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Behavioral Intentions of Customers Under the Technology Acceptance Model (TAM): Example of Migros Jet Kasa

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Abstract

This study aims to reveal the attitudes and intentions of consumers towards self check-out points in their grocery shopping. For this purpose, a questionnaire was applied to consumers who used the Migros Jet Kasa (self check-out) payment points in Migros shopping stores at least once. In this direction, the results of the survey answered by 383 people were analyzed. As a result of the study it has been observed that technology use proficiency has a positive effect on both perceived ease of use and perceived usefulness. From this point of view, it can be stated that when the ability to use technology increases, perceived ease of use and perceived usefulness will increase. New technology concern does not significantly affect perceived ease of use and perceived usefulness. On the other hand, perceived ease of use affects attitude significantly and positively. Similarly, perceived usefulness also affects attitude in a meaningful and positive way. Therefore, it can be said that when both perceived ease of use and perceived usefulness increase, the attitude will increase in a positive way. Finally, attitude significantly and positively affects behavioral intention. It can be stated that when the attitude increases positively, the behavioral intention will also increase.

Keywords: Customer behavior, Self Service Technologies, Self-Checkout, Technology Acceptance Model, Migros Jet Kasa

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2023, 12 (3), 1874-1903 | Araştırma Makalesi

Müşterilerin Teknoloji Kabul Modeli (TAM) Kapsamında Davranışsal Niyetleri: Migros Jet Kasa Örneği

Cemal GÜMÜŞ [1] **Selda FINDIKLI** [2] **Emine Pınar SAYGIN** [3]

Öz

Bu çalışma, tüketicilerin market alışverişlerinde self check-out noktalarına yönelik tutum ve niyetlerini ortaya çıkarmayı amaçlamaktadır. Bu amaçla Migros alışveriş mağazalarında Migros Jet Kasa (self check-out) ödeme noktalarını en az bir kez kullanan tüketicilere anket uygulanmıştır. Bu doğrultuda 383 kişinin cevapladığı anketin sonuçları analiz edilmiştir. Araştırma sonucunda teknoloji kullanım yeterliliğinin hem algılanan kullanım kolaylığı hem de algılanan fayda üzerinde olumlu bir etkiye sahip olduğu görülmüştür. Buradan hareketle teknoloji kullanma becerisi arttıkça algılanan kullanım kolaylığı ve algılanan faydanın artacağı ifade edilebilir. Yeni teknoloji endişesi, algılanan kullanım kolaylığını ve algılanan kullanışlılığı önemli ölçüde etkilemediği görülmüştür. Öte yandan algılanan kullanım kolaylığı, tutumu anlamlı ve olumlu yönde etkilemektedir. Benzer şekilde algılanan fayda da tutumu anlamlı ve olumlu yönde etkiler. Dolayısıyla hem algılanan kullanım kolaylığı hem de algılanan fayda arttıkça tutumun da olumlu yönde artacağı söylenebilir. Son olarak, tutum, davranışsal niyeti önemli ölçüde ve olumlu yönde etkiler. Tutum olumlu yönde arttığında davranışsal niyetin de artacağı ifade edilebilir.

Anahtar Kelimeler: Müşteri davranışı, Self Servis Teknolojileri, Self-Checkout, Teknoloji Kabul Modeli, Migros Jet Kasa

Gümüş, C. , Fındıklı, S. & Saygın, E. P. (2023). Müşterilerin Teknoloji Kabul Modeli (TAM) Kapsamında Davranışsal Niyetleri: Migros Jet Kasa Örneği . İnsan ve Toplum Bilimleri Araştırmaları Dergisi , 12 (3) , 1874-1903 . https://doi.org/10.15869/itobiad.1296686

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Introduction

Technology opens up new ways to create customer value while going beyond boundaries and enabling collaboration with customers. Many companies are taking advantage of digital intelligence to reduce power usage and are using technology to find new ways to create shared value with customers (Porter and Kramer 2019:333). One of the most effective ways to facilitate this is through the use of self-service technologies (SST). SST is a technological interface that provides customers with the best communication while interacting with their products and services, making them semi-participants. SST allows businesses to produce services independently without the participation of a service employee. SST is a proven business model that has a positive impact on both the customer and the service provider (Taufik and Hanafiah, 2019: 1). There are many self-service applications where individuals can provide their service. In this context, the number of people using this service to make their payments (Self Checkout) in supermarkets is increasing. Self-checkout (SCO) is a self-payment system where the customer scans the products they want to buy and then takes on the responsibility of making payments using an interactive operating system. SCOs typically have a barcode reader, a scale for free purchases such as fruits and vegetables, a 'bagging area' (where a scale is also used to verify the transition to bagging), and usually, a payment system that accepts cash and/or credit cards (Taylor, 2018: 100). In summary, it is an automatic process that involves customers scanning (scan), bagging (bag), and paying (pay) for the products they have purchased (McWilliams et al., 2016: 79). The semi-participant and co-producer role allows Generation Y to feel temporally and spatially free, even perceiving this situation as autonomy, and values the control they have over this process (Lee and Leonas, 2021: 269). In line with all of this, the use of SCOs leaves the execution of the most important point of the shopping experience, the payment stage, to the customer, creating a revolution in many ways in the relationship between the customer and the retailer. SCOs are becoming an increasingly common feature of retailing, with some stores even offering entirely self-service. In other words, self-service payment solutions can be interpreted as a permanent feature of contemporary shopping experiences (Taylor, 2018: 100).

The problem of this study is to investigate how self-service payment application in self-service technologies is reflected in retail consumption experiences. The sample of the study consists of people who have used jet cash registers at least once. In the research, it is aimed to reveal the attitudes and behavioral intentions of customers regarding the four scales of the extended technology acceptance model at jet cash payment points in Migros shopping stores. In this context, revealing how self-check-out technology affects the attitudes and behaviors of consumers constitutes the problem of the research. The answer to the research question; It has been tried to be revealed through the Migros Jet Kasa (Self-checkout) example within the framework of the TAM model.

Conceptual Model and Hypothesis Development

Self-Service Technologies and Self-Checkout Definition and Scope

In marketing literature, vending machines used in markets are referred to as the first self-service technologies. In the 1980s, self-service technologies for customers were expressed as automatic teller machines (ATMs) and payment at gas stations for their cars. Dabholkar (1994) defined the customer-technology interaction in self-service as technology-based self-service (TBSS) 1994 (Dabholkar, 1994; Garg, 2019: 5). In general terms, self-service technologies (SST) are defined as a technological interface that allows customers to receive services without the physical presence or participation of service employees (Meuter et al., 2000; 50). Examples of SST include self-service gas stations where customers pump their gas, self-service hotels where check-in and check-out processes do not require any interaction with hotel staff, and air travel where passengers use airport kiosks to make online ticket reservations, make payments, and obtain boarding passes (Campbell, Maglio, and Davis, 2011: 174-175; Castillo-Manzano and López-Valpuesta, 2013: 2431). At this point, it is appropriate to define the kiosk that provides self-service. The word "kiosk", derived from the Turkish word "köşk", has also passed into European languages from Turkish. In English, the word "kiosk", which is equivalent to a pavilion or hut, can be interpreted as an interactive media tool in connection with its roots. They have touchscreen technology that allows users to interact with the information on the screen. There are also examples in restaurants. McDonald's self-service kiosks, which we have started to see in our country, are among them (Zedeli, 2021: 15-18). The self-service kiosks that make up the subject of the study are the self-check-out cash registers in retail operations operating in real space. Automatic payment systems or electronic point-of-sale scanning devices, which have become an important part of the retail customer experience, use payment lanes that consumers can use to scan their products and theoretically pay without the help of a cashier (Mendat and Mayhorn, 2007: 1011). Automatic payment machines are computerized systems that allow customers to scan their shopping products on their own, pack them and make payments. Automatic scanning devices are defined as handheld terminals that can read product barcodes and display their prices, allowing shoppers to directly place the product in their bags while shopping, track their expenses, and make payments in a designated area without opening their packages (Sharma et al., 2021: 3).

The literature indicates that the most important main element of SST usage is time savings, with some customers preferring the self-service experience simply because they receive their services in a shorter amount of time. Time savings and control over service delivery are the main factors influencing the choice of self-service options (Barteson, 1985: 49). Other reasons for consumers to make their payments include not wanting to interact with cashiers, having more payment options, seeking more privacy, control, and comfort (Lee et al., 2010: 47). Self-checkout also provides benefits to retailers. The benefits and limitations of the application for both the customer and the retailer are summarized in the table below. The benefits and limitations of self-Service systems are shown in Table 1.

Table 1. Self-Service Checkout: Benefits and Limitations

	Consumer Benefits	**Consumer Limitations**	**Retail Benefits**	**Retail Limitations**
	*The perception of speed,	*Usual fear of making embarrassing mistakes,	*Decreased labor costs,	* The decrease in impulse purchases,
	*Short lines and increased privacy at checkouts,	*Customer mistakes when using technology can stop the system until the intervention of the supervising cashier,	* Free employees for other customer-service tasks,	* Taking away jobs from humans,
Self-service Checkout (SCO)	*Convenience,	*Slow down the checkout process when cigarettes or alcohol drinks are being purchased.	*Improved labor allocation, which leads to greater efficiency,	*The preferences of some customers to deal with human beings, rather than machines.
	*Free employees to help shoppers make purchase decisions,		* Better handling unexpected customer traffic during hours of unexpected increases in the numbers of customers,	
	*The new level of control over their checkout experiences,		* A short payback period to receive a desired ROI	
	*The ability to scan items at their own pace which gives consumers time to verify ns			

Source: Renko ve Druzijanic, 2014: 838

The Use of Self-Service and Self-Service Checkouts (Self-Checkout) In The Retail Sector

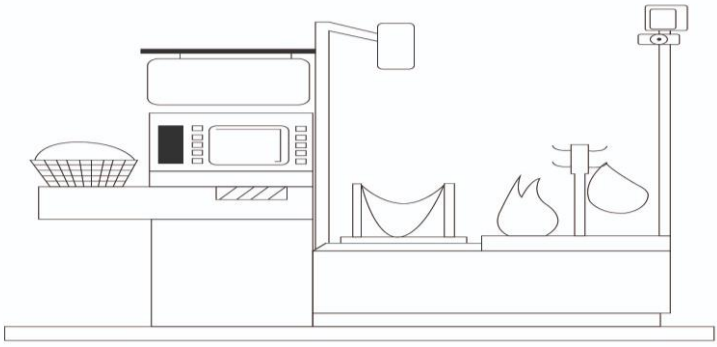
Professional retailing is thought to have begun in the second half of the 19th century worldwide, while its modern implementation in Turkey dates back to the 1950s. Organized retail activities began in the 1950s with Migros and Gima and grew rapidly with the entry of foreign-capital retailers such as CarrefourSA and Metro in the 1990s. In the 1990s, discount stores were created, inspired by the European discount store format, and their presence in the market increased significantly in the 2000s. These discount stores spread throughout Turkey, causing significant changes in the retail sector's development (Kurumu, R, 2021:9). Since the beginning of retailing in the early 1800s, technology has continued to influence the retail sector and consumer expectations by using the latest technology. In this regard, technological changes also affect how consumers interact with retailers when consuming products and services (Garg, 2019:27). Another component of the context is the word "Service," which is expressed in Turkish as "Hizmet" and refers specifically to retail sales environments as the application of specialized competencies for the benefit of another organization or its own. As an organization, a retailer is identified as a service provider by its employees, customers, suppliers, partners, computers, and machines. Current developments in

technology provide new tools to improve the quality of retail processes by enhancing consumers' shopping experiences, facilitating shopping processes, or improving retailers' capabilities through what is termed "interactive technology." Self-checkout technology-based self-service provides a self-payment service that requires multiple actions such as barcode reader technology and touch screen usage. Interactive technologies carried out in stores contribute to the creation of retail value by fulfilling a human purpose, improving customers' shopping experiences, or facilitating retailers' capabilities (Wolpert and Roth, 2020: 500-501). Self-checkout technology is an automated process that allows shoppers to scan, package, and pay for their purchases without the need for a cashier. The self-scanning checkout lane resembles a traditional checkout lane except that the shopper interacts with a computer user interface instead of a store employee. When it comes to payment, the self-scan interface guides the customer on where to place each product during and after scanning (Inman & Nikolova, 2017).

The first example of a self-service application for the retail sector and supermarkets in the United States began in 1916 with Clarence Saunders' new supermarket concept at his Piggly Wiggly store, which allowed customers to use a shopping cart and select products from the shelves without the assistance of store employees (Ncr, 2022). The example from England began with a store opened by John James Sainsbury's on London Road. John James' grandson Alan Sainsbury, who visited the United States to receive retail training, implemented the self-service system in 1950. Until then, customers would give their shopping lists to the staff and wait while their goods were packaged at the counter. With this application, the power was given to the shopper's hands, making shopping a much more enjoyable experience for customers (Retailhumanresources, 2022). Sainsbury's store has posters in its archives explaining self-service shopping to its customers (Heritagecalling, 2022). On March 3, 1955, F. W Woolworth's new store on High Street in Cobham, Surrey was built and opened in a self-service supermarket style following a model created by its American parent company that started testing in 1950 and quickly brought the concept to life. Woolworth stores offered revolutionary services. The name "self-service" came from customers being able to touch and pick up products before deciding to buy them and being able to collect what they bought at each counter before paying the assistant there and moving on to the next counter. At that time, most stores expected customers to choose what they wanted from a display window and go to the store to request it and receive the product packaged and ready to go (Woolwortmuseum, 2022). In 2010, the Tesco Express store in Northampton region is cited as an example of the first fully self-service store of Tesco, the United Kingdom's largest retailer. This store was supervised by a single employee and had only five self-service checkouts with no staffed checkout.

In the early 1990s, Dr. Howard Schneider developed the first retail automatic payment system, called a "service robot," and by 2003 automatic payment had become widespread in retail stores in America (Qikserve, 2022). In 1995, the Kroger supermarket chain introduced its first self-payment method to consumers at select locations and this application has since expanded exponentially (Harrington, 2002). The patent for the "Automated Point-of-Sale Machine" was obtained in 1992 by Schneider (Schneider 1992), and the first "Self-Checkout System" was established in 1992 by Price Chopper Supermarkets (Inman & Nikolova, 2017).

Picture 1. Self-checkout sketch from original patent 5,083,638.



Source: Inman & Nikolova, 2017

The drawing above shows the operation of the first patented self-checkout system (Picture 1). The first modern self-payment system was introduced in 1995 by a Florida company called CheckRobot, which held the patent and was introduced in several Kroger supermarket chains. The system, seen as a revolution in the supermarket, allowed customers to scan their products and place them on a conveyor belt. At the other end of the belt, an employee packed the food. Customers were then taken to a central cashier area to make their payments (Edition, 2023). The transformation of the self-service system in various service industries is shown in Table 2.

Table 2. Evaluation of self-service

Service Industry	Human Contact	Machine Assisted Service	Electronic Service
Retail Banking	Teller	ATM	Online Banking
Grocery	Checkout Clerk	Self-checkout Station	Online Order/Pickup
Airline	Ticket Agent	Check-in Kiosk	Print Boarding Pass
Restaurants	Waiting Staff	Vending Machine	Online Order/Delivery
Movie Theather	Ticket Sales	Kiosk Ticketing	Pay-per-view
Book Store	Shop Assistant	Stock-availability Terminal	Online Ordering
Education	Teacher	Computer Tutorial	Distance Learning
Retail Store	Checkout Clerk	Self-Checkout Station	Online Shopping

Source: Fitzsimmons, 2003: 444

In Turkey, self-checkout systems first met with customers in five markets in 1999 and shoppers quickly adapted to them. According to a study conducted in 2013, 107 markets offered self-payment services (Orel and Kara, 2014: 118). The application, generally known as "Self-checkout" in English and sometimes referred to as "Frictionless checkout" in some studies, is used under different names by various stores in Turkey (Zebra, 2022: 6). These names include "Cashierless checkout", "TikTak checkout" by Çağdaş Market, "Self-service checkout" by Kipa and "Jet Checkout" used by Migros (Gültekin and Esen, 2020: 1623; Doğrul and Koşar, 2017: 102). Migros' pilot study of Jet checkouts, which was implemented in 2009, was reflected in the news titled "Turkish retailers aim for cashier-free Checkout" a decade ago (Supermarketsnews, 1999). The jet checkout application, which was first put into operation as a pilot study in Turkey in January 2009, is an example of the first. As of 13-09-2023, Migros serves with 3,184 stores in 81 provinces in Turkey, including 3,022 Migros, 147 Macrocenter and 15 Mion,

with a closed area of 3,084,392 m². (Migros Kurumsal, 2023). The value of the global self-payment system market was determined to be $3.90 billion in 2019. This value is expected to rise from $4.51 billion in 2022 to $12.01 billion in 2029. According to 2021 data, retail users are the largest users of this market with a rate of 75.6% (Fortune, 2022). Like the rest of the world, this technology has become widespread in Turkey over time and has become the subject of scientific studies. There are various studies conducted on SCOs in Turkey. The scope for the title, purpose and result of the studies is given in Table 3.

Table 3. Self-Checkout Studies in Turkey

Authors	Publication Title	Purpose	Result
Fatma Demirciörel & Ali Kara (2014)	"Süpermarket Self-check-out hizmet kalitesi, müşteri memnuniyeti ve sadakati: Gelişmekte olan bir pazardan Ampirik Kanıt/Supermarket self-checkout service quality, customer satisfaction, and loyalty: Empirical evidence from an emerging market"	"To examine the effect of the service quality of supermarket/grocery store SCS on customer satisfaction and loyalty."	"It was found that SCS service quality positively affects loyalty through customer satisfaction."
Ümit Doğrul & Alaiddin Koşar (2017)	"Perakendecilik Sektöründe Tüketicilerin Kasiyersiz Kasalara Adaptasyonunu Etkileyen Faktörlerin İncelenmesi Üzerine Ampirik Bir Çalışma/ An Empirical Study on the Factors Affecting Consumers' Adaptation to Cashierless Checkouts in the Retail Sector"	"To examine and explain the factors affecting consumers' adaptation to the use of cashierless checkouts, based on the technology acceptance model."	"The perception of ease of use of cashier-less checkouts, the perceived benefits after use, and the enjoyment of use positively affect the satisfaction obtained after using cashier-less checkouts. Satisfaction with the use of cashier-less checkouts positively affects the intention to reuse. Satisfaction has a mediating effect on the relationship between ease of use, perceived benefit, and enjoyment of use with intention."
Ayşegül Özkavukcu (2017)	"Hoshin Kanri Sistematiği Altında Aksiyomlarla Ürün Ve Süreç Tasarımı: Perakende Sektöründe Bir Uygulama/ Product and Process Design with Axioms under the Hoshin Kanri" System: An Application in the Retail Sector	"Within the scope of the study, a methodology has been developed in which product and process development and the Hoshin Kanri system are considered together. The main purpose of the newly developed methodology is to realize product and process design based on Hoshin and to provide a holistic perspective."	"The application design is presented"
İzzet Gülşen, Şuayip Özdemir (2018)	"Perakendecilikte Teknolojik Yenilikler ve Uygulamalar/ Technological Innovations and Applications in Retail"	"To examine technological innovations in the retail sector from a broad perspective and discuss the benefits of these technologies	"Significant technological innovations in the retail sector have been examined from

		and their roles in the transformative change of retail."	the 1970s to 2018."
Deniz Karaömerlioğlu & Eda Yaşa Özeltürkay (2018)	"Teknoloji Çocuklarının Akıllı Perakendecilik Uygulamalarına İlişkin Deneyim ve Beklentilerini Belirlemeye Yönelik Keşifsel Bir Çalışma/An exploratory study to determine the experiences and expectations of technology children about smart retail applications."	"To determine the opinions, expectations, and experiences of Generation Z consumers born in 1995 and later about smart retail applications."	"Findings have been reached that there are experiences with smart retail applications and that they will become more frequent in the future."
Figen Yıldırım & Koray Taştekin (2019)	"Perakende Yönetiminde Teknoloji Kullanımının Algılanan Hizmet Kalitesindeki Önemi: Gıda Perakendeciliği Üzerine Bir Araştırma/The Importance of Technology Use in Perceived Service Quality in Retail Management: A Study on Food Retailing."	"To measure the perceived service quality of cashier-less checkout systems by consumers."	"According to the findings, the cashier-less checkout technology of a reliable and well-known brand that offers functionality, ease of use, and personal benefits will increase consumers' motivation to use it more."
Tolga Kahrimanoğlu (2019)	"Jet Kasa (Self-Checkout) Hizmet Kalitesinin Perakende Hizmet Kalitesi ve Algılanan Değere Etkisi: Migros Süpermarket Çalışması /The Effect of Jet Kasa (Self-Checkout) Service Quality on Retail Service Quality and Perceived Value: A Study on Migros Supermarket."	"To determine the effect of self-checkout (jet kasa) service quality on retail service quality and perceived value, and to identify differences in self-checkout (jet kasa) usage among consumers based on their demographic and shopping behavior characteristics"	"It was found that consumers were satisfied with the use of self-checkout (jet kasa) service quality and that this satisfaction contributed positively to retail service quality."
Tevfik Elmas (2019)	"Mobil Jet Kasa Tasarımı/Mobile Jet Kasa Design."	"To design a new payment system that eliminates the disadvantages brought by existing payment systems and allows for more efficient use of technology's power"	"A portable device design, intended for use by supermarket chains, has been presented."
Yasin Gültekin & Selin Küçükkancabaş Esen (2020)	"Perakendecilikte Self Servis Teknoloji Kullanımını Etkileyen Faktörler ve Sonuçları: Süpermarketlerde Self Servis Kasalar Üzerine Bir Çalışma/ Factors and Results Affecting the Use of Self-Service Technology in Retail: A Study on Self-Service Checkouts in Supermarkets."	"To examine the factors affecting the use of self-service technologies and to present academically the strategies and analyses that will enable the efficient use and implementation of self-service technology applications preferred by businesses for the efficient use of resources in supermarkets."	"It has been revealed that there are positive relationships between attitudes toward self-service checkouts, perceived behavioral control, and use, and use and recommendation behaviors."
Yankı Çelik (2020)	"Self Servis Kasa Sistemlerinin Kullanılabilirlik Karşılaştırması/Comparison of the Usability of Self-Service Checkout Systems."	"A comparison of the usability of two self-service checkout systems commonly used by supermarkets under the heading of usability."	"Efficiency and effectiveness results for the compared checkout systems were presented, followed by participant satisfaction results."

Source: Created by the authors.

Technology Acceptance Model

The Technology Acceptance Model is one of the models that reveal the adoption of technology by potential users. The model was first developed by Fred D. Davis in 1986. In his model, based on the theory of reasoned action, Davis tried to explain people's adoption of technologies by taking into account the relationships between perceived ease of use, perceived usefulness, users' attitudes, intentions, and actual behaviors (Davis, 1989). The Technology Acceptance Model assumes that there are several conceptually independent determinants of users' attitudes toward using new technology. The first is the perceived usefulness of the system or technology, which reveals the extent to which using the technology will improve the user's performance in their job. The second is the ease of use of technology, which represents the process leading to the outcome (Childers et al., 2001:513). These two factors affect attitude. Attitude affects behavioral intention. Fishbein and Ajzen (1975) define behavioral intention as a measure of the strength of a person's intention to exhibit a behavior. In the Technology Acceptance Model, behavioral intention is determined according to attitudes. According to most researchers, attitude is defined as a learned predisposition to consistently respond positively or negatively to a particular object (Fishbein and Ajzen, 1975:6). The attitude concept in the Technology Acceptance Model is directed toward using technology (Childers et al. 2001:513). Davis et al. (1989:985) have shown the Technology Acceptance Model as follows:

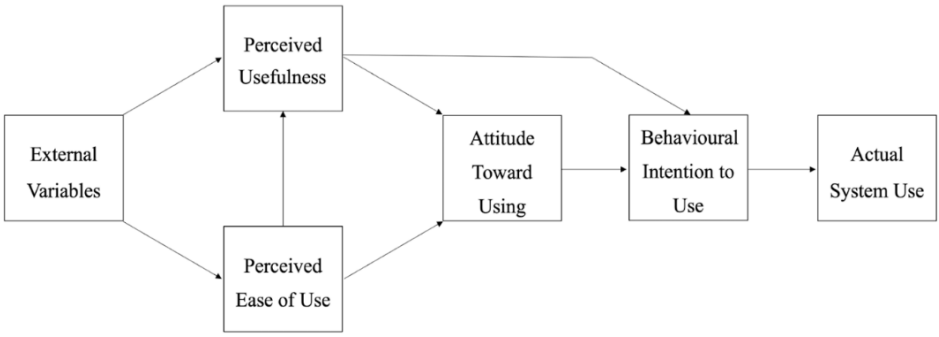


Figure 1: Technology Acceptance Model (Davis et al., 1989: 985)

Several factors determine consumers' behavioral intentions regarding the use of new technology. According to the TAM model, the process of actually using technology works as shown above. According to this model, behavioral intention, which helps to understand user behavior, is influenced by perceived ease of use, perceived usefulness, and attitude (Davis et al., 1989:985).

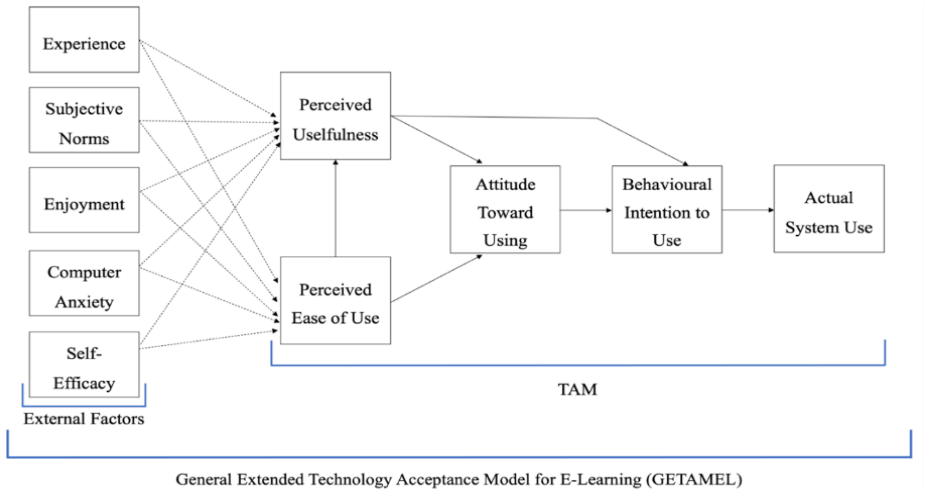


Figure 2. General Extended Technology Acceptance Model for E-Learning (Abdullah and Ward, 2016: 246).

Later, the model was expanded by Abdullah and Ward to include elements such as experience, subjective norms, enjoyment, computer anxiety and self-efficacy. This situation is shown in Figure 2. The content of the technology acceptance model discussed in the study will be tried to be conveyed comprehensively.

Technological Savviness (Tech Savviness)

Technological understanding, referred to as technology usage skills and consumer learning, is defined as the ability to competently interact with modern technology by having an intuitive knowledge of technological operations and the ability to use technical devices, especially computers (Zaman et al., 2022: 5). Three statements of this scale are based on Mathwick and Rigdon's 2004 study "Play, Flow, And The Online Search Experience" (Mathwick and Rigdon, 2004: 331). The final statement of the scale is taken from Thomas-Francois and Somogyi's study (Thomas-Francois and Somogyi: 2022: 20). The scales and hypotheses are as follows:

1- I am extremely skilled at making payments with jet cash applications.

2- I think I am knowledgeable about good search techniques for making payments with jet cash applications.

3- I know how to find what I'm looking for in a jet cash application.

4- I would trust myself when using jet cash applications to buy products.

H1: Consumers' ability to use technology (TechS) affects the perceived ease of use of jet cash when shopping.

H2: Consumers' ability to use technology (TechS) affects the perceived usefulness of jet cash when shopping.

New Technology Anxiety

The effect of anxiety during everyday experiences varies depending on how far beyond a person's skill level they are pushed. Moderately challenging tasks can be both satisfying and engaging as a person tries to master them (Mathwich and Rigdon, 2004:326). Technology anxiety is the fear or even phobia of using technology in general

or simply thinking about using it (Venkatesh, 2000; Meuter et al., 2003). It is likely to lead to avoidance of technology (Venkatesh, 2000; Meuter et al., 2005). Conceptualized as a stabilizing belief, technology anxiety affects the perceived ease of use of a system (Venkatesh, 2000; Venkatesh and Bala, 2008); therefore, customers who are anxious about using technology may not perceive SST as easy to use. The scale statements based on Bailey et al.'s 2017 study are as follows:

5- I am anxious about using the jet cash application.
6- Using the jet cash application can be intimidating.
7- I am afraid of doing something wrong when using the jet cash application.
8- I am not very comfortable using the jet cash application (Bailey et al., 2017: 26).

H3: New technology anxiety affects the perceived usefulness of jet cash when shopping.

H4: New technology anxiety affects the perceived ease of use of jet cash when shopping.

Perceived Ease of Use

Perceived ease of use is expressed as the thought that any use can be done without requiring too much effort (Davis, 1989:985). The literature shows that perceived ease of use is a strong determinant of perceived usefulness in the adoption of technological products. Scale expressions have been presented in various studies (Davis,1989: 985); (Chien et al., 2003: 221); (Bhatiasevi and Naglis, 2016: 1203); (Driediger and Bhatiasevi, 2019: 228). The following statements are adapted from Thomas-Francois and Somogyi (Thomas-Francois and Somogyi, 2022: 20).

9- I think using the jet cash application is easy.
10- I think it is easy to gain the skill to use the jet cash application.
11- I think it is easy for me to follow the procedures when making payments using the jet cash application.
12- Overall, I believe it is easy to use jet cash applications when shopping. H5: Perceived ease of use affects attitudes towards using jet cash when shopping.

Perceived Usefulness

It includes the benefits that customers associate with using SST. When faced with the choice of using SST, users tend to focus on the potential benefits offered by the technology. Perceived usefulness is also defined as the primary motivation for technology acceptance (Öztürk et al., 2015: 142). The scale expressions are as follows (Kim et al., 2009: 314):

13- Using the jet cash application allows me to make payments faster.
14- Using the jet cash application makes it easier for me to make transactions.
15- I would see using the jet cash application as a useful possibility for payment. H6: Perceived usefulness affects attitudes towards using jet cash when shopping.

Attitude

Attitude is conveyed as preconceptions that indicate whether we like something or not (Severin and Tankard 2001: 151). It emerges as positive or negative approaches toward an object (Kağıtçıbaşı and Cemalcılar, 2016:130). The scale expressions are as follows (Yeo, 2017:159; Childers, 2001: 524):

16- Making payments with Jet Cash is smart.
17- Making payments with Jet Cash is good.
18- Making payments with Jet Cash is logical.
19- Making payments with Jet Cash is rewarding.

H7: Attitude towards using jet cash affects behavioral intention.

Behavior Intention

In order to increase their competitiveness level, businesses have made an effort to respond to the demands and needs of their customers. Customers who meet their demands and needs also stay connected to the businesses they visit and visit them again, increasing their purchases from them (Kement, 2019: 375). Accordingly, the dimensions of behavioral intention in the literature are also expressed as repurchase, revisit, recommend and positive observation (Liu vd., 2005: 292). The scale expressions are as follows (Kim et al., 2009: 311):

20- I now make payments with the jet cash application for purchases.
21- Assuming I have access to the jet cash, I am considering using it for payment.
22- I plan to make payments with the jet cash application for the next month.
23- I plan to make payments with the jet cash application five years from now.

Research Methodology

Conceptual Model

In the research, within the framework of the technology acceptance model, the effects of technology useability and new technology anxiety, perceived ease of use, and perceived usefulness on customers' attitudes and behavioral intentions are evaluated. In the conceptual model of the research, hypotheses describing the relationships between these dimensions are included.

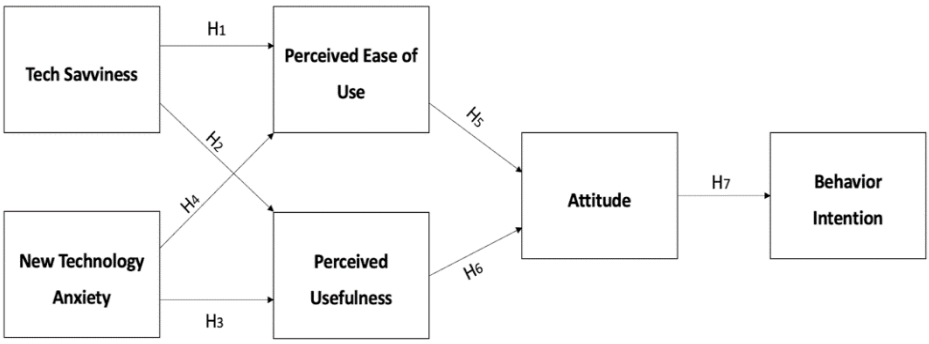


Figure 3. Research Conceptual Model

Sampling And Population

The population of the research consists of customers who used jet cash registers at least once in Migros shopping stores operating in 81 provinces of Turkey. Since it is not possible to reach the entire universe due to time and cost constraints, convenience sampling method was used in the research.

Data Collection Method, Tool and Analysis

This study aims to reveal the attitudes and intentions of customers' ability to use technology, new technology anxiety, and perceptions of ease of use and usefulness towards self-checkout points in grocery shopping. For this purpose, a questionnaire was applied to consumers who used the jet cash register payment points in Migros shopping stores at least once. The online survey method (Google Forms) was preferred as the data collection method in the research. The variables in the study were measured using a 7-point Likert type scale (1: I totally disagree- 7: I totally agree). The survey link was sent to the participants who were suitable for the purpose of the research. The data were obtained from a total of 382 participants between 26.10.2022 and 09.01.2023. The prepared questionnaire consists of two parts. In the first part, there are questions to define the demographic characteristics of the participants (gender, age, marital status, education status, income status, frequency of shopping, duration of shopping, frequency of using jet-safes, time to be aware of jet-safes). In the second part, there are statements to measure the ability to use technology, new technology anxiety, perceived ease of use, perceived usefulness, and attitude and behavioral intentions for cash register applications. In order to achieve the purpose of the research, the analysis of the collected data was made with SPSS 26 and AMOS 25 package programs**.**

Findings

Within the scope of the research, data were obtained from 382 people. As a result of the pre-controls and univariate and multivariate normality examinations, the answers of 50 participants were excluded from the data set (Pallant, 2011; Arifin, 2015). With the remaining 332 responses, it was concluded that the data set provided both univariate normal distribution and multivariate normal distribution.

Findings For Participants

66.3% of the study participants were female and 33.7% were male. The ages of the participants are mostly between the ages of 18-22 (36.2%) and the marital status of the participants is mostly single (58.4%). Participants are predominantly undergraduate graduates (54.8%) and their monthly income is mostly 15,001 TL and above (44.9%). The average shopping time of the participants is mostly less than 30 minutes (65.3%). The frequency of use of jet safes by the participants is predominantly low (49.7%). Finally, participants mostly use Migros Jet Kasa for less than 1 year (31.6%). - The relevant results are presented in Table 4.

Table 4. Sample Profiles

Demographic Variable	Group	N	Percent
Gender	Female	220	66,3
	Male	112	33,7
	Total	332	100,0
Age	18-22	120	36,2
	23-29	40	12,0
	30-39	86	25,9
	40-49	60	18,1
	50 and above	26	7,8
	Total	332	100,0
Marital Status	Married	138	41,6
	Single	194	58,4
	Total	332	100,0

Education	Primary education	1	0,3
	High school	26	7,8
	Associate degree	39	11,8
	Licence	182	54,8
	Graduate	84	25,3
	Total	332	100,0
Montly Income	3.500 TL and below	37	11,1
	3.501-5.500 TL	39	11,7
	5.501-10.000 TL	50	15,1
	10.001-15.000 TL	57	17,2
	15.001 TL and above	149	44,9
	Total	332	100,0
Shopping (Migros) Frequency	2 times a week	93	28,0
	1 in 10 days	85	25,6
	1 per month	81	24,4
	1 in 3 months	15	4,5
	Less	58	17,5
	Total	332	100,0
Avarage Shopping Time	Less than 30 minutes	220	65,3
	30 minutes to 1 hour	97	29,2
	Over 1 hour	15	4,5
	Total	332	100,0
Jet Kasa (Self-checkout) Usage Frequency	2 times a week	39	11,7
	1 in 10 days	44	13,3
	1 per month	61	18,4
	Quarterly 1	23	6,9
	Less	165	49,7
	Total	332	100,0
Jet Kasa (Self-checkout) Usage Period	Less than 1 Year	105	31,6
	1-3 Years	94	28,3
	4-6 Years	84	25,3
	7 Years and Over	49	14,8
	Total	332	100,0

Findings Regarding the Scales Used

Explanatory (EFA) and confirmatory factor analyzes (CFA) for reliability and validity evaluations of a) ability to use technology, b) anxiety about new technology, c) perceived ease of use, d) perceived usefulness, e) attitude and f) behavioral intention constructs utilized in the study has been carried out. Based on the results, Cronbach's Alpha reliability scores were calculated for the structures.

As a result of the applied EFAs ("Maximum Likelihood" subtraction method and "Promax" rotation method), it was determined that the results of the KMO and Barlett Sphericity Test were at a good level and were significant. It was determined that the total variances explained for the structures were at a sufficient level and the EFA factor loads for the structures were above the 0.5 limit value suggested in the literature (Hair et al., 2017, p. 102). It was noted that the CFA factor loads determined for each structure as a result of CFA were also well above the recommended threshold value (Hair et al., 2019). On the other hand, Cronbach's Alpha reliability coefficients for the structures were also found to be in a very reliable range (>0.70) (Kalaycı, 2017, p. 405). The relevant results are presented in Table 5.

Table 5. Findings on structures

Structure	$\bar{x}$	*s*	EFY	CFY	EV (E)	CA
Technological Savviness (KMO = 0,866; x^2 = 1370,44; df = 6; p<0,001)					87,28 (3,49)	0,951
TS2	4,86	1,63	0,932	0,944		
TS1	4,88	1,60	0,917	0,932		
TS3	4,92	1,65	0,838	0,885		
TS4	5,16	1,53	0,824	0,882		
Arithmetic Mean	4,95	1,50	-	-		
New Technology Anxiety (KMO = 0,790; x^2 = 802,124; df = 6; p<0,001)					75,38 (3,01)	0,890
NTA1	2,86	1,64	0,837	0,857		
NTA4	3,09	1,72	0,814	0,826		
NFA2	2,49	1,50	0,810	0,825		
NFA3	3,26	1,75	0,754	0,770		
Arithmetic Mean	2,92	1,43	-	-		
Perceived Ease of Use (KMO = 0,790; x^2 = 802,124; df = 6; p<0,001)					88,72 (3,55)	0,957
PEU4	5,33	1,34	0,923	0,943		
PEU2	5,27	1,36	0,914	0,935		
PEU3	5,33	1,40	0,911	0,921		
PEU1	5,23	1,38	0,879	0,889		
Arithmetic Mean	5,29	1,29	-	-		
Perceived Usefulness (KMO = 0,766; x^2 = 1070,875; df = 3; p<0,001)					91,87 (2,76)	0,955
PU2	5,39	1,37	0,924	0,968		
PU1	5,33	1,46	0,913	0,923		
PU3	5,45	1,34	0,900	0,920		
Arithmetic Mean	5,39	1,33	-	-		
Attitude (KMO = 0,825; x^2 = 1271,76; df = 6; p<0,001)					78,96 (3,16)	0,892
A1	5,32	1,32	0,954	0,961		
A3	5,39	1,29	0,933	0,949		
A2	5,28	1,33	0,920	0,930		
A4	4,43	1,64	0,521	0,542		
Arithmetic Mean	5,10	1,21	-	-		
Behavior Intention (KMO = 0,747; x^2 = 769,423; df = 6; p<0,001)					73,47 (2,94)	0,875
BI3	4,72	1,64	0,917	0,934		
BI4	4,98	1,61	0,822	0,839		
BI1	4,31	1,85	0,705	0,715		
BI2	5,26	1,45	0,701	0,709		
Arithmetic Mean	4,82	1,40	-	-		

EFA = EFA Factor Load; CFA = CFA Factor Load; EV = Explained variance; E = Eigenvalue; CA = Cronbach's Alpha.

As a result of the CFA applied, it is observed that all structures have good and acceptable goodness-of-fit coefficients, except for perceived usefulness in Table 5 where the model goodness-of-fit coefficients are examined in particular (Hu & Bentler, 1999; Tabachnick & Fidell, 2012; Hair et al., 2019). Since the perceived usefulness structure consists of three (3) items, the coefficient of goodness of fit could not be calculated (Hair

et al., 2019). Instead, only construct validity was evaluated for the structure in question. On the other hand, due to the fact that the constructs in question consist of a single factor within the scope of construct validity, only the convergent validity was evaluated in the CFA stage, and it was observed that the constructs were well above the threshold values suggested in the literature in terms of AVE and CR coefficients (Fornell & Larcker, 1981).

Table 6. CFA model goodness of fit and construct validity

Structure	Model Fit Index				Construct Validity	
	x^2/df	CFI	SRMR	RMSEA	AVE	CR
Technological Savviness	2,567	0,998	0,010	0,069	0,830	0,951
New Technology Anxiety	3,837	0,928	0,061	0,082	0,672	0,891
Perceived Ease of Use	4,121	0,994	0,011	0,079	0,850	0,958
Perceived Usefulness	-	-	-	-	0,879	0,956
Attitude	3,081	0,997	0,003	0,009	0,746	0,918
Behavior Intention	4,456	0,936	0,064	0,072	0,648	0,879
Threshold value (Hu & Bentler, 1999; Tabachnick & Fidell, 2012; Hair et al., 2019)	<5,0	>0,90	<0,1	<0,1	>0,50	>0,70

Common Method Bias

Before testing the research model, common method bias analysis was carried out. As a matter of fact, since the data collected through the survey in the research were collected from a single source, it is important to check whether the answers of the participants are biased, and if there is bias, to what extent they affect the analyzes (Podsakoff et al., 2003, p. 879). In this context, the existence of common method bias was examined by 1) adding all the items in the measurement model to a single common latent factor and 2) comparing the standardized regression loads with the common latent factor test.

It was noted that the goodness of fit coefficients determined as a result of adding all the items in the confirmatory measurement model to a single common latent factor were lower than the goodness of fit values determined as a result of testing the confirmatory measurement model (x2/df = 6.23; CFI = 0.75; SRMR). = 0.62 and RMSEA = 0.138). Here, it is stated that there is potential environment method bias if the goodness of fit coefficients of the model improve dramatically after all items are linked to a single common latent factor (Malhotra et al., 2006, p. 1867). However, the coefficients of goodness of fit obtained within the scope of the study show that there is no common method bias. Based on this result, the common latent factor test was applied and standardized regression coefficients for all items were compared in both models with and without a common latent factor (measurement model itself). As a result, it was seen that the differences in the regression coefficients on the two models were quite small (<0.1) (Archimi et al., 2018, p. 914). Therefore, it was concluded that the research data did not pose a major problem in terms of common method bias in this study.

Testing The Measurement Model

After the constructs used in the research were proven to be valid and reliable, the research model was tested. The model in question was tested using covariance-based structural equation modeling (CB-SEM) and the evaluation process was carried out through a two-stage approach (Hair et al., 2019, p. 783). At the first stage, the research model was validated as a measurement model, and convergent and discriminant

validity were taken into account in the evaluation of the model (Hair et al., 2017, p. 97). In the second step, the hypotheses were tested by testing the structural model.

In the evaluation of the measurement model, the goodness of fit coefficients of the model were examined first. In this context, one of the goodness-of-fit parameters is x2/df = 3.228; CFI = 0.945; SRMR = 0.045; The determination of RMSEA = 0.082 indicates that the model has acceptable and good goodness-of-fit coefficients (Hu & Bentler, 1999; Tabachnick & Fidell, 2012; Hair et al., 2019). Secondly, the factor loads of the structures in the model were examined and it was determined that these loads were well above the 0.50 threshold (Hair et al., 2017, p. 102). Third, the convergent validity of the constructs in the model was examined, and in this context, a close examination of the AVE and CR values was carried out. It has been understood that there is no problem in terms of the convergent validity of the measurement model, since the relevant values are above the threshold values recommended by the literature. Subsequently, for discriminant validity, whether the square roots of the AVE values were higher than the inter-structure correlation values and the criteria that the HTMT coefficients did not exceed the threshold value of 0.90 were checked. In this context, as can be seen in Table 7 and Table 8, the square roots of the AVE coefficients for the structures are higher than the correlation values between the structures and the HTMT coefficients for the structures do not exceed the threshold value of 0.90 (Hanseler et al., 2015, p. 129). These results prove that the model is validated as a measurement model.

Table 7. Evaluation of the measurement model

Structure	**Item**	**Standardized Factor Loads**	**convergent validity**	
			AVE	CR
Technological Savviness	TS1	0,931	0,832	0,952
	TS2	0,932		
	TS3	0,887		
	TS4	0,898		
New Technology Anxiety	NTA1	0,853	0,673	0,891
	NTA2	0,817		
	NTA3	0,775		
	NTA4	0,834		
Perceived Ease of Use	PEU1	0,901	0,851	0,958
	PEU2	0,927		
	PEU3	0,918		
	PEU4	0,944		
Perceived Usefulness	PU1	0,926	0,880	0,956
	PU2	0,958		
	PU3	0,930		
Attitude	A4	0,547	0,747	0,919
	A3	0,951		
	A2	0,936		
	A1	0,954		
Behavior Intention	BI1	0,737	0,649	0,881
	BI2	0,822		
	BI3	0,844		
	BI4	0,815		

x^2/df = 3,228; CFI = 0,945; SRMR = 0,045; RMSEA = 0,082.

Table 8. Convergent validity results

Structures	1. TS	2. NTA	3. PEU	4. PU	5. A	6. BI
1. Technological Savviness	**0,912**	(0,587)	(0,761)	(0,657)	(0,699)	(0,730)
2. New Technology Anxiety	-0,581	**0,820**	(0,539)	(0,448)	(0,410)	(0,532)
3. Perceived Ease of Use	0,749	-0,536	**0,923**	(0,784)	(0,745)	(0,768)
4. Perceived Usefulness	0,646	-0,454	0,779	**0,938**	(0,750)	(0,798)
5. Attitude	0,698	-0,452	0,745	0,725	**0,864**	(0,793)
6. Behavior Intention	0,611	-0,523	0,662	0,713	0,677	**0,806**

The square roots for the AVE coefficients are shown in bold on the diagonals. The coefficients in parentheses represent the HTMT coefficients.

Testing The Structural Model

In the evaluation phase of the structural model, firstly, the coefficients of goodness of fit of the model tested as a structural model were examined (x2/df = 3.841; CFI = 0.928; SRMR = 0.082; RMSEA = 0.093) and it was determined that the results were in the range of acceptable goodness-of-fit coefficients (Hu and Bentler, 1999; Tabachnick and Fidell, 2012; Hair et al., 2019). Therefore, when it was concluded that the structural model was reliable, the hypotheses were tested and in Table 7, standardized beta coefficients (ß), non-standardized beta coefficients (B), standard errors (SE), critical ratios (CR) and the significance of beta coefficients (p) are presented.

Table 9. Testing the Structural Model

Hipotez		*ß*	*B*	*SE*	*CR*	*p*	Results
H1	TS → PEU	0,828	0,593	0,041	16,861	***	Supported
H2	TS → PU	0,616	0,561	0,053	10,557	***	Supported
H3	NTA → PEU	-0,057	-0,050	0,038	-1,331	-0,050	Not supported
H4	NTA → PU	-0,098	-0,095	0,056	-1,707	-0,095	Not supported
H5	PEU → A	0,534	0,372	0,043	8,719	***	Supported
H6	PU → A	0,461	0,296	0,036	8,289	***	Supported
H7	A → BI	0,877	0,996	0,144	8,973	***	Supported

****p*<0,001.

According to the findings in Table 9, the ability to use technology significantly and positively affects both perceived ease of use (ß = 0.828; p<0.001) and perceived usefulness (ß = 0.616; p<0.001). From this point of view, it can be stated that when the ability to use technology increases, perceived ease of use and perceived usefulness will increase. New technology concern does not significantly affect perceived ease of use and perceived usefulness (p>0.05). On the other hand, perceived ease of use affects attitude significantly and positively (ß = 0.534; p<0.001). Similarly, perceived usefulness also affects attitude significantly and positively (ß = 0.461; p<0.001). Therefore, it can be said that when both perceived ease of use and perceived usefulness increase, the attitude will increase in a positive way. Finally, attitude significantly and positively affects behavioral intention (ß = 0.877; p<0.001). It can be stated that when the attitude increases positively, the behavioral intention will also increase. In Figure 1, these findings are shown on the visual.

Discussion

Considering the findings of the study, the perceived ease of use of the self-checokut system affects attitude and repurchase intention. These results support previous studies in the literature (Davis, 1989: 985; Chien et al., 2003: 221; Bhatiasevi and Naglis, 2016: 1203; (Driediger and Bhatiasevi, 2019: 228; Thomas-Francois and Somogyi, 2022: 2022). The results of the research show that the ease of use perceived by customers regarding the use of jet cash registers is considered important in terms of realising their shopping experiences well and quickly. This finding coincides with the conclusion of Yıldırım and Taştekin in their study in 2019 that cashierless payment technology that offers ease of use will further increase consumers' motivation to use the product. Users' intention to use information technology largely depends on the perceived usefulness of the system (Davis et al., 1989). This study also confirms this. Perceived usefulness positively affects the intention to use self-checkout technology. Considering the research findings on perceived usefulness, when perceived usefulness increases, the attitude increases positively. This result supports previous studies in the literature (Öztürk et al., 2015: 142; Kim et al., 2009: 314). Another finding of the study is that people's ability to use technology affects perceived usefulness and ease of use. This result differs from the study conducted by Thomas-Francois and Somogyi in the literature. In their study, the authors state that consumers' technological usage skills or technological understanding do not affect consumers' intention to adopt self-checkout (Thomas-Francois and Somogyi: 2022: 55). The last finding of the study is that new technology anxiety does not affect perceived ease of use and perceived usefulness. This result is similar to the study emphasising that the technological capacity of a population will determine the intention to adopt new shopping methods (Thomas-Francois and Somogyi: 2022: 55).

From barcode scanning to RFID technology, from the internet of things to artificial intelligence and robots, each technological innovation in retailing has benefits and effects (Gülşen & Özdemir, 2018: 129-131). RFID is an automatic identification method that can store and retrieve data based on Radio Frequency. They are effective for calculating how much product is sold and the need to create an invoice to the customer. RFID system is considered important for consumers to solve queuing problems by self-payment (Maulana et al., 2021: 273). The sector that obtains the highest output value from artificial intelligence, which is a more current approach, is the retail sector. This shows that the application of artificial intelligence in the retail sector can provide significant benefits for retailers (Chang et al., 2023: 773) The most important area where Artificial Intelligence (AI) is of great benefit to the retail industry is productivity, operational cost reductions and faster time to profitability. The global market for the use of Artificial Intelligence (AI) in retail is valued at approximately USD 4.84 billion in 2021 (Statista, 2023). As quoted in the article "Here's how artificial intelligence can benefit the retail sector" published by the World Economic Forum, it is predicted that the use of AI tools in the retail sector will increase from $5 billion to over $31 billion by 2028 (weforum, 2023). AI-powered automated checkout solutions use advanced algorithms to analyse images of products scanned by customers to identify them and calculate the total cost of purchases. These systems can detect errors such as incorrect product selection, incorrect invoice amount almost instantly. This feature makes the payment process faster and more accurate compared to manual methods (dogtownmedia, 2023). New generation customers demand more self-service while shopping. At this point, it is

thought that businesses can benefit from artificial intelligence applications (Gülşen, 2019: 418).

Advanced technology in retail stores is suggested as an important tool in reducing customer churn as it offers an exciting experience to consumers in the store (Kim et al., 2017). New technologies applied in retail stores affect consumer behaviour in the retail sector. Consumers are confronted with technologies in retail stores and this situation is reflected in consumers' purchase intentions. For this reason, it is considered important to investigate their perceptions towards technology. Self-checkout systems, which have a history of approximately 25 years in Turkey, started to be used in Migros in 2009. In the literature, studies examining the service quality of these systems and the adaptation to these systems have been emphasised since 2014. The details of these studies on self-checkout in Turkey are shown in Table 3. Migros follows the path of differentiation according to Porter's generic competitive strategy (cost leadership, differentiation and focus) in the retail sector in Turkey (Özdemir; 2022:50). As of 2018, Migros' being the only one in the market with 860 active self-service cash registers in 250 different stores (Gültekin and Esen; 2020: 162) is an example of this differentiation. This study is different and unique from the studies in the literature in many aspects. In the literature, the study on Migros in 2019 was only reported by conducting a survey to investigate the effect of self-checkout (jet checkout) service quality on retail service quality and perceived value in 2M Migros supermarket in Kadıköy district of Istanbul (Kahrimanoğlu, 2019). The research population of this study is more inclusive and was conducted with the customers of Migros shopping stores living in various provinces of Turkey. Another study conducted in 2020 on self-service cash registers reflects the positive relationship between perceived benefit and attitude towards the technology acceptance model (Gültekin & Esen; 2020: 1626).

This article in 2020 is not only about Migros stores and in this respect, it does not reflect the context of the study with Migros. One of the findings of the study is that new technology anxiety does not affect perceived ease of use and perceived usefulness. In the literature, it is seen that technological anxiety is a consistent and negative determinant of self-service technology use (Meuter et al., 2003:903). In this respect, the results of the study differ. Sociological, social and technological developments are at the basis of the change in marketing. The retail sector can be interpreted as a strong data for understanding this structure. Examining the traces of how the behaviours of retail consumers in the dynamic structure of marketing and technology work in multiple channels in Migros, which is the pioneer of this business in Turkey, with the new elements added to the technology acceptance model (Tech Savviness and New Technology Anxiety) reveals the contribution of the study both to other studies and to other studies. In addition, the world is preparing for major developments in terms of retail technology. For example, artificial intelligence in retail can help predict customer demand, automation of store operations, customer engagement, customer personalisation and price optimisation (Pillai et al., 2020: 1-2). In Turkey, artificial intelligence-supported retailing applications have not yet become widespread. Understanding the outcome of consumers' encounters with this new development through self-checkout, a relatively older technological innovation, will contribute to the field. For this reason, this study on Migros, one of the leading retailers, offers important implications.

In the light of the above explanations, it is seen that the use of technology in retailing has developed in a multifaceted and rapid manner in a way that will also affect the consumer. Considering that the place of technology in daily life is increasing, it is meaningful to reveal the attitudes and intentions of consumers towards the use of technology through frequently visited retail stores. In this process moving towards unmanned retailing, it is thought to be important in understanding the cooperation of consumers with technology in terms of the results of the study.

Conclusion and Suggestions

In the study, the definition of self-service technologies and how technology develops in the retail sector are explained within the framework of the literature. The expansion of the self-service network with the development of technology and the reflection of this expansion in retail services have been tried to be explained in the historical process. At this point, it has been seen that shopping carts are an important building block on the way to unmanned stores since they are seen as a self-service tools. It can be said that self-service technologies have an important place in the transformation of the retailer and technology relationship. Therefore, understanding this relationship and revealing it in all its aspects will help to reveal the picture of the consumer technology and retailer triangle in the future. Self check-out applications, which are a pillar of self-service services, are an important point where consumers are alone with technology. Various studies have been carried out in order to understand this point where the consumer is both alone and uses technology. The technology acceptance model is seen as a good roadmap in this context. The answers given by the consumers who cooperate with them as a service tool to the technology acceptance model in multimedia constitute the starting point of the method. The research tried to reveal consumers' attitudes and intentions towards self-check-out points in grocery shopping, their technology use skills, new technology anxiety, ease of use and usefulness perceptions. In this context, the main point of the study is to determine the factors that affect the attitudes and behaviors of customers towards their adoption and not resisting the jet cash register applications in their shopping.

Various results were obtained in the study. It has been observed that technology use proficiency has a positive effect on both perceived ease of use and perceived usefulness. From this point of view, it can be stated that when the ability to use technology increases, perceived ease of use and perceived usefulness will increase. New technology concern does not significantly affect perceived ease of use and perceived usefulness. On the other hand, perceived ease of use affects attitude significantly and positively. Similarly, perceived usefulness also affects attitude in a meaningful and positive way. Therefore, it can be said that when both perceived ease of use and perceived usefulness increase, the attitude will increase in a positive way. Finally, attitude significantly and positively affects behavioral intention. It can be stated that when the attitude increases positively, the behavioral intention will also increase.

As a result, it is seen that the external factors selected within the scope of the research generally affect the attitudes and intentions of consumers towards self-check-out use in a positive and meaningful way. Only the concern of new technology does not significantly affect perceived ease of use and perceived usefulness. In this case, it is possible to say that using jet cash register applications is easy and understandable and does not require much effort, enabling customers to complete their shopping with

confidence and increasing their shopping performance. In other words, it can be concluded that customers who use Migros Jet Kasa applications are confident in their abilities and their technology anxiety level does not affect their perceptions of finding jet safes easy and convenient to use. Or the reason for this may be the possibility of being more comfortable with new technology due to the young sample age.

It is observed that customers who believe that using Migros Jet Kasa applications are easy and convenient have a positive attitude towards the use of jet safe applications. In addition, it is concluded that this attitude has a positive and significant effect on behavioral intention. From this point of view, it can be said that the customers participating in the research are pleased to use the Migros Jet Kasa applications. Therefore, it can be stated that the effects of these positive reactions on the customers' intention to use Migros Jet Kasa applications more frequently and the efforts of their businesses to encourage them cannot be denied. The ease of use that customers perceive regarding the use of jet cash registers can be seen as important in terms of realizing their shopping experience in the best and fastest way. On the other hand, the level of usefulness perceived by customers can be associated with the benefits to be obtained at the point of acceptance of using this application.

Considering that the place of technology in daily life is increasing, it is meaningful to reveal the attitudes and intentions of consumers towards the use of technology through the retail channel that is frequently visited. In this process, which is progressing towards unmanned merchandising, it is thought that it is important for consumers to understand their cooperation with technology, in terms of the results of the study.

Future research can look at how other new technologies in the retailing sector are evaluated from a consumer perspective within the scope of TAM. The results can be enriched by including other items in the model that may affect consumers' attitudes and purchase intentions. The parallelism of the findings can be looked at. In line with the experience gained from the study, various suggestions can be made for future studies. Investigation of attitudes and intentions towards jet safes only found in Migros stores, which constitutes the limitation of the study, can also be carried out in self-check-out applications in other stores in Turkey. While the retail service sector uses technology-based applications as a competitive strategy, a broader perspective can be obtained by supporting consumers' reflections on external factors not only with quantitative but also qualitative research.

By taking into account the elements that have been shown to affect the attitude and purchase intention by the practitioners, measures can be taken for consumers to use self-checkout systems more internally.

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