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Examining Attitudes toward the Metaverse and Consumer Behavior through the Perspective of the Technology Acceptance Model

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Abstract

This study examines the intention to use metaverse technology in online shopping in Turkey from the consumer behavior perspective with the Technology Acceptance Model (TAM). In the study, which uses the survey technique in the context of numerical research, data obtained from 471 participants with online shopping experience and questions created for the research were analyzed. As a result of the data analyzed using the structural equation model, it is understood that perceived usefulness and ease of use from the metaverse significantly and positively affect consumer attitudes; consumer attitudes also affect behavioral intention, and ultimately behavioral intention positively affects actual use. The statistical findings obtained from the study show that metaverse technology is an important factor in directing consumer behavior in online shopping environments and it is understood that these results overlap with studies conducted in similar areas in the literature. The study emphasizes the need for marketers and businesses running in the online environment to develop innovative and consumer-oriented strategies to increase consumers' usefulness and ease of use in the metaverse environment and contributes to future studies in this field.

Keywords
Metaverse, Consumer Behavior, Online Shopping, Technology, Acceptance Model

JEL Classification
M31, D91, O33, D83

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Teknoloji Kabul Modeli Perspektifinden Metaverse ve Tüketici Davranışına Yönelik Tutumların İncelenmesi

Öz

Bu çalışma, Türkiye'de online alışverişlerde metaverse teknolojisinin kullanılma niyetini tüketici davranışları perspektifinden Teknoloji Kabul Modeli (TKM) ile incelemektedir. Sayısal araştırma bağlamında anket tekniğinden yararlanılan çalışmada, 471 online alışveriş deneyimi olan katılımcıdan elde edilen veriler ile araştırma amacına yönelik oluşturulan sorular analiz edilmiştir. Yapısal eşitlik modeli kullanılarak analiz edilen veriler sonucunda, metaverse yönünden algılanan kullanışlılık ve algılanan kullanım kolaylığının tüketici tutumlarını anlamlı ve pozitif yönde etkilediğini; tüketici tutumlarının da davranışsal niyeti ve nihayetinde davranışsal niyetin de gerçek kullanıma pozitif yönde etkide bulunduğu anlaşılmaktadır. Araştırmadan elde edilen istatistiki bulgular, metaverse teknolojisinin online alışveriş ortamlarında tüketici davranışlarını yönlendirmede önemli bir etken olduğunu göstermekte ve bu sonuçlar literatürdeki benzer alanlarda yapılmış çalışmalar ile örtüştüğü anlaşılmaktadır. Çalışma, pazarlamacılar ve online ortamda faaliyet gösteren işletmelere metaverse ortamında tüketicilerin kullanışlılık ve kullanım kolaylığını artırmaya yönelik yenilikçi ve tüketici odaklı stratejiler geliştirmesi gerekliliğini vurgulamakta ve bu alandaki gelecekte yapılacak çalışmalara katkı sağlamaktadır.

Anahtar Kelimeler
Metaverse,
Tüketici Davranışları,
Online Alışveriş,
Teknoloji Kabul Modeli

JEL Kodu
M31, D91, O33, C83

1. Introduction

The development of technology causes radical changes in human life. Technological innovations have different reflections on human behavior, and therefore the acceptance of innovations has been one of the important issues researched by experts throughout the process (Assaker, 2020: 430-435). Today, organizations attach importance to digitalization to adapt to rapidly changing market conditions. It is now a known fact that leading brands in terms of corporate, commercial, and brand value develop their strategies by giving importance to consumer preferences. Moreover, in today's market conditions where consumer demands are transferred to artificial intelligence, cloud-based technology, and virtual environments, it can be observed that the businesses that use technology the most in this field lead the market. All businesses in the advertising and marketing departments have been looking for ways to reach their target customers since the old days. Today, thanks to the internet, even the smallest businesses can reach wider audiences. However, the rise of social media use in the internet environment, according to Bushell (2022: 4), allows them to reach both more and more specific audiences through many online platforms. According to Asseker (2020: 430), these technological developments have different effects on human behavior, and for this reason, the acceptance of innovations by individuals has been one of the topics that researchers have been working on recently.

Thanks to the studies that started in 2006, it is seen that the Metaverse, which was shaped by focusing on virtual worlds such as Second Life, has changed a lot compared to its old versions today. The online identity, mostly used by Generation Z, can show higher similarities with social and cultural values in the real world. According to Park and Kim (2022: 4209), the increasing content and social interactions distinguish the Metaverse from its previous appearance. According to Damer (2008: 16), Dionisio et al. (2013: 3), and Grimshaw (2014: 702), the development of this concept gained much more momentum during the actual pandemic period, based on Stephenson's work Snow Crash dated 1992. The prevention of social distance due to the closure during the pandemic period, combined with the opportunities provided by Web 3.0 technology, has enabled the fiction in the cyberpunk movement, which the author pioneered, to become real-life. The cyberpunk movement, in addition to progress in the fields of science and technology, leads to a change in the social order and is expressed with the slogans of advanced technology and low life (Ketterer, 1992: 141). This concept means developing solutions for you by affecting the brains of those looking for a solution in a kind of digital confusion in the metaverse, just like a computer virus (Stephenson, 2016: 22).

Developments in virtual and augmented reality technologies, especially in the last thirty years, have made it more possible to offer quality and interactive experiences to consumers. According to Anderson and Rainie (2022), the Metaverse, which is formed by the combination of all these technologies, is adopted more quickly by large enterprises, and much larger amounts of investment are made in areas such as education, retail shopping, and entertainment.

The rapid and widespread interest in the concept of the Metaverse in recent years is not very common compared to other contemporary concepts. This concept, which is immediately accepted by everyone from consumers to industry practitioners, from academics to businesses, triggers emotions such as interest and acceptance, as well as emotions such as excitement, fear, skepticism, and opportunism. It is stated that these features, both increase the number of people it affects, and its value and investment rates by businesses are increasing (Faraboschi et al., 2022: 103; Tong, 2022). The most important question in the developing and expanding Metaverse process is how it will change the ways consumers socialize, shop, and find meaning. For this reason, a conceptual framework is being created to examine attitudes toward the metaverse and consumer behavior from the perspective of the technology acceptance model. Since the technical features of the Metaverse are still new, in addition to the studies documenting more specific

elements such as NFTs and their social interactions, research on marketing applications is also increasing (Christodoulou et al., 2022; Lee et al., 2021).

2. Metaverse, Technology Acceptance Model (TAM) and Consumer Behavior

2.1. Metaverse

The Metaverse, as a concept, was first mentioned in the works of authors such as Stephenson N., Rheingold H., and Gibson W., long before it was chosen as a subject for scientific studies and universally accepted, as fantastic worlds whose traces were first seen in science fiction sources (Buchholz et al., 2022: 313). In today's world where advanced technology is strongly developing with processes, connections, and devices, a Metaverse phenomenon that has fully entered the field of research in the industry sector as well as even in academia is explained by Cheng et al. (2022: 197).

When we look at its definition, the concept of Metaverse is formed by the combination of the words "meta" and "universe". According to Duan et al. (2021: 153), it is explained that all users communicate with the help of avatars in this new generation internet environment where they interact. According to Collins (2008: 52), this concept, in a sense, brings together the real world and the virtual world, where users benefit from both at the same time and represent the sum of both their physical and mental worlds. It is seen as an external universe where many activities such as playing games or socializing are also included, such as cultural activities, shopping, and receiving or providing education. , according to Lee (2021: 72), when the historical development of communication and information technologies is examined, it is stated that computers came to the fore in the 90s, the web concept in the 2000s, and finally Web 3 and the Metaverse concepts in the 2010s. The Metaverse can be seen as a new style of social form and internet application that brings together different and new technologies. In this sense, according to Averbek and Türkyılmaz (2021: 100) and Özdemir Uçgun and Şahin (2024: 1), the constantly evolving Metaverse; It is a concept that is based on augmented reality technology, has the potential to create its tourism literature and sector thanks to blockchain technology, has an economic structure, a kind of digital twin of the real world has been created, the real world and the virtual world are adapted, has both a social system and an economic structure, and allows users to produce and edit content in this virtual world. It is understood that there is no clear consensus on how the Metaverse will follow, develop, and work in the future. Dwivedi et al.

(2022: 751) state that the ideas and discussions regarding the effects of the relevant concept on society, individuals, and, businesses are completely shaped by the predictions and explanations of researchers. When we look at the literature, we see that there are many overlapping definitions based on current studies. For example, Joy et al. (2022: 340) defined the Metaverse as a world where users are represented as avatars, live in, can communicate, and where real estate can be purchased in a virtual sense. In another definition, Weinberger (2022: 13) explained the Metaverse as an improved network where virtual worlds that are partially similar to the physical world and are found everywhere are connected. He also states that people are represented by avatars and that users can experience and communicate with each other on a scalable, sustainable, synchronous, s and continuous platform through the content they create in virtual worlds. Metaverse is defined by Hollensen et al. (2022: 2) as a set of interconnected virtual worlds where people can navigate and communicate through individual avatars by using virtual and augmented realities. It cannot be said that the Metaverse will replace social media and the internet. In their articles supporting this, George et al. (2021: 9) think that this medium will stand before people as a new generation internet phenomenon created in the middle of socialization. As Hollensen et al. (2022: 1) explained, the Metaverse can be considered as a three-dimensional transformation period that takes social media and the internet as a basis, contains many exciting and new experiences, and is always renewed. The only difference is that it is known that this medium has the potential to revolutionize the communication and relationship formation methods with the experienced digital world (Ali and Khan, 2023: 388; Damar, 2021: 1). Because users are allowed to have three-dimensional experiences in a virtual environment, while also being able to develop their creativity. Users can try reality games, go to training, or do virtual concerts in this virtual environment. According to Cheah and Shimul (2023: 2), this provides users with greater accessibility and comfort than they have ever experienced before. In terms of frequency of use, some researchers they state that the Metaverse has become more popular due to COVID-19 and that this is because people who are confined to their homes see it as a way to socialize. Kang (2021: 1263), who shows COVID-19 as a factor in the acceleration of the transition to the digital world, states that the Metaverse offers solutions without being affected by different variables as an alternative to the physical world. Lee (2021: 73) showed the continuity of relationships that could not be face-to-face during the pandemic period as the reason for the increase in the trend of the Metaverse. In addition, Lee et al. (2021: 5), who mention that the Metaverse has two sub-

components ecosystem and technology, state that it creates a kind of "digital big bang" effect with augmented realities from the internet such as network, augmented reality, hardware, and cloud technologies. They explain that this situation creates a different Metaverse ecosystem that includes a virtual economy, trust, avatars, and social acceptability. In another explanation, Duan et al. (2021: 155) state that the Metaverse has an internal tiered structure consisting of infrastructure, a virtual world, intersection concepts, and sub-concepts. This definition is consistent with Lee et al.'s explanations about the components of the Metaverse. The prepared metaverse projects can transform the projects planned to be carried to the blockchain network in the future into a decentralized form as a system. As a result, it is among the predictable strategies that today's technology companies and social media platforms will experience huge amounts of revenue loss. In the same sense, according to Arvas (2022: 67), there is an organic connection between the projects belonging to the Metaverse and NFTs, namely Qualified Intellectual Property Titles. Mystakidis (2022: 486) defines the Metaverse as a "post-reality universe" as an environment that brings digital virtuality together with physical reality, provides continuous permanence, and has multiple users. In terms of convergence, virtual worlds are similar to virtual reality and augmented reality; It is the result of the convergence of technologies and digital objects that enable multi-faceted emotional communication with people. Metaverse refers to a three-dimensional world as a virtual environment where avatars created as a kind of digital twin exhibit social, economic, political, and cultural movements. It is widely used today as a virtual environment where both unreal and real situations are experienced together, similar to and based on daily life. Park and Kim (2022: 4411) explain that there is a need for simultaneous interaction between users to be created and maintained to create services just like in the real world. Because the Metaverse is an environment where both millions of people and their avatars, that is, their digital twins, will communicate in real-time as a virtual giant world. In other words, it is a life created entirely on a digital system, unlike this analog world we live in. This virtual and digital world also has functions that can fundamentally change the way we interact and communicate in the future. Because, according to Smart et al. (2007: 4), the Metaverse, which is the intersection, union, and crossroads of our virtual and physical worlds, cannot be seen as just a virtual space.

2.2. Technology Acceptance Model

Experts also conduct very frequent studies on the interpretation of human behavior. According to Pektekin (2013: 30), these studies have changed the ways of doing business in all

sectors as a result of developments in the fields of communication and information technologies. In addition, many models have been developed regarding the perception, adoption, and implementation of individuals. The Technology Acceptance Model (TAM) is also one of the models used very frequently during the acceptance period of new technologies while conducting user analyses. It is stated that TAM, which is based on the Theory of Reasoned Action (TACT), assumes that human behavior is not random but depends on some reasons. Davis et al. According to (1989: 983) and Taylor and Todd (1995: 561), TAM is based on GET, which is frequently used in the study of human behavior, especially in the period of acceptance of new technologies, and has been developed to explain the behaviors of users in using new technologies, either rejecting or accepting them. Therefore, it is explained that while attitude, perceived ease of use, and benefits determine the behaviors, intention provides the formation of behaviors. According to Davis (1989: 322), the content of TAM includes new technological applications and devices to be used more actively, ideas, reactions to innovations, perceived ease of use, and perceived benefits. According to Lee et al. (2003: 768), TAM is constantly advancing and being developed thanks to relevant researchers, its limitations are being solved and it is being developed.

It also includes theoretical models. According to Davis's (1986: 64) research, active use is directly and indirectly affected by the perceived benefit variable. In this respect, perceived ease of use is the level of employees' belief that using a certain system will reduce the mental and physical workload they will need. It is assumed that perceived ease of use has a direct effect on perceived benefit. It is argued that it will contribute as a factor to increasing work performance when all other factors are equal. It is thought that employees will become more productive if they benefit from the system and gain convenience. The best example of this is the level of employees' belief in the positive or negative workload that the computer programs they will use in their transactions in an accounting job will add to them. Chen and Barnes (2007: 28) express perceived benefit as the belief that any technological development will increase employees' work performance. According to Chau and Hu (2002: 299), the acceptance of new technologies in TAM occurs in four stages. While there are external variables in the first stage, the perceived ease of use and usefulness of new technologies in consumers are shown in the second stage. The attitude towards using new technologies is in the third stage, while the behavioral intention towards new technology is in the fourth and final stage. The studies conducted by Saade and Bahli (2005), Nair and Das (2011), and Tarhini et al. (2015) reveal that the higher the benefit and

perceived ease of use that consumers get from the new technologies they use, the higher their level of acceptance and use of that technology will be. Behaviors that may occur in other variables are the positive and negative behavioral tendencies that people display regarding a situation or phenomenon. Teo (2011) mentions that the reason for the high level of technology use behavior is related to how strong a person's attitude is towards new technologies. Here, the concept of intention refers to the person's readiness to take any action, while the concept of behavior is explained as the realized use that occurs after intentions and attitudes. When the studies on TAM are examined, it is seen that the relevant research is mostly in the devices and applications section. It is understood that many processes previously done in physical environments are simultaneously transferred to online environments while technological development continues. Examples of the transfer of learning and education processes to digital media with the increased use of technological devices can be given in studies by Rafique et al. (2020), Sukendro et al. (2020), and Salloum et al. (2019). The study conducted by Hu et al. (1999: 1) on telemedicine reveals that TAM can be used at a reasonable level in the intention to use technology in this field. In their studies examining mobile social media applications, Kong et al. (2021) and Min et al. (2019) focused on the usage acceptances of the relevant applications. It is possible to provide healthier services with the improvements to be developed by knowing the factors that affect the uses related to mobile applications. Sagnier et al. examined the technologies that enable people to be in different places without leaving their places. (2020) and Manis and Choi's (2019) studies, in a sense, focus on the future acceptance of developing technologies.

2.3. Consumer Behavior

According to Reed et al. (2012: 312), the labels that consumers associate themselves with as an important driving force of market movements are generally accepted as a kind of identity perception. To exemplify this, Kirmani (2009: 272) states that the identity of a person can make useful contributions to social actions by affecting their brand choices, social communication, and advertising sensitivity. However, how this can be done in the Metaverse environment is a problem because how a person's identity is created is important in this environment. In the Metaverse, a person's physical state can be created independently of all restrictions due to being given to an avatar representative and the external appearance, identity, and personality of the relevant avatar being created digitally. For this reason, the created avatar can be a reflection of a

person who does not exist, as well as taking on a completely different identity and shape. According to Messinger (2008) and Kaur et al. (2024: 1732), this situation can have profound consequences on the behavior patterns to be observed, and consumers, on the other hand, are still very interested in the Metaverse because they actively seek interaction despite the difficulties they experience.

One of the main concepts in the consumer behavior literature is the acceptance of ownership. It is known that a purchase transaction provides the buyer with permanent ownership in terms of material products. In other words, it is not very common for ownership to be temporarily not provided. Therefore, the majority of the ownership studies found are related to tangible material assets in our physical world. However, Belk (2013: 481) states that with the continuous increase in digital technologies, researchers are turning to more studies on digital property. Leung et al. (2022: 677) also explain that the abstract nature of digital goods will make consumers feel less psychological property compared to tangible goods, and therefore will cause digital assets to be valued less. In this sense, when considering how property can be created in Metaverse and similar virtual environments, it should not be forgotten that the relevant platform has unique features and contains technologies that make trade possible. Because mechanisms that are different compared to other platforms can change both the nature of the property and its effects on consumer behavior. According to Shen et al. (2021: 23), while property will continue to be a very important and fundamental concept in the Metaverse, its meaning and consequences will also differ. In the explanation of property in the Metaverse, cryptocurrency, known as virtual money, non-fungible tokens, and blockchain come to the fore. Cryptocurrencies are used as a unit in exchange for goods or services, just like physical money. Therefore, “coins” are assets that have value like cash in the digital world and have interchangeable features. The fact that the unit known as Bitcoin has the same value everywhere is the best example of this. Another token, NFTs, actually include the storage of unique information such as the origin, manufacturer, and brand of any product on the blockchain, as well as the ownership record of that product. It is known as an original and unchangeable token, just like title deeds. NFTs are not products, but product-specific ownership and data documents used to document the purchases of both tangible and intangible products. According to Belk et al. (2022: 203), coins in the Metaverse are tools used to purchase NFTs, which represent unique products in the digital world. Therefore, NFTs have functions just like official documents showing ownership.

3. Methodology

The purpose of this study is to understand the attitudes of consumers towards the use of metaverse technology by businesses in order to gain experience before online shopping and to examine the effect of these attitudes on the purchasing decision process within the framework of the Technology Acceptance Model (TAM). The study also aims to evaluate the factors affecting the online shopping processes of consumers by using the perceived ease of use and perceived usefulness variables, which are the sub-dimensions of TAM. The model created with the research variables according to the research purpose is shown in Figure 1 below.

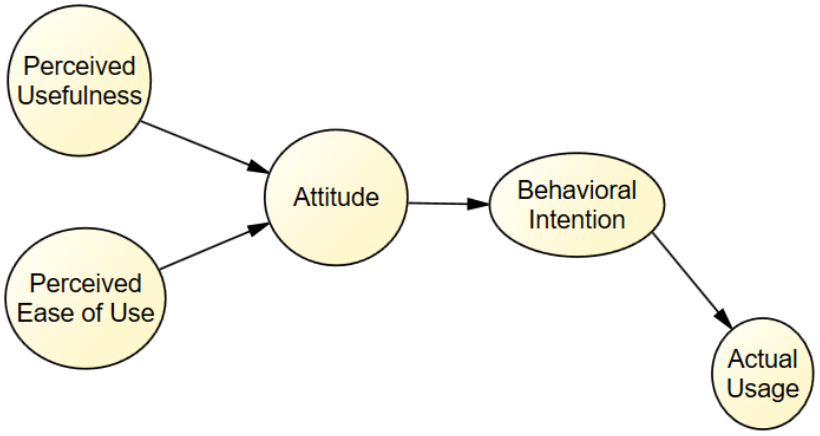

Figure 1. Research Model

In the study, a survey was preferred among quantitative data collection methods and the survey was composed of two parts. While the first part of the survey included statements aimed at determining the demographic characteristics of the respondents, the second part included 25 statements in the Technology Acceptance Model scale developed by Davis (1989) and adapted according to the research topic. The universe of the study consisted of 58,337,938 people between the ages of 15-64 in Turkey as of the end of 2023 (TÜİK, 2024). The survey prepared to understand the suitability of the scale planned to be used for the research was applied to a group of 50 people in October 2024 and confirmatory factor analysis (CFA) was performed using the structural equation model with the obtained data and is shown in Figure 2 below. The goodness of fit values obtained as a result of factor analysis (X2/df: 3.666, GFI: .929, AGFI: .912, CFI: .927, RMSEA: .075, P=0.000<0.05) are found to be within the acceptable goodness of fit range (Schermelleh-Engel, 2003). Since it was understood that there was no statistical obstacle in the survey prepared as a result of the CFA, the survey was re-applied in November and December

2024 and 471 usable data were obtained. According to the research model, these data are examined with path analysis using SEM.

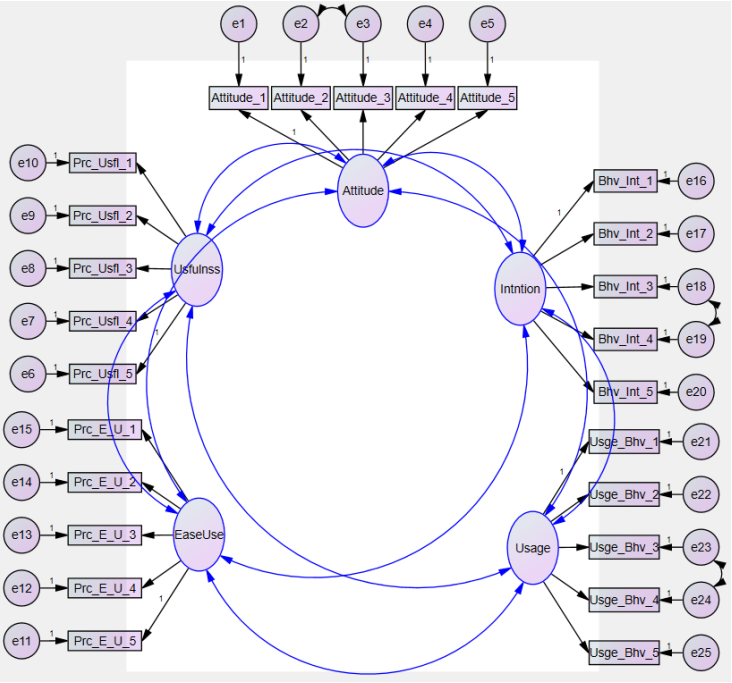

Figure 2. Confirmatory Factor Analysis

The statements given to determine the demographic characteristics of the participants in the study were examined and are shown in Table 1 below. Accordingly, the participants were mostly male (53%), single (66%), between the ages of 26-35 (35%), had a bachelor's degree (73%), and had an income level of $500 and below (30%), and finally, their online shopping frequency was generally 1-2 times per month (39%).

Table 1

Demographic Characteristics of the Participants

Category	N (%)
Gender	**Male**: 251 (53%) - **Female**: 220 (47%)
Marital Status	**Married**: 160 (34%) - **Single**: 311 (66%)
Age	**18-25**: 102 (22%) - **26-35**: 167 (35%) - **36-45**: 84 (18%) **46-55**: 67 (14%) - **56 and more**: 51 (11%)
Education	**High School**: 61 (13%) - **Bachelor**: 346 (73%) **Master - PhD**: 64 (14%)
Income	**500 $ and Less**: 141 (30%) - **501-1500** $: 111 (24%) **1501-2500 $**: 136 (28%) - **2501 $ and More**: 83 (18%)
Frequency of Online	**1-2**: 182 (39%); **3-4**: 123 (26%); **5-6**: 101 (21%); **7 and more**: 65 (14%)

Shopping (Monthly)	

The path analysis created using the structural equation model in line with the research purpose is given below in Figure 3. In the path analysis, the effects and relationships between the variables are examined.

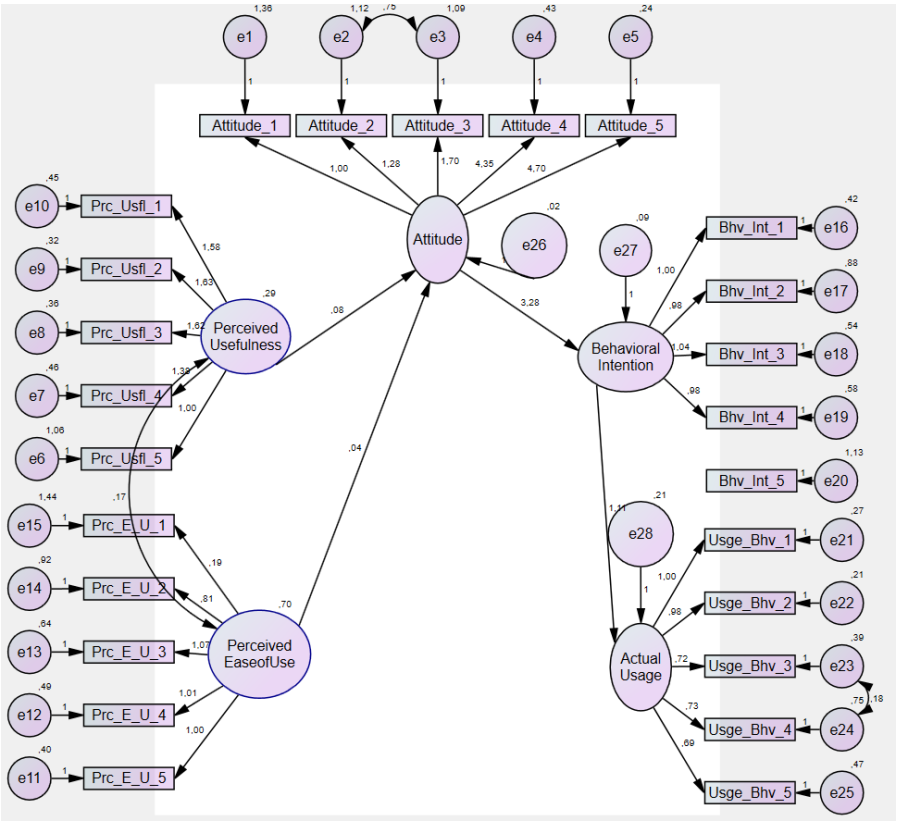

Figure 3. Path Diagram

In the above path diagram where the research variables are located, the effects of perceived usefulness and perceived ease of use on attitude, attitude on behavioral intention, and behavioral intention on actual usage are examined. When the goodness of fit values of the established path model are examined (X2/df: 3.780, GFI: .921, AGFI: .891, CFI: .906, RMSEA: .077, P=0.000<0.05), it is understood that they are within the acceptable range. Therefore, it is understood that there is no statistical obstacle in establishing the model. The values related to the relationships between the variables in the path diagram are given in Table 2 below.

Table 2

Regression Weights

			Estimate	S.E.	C.R.	P
Attitude	<---	Perceived Ease of Use	.037	.018	2.045	**.041**
Attitude	<---	Perceived Usefulness	.085	.038	2.214	**.027**
Behavioral Intention	<---	Attitude	3.279	1.345	2.438	**.015**
Actual Usage	<---	Behavioral Intention	1.110	.091	12.202	***

-S.E.: Standard Error; **- C.R.:** Critical Ratio; **-P:** p-value

When Table 2 above, which shows the effect values of the variables with each other as a result of the established path analysis, is examined, it is understood that there is an effect for all four situations ($p<.05$). It is understood that perceived ease of use and perceived usefulness affect attitude (Estimations: .37; .085), attitude affects behavioral intention (Estimation: 3.279) and also behavioral intention affects actual usage (Estimation: 1.110).

4. Conclusion and Discussion

This study, which aims to examine the reflection of online shopping consumers' perceptions of the metaverse on their behaviors with the Technology Acceptance Model (TAM), uses a structural equation model. According to the path analysis results created for the research, it is understood that perceived ease of use and perceived usefulness towards metaverse significantly affect consumer attitudes (Estimation: .37; .085). In addition, it is statistically determined that consumer attitudes also affect behavioral intention (Estimation: 3.279), and ultimately behavioral intention positively affects actual usage (Estimation: 1.110). These results are consistent with the assumptions of TKM and reveal that metaverse technology is effective in the adoption of online shopping specifically. These findings are consistent with the results of Sheth'sthe (2020) and Jiang's (2024) studies, which found that perceived usefulness and ease of use positively affect consumer attitudes, especially in the context of metaverse. In addition, Rane et al. (2023) are consistent with the conclusion that metaverse technologies guide consumer behavior and the experience gained is personalized. In Turkey, it is understood that perceived ease of use and benefit in online shopping environments are the main factors that guide consumers' decisions, and that metaverse technology has transformed online shopping, based on the results of Çelikkol

(2022), and that the research findings are also supported in Turkey. This study makes empirical contributions to the literature; however, to enhance transperacy, future research may address some limitations by utilizing alternative data collection techniques beyond questionnaires, such as behavioral tracking or experimental studies.

Finally, it is thought that this study, which is applied specifically to Turkey, makes a significant contribution to the studies in local and international literature in understanding the impact of metaverse technology, which is a new and unknown area, on consumer behavior. Based on the statistical findings obtained from the research, it can be said that strategies in line with consumer expectations should be developed for businesses and professional marketers in metaverse applications and that it will be important to be innovative and consumer-oriented, especially to increase perceived benefit and perceived ease of use. It is anticipated that the results will be generalized with similar future studies in this field.

Declaration of Research and Publication Ethics

In order to apply the survey method in this study, permission was obtained from Istanbul Aydin University Educational Sciences Ethics Commission with the decision number 22025/01 and the number E-45379966-100-143698, and research and publication ethics were complied with in this study.

Researcher's Contribution Rate Statement

Since the author is the sole author of the article, his contribution rate is 100%.

Declaration of Researcher's Conflict of Interest

There are no potential conflicts of interest in this study.

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