationship from facilitating conditions to behavioral intent. In UTAUT, facilitating conditions are assumed to directly influence technology use, based on the idea that in an organizational setting they can serve as an aid to true behavioral control and directly influence behavior (Ajzen 1991; Vankatesh et al, 2012). This is because many aspects of the facilitating terms, such as the training and support provided, can be provided free of charge by an organization and are fairly immutable among users. In contrast, facilitation in the environment available to every consumer can be different from application vendors, technology generations, mobile devices, etc. can vary significantly between In this context, facilitating conditions will act as perceived behavioral control in planned behavior theory (TPB) and affect both intention and behavior (Ajzen 1991; Vankatesh et al, 2012). Specifically, a consumer with access to a favorable set of enabling conditions is more likely to use the technology. For example, in the case of mobile internet, consumers have different levels of access to different resources. In general, all things being equal, a consumer with lower facilitating conditions will have lower intention to use mobile internet. Also, consumers with different smart devices may experience different data transfer rates and, as a result, their intention to use mobile internet may also differ. Thus, in the consumer context, the general pattern of TPB is followed and facilitator conditions are associated with behavioral intention.

***H4- Facilitating condition has a positive effect on omni channel purchase intention to OCS in Turkey.***

To analyze consumers' motivations to adopt consumer engagement perspective in omnichannel behavior, I based my work on the extensive literature used in retailing. In previous research on shopping, behavior suggests that customers use different channels at each stage of the shopping process to meet their utilitarian and hedonic needs at the lowest cost, in other words, to maximize value. (eg, Balasubramanian et al., 2005; Noble et al., 2005; Konus et al., 2008, Ayensa et al., 2016). The value of shopping can be both hedonic and utilitarian (Babin et al., 1994). Hedonic motivations are associated with adjectives such as fun, enjoyable, and pleasant (for example, Holbrook & Hirschman, 1982; Kim & Forsythe, 2007; Venkatesh et al., 2012; Ayensa et al., 2016). In contrast, utilitarian motivations are rational and task-oriented (Batra & Ahtola, 1991). Both dimensions are important because

they are present in all shopping experiences and consumer behavior (Jones et al., 2006). Clothing, gifts, perfume, etc. It is classified in the hedonic product category due to its symbolic, experimental and pleasing features (Crowley et al., 1992). Because strong physical environments elevate mood by providing opportunities for social interaction, product evaluation, and sensory stimulation, consumers are more likely to find hedonic fashion items etc. are more likely to choose a physical store when they shop for (Nicholson et al., 2002). However, recent data show that consumers view online fashion shopping as an enjoyable activity and spend their free time searching for clothes using this tool (Blázquez, 2014). Regarding technology acceptance and use, utilitarian motivation was included as part of the performance expectancy construct (2003) in agreement with Venkatesh et al., while hedonic motivation was included as a separate construct in UTAUT2 (Venkatesh et al., 2012). Hedonic motivation is defined as the fun or pleasure derived from using technology and has been shown to play an important role in determining technology acceptance and use (Brown & Venkatesh, 2005). Numerous articles on ICT (Information and communication technology) have shown the effect of hedonic motivation on both technology use and purchase intention (Van Der Heijden, 2004; Thong et al., 2006, Ayensa et al. 2016). Therefore, the following hypothesis has been added to the research structure.

***H5- Hedonic motivation has a positive effect on omni channel purchase intention to OCS in Turkey.***

Price is the perception of the gap between the benefit of using technology and the rates charged (Dodds et al., 1991). The cost and pricing structure has a tremendous impact on consumers' use of technology. In marketing research, monetary cost/price is often considered together with the quality of products or services to determine the perceived value of products or services (Zeithaml 1988). We can follow these ideas and assume that price value is the cognitive interaction between the benefits perceived by consumers and the cost of using them (Dodds et al., 1991, Vankatesh et al., 2012). The price value is positive when the benefits of using technology are perceived to be greater than the monetary cost, and this price value has a positive effect on behavioral intention (vankatesh et al., 2012). Thus, I added the price value as an indicator of behavioral intention to use a technology to the corresponding follow-up hypothesis.

***H6- Price value has a positive effect on omni channel purchase intention to OCS in Turkey.***

Trust perceived by consumers is known as the perception that omni-channel companies include principles of information security such as authentication, protection and verification of information, or encryption in their technology policies (Kim et al., 2008). If O.C.s perceive that online channels have security features, they will conclude that the retailer's purpose is to guarantee their information security during the purchasing process (Chellappa and Pavlou, 2002, Ayensa et al., 2016). There is some evidence that the perceived trust of online channels positively influences purchase intention using such channels (Salisbury et al., 2001; Frasquet et al., 2015). Under these findings, it was added to the structure assuming that perceived trust is related to purchase behavior intention.

***H7- Perceived trust has a positive effect on omni channel purchase intention to OCS in Turkey.***

External variables implemented in the UTAUT2 extension, when shoppers encounter a new technology or innovation, they have the right to adopt or reject it ( Ayensa et al., 2016 ). Previous research has shown that innovative omnichannel customers prefer to explore and use new alternatives (eg, Steenkamp & Baumgartner, 1992; Rogers, 1995; Talk et al., 2008). In addition, many studies in the e-commerce literature have shown the important role that innovation plays in purchase intention in different contexts (eg, Herrero & Rodriguez del Bosque, 2008; Lu et al., 2011; San Martín & Herrero, 2012; Escobar-Rodriguez and Carvajal-Trujillo, 2014; Ayensa et al., 2016).

In the omnichannel context, innovation is defined as the degree to which a person prefers to try new and different products or channels and seek new experiences that require more extensive research (Midgley & Dowling, 1978). Many articles have highlighted that consumer innovation seeking is a highly influential factor in ICT adoption and purchase intention (eg, Agarwal and Prasad, 1998; Citrin et al., 2000; Herrero and Rodriguez del Bosque, 2008; San Martín and Herrero, 2012; Escobar-Rodriguez and Carvajal-Trujillo, 2014). The following research hypothesis is formulated in this way:

***H8- Innovativeness has a positive effect on omni channel purchase intention to OCS in Turkey.***

Behavioral intent determines usage behavior. It is defined by (Fishbein and Ajzen, 1975; Fishbein and Ajzen, 1979; Davis and Cosenza, 1993) as the intention of M-commerce users ( omnichannel shopper ) to accept and use the system, and this is our ultimate goal and aspiration. Vanketesh et al. (2003) hypothesize that BI will have a significant positive impact

on use BU ( making online, offline, purchase).: Therefore, the following hypothesis has been added to the research structure.

***H9-Behavioral intention has a positive effect on behavioral use to OCS in Turkey.***

Trust is a strong influential factor for making a purchase in both offline and on-line environments; however, in the on-line environment, trust is built primarily in a person-to-web site manner rather than person-to-person communication, mediated through technology (Winch and Joyce 2006). According to Smith and Sivakumar's (2002) research, when consumers are ready to buy products, they link risk and the purchasing process. According to Smith and Sivakumar (2002), in general, shopping on-line has a higher risk than shopping in-store. Again, according to the results of Ruparelia's (2010) research, it is seen that product information and consumer experience in virtual shopping affect consumer trust. However, it is seen that security in virtual shopping does not affect consumer confidence. Since the elderly are the consumer group who experience the feeling of being vulnerable to being deceived the most, they usually insist on shopping from places and vendors they know and trust (Köseoglu, 2002). With the change in lifestyles and consumption habits in recent years, the use of credit cards among elderly consumers is increasing (Apostolova & Gehrt, 2000). Age is also found to be significant when regarding technology adoption as younger consumers are considered more technologically proficient, due to being born within the digital era (Pieri and Diamantinir, 2010). On the other hand, gender often has a significant effect on consumers' perceived trust; for instance, Faqih (2016) revealed that women show lower trust and higher risk levels than men regarding their intention to purchase. Therefore, the following hypotheses have been added to the research structure.

***H-10.The relationship between perceived trust and purchase intention from OCS to use shopping behaviour in Turkey is moderated by age of consumers.***

***H11- The relationship between perceived trust and purchase intention from OCS to use shopping behaviour in Turkey is moderated by gender of consumers.***

The effect of price value on behavioral intention is expected to be moderated by age, gender, and disposable income (Vankatesh et al, 2012). Theories about social roles (eg, Minister 1966; Deaux and Lewis 1984) have been used to theorize about the differential significance of price value between men versus women and the younger versus the older. It shows that men and women take on different social roles and exhibit different role behaviors. In particular, while men tend to be free, competitive, and make decisions based on selective

information and heuristics, women, on the contrary, are more interdependent, collaborative, and consider more details (Bakan 1966; Deaux and Kite 1987). As a result, in a consumer context, women will likely pay more attention to the prices of products and services and will be more cost-conscious than men. Moreover, women are generally more involved in purchasing, more responsible than men, and more careful about spending money (Slama and Tashchian 1985). Given the propensity for men to play with technologies, the price value men assign to technologies is likely to be higher than the value women assign to the same technologies. Moreover, this gender gap caused by social role stereotypes will become stronger with age because older women are more likely to engage in such activities, such as caring for their families (Deaux and Lewis 1984). Therefore, older women will be more price sensitive due to their social role, which will pay more attention to their family budgets and expenditures. This shows that the monetary value of products and services is of greater importance for older women. Thus, the following hypotheses can be established.

***H12-The relationship between price value and purchase intention from OCS to use shopping behaviour in Turkey is moderated by disposable income of consumers.***

***H13-The relationship between price value and purchase intention from OCS to use shopping behavior in Turkey is moderated by the age of consumers so that the effect will be stronger among consumers who are elderly.***

Grohmann and Battistella (2011) aimed to validate the role of gender in the adoption and implementation of new technologies. Based on the Unified Technology Acceptance Model and Technology Use Model, Wang and Wang (2010) examined the determinants of mobile internet acceptance and whether there were gender differences in mobile internet acceptance. From the results, it was stated that the effect of performance expectation and computer self-efficacy on the purpose of use was significant for men, but not for women. On the other hand, Raman et al. (2014) surveyed postgraduate students on Moodle use in Malaysia and found that gender did not have a moderate effect on performance expectancy on behavioral intention. Hsiao and Tang (2015) evaluated the critical variables that contribute to users' acceptance of self-service technologies in the context of the library and further examined gender differences among all the theoretical associations proposed in this research model. Evaluated critical variables and self-efficacy were validated as critical determinants of attitude. In addition, it was observed that the effect of self-efficacy on attitude was stronger in women than in men. When the gender variable in the performance expectation factor is

examined, it has been observed that women are more prominent and they are superior to men (Ayaz et al., 2019). In this study, following the literature, this hypothesis has been proposed:

***H14-The relationship between performance expectancy and purchase intention from OCS to use shopping behavior in Turkey is moderated by the gender of consumers.***

The effect of hedonic motivation on behavioral intention is expected to be moderated by age due to differences in consumers' perceptions of innovation, novelty seeking, and novelty of the target technology (Vankatesh et al., 2012). Innovativeness is "the degree to which an individual is open to new ideas and makes innovative decisions independently" (Midgley and Dowling 1978, p. 236). Novelty seeking is an individual's tendency to seek new information or stimulus (Hirschman 1980). Such innovation and novelty seeking can also contribute to the hedonic motivation to use any product (Holbrook and Hirschman 1982). When consumers begin using a particular technology, they will pay more attention to its innovation and may even use it for innovativeness (Holbrook and Hirschman 1982). It has also been found that both gender and age are associated with the innovativeness of consumer technology (Lee et al., 2010). In the early stages of using a new technology, young men show a greater tendency to seek innovation (Chau and Hui 1998). We can conclude that this trend will increase the importance of hedonic motivation in young men's early technology use decisions. As a result of all this, the following hypotheses are thus established (Vankatesh et al., 2012 ).

***H15-The relationship between innovativeness and purchase intention from OCS to use shopping behaviour in Turkey is moderated by gender of consumers so that the effect will be stronger among the male consumers.***

***H16- The relationship between price value and purchase intention from OCS to use shopping behaviour in Turkey is moderated by gender of consumers.***

***H17-The relationship between hedonic motivations and purchase intention from OCS to use shopping behaviour in Turkey is moderated by age of consumers .***

The effect of facilitating conditions on behavioral intention is expected to be moderated by age (vankatesh et al, 2012). Older consumers tend to have more difficulty processing new or complex information, affecting their learning of new technologies (Morris et al. 2005; Plude and Hoyer 1985). This difficulty can be attributed to the decline in cognitive and memory abilities associated with the aging process (Posner 1996). Therefore, compared to younger consumers, older consumers tend to place more emphasis on the availability of



adequate support (Hall and Mansfield 1975). As people age, differentiation of gender roles will become more important, especially from young people to adults. Therefore, older women will place more emphasis on facilitating conditions. Indeed, there is empirical evidence that gender differences in the importance of facilitating conditions become more pronounced with age (Morris et al 2005; Venkatesh et al 2003). Dependence on enabling conditions is of greater importance for older women in the early stages of technology use, as they place greater emphasis on reducing the learning effort required to use new technology, as discussed earlier. So we hypothesize:

***H18- The relationship between facilitating conditions and purchase Intention from OCS to use shopping behaviour in Turkey is moderated by age of consumers .***

## CHAPTER 6

### RESULTS

#### 6.1. Descriptive Analysis

According to the data results regarding the characteristics of the participants in table 10, it is understood that 41.9 percent of the 456 participants are women and 58.1 percent are men.

The distribution of respondents according to their education level is as follows. The number of secondary school graduates is 5 and its rate is 1,1 %, the number of high school graduates is 36 and its rate is 7,9 %. Assosiate degree education level number is 38 and its rate is 8,3 % . The number of becholar degree number is 247 and its rate is 54,2 %. The last education level is postgraduate that its number is 130 and its rate is 28,5.

Age of respondents data is below that the of number of respondents between the ages of 18 and 24 is 16 and its rate is 3,5 %. Between 25-30 years old respondent number is 58 and its rate is 12,7 %. Respectively age of 31-35 number is 44 and its rate is 9,6%. 36-40 years old respondent number is 15,1 %. The most respondent age range is 41-50 on the table that its number is 157 and its rate is 34,4 %. Between 51-60 years old respondent number is 106 and its rate is 23,2 %. The last data is 61 years old and above, the number of its participants is 6 and the rate is 1.4%.

When we look at the income levels of the respondents in the table, the largest values in terms of numbers are 12.000 TL and above, and the number of respondents is 149 and the percentage is 32,7. The lowest level of income is 9.000-11.900 TL. The number of respondents is 62 and the rate is 13,6 %.

**Table 6.1.** Respondents Features Characteristics ( N= 456 )

<b>Demographic Features</b>	<b>Frequency</b>	<b>Percent</b>
<b>Gender</b>		
Male	265	58,1
Female	191	41,9
Total	456	100
<b>Educational Level</b>		
Secondary School	5	1,1
High School	36	7,9
Associate Degree	38	8,3
Becholar Degree	247	54,2
Postgraduate	130	28,5
<b>Age of Respondents</b>		
18-24	16	3,5
25-30	58	12,7
31-35	44	9,6
36-40	69	15,1
41-50	157	34,4
51-60	106	23,3
61 years old and older	6	1,4
<b>Income Level ( TL.)</b>		
2825-3999	64	14,1
4000-5999	75	16,4
6000-8999	106	23,2
9000-11.999	62	13,6
12.000 - Over	149	32,7
<b>Online Shopping Experience ( Years)</b>		
Less than one year	23	5
Between 1 or 2 years	48	10,5
Between 3-4 years	82	18,1
5 Years and over	303	66,4

**Table 6.2.** Descriptive Statistics of Respondents

		Gender	Level of Education	Age of Respondents	Income Level	Online Shoppig Experience
<b>N</b>	<b>Valid</b>	456	456	456	456	456
	<b>Missing</b>	0	0	0	0	0
<b>Mean</b>		0,58	4,01	3,39	2,34	2,46
<b>Std. Error of Mean</b>		0,23	0,041	0,069	0,067	0,041
<b>Median</b>		1,00	4,00	4,00	2,00	3,00
<b>Mode</b>		1	4	4	4	3
<b>Std. Deviation</b>		0,494	0,886	1,471	1,433	0,874
<b>Variance</b>		0,244	0,784	2,164	2,055	0,763
<b>Skewness</b>		-0,330	-1,089	-0,666	-0,238	-1,491
<b>Std. Error of Skewness</b>		0,114	0,114	0,114	0,114	0,114
<b>Kurtosis</b>		-1,899	1,191	-0,551	-1,274	1,137
<b>Std. Error of Kurtosis</b>		0,228	0,228	0,228	0,228	0,228
<b>Range</b>		1	4	6	4	3
<b>Sum</b>		265	1829	1547	1069	1121
<b>Percentiles</b>	<b>25</b>	0,00	4,00	2,00	1,00	2,00
	<b>50</b>	1,00	4,00	4,00	2,00	3,00
	<b>75</b>	1,00	5,00	4,00	4,00	3,00

Table 11 illustrates that there is no missing value in this survey. It is seen that all data (N=456) were used in this study.

**Table 6.3.** Tests of Normality

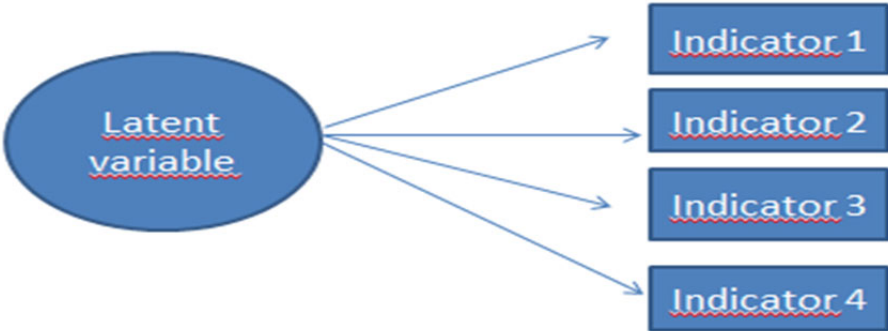
	Kolmogorof-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Age Of Consumers	0,250	456	0,000	0,887	456	0,000
Learning how to use mobile internet is easy for me.	0,220	456	0,000	0,842	456	0,000
People who are import to me think that I should use mobile internet.	0,160	456	0,000	0,914	456	0,000

In normality test, which is also reflected in the table, not all items in data are normally distributed ( $p < 0.00$  in Kolmogorov-Smirnov test), so there is no normal distribution

assumption. Therefore, we do not need to choose the parametric test rather than the non-parametric test in this study.

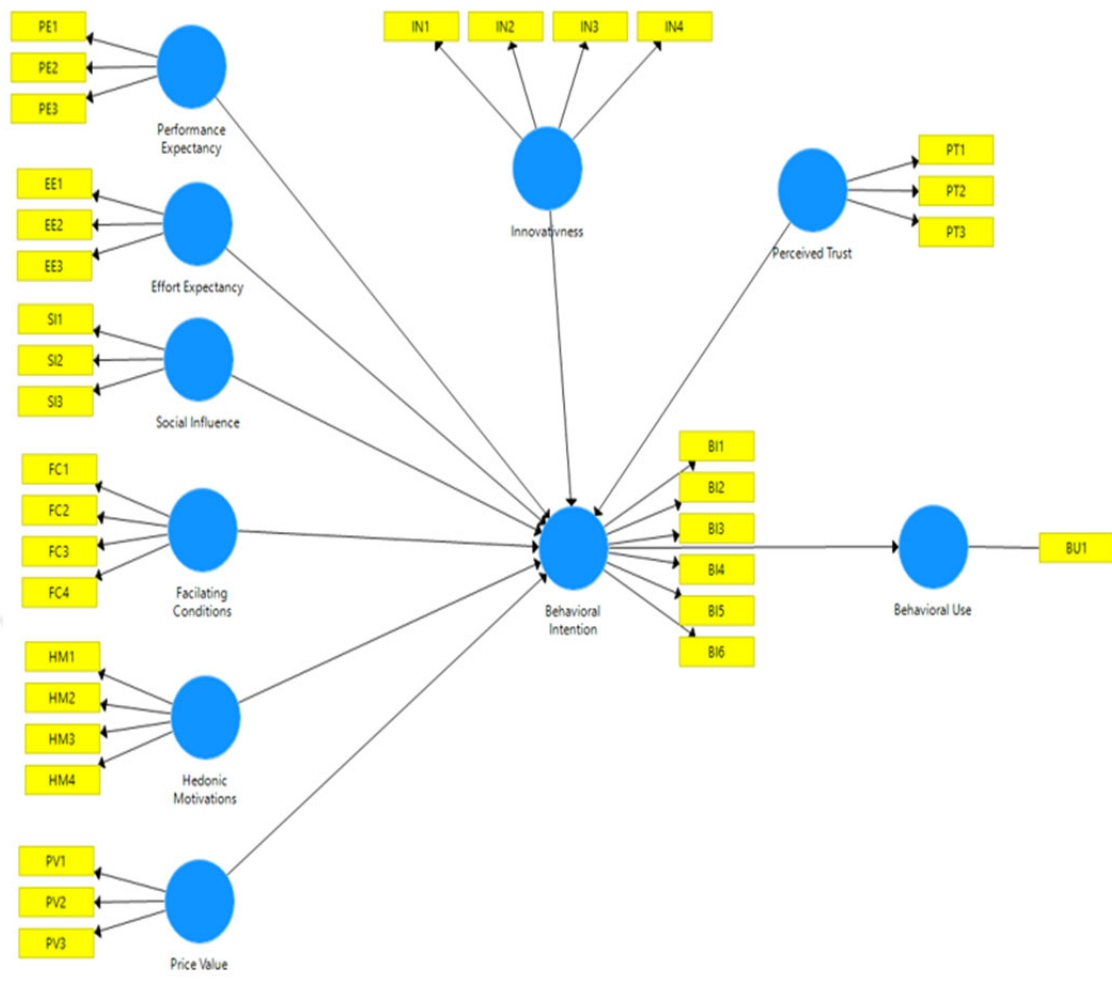
SmartPLS, on the other hand, can perform relationship analysis of much more complex models. Subjecting all variables included in the research model to the test at the same time provides more accurate results than first generation methods that can only perform partial analysis (Lowry & Gaskin, 2014). PLS-SEM is based on testing the regression relationship of each endogenous variable with its exogenous variables in complex and multilayered models. Essentially, this means running multiple regression analyzes at once. However, PLS-SEM is not parametric like regression. In other words, there is no assumption of normal distribution. The small sample problem is solved by the resampling method.

In the survey, each question that measures the variables is called an indicator, indicator or question item. Variables that cannot be measured directly but measured through indicators are called latent variables.



**Figure 6.1.** Causality Relationship Between the Indicators and Variable.

Above figure, circle shows latent variables. Indicators are represented by rectangles in the model. The arrows between the latent variable and the rectangles indicate the direction of the causality relationship between the indicators and the variables. In structural equation models, some variables can be both dependent and independent variables. Variables that are both dependent and independent at the same time or only dependent variables are called endogenous variables. On the other hand, variables that are only independent variables in structural equation models are called exogenous variables.



**Figure 6.2.** Exogenous and Endogenous Variables of the Survey Measurement Model

The independent variables in our research model are also exogenous variables, and these are PE, EE, SI, FC, HM, PV, IN and PT, respectively. Here, BI variable is both exogenous and endogenous variable. By the way, BU is an endogenous variable.



**Figure 6.3.** Reflective and Formative Variables.

Above figure illustrates that, latent variables are measured by two methods as reflective and formative. The main difference between the two methods is the direction of the relationship between the variables and their indicators. In reflective variables, the arrows go from the variable to the indicators. In formative variables, the arrows reach the variable from the indicators. Therefore, the determining factor in the selection between reflective and formative variables is the order of causality between the indicators and the variable.

The most frequently used models in the literature are reflective models. The variable causes the covariance between the indicators in reflective models. In these models, the causality relationship is from the variable to the indicators. The indicators show how the variable is revealed and how it is expressed. In other words, it is thought that the changes in the variable are the source of the change in the indicator.

The most important difference between formative and reflective variables is the cause and effect relationship between the indicators and the latent variable. In reflective variables, the indicators change depending on the variable, while in the formative variables, the variable changes depending on the indicators.

## 6.2. The measurement Model

Indicator reliability, factor loadings should be statistically significant and preferably greater than 0.708 (Chin, 1998; Hair & Anderson, 2010; Henseler et al., 2009).

### 6.2.1. Construct Validity and Reliability Analysis

One of the primary objectives of of CFA /SEM is to assess the construct validity of a proposed measurement theory. Construct validity is the extent to which a sets of measured items accurately theoretical latent constructs they are designed to measure. ( Hair, 2019)

First of all, to measure the validity and reliability of the research with the measurement model in the reflective variables; Internal "Consistency Reliability", "Convergent Validity and " Discriminant Validity analyzes were performed.

### 6.2.2. Internal Consistency Reliability

In the internal reliability analysis of the measurement of the research, three different reliability coefficients were calculated. These are respectively "Cronbach Alpha", "Composite Reliability (CR)", and finally "rho\_A" coefficients.

### 6.2.3. Composite Reliability

Reliability coefficients are expected to be above 0.70. As Cronbach Alpha, rho\_A, composite reliability (CR) values were above the critical value of 0.70, according to below table13 indicates that all variables had sufficient reliability values. Construct provided composite reliability in this survey.

**Table 6.4.** Construct Reliability and Validity

	<b>Cronbach's <math>\alpha</math></b>	<b>rho_A</b>	<b>CR &gt;0,70</b>	<b>AVE &gt;0,50</b>
<b>BI</b>	0,964	0,964	0,971	0,848
<b>BU</b>	1,000	1,000	1,000	1,000
<b>EE</b>	0,889	0,899	0,931	0,818
<b>FC</b>	0,873	0,902	0,915	0,732
<b>HM</b>	0,882	0,895	0,922	0,750
<b>IN</b>	0,890	0,895	0,925	0,757
<b>PE</b>	0,923	0,925	0,951	0,866
<b>PT</b>	0,899	0,915	0,937	0,833
<b>PV</b>	0,913	0,916	0,945	0,852
<b>SI</b>	0,906	0,906	0,941	0,841

#### **6.2.4. Convergent Validity**

The high common variance of the latent variable's indicators is called convergent validity (Hair et al., 2010). Convergent validity is evaluated by looking at two values. One of them is factor loading and another is the Explained Average Variance (AVE). The AVE value is expected to be above 0.50. Since the AVE values are above 0.50, it is seen that convergent validity is also provided on the table 6.4. for this survey.

#### **6.2.5. Discriminant Validity**

Discriminant validity shows that the variable that is the subject of decomposition is really different from other variables. Therefore, a high discriminant validity value indicates that the focal variable measures an event or concept that is different from the event or concept measured by other variables. Three values are used to test discriminant validity. One of them is Cross-Loading, the second is Fornell-Larcker criterion (Hair et al., 2014), and the third is HTMT (Heterotrait-Monotrait Ratio) criterion (Henseler et al., 2015).



**Table 6.5.** Cross-Loading of the Survey

	BI	BU	EE	FC	HM	IN	PE	PT	PV	SI
BI1	<b>0,896</b>									
BI2	<b>0,909</b>									
BI3	<b>0,940</b>									
BI4	<b>0,926</b>									
BI5	<b>0,909</b>									
BI6	<b>0,944</b>									
BU1		<b>1,000</b>								
EE1			<b>0,908</b>							
EE2			<b>0,912</b>							
EE3			<b>0,894</b>							
FC1				<b>0,931</b>						
FC2				<b>0,923</b>						
FC3				<b>0,873</b>						
FC4				<b>0,699</b>						
HM1					<b>0,934</b>					
HM2					<b>0,939</b>					
HM3					<b>0,889</b>					
HM4					<b>0,674</b>					
IN1						<b>0,917</b>				
IN2						<b>0,879</b>				
IN3						<b>0,748</b>				
IN4						<b>0,924</b>				
PE1							<b>0,907</b>			
PE2							<b>0,945</b>			
PE3							<b>0,940</b>			
PT1								<b>0,946</b>		
PT2								<b>0,952</b>		
PT3								<b>0,836</b>		
PV1									<b>0,891</b>	
PV2									<b>0,944</b>	
PV3									<b>0,934</b>	
SI1										<b>0,907</b>
SI2										<b>0,941</b>
SI3										<b>0,904</b>

In the examination of discriminant validity, first of all, cross-loads are checked. When we control the factor loadings of the indicators in table 6.5., it is expected that the factor loading of each indicator will have the highest value under its own variable, and there will be a difference of more than 0,1 between the factor loading in its own variable and the factor in

other variables. If the difference is less than 0,1, the indicators are considered as overlapping items and are also removed from the measurement. If overlapping is detected based on cross-loads, the those items are removed from the measurement model. It is seen that all factor loads are above 0.70 except HM4 and FC4 indicators. The reliability and validity values of the items between 0.60-0.70 should be left in the model. If the value is at an acceptable level, there is no harm in keeping it in the model. It is said that factor loads in PLS-SEM based analysis methods are above 0.70 (Chin, 2010). However, in recent studies, it is accepted that this value is above 0.60 (Hair et al., 2014). According to the cross-loading criterion, the factor load in the variable to which an indicator is associated should be higher than the other variables. In table 6.6, the factor loadings with the highest values horizontally related to the cross-loading criterion are shown.

**Table 6.6.** Farner-Lacker Values

	BI	BU	EE	FC	HM	IN	PT	PE	PV	SI
BI	<b>0,921</b>									
BU	0,872	<b>1,000</b>								
EE	0,739	0,701	<b>0,905</b>							
FC	0,687	0,646	0,826	<b>0,855</b>						
HM	0,701	0,656	0,679	0,658	<b>0,866</b>					
IN	0,756	0,758	0,681	0,675	0,636	<b>0,870</b>				
PT	0,720	0,707	0,623	0,557	0,595	0,673	<b>0,913</b>			
PE	0,742	0,714	0,866	0,828	0,674	0,675	0,573	<b>0,931</b>		
PV	0,750	0,765	0,662	0,641	0,683	0,701	0,627	0,644	<b>0,923</b>	
SI	0,554	0,522	0,626	0,571	0,640	0,538	0,446	0,632	0,531	<b>0,917</b>

According to the Cross-Loading Criterion, the factor load in the variable to which an indicator is related should be higher than that of the other variables. According to the Fornell-Larcker criterion, the square root of the explained mean variance (AVE) of each variable should be greater than the correlation of the variable with other variables. HTMT expresses the ratio of the mean of the correlations of the indicators of all variables in the model (the heterotrait-heteromethod correlations) to the geometric mean of the correlations of the indicators of the same variable (the monotrait-heteromethod correlations). HTMT should be less than 0.90.

**Table 6.7.** HTMT Ratio Criteria

	Behavioral Int.	Behavior Use	Effort Exp.	Fac. Cond.	Hed. Mot.	Innovat.	Perc. Trs.	Per. Exp.	Price V.	Soc. Inf.
Behavioral Intention										
Behavior Use	0,883									
Effort Expectancy	0,674	0,623								
Facilitating Condition	0,472	0,428	0,416							
Hedonic Motivation	0,708	0,638	0,637	0,552						
Innovativeness	0,807	0,802	0,670	0,446	0,653					
Perceived Trust	0,768	0,740	0,564	0,396	0,618	0,747				
Performance Expectancy	0,780	0,743	0,769	0,524	0,708	0,744	0,622			
Price Value	0,802	0,800	0,598	0,467	0,674	0,777	0,690	0,723		
Social Influence	0,596	0,548	0,607	0,416	0,691	0,598	0,496	0,691	0,581	

Both Fornell-Larcker and HTMT criteria provided for this survey that results are illustrated on the table 11. All numbers ensures HTMT ratio. Researchers stated that; HTMT coefficient theoretically close to each other in concepts of 0.90; it should be below 0.85 in theoretically distant concepts. Table 6.7 also provides this criterion. Providing the desired threshold values for the three criterias provide the discriminant validity conditions of the model.

### 6.3. Structural Model

#### 6.3.1 Inner VIF Value

After the reliability and validity analysis, the relationship analysis of the model is performed and the VIF coefficients for linearity are calculated. Before testing the hypothesis, it should be proven that there is no collinearity problem between the variables. According to Hair et al, (2017), the inner VIF value should be less than 5. As seen in Table 6.8., the VIF coefficients were below 5 in value. Based on this finding, it is understood that there is no linearity between the research variables.

**Table 6.8.** Inner VIF Values

	BI	BU
BI		<b>1,000</b>
BU		
EE	<b>2,686</b>	
FC	<b>1,523</b>	
HM	<b>2,933</b>	
IN	<b>3,787</b>	
PE	<b>4,065</b>	
PT	<b>2,490</b>	
PV	<b>3,138</b>	
SI	<b>2,301</b>	

### 6.3.2 Quality Criteria

After determining the linearity, we have to look  $R^2$  that is the value indicating what percentage of the exogenous variants explain the endogenous variant. A value of  $R^2$  is considered weak if it is 0.25, medium if 0.50 and strong if 0.75 ( Hair et al. 2009, 2011). According to the  $R^2$  value in the table, the endogenous variables of the research model, behavioral Intention and behavioral use, are explained at a rate of 75,4 % and 76,1 %. Those are the strongest values. The Quality Criteria is checked that the effect size ( $f^2$ ) coefficient is calculated for each exogenous variable. The  $f^2$  coefficient shows the shares of exogenous variables in the disclosure rate of endogenous variables. If the effect size of coefficient is ( $f^2$ ) > 0,02, it is low, 0,15 is medium, and 0,35 is high. (Cohen,1988). According to Sarstedt et.al (2017), there is no effect in the coefficient being less than 0.02. The quality criteria,  $R^2$  and  $f^2$  illustrated at below tables of 6.9.- 6.10

**Table 6.9.** R Square

	R Square	R Square Adjusted
BI	0,754	0,749
BU	0,761	0,760

**Table 6.10.** f Square

	BI	BU
BI		3,177
BU		
EE	0,007	
FC	0,001	
HM	0,022	
IN	0,063	
PE	0,037	
PT	0,096	
PV	0,068	
SI	0,001	

### **6.3.3. Bootstarpping**

Finally, resampling analysis will be performed to test the statistical significance of factor loadings. The resampling results for factor analysis are shown on the next page. The results show that the relationships of all indicators with the variables they are associated with are statistically significant. Factor loads and p values of the model are given in the table below. If the p values in the table are less than 0.05, it is understood that the factor loads are not statistically significant. If the p values are greater than 0.05, the relevant indicators are removed from the model.

**Table 6.11.** Outer Loadings

	Original Sampling	Sample Mean	Standart Deviation	T Statistics	P Values*
BI1 <-BI	0,896	0,898	0,014	63,324	0,000
BI2 <-BI	0,909	0,910	0,011	82.098	0,000
BI3 <-BI	0,940	0,940	0,007	136.761	0,000
BI4 <-BI	0,926	0,926	0,012	79.446	0,000
BI5 <-BI	0,909	0,909	0,014	66.702	0,000
BI6 <-BI	0,944	0,944	0,008	121.307	0,000
BU1 <-BU	1,000	1,000	0,000		
EE1 <-EE	0,908	0,908	0,013	69.773	0,000
EE2 <-EE	0,912	0,912	0,010	88.117	0,000
EE3 <-EE	0,894	0,894	0,015	59.126	0,000
FC1 <-FC	0,931	0,931	0,010	92.725	0,000
FC2 <-FC	0,923	0,922	0,010	97.225	0,000
FC3 <-FC	0,873	0,872	0,019	46.044	0,000
FC4 <-FC	0,669	0,668	0,028	23.799	0,000
HM1 <-HM	0,934	0,934	0,007	128.762	0,000
HM2 <-HM	0,939	0,939	0,006	147.254	0,000
HM3 <-HM	0,889	0,888	0,012	73.757	0,000
HM4 <-HM	0,674	0,673	0,032	20.851	0,000
IN 1 <-IN	0,917	0,917	0,008	119.936	0,000
IN 2 <-IN	0,879	0,980	0,015	60.055	0,000
IN 3 <-IN	0,812	0,812	0,026	30.863	0,000
IN 4 <-IN	0,924	0,925	0,010	90.099	0,000
PE1 <-PE	0,907	0,907	0,013	71.919	0,000
PE2 <-PE	0,945	0,946	0,007	126.379	0,000
PE3 <-PE	0,940	0,940	0,009	106.132	0,000
PT1 <-PT	0,946	0,946	0,007	131.288	0,000
PT2 <-PT	0,952	0,953	0,005	205.122	0,000
PT3 <-PT	0,836	0,835	0,018	45.457	0,000
PV1 <-PV	0,891	0,892	0,016	55.844	0,000
PV2 <-PV	0,944	0,944	0,007	145.076	0,000
PV3 <-PV	0,934	0,933	0,008	116.872	0,000
SI 1 <-SI	0,907	0,907	0,012	77.918	0,000
SI 2 <-SI	0,941	0,941	0,009	101.220	0,000
SI 3 <-SI	0,904	0,905	0,012	76.995	0,000

(\*p<0,05)

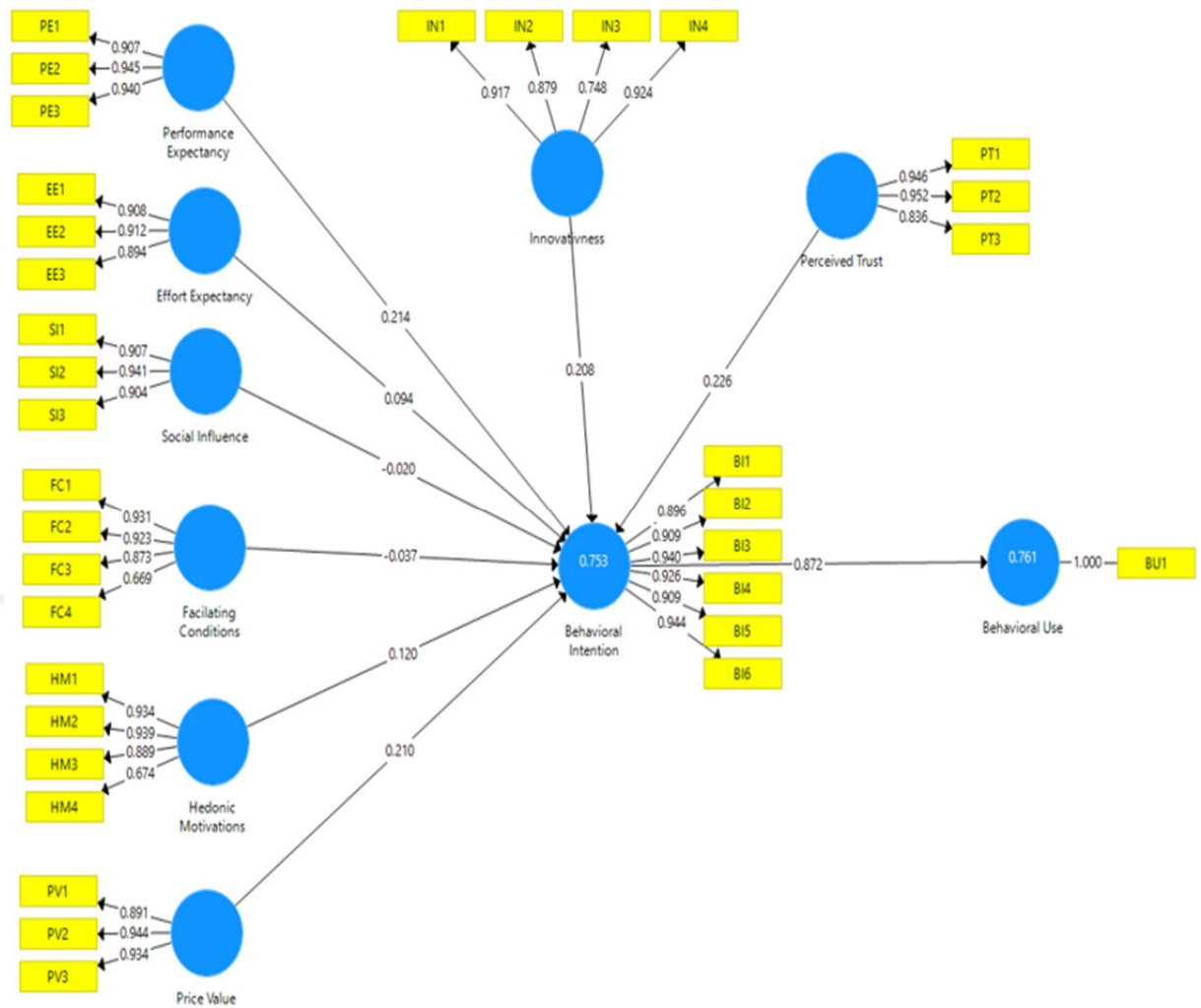


Figure 6.4. T Values of the Construct Model ( Outer Loadings)

## 6.4. Blindfolding

Blinding power analysis is an analysis method that calculates the predictive power of the model with the data closure method. The analysis is suitable for models consisting of only reflective variables and is a method based on reusing the sample. It is carried out by cyclically closing and recalculating all observations of the indicators of the endogenous variable.  $Q^2 > 0$  calculated for endogenous variables indicates that the research model has the power to predict endogenous variables. If  $Q^2 > 0.02$  it is considered a small estimate, if  $Q^2 > 0.15$  a medium, and if  $Q^2 > 0.35$  a large estimate. Blindinfolding table illustrated on the below table.

**Table 6.12.** Construct Crossvalidated Reduncy

	SSO	SSE	Q <sup>2</sup> (=1-SSE/SSO )
BI	1824,000	673,050	<b>0,631</b>
BU	456,000	121,185	<b>0,734</b>
EE	456,000	456,000	
FC	456,000	456,000	
HM	1328,000	1328,000	
IN	1824,000	1824,000	
PE	1368,000	1368,000	
PT	1368,000	1368,000	
PV	1368,000	1368,000	
SI	1368,000	1368,000	

## 6.5. Model Fit

SMRM value in saturated model is 0,048 and in estiamted model is 0,050 d-ULS value in saturated model is 1,670 and in estiamted model is 1,475. d\_G valu in saturated model is 0,853 and in estimated value is 0,895. At last, respectively Chi square valu is 2274,017 and 0,867. The model fit values of the model are shown in the table 6.13. The SRMR is defined as the difference between the observed correlation and the model implied correlation matrix. Thus, it allows assessing the average magnitude of the discrepancies between observed and expected correlations as an absolute measure of (model) fit criterion. A value less than 0.10 or of 0.08 (in a more conservative version; Hu and Bentler, 1999) are considered a good fit. Henseler et al. (2014) introduce the SRMR as a goodness of fit measure for PLS-SEM that can be used to avoid model misspecification. Chi-Square value is 0,867 >0,05.

**Table 6.13.** Model Fit ( Fit Summary )

	Saturated Model	Estimated Model
SRMR	0,048	0,050
d_ ULS	1,670	1,475
d_ G	0,853	0,895
Chi-Square	2274,017	0,867



## 6.6. Hypothesis Test

Table 6.14 illustrates hypothesis test that original sample standardized beta coefficients, standardized beta coefficients calculated by sample mean bootstrapping, STDEV is standard deviations, T statistics is t values, and p shows p values. The acceptance or rejection of the hypotheses is decided by looking at the P value. If the P value is below 0.05, it is proof of support.

**Table 6.14.** Hypothesis Test

HYPOTHESIS		Original Sample (O) $\beta$ Coefficient	Sample Mean (M) Standart $\beta$ Coefficient	Standartd Deviation	T Statistics	P values*
H-1	PE->BI	0,326	0,312	0,333	0.978	0,329
H-2	EE->BI	0,093	0,146	0,519	0,180	0,858
H-3	SI->BI	-0,060	-0,066	0,062	0.969	0,333
H-4	FC->BI	-0,172	-0,205	0,240	0,718	0,473
H-5	HM->BI	0,135	0,132	0,074	1.836	0,067
H-6	PV->BI	0,206	0,205	0,078	2.633	0,009
H-7	PT->BI	0,223	0,215	0,105	2.124	0,034
H-8	INV>BI	0,246	0,255	0,093	2.642	0,008
H-9	BI->BU	0,888	0,889	0,020	44.353	0,000
MODERATING EFFECT OF HYPOTHESIS						
H-10	AGE >PT>BI	-0,057	-0,018	0,072	0,790	0,430
H-11	GEN.>PT>BI	-0,057	-0,025	0,069	0,819	0,413
H-12	INC.>PV>BI	0,044	0,011	0,054	0,855	0,410
H-13	AGE>PV>BI	0,018	-0,072	0,993	0,018	0,985
H-14	GEN.>PE>BI	0,286	0,344	0,063	4,936	0,000
H-15	GEN.>IN>BI	0,330	0,315	0,067	4,406	0,000
H-16	GEN.>PV>BI	0,335	0,296	0,069	4,050	0,000
H-17	AGE>HM>BI	-0,051	-0,004	0,107	0,472	0,637
H-18	AGE>FC>BI	-0,030	-0,019	0,034	0,872	0,384

(\*p<0,05)

## CHAPTER 7

### DISCUSSION

As a result of the confirmatory factor analysis conducted within the scope of the research, as a result of the perspective of engagement in omni-channel marketing, the factors affecting the adoption of purchasing behavior by consumers in Turkey with the unified technology acceptance model-2 are explained in 10 dimensions. These are performance expectancy, effort expectancy, social influence, convenience conditions, hedonic motivation, price value, perceived trust, innovation, behavioral intention, and use of behavior.

In order to ensure that the measurement errors are at a minimum, it should be checked whether the scale fulfills its task. The way to do this is reliability and validity analysis. Validity indicates whether the scale actually measures what it aims to measure. Reliability is the ability of the scale to always give the same result under the same conditions. Within the scope of reliability and validity, in the internal consistency analysis of the research, it is considered acceptable that the CR and rho\_A, cronbach alpha values are above 0.70 and all values are above 0.70.

Again, in our study, the high common variance of the latent variable's indicators is called convergent validity (Hair et al., 2010). Convergent validity is evaluated by looking at two values. One of them is factor loading and the other is the Explained Average Variance (AVE). In the literature; The AVE value is expected to be above 0.50, while the values of the study are 0.70 and above. With the largest value of 1.00, it is the using behavior, that is, purchasing behavior ( BU ) scale.

It shows that the variable subject to discriminant validity is really different from other variables. Therefore, a high discriminant validity value indicates that the focal variable measures an event or concept that is different from the event or concept measured by other variables.

Three values were used to test discriminant validity. One of them is cross-loading, the second is Fornell-Larcker criterion (Hair et al., 2014), and the third is HTMT (Heterotrait-Monotrait Ratio) criterion (Henseler et al., 2015). When we look at the tables of 9.,10., and 11. in the results section of the research, according to the cross-loading criterion, it is ensured that the factor load in the variable to which an indicator is related should be higher than the other variables. On the other hand, according to the Fornell-Larcker criterion, the square root of the explained mean variance (AVE) of each variable should be greater than the correlation

of the variable with other variables. HTMT expresses the ratio of the mean of the correlations of the indicators of all variables in the model (the heterotrait-heteromethod correlations) to the geometric mean of the correlations of the indicators of the same variable (the monotrait-heteromethod correlations). HTMT should be below 0.90. The figures found in the study are compatible with all of these three-criteria.

Bootstrapping means obtaining a large number of replicas of the existing sample using a computer. The bootstrapping method was used in this research, as PLS-SEM does not assume the normal distribution of the sample. The bootstrapping method eliminates the concerns of deviation from normality in the case of a small sample. The reason why PLS-SEM is a non-parametric analysis method is that even if the main sample is small, normal distribution can be achieved by bootstrapping. When calculating the confidence intervals in resampling, correction is made according to the ratio of those below the mean value obtained from the original data.

Blidfolding (predictive power) analysis is an analysis method that calculates the predictive power of the model with the data closure method. The analysis is suitable for models consisting of only reflective variables and is a method based on reusing the sample. It is performed by cyclically closing and recalculating all observations of the indicators of the endogenous variable. At least 7 turns are required to close all points. The difference between the value obtained by closing the existing data and recalculating it using other data (predicted value) and the closed real value (true value) is called prediction error. The presence of estimation errors is used to calculate the  $Q^2$  value. In this study, the fact that the  $Q^2$  value calculated for the endogenous variable is higher than zero ( 0.631 and 0.734 ), shows in table 16 that the research model has the predictive power of this endogenous variable.

$R^2$  is the value indicating what percentage of the exogenous variables explain the endogenous variables. A value of  $R^2$  is considered weak if it is 0.25, medium if 0.50 and strong if 0.75. According to the results of the research, as shown in Table 13, the values found for  $R^2$  are 0.754 and 0.761, respectively. It has been determined that the endogenous variables, namely the purchase intention, are strongly explained by 75,4 % and the purchasing behavior by 76,1 %.

The effect size is calculated for each exogenous variable and shows the share of each exogenous variable in the explanation rate of the endogenous variable.

The effect size ( $f^2$ ) is calculated for each exogenous variable and shows the share of each exogenous variable in the explanation rate of the endogenous variable. According to the results of the research, when the effect size coefficients ( $f^2$ ) in the model are examined, while the purchase intention has a very strong effect on the purchasing behavior, the effect of effort expectancy, facilitating conditions and social influence on purchasing is not possible, on the other hand, as seen in the same table 14. , hedonic motivation, innovation, perceived trust and price value seem to have a low effect on purchase intention. Again, starting from the rate of explaining  $f^2$  values, the endogenous variable's  $R^2$  value is 0.75 and the  $f^2$  value of perceived trust from exogenous variables is 0.096, and in the case that all exogenous variables together explain 75,4 % of the endogenous variable, the perceived trust is 75.4 on the intention to purchase shows that it contributes 0.096 units to the one-unit explanation. Here, the exogenous variable that makes the most contribution is the perceived trust variable.

When we look at the hypothesis analysis part of the research (table 18), it is seen that the purchase intention on the purchasing behavior ( $\beta=0.899$ ;  $p<0.05$ ); innovation on purchase intention ( $\beta=0.255$ ;  $p<0.05$ ); perceived trust on the purchase intention ( $\beta=0.215$ ;  $p<0.05$ ); price value on the purchase intention ( $\beta=0.205$ ;  $p<0.005$ ); found to have positive effects. In this case, the h6,h7,h8 and h9 hypotheses of the research are supported. According to the results obtained by including the moderator variables in the hypothesis; h14 ( $\beta=0.314$ ;  $p<0.05$ ); It is seen that h15 ( $\beta=0.344$ ;  $p<0.05$ ) and h16 ( $\beta=0.296$ ;  $p<0.05$ ) hypotheses are supported.

## **CHAPTER 8**

### **CONCLUSION**

In the research, it is aimed to determine the factors affecting the purchase intention and purchasing behavior by consumers in Turkey by using technology and to reveal a conceptual model that explains the acceptance of shopping by consumers through mobile applications. In addition, the level of these effects and whether they are valid and reliable are explained with a conceptual method.

In the model developed in the research; Purchase intention; Hedonic Motivation, Innovation; It has been verified that the conceptual structures of Perceived Trust and Price Value are the factors that affect the consumer's purchasing behavior in the Omni-channel

framework by using technology in Turkey. In addition, the income level, which is one of the categorical variables that has not been used in studies in this field before, was added to the structure and the research was tested.

To mention the above concepts that stand out in the research, in a mobile world where products and services are interactively personalized in line with the individual wishes and needs of consumers, it seems natural that personalization is a determining factor in purchasing behavior through mobile applications. Determining the products and / or services that the consumer is interested in by communicating interactively with the consumers using technology, and then personalizing the product and service offers according to income, gender and age based on the consumer behavior in the historical process will ensure that the consumers have a more positive attitude. Therefore, consumers who also use technological devices with positive attitudes will benefit more from personalized offers. Thus, consumers will be willing to give more information about their personal preferences. In this direction, it can be thought that it would be beneficial to remove and develop the possible problems in front of interactive communication in the mobile technological field.

As it is known, in the information age we live in, the consumer wants to make the best decision by gathering all the information he can get about that product or service before purchasing any product or service. In this respect, consumers are highly influenced by the comments and evaluations of people who have experienced any product or service or application before. In this respect, it is thought that it is necessary to act carefully in the contacts to be made with the customer through mobile applications and to remove the negative feedbacks of the consumers immediately. Thus, consumers will express positive opinions about their shopping experiences through mobile technological devices and even support the spread of shopping through mobile devices and applications.

As a result, the model developed within the framework of the research to explain the factors affecting the acceptance of buying by consumers through technological mobile devices and applications, in-store and out-of-store purchase intention and purchasing behavior within the framework of omni-channel is also structurally valid and reliable. The model developed with statistical significance will take its place as an original model used in national and international research, on the other hand, it is thought that the model developed in the research will create a new research area and shape both future research and current research in this field.

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## APPENDIX

### QUESTIONNAIRE

Bu anket akademik amaçlı olup bir doktora tezi için kullanılacaktır. Aşağıdaki sorulara cevap verirken kendinizi bir ürün veya hizmet satın alırken düşününüz. “Bütünleşik Kanal Mağazası” aynı mağazanın hem internet sitesinden hem de mağazanın içinden satın alma olarak algılayınız”. Lütfen cevaplarınızı **1'den (kesinlikle katılmıyorum ) 7'ye kadar (kesinlikle katılıyorum)** olan seçeneklerden hangisi size uygun ise onu işaretleyiniz ve lütfen boş bırakmayınız. Özverinizden dolayı şimdiden teşekkür ederim.

<b>1</b>	<b>Bütünleşik kanal mağazalardan alışveriş yaparken mobil interneti kullanmayı yararlı bulurum.</b>	1	2	3	4	5	6	7
<b>2</b>	Bütünleşik kanal mağazalardan alışveriş yaparken interneti kullanmak ürün/hizmet satın almamı hızlı gerçekleştirmeme yardımcı olur.	1	2	3	4	5	6	7
<b>3</b>	<b>İnternet aracılığı ile bütünleşik kanal mağazalardan alışveriş yaparak zamanı daha verimli kullanırım.</b>	1	2	3	4	5	6	7
<b>4</b>	Bütünleşik kanal mağazalardan alışveriş yaparken farklı çevrim içi platformların (web sitesi ve mobil uygulamalar) kullanımının kolay olduğunu düşünüyorum.	1	2	3	4	5	6	7
<b>5</b>	<b>Bütünleşik kanal mağazalardan alışveriş yaparken internet ile etkileşimim açık ve anlaşılırdır.</b>	1	2	3	4	5	6	7
<b>6</b>	Bütünleşik kanal mağazalardan becerikli olduğum için interneti kullanarak kolaylıkla alışveriş yapabilirim.	1	2	3	4	5	6	7
<b>7</b>	Benim için önemli olan kişiler, bütünleşik kanal mağazalarından alışveriş yaparken interneti kullanmam gerektiğini düşünüyorlar.	1	2	3	4	5	6	7
<b>8</b>	Davranışımı etkileyen insanlar bütünleşik kanal mağazalardan alışveriş yaparken mobil interneti kullanmam gerektiğini düşünüyorlar.	1	2	3	4	5	6	7
<b>9</b>	<b>Fikirlerine değer verdiğim kişiler bütünleşik mağazalardan alışveriş yaparken mobil interneti kullanmayı tercih ederler.</b>	1	2	3	4	5	6	7
<b>10</b>	Bütünleşik kanallı mağazalardan alışveriş yaparken mobil interneti kullanmak için gerekli kaynaklara ve olanaklara sahibim.	1	2	3	4	5	6	7
<b>11</b>	<b>Mobil interneti bütünleşik kanal mağazalarından alışveriş yaparken kullanmak için gerekli bilgi ve donanıma sahibim.</b>	1	2	3	4	5	6	7
<b>12</b>	Mobil İnternet uygulamaları, bütünleşik kanal mağazalarında alışverişte kullandığım diğer bilgi teknolojileri ile uyumludur. (mağaza içi wifi hizmeti vs. )	1	2	3	4	5	6	7
<b>13</b>	<b>Bütünleşik mağazalardan alışverişlerde mobil İnternet kullanımında zorluk yaşadığımda başkalarından yardım</b>	1	2	3	4	5	6	7



	<b>isteyebilirim.</b>							
14	Bütünleşik mağazalardan mobil interneti kullanarak alışveriş yapmak eğlencelidir.	1	2	3	4	5	6	7
15	<b>Bütünleşik kanallı mağazalardan alışveriş yaparken mobil interneti kullanmak keyfidir.</b>	1	2	3	4	5	6	7
16	Mobil interneti kullanarak bütünleşik kanal mağazalarından alışveriş yapmak büyük heyecan verir.	1	2	3	4	5	6	7
17	<b>Alışveriş yolculuğu boyunca birden fazla kanalı kullanabilmek ( internetten sipariş verip mağazadan teslim almak ya da tam tersi ) ilginçtir.</b>	1	2	3	4	5	6	7
18	Bütünleşik kanal mağazalarında alışveriş sırasında mobil internet kullanırken satın almış olduğum ürün veya hizmet makul fiyatlıdır.	1	2	3	4	5	6	7
19	<b>Bütünleşik kanallı mağazalardan online alışverişlerde mobil İnternet için ödenen paraya değer.</b>	1	2	3	4	5	6	7
20	Mevcut fiyata mobil internet bu tür mağazalardan alışverişlerimde iyi bir değer sağlıyor.	1	2	3	4	5	6	7
21	<b>Yeni bir teknoloji duyduğumda, onu denemenin bir yolunu ararım.</b>	1	2	3	4	5	6	7
22	Arkadaşlarım ve ailem arasında genellikle yeni teknolojiyi ilk deneyen ben olurum.	1	2	3	4	5	6	7
23	<b>Yeni bir ürün veya markayı test etmeden önce, daha önce deneyen kişilerin fikrini alırım.</b>	1	2	3	4	5	6	7
24	Yeni teknolojileri test edip, kullanmayı severim.	1	2	3	4	5	6	7
25	<b>İnternet üzerinden alışveriş yapmak için kredi kartı kullanmak güvenlidir.</b>	1	2	3	4	5	6	7
26	Çevrimiçi (online) ödeme yapmak güvenlidir.	1	2	3	4	5	6	7
27	<b>Kişisel verilerimi bütünleşik kanallı mağazaya vermek güvenli görünüyor.</b>	1	2	3	4	5	6	7
28	İleriki dönemlerde, alışverişlerimde satın alma yaparken mobil interneti kullanmaya devam etmek niyetindeyim.	1	2	3	4	5	6	7
29	<b>Günlük yaşantımda bütünleşik kanal mağazalarından alışveriş yaparken daima interneti kullanmaya çalışırım.</b>	1	2	3	4	5	6	7
30	Bütünleşik kanal mağazalarından alışveriş yaparken sık sık interneti kullanmayı planlıyorum.	1	2	3	4	5	6	7
31	<b>Alışverişlerimde satın alma yaparken bütünleşik kanal mağazalarını kullanırım.</b>	1	2	3	4	5	6	7
32	Arkadaşlarıma bütünleşik kanal türü mağazalardan satın almalarını tavsiye ederim.	1	2	3	4	5	6	7
33	<b>Bütünleşik kanal faaliyeti sürdüren bu tür mağazalardan satın alma deneyimimi tekrarlamak isterim.</b>	1	2	3	4	5	6	7