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Research Article

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THE DIGITAL AGE AND ITS TRANSFORMATIONS IN MARKETING: A CASE ON E-COMMERCE WEBSITES

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Abstract: Thanks to the digital technologies that have developed in recent years, new concepts have started to enter our lives with the spread of information and the effect of globalization. Concepts such as digitalization, innovation, change and transformation have become the new trends of business and social life, while social habits and consumption practices have started to build on them. The marketing discipline, which has been reshaped by the digital revolution, offers new markets and unlimited opportunities to companies, while bringing consumers together with personalized experiences in a broad perspective. In this direction, the study aims to determine the effects of e-commerce, the new business model of the digital age and marketing, on consumers and their satisfaction perceptions. In this context, a survey was conducted on 386 consumers in Siirt province using descriptive and correlational research method. In addition, the resulting data were tested with frequency distributions, t-test and Analysis of Variance (ANOVA) model, which is an inferential statistical test. When the findings obtained from the application are evaluated, it is concluded that when we look at the general average of the participants' attitudes towards shopping activities through e-commerce sites, it is concluded that they care about contributing to the national economy, they prefer to make more than one purchase in products with discounts such as discounts, promotions, gift vouchers, installments, etc. in the products they need, and they generally have a positive attitude towards the affordable policy. In addition, in the results regarding whether there is a relationship between customer satisfaction perceptions and demographic characteristics of the participants in their shopping experiences through e-commerce sites, it can be said that they are generally positively affected and their satisfaction levels are high.

Keywords: Digital Age, Marketing, E-Commerce Sites, Technological Transformation.
JEL Code: M10, M31, M39.

DİJİTAL ÇAĞ VE PAZARLAMADA YARATTIĞI DÖNÜŞÜMLER: E-TİCARET SİTELERİ ÜZERİNE BİR ARAŞTIRMA ÖRNEĞİ

Özet: Son yıllarda gelişen dijital teknolojiler sayesinde bilginin genele yayılması ve küreselleşmenin de etkisiyle hayatımıza yeni kavramlar girmeye başlamıştır. Dijitalleşme, yenilik, değişim ve dönüşüm gibi kavramlar iş ve sosyal hayatın yeni trendleri olurken toplumsal alışkanlıkları ve tüketim pratiklerini de bunun üzerine inşa etmeye başlamıştır. Dijital devrimle yeniden şekillenen pazarlama disiplini firmalara yeni pazarlar ve sınırsız fırsatlar sunarken tüketicileri de geniş bir perspektifte kişiselleştirilmiş deneyimlerle buluşturmaktadır. Bu doğrultuda, çalışmada, dijital çağ ve pazarlamanın yeni iş modeli olan e-ticaretin tüketiciler üzerindeki etkileri ve memnuniyet algılarının belirlenmesi amaçlanmıştır. Bu kapsamda betimsel ve bağıntısal araştırma yöntemi kullanılarak Siirt ilinde 386 tüketici üzerinde anket çalışması yapılmıştır. Ayrıca ortaya çıkan veriler frekans dağılımları, t-testi ve çıkarımsal istatistik sınaması olan Varyans Analizi (ANOVA) modeli ile test edilmiştir. Uygulamadan elde edilen bulgular değerlendirildiğinde, katılımcıların e-ticaret siteleri üzerinden alışveriş etkinliklerine ilişkin tutumlarının genel ortalamasına bakıldığında ülke ekonomisine katkı yapmayı önemsedikleri, ihtiyaçları olan ürünlerde indirim, promosyon, hediye çeki, taksitlendirme vb. gibi tenzilatlı ürünlerde birden fazla alım yapmayı tercih ettikleri ve uygun fiyatlı politikasına yönelik genelde olumlu bir tutuma sahip oldukları sonucuna ulaşılmıştır. Ayrıca katılımcıların e-ticaret siteleri üzerinden alışveriş deneyimlerinde müşteri memnuniyeti algılamaları ile demografik özellikleri arasında bir ilişkinin olup olmadığına yönelik sonuçlarda ise genel olarak olumlu yönde etkilendikleri ve memnuniyet düzeylerinin yüksek olduğu söylenebilir.

Anahtar Kelimeler: Dijital Çağ, Pazarlama, E-Ticaret Siteleri, Teknolojik Dönüşüm.
JEL Kodu: M10, M31, M39.

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Introduction

The extraordinary progress of science and technology in the age we live in clearly demonstrates the rapid change in every field. The multifaceted development of digital technologies has accelerated the transition from the industrial society to the information society, and as a natural consequence, it has witnessed the emergence of new markets and the digital transformation of existing industries (Veretekhina, Krapivka & Krieeva, 2020). Digital technology, which has deeply affected and transformed many sectors, has also differentiated the business processes and operations of companies (Pagani & Pardo, 2017). In this climate of differentiation, firms have adopted the tendency to be in constant communication with their stakeholders and customers, to take measurable risks, and to be innovative and proactive as the main determinants of their activities in order to be involved in the process and to turn towards collaborations ((Leng et al., 2022). This is because such an approach will help firms to be successful in the long term, to analyze decision-making in real time, to be more pragmatic towards potential problems that may arise, to anticipate changes in the market faster and to make solution-oriented decisions (Zhang et al., 2021).

The digital age is a source of economic and social value that has transformed the business processes, business models, customer relationships and markets of firms from past to present into comprehensive and revolutionary changes in line with societal demands and reform trends in the public sector (Sundu et al., 2022). In addition, the social and intellectual environment created by the digital age enables the continuous development of knowledge and technology by storing data from all these different areas of life such as trade, marketing, finance, social media, consumer behavior, health, agricultural policies and public administration in a consistent manner (Schwertner, 2017). The fact that new generation systems such as big data and automation generate value by affecting the aforementioned areas and offer new opportunities in application areas shows that the importance of digital technologies will continue to increase day by day (Telli Yamamoto & Altun, 2020). On the other hand, the only way for companies to compete effectively in the digitalizing world and to continue their existence depends on adapting their existing business processes and operations to digital transformation (Kane, 2017).

Today's digital world constitutes the most important variable of our age thanks to a wide variety of channels. So much so that it plays a dominant role in a wide range that includes many details from daily life to consumption habits (Koçak Alan et al., 2018). In particular, the transformation of marketing channels and application methods of companies in line with technological innovations has caused almost all organizations to integrate their business strategies with digital change. This transformation not only adds value to firms, but also provides competitive advantage, high productivity and higher profitability. It also helps to create an undeniably important market actor by creating technology-oriented software and systems within the organization (Leeflang et al., 2014). On the other hand, companies that benefit from the opportunities offered by digital marketing can reach much larger consumer masses with much lower costs, promote their products and services, and create service opportunities that prioritize customer satisfaction after sales (Ryan, 2016). Again, the most important business model analytics of digital marketing is that companies provide easy access to information to their customers by using interactive platforms, taking their feelings, thoughts, opinions and recommendations into consideration and including them in the production process by pulling them backwards from the purchasing decisions stage (Saçan & Eren, 2021).

The primary objective of this study is to examine the transformations brought about by the digital age in marketing and to reveal the impact of these transformations on e-commerce websites. With the digitalisation process, marketing activities have evolved from traditional

channels to digital platforms; customer interaction, personalisation and data-driven decision-making processes have come to the fore. In this context, e-commerce sites have become one of the areas where digital marketing applications can be observed most intensively and directly. Within this scope, the analysis examines how the digital age has transformed marketing strategies and how this transformation is reflected in the design, operation, and marketing practices of e-commerce websites. In particular, the aim is to evaluate the impact of user experience, digital content, personalisation, online customer relationship management and trust factors on consumer purchasing behaviour. In this regard, the extent to which e-commerce websites have adopted the customer-focused and interaction-based structure required by the digital marketing approach is examined.

Another objective is to highlight the role of digital marketing applications in the competitive strength and business performance of e-commerce websites. In the increasingly competitive environment of the digital age, it is crucial for e-commerce websites to develop differentiation strategies and create sustainable customer value. Therefore, the aim is to evaluate the impact of digital marketing tools on customer satisfaction, loyalty, and purchase intent. Finally, this research aims to contribute to the theoretical literature by examining the transformations occurring in the field of marketing in the digital age, specifically in relation to e-commerce websites, and to provide guidance to businesses and practitioners based on the findings.

Marketing and Transformation in The Digital Age

With the digital age, the modern world centered on technology facilitates the productivity of knowledge and has a more sophisticated impact on daily life. Digital platforms such as artificial intelligence, Google, the Internet of Things, Facebook, Amazon, etc., which were not in our lives in the very recent past, now enable us to interact with other people and shape every aspect of our lives to an incredible extent (Jarrahi et al., 2022). On the other hand, concerns and pessimistic approaches are expressed against the possible dangers of digitalization (Reese, 2020). Although concerns such as the fact that digital life creates a sedentary society and creates socioeconomic gaps by negatively affecting the level of development between countries are frequently expressed by some circles, when we look at the whole, digitalization offers significant advantages that affect a country's industrialization and development as well as productivity (Şahin, 2015).

Developments in communication and information technologies in recent years have led to the emergence of the concept of digitalization and the debate on whether it is an innovation or a revolution. These developments and debates have been the subject of research by many communication scientists and different definitions and expansions have been put forward in this field (Larjovuori et al., 2018). On the other hand, while the scientific world was discussing this, this magic concept (Digitalization) the attention of all sectors, and many organizations started to see digitalization as a key to transformation in their business and management concepts (Kraus et al., 2022). When digitalization is examined in terms of its origin, it is known that it started its historical adventure in the 18th century, which is accepted as the beginning of the first industrial revolution in England. It is stated that it evolved from mechanical production methods to steam production and then to electronic production in the early periods, and since the 1970s, it has been included in daily life by continuing the cycle of change and transformation that includes digitization and digitalization stages (Ersöz & Özmen, 2020). Especially between 2013 and 2024, many countries from America to Europe and Asia have made incredible investments in digital technologies and artificial intelligence. Between 2013 and 2024, America's investment in artificial intelligence and digitalization was recorded as approximately half a trillion dollars. China follows the US with 119 billion dollars. The United Kingdom has

allocated 28 billion dollars, while Canada and Israel have allocated 15 billion dollars (Al Index Report, 2025).

The digital transformation, which has influenced masses and all sectors in terms of communication patterns and practices and has become an indispensable part of life, has also changed traditional business models with the spread of internet and computer technologies, and has started to offer new entrepreneurial and income methods to companies in global business processes (Plekhanov et al., 2022). In addition, these technologies have also affected the structural process of business and reshaped the rules of the competitive game with fast and easily accessible modular applications (Vial, 2019). In this respect, digital transformation aims to transform firms into organizations that can best adapt to technological trends in their production practices by increasing their awareness while forcing them to develop innovative power. The main goal here is to minimize the negative effects of decreasing sales and financial pressure caused by the similarity of production systems and the decrease in quality differences between products in recent years. In this respect, digital transformation is of vital strategic importance for firms to transform themselves (Ismail et al., 2017).

While digital transformation transforms the way companies do business and their management approach, it also enables the optimization of operational processes within the organization through digital marketing strategies (Hanelt et al., 2020). Therefore, it is critical for companies to understand digital marketing correctly and implement the right strategies for it in terms of their productivity (Koçak Alan et al., 2018). New business models, personalized product and service portfolios, analysis of new generation consumer behaviors, and the creation of two-way communication channels using interactive platforms are radical changes created by digital transformation in marketing (Graphicmail, 2016). Digital marketing realizes these transformations in accordance with the era it is in by using e-commerce sites, social media, internet of things, written, visual and audio communication technologies that provide services over the internet or online-based networks (Çakır, 2024).

With these tools, digital marketing aims to provide companies and consumers with quality service as well as very important opportunities and experiences (Shin, et al., 2020). For example, it can deliver the goods and services they produce in line with the demands of customers in a very short time frame through secure distribution channels and offer the opportunity to make payments easily and securely over the internet. It can also provide strategic advantages by reaching the right customer base with the right analyzes in the efforts of companies to stand out in product and service sales compared to other companies. Again, in order to make successful studies and increase the potential customer base, it helps to save time and money by making comprehensive analyzes with some data and can reach wider markets and masses at affordable costs (Urbach et al., 2017). In addition to the opportunity to meet their needs and requirements at low costs with digital marketing, consumers can have different experiences such as time saving, awareness, socialization, having fun and enjoyable time in the shopping process, social status and respectability, psychological satisfaction, and filling the deprivation they feel in their spiritual world (Çakır, 2024).

Trending Marketing Model in the Digital Age E-Commerce

In this age of science and technology, societies are experiencing radical socioeconomic changes. In particular, the widespread use of the internet and the use of artificial intelligence in every stage of life have transformed the world into a global village. As a natural consequence, the concept of trade has experienced a characteristic change and entered a new process in which time, space and borders have disappeared. E-commerce, the most concrete and trendy model of the paradigm of evolving from traditional methods to contemporary marketing methods, is the reality of this process. E-commerce, which shapes the economy of the 21st century with its

digital infrastructure and constantly renewed interfaces, offers new opportunities to companies in its new commercial understanding based on autonomous systems, as well as many threats and risks. On the other hand, it is rapidly changing market structures with the opportunities, conveniences and low-cost shopping experiences it offers to consumers (Lu et al., 2018).

E-Commerce carries out its activity flow by using different tools and methods over computer networks in the internet environment compared to classical marketing. Therefore, compared to traditional marketing, it is much more professional and wide-ranging, considering both the tools and methods it uses and its impact distance (Tağıyev, 2005). In this context, since the e-commerce system has a very wide usage network around the world and realizes instant transactions in a very short time frame with artificial intelligence infrastructure, it supports revenue generation, demand generation and management, sales support, sales support, reducing intermediaries, customer service before and after purchase, and facilitating communication between business partners, in addition to selling or purchasing products and services (Fayyad et al., 2020). On the other hand, e-commerce has an ever-increasing impact on markets as it involves shorter transportation and delivery times for users, offers flexible payment options, integrates small entrepreneurs and local industries into national and international markets, and reduces dependence on imports (Gedik, 2021).

E-commerce, which has found a wide place in all areas of economic and social life, has revolutionized traditional ways of doing business and market structures and accelerated the digital transformation in marketing. So much so that marketing professionals have had to adapt all their business processes and strategies to this new system (Almarabeh & Majdalawi, 2019). Although there is no single universal definition of e-commerce, which has pioneered many digital innovations in every aspect and continuously improves organizational performance, many definitions have been made by relevant trade organizations and researchers. The World Trade Organization (WTO, 1998) defined e-commerce as "the production, distribution, marketing, sale or delivery of goods and services by electronic means". The Organization for Economic Cooperation and Development (OECD) defines e-commerce as "whether a commercial transaction qualifies as e-commerce is determined by the method of ordering rather than the characteristics of the product purchased, the parties involved, the form of payment or the delivery channel" (OECD, 2011). Mou et al. (2019) defined it as the secure conduct of the online sale and purchase of goods and services between suppliers and customers via computer and network technology. Satar et al. (2019) defined e-commerce as a web-based platform that enables all economic activities to be carried out through easy and secure virtual environments.

The age we are in has transformed information and technology into a value, globalized the ongoing commercial and economic structure and turned the world into almost a single market. With the inclusion of e-commerce in this new economic order, new opportunities, new markets and new competitive environments have emerged. So much so that the ability to quickly reach and penetrate the potential buyer mass in the market has come to determine the rules of competition (Edwards et al., 2022). As a reflection of this, the spread rate and transaction volume of e-commerce sites have increased tremendously all over the world. Today, it is known that more than 28 million e-commerce sites are in operation and this number is increasing day by day (www-sellerscommerce-com). Especially the pandemic process, which has affected the whole world in the recent past, is the period when e-commerce grew the fastest and most intense. While the e-commerce transaction volume in the world was realized as 8.74 trillion dollars between 2015-2019, it reached 3.53 trillion dollars in 2019 and 4.3 trillion dollars in 2020 with 26% growth due to the pandemic. In 2021, retail e-commerce sales reached $4.9 trillion worldwide, $5.5 trillion in 2022, and $5.8 trillion in 2023. In 2024, the global e-commerce market was worth 6.33 trillion dollars. By the end of 2025, it is estimated to be 6.86 trillion dollars (www.kingsresearch.com/tr).

China, the largest user of the global e-commerce market, leads with 3.19 trillion dollars. The USA ranks second with 1.22 trillion dollars. The United Kingdom (UK) ranks third with 195.7 billion dollars, Japan ranks fourth with 169.40 billion dollars, South Korea ranks fifth with 147 billion dollars, Germany ranks sixth with 141.2 billion dollars, India ranks seventh with 116 billion dollars, Indonesia ranks eighth with 62 billion dollars, France ranks ninth with 51 billion dollars and Canada ranks tenth with 40.3 billion dollars (www.precedenceresearch.com). The most preferred e-commerce website by users in the world (as of February 2025) is amazon.com. The second most popular website is temu.com, while aliexpress.com is the third most frequently visited e-commerce website. Fourth place was ebay.com, while amazon.co.jp ranked fifth (www.similarweb.com/tr).

Today, global e-commerce volume data is increasing day by day due to the widespread use of the internet. This increase is based on the fact that e-commerce offers consumers a wide range of products, price and quality comparisons of products and services, no time limitations in shopping experiences, ease of payment, creating a secure shopping environment and constantly prioritizing customer satisfaction (Jain et al., 2021). Especially in the formation of customer satisfaction, the performance that consumers expect from the products they buy and the attitudes and judgments they make as a result of the realized performance are important (Şahin, 2017). This emotion, which is a psychological dimension, is known as "customer satisfaction" in marketing science. This judgment, which is the most powerful and decisive actor of the purchasing decision process, also forms the basis of customer satisfaction. Therefore, the issue that businesses focus on and invest the most is customer satisfaction and customer satisfaction. Customer-oriented service understanding increases the satisfaction levels of customers by meeting expectations. As a result, in order for businesses serving on e-commerce platforms to achieve customer satisfaction, which is a dynamic concept, they need to continuously improve their product and service quality and be in uninterrupted communication with their customers.

Methodology

Purpose and Model of the Study

The main purpose of this study is to determine the digital age and the transformation effect it creates in marketing. Within the scope of this purpose, the digital age and the digitalization brought by the age as well as the digital transformation in marketing are discussed. Another objective is to determine whether the shopping activities of consumers through e-commerce sites, which are characterized as the digital transformation of the last 30 years in marketing, show a difference according to their demographic characteristics. In line with these objectives, a descriptive and correlational research model was adopted as it is widely used in marketing research and is suitable for the scope of the research. In addition, considering the main objective of the research, the questionnaire study was applied especially on young consumers.

Study Population and Sample Selection

The population of the research consists of consumers living in Siirt. According to the population data of 2024, 336.453 people live in Siirt province (www.nufusu.com). While creating the sampling frame of the research, since it is not possible to determine whether all of the consumers residing in Siirt province shop from e-commerce sites, the subjects participating in the survey were first asked whether they had ever shopped from any e-commerce site before. In line with the data obtained for the main mass, a hand and face-to-face survey was conducted to 450 people between 10-31 May 2025 in the Siirt provincial center between the dates of May 10-31, 2025 in the places and time periods where the human population is the most intense. Among the survey data obtained, 64 of them were found to be incomplete and inaccurate and

were not included in the analysis. As a result, the research analysis was evaluated based on the remaining 386 survey form data.

Data Collection Tool and Reliability

In this quantitative study, data were collected using a questionnaire technique. While preparing the questionnaire form and scale statements, studies conducted and developed by Kim et al., (2009), O'Brien & Toms (2010), Shobeiri et al., (2013), Mohd-Any et al., (2014) and Ruiz et al., (2008), Srinivasan et al., (2002), Yang et al., (2004), Akıskalı (2020) were utilized. In the research, 30 scale questions were prepared and directed to the participants. Accordingly, the questionnaire consists of three parts. In the first part, there are questions to determine the demographic information of the participants (gender, age, income status, occupation, educational status and marital status), while in the second part, there are 10 question statements to measure the attitudes of the participants towards shopping activities through e-commerce. In the third part, 20 question statements were included to determine the extent to which the participants were satisfied with the shopping experiences they realized from e-commerce sites. The participants were asked to evaluate the statements related to the variables on a 5-point Likert scale (1: Never Disagree, 5: Always Agree). On the other hand, the reliability analysis (Cronbach's Alpha Coefficient) of the scale, which was conducted to determine consumers' shopping experiences and satisfaction perceptions, which is one of the main objectives of the research, was calculated as 0.841. In this case, it is understood that the survey scale is consistent and the reliability coefficient is high enough.

The research data were evaluated in the SPSS statistical package program, and the resulting data were with frequency distributions, t-test and Analysis of Variance (ANOVA) model, which is an inferential statistical test.

Findings

The results of the demographic profile of the surveyed consumers are given in Table 1.

Table 1. Participant Profile of the Study

Features		N	%	Features		N	%
Gender	Woman	214	55.4	**Profession**	Student	168	43.5
	Male	172	44.6		Public Employee	65	16.8
Age	18-25	62	16.1		Private Sector Employee	102	26.5
	26-35	97	25.1		Self-employment	39	10.1
	36-45	71	18.4		Retired	12	3.1
	46-55	56	14.5	**Education Status**	Primary education	33	8.5
	56-65	60	15.5		Secondary Education	156	40.4
	66 and above	40	10.4		Associate's Degree/Bachelor's Degree	172	44.6
Income Status	15.000 and below	53	13.7		Postgraduate	25	6.5
	15.001-40.000	127	32.9	**Marital Status**	Single	248	64.2
	40.001-70.000	108	28.0		Married	138	35.8
	70.001-100.000	41	10.6				
	100.001 and above	57	14.8				

When the demographic profiles of the consumers participating in the research are analyzed; it is understood that female consumers participate more than males with 55.4%. It is seen that consumers in the age range (26-35), where there is not a very high difference in age

distribution, constitute the highest group with a rate of 25.1%, followed by participants in the age range (36-45) with a rate of 18.4%. The lowest rate in this category was 10.4% respondents aged 66 and over. When the income levels of the participants were analyzed, the highest income group was those earning between 15,001-40,000 TL with 32,9%. In terms of occupational status, the highest occupational group was students with 43,5% and the lowest occupational group was retired with 3,1%. It is seen that the fact that the highest result in the income levels category is between 15,001-40,000 TL is due to the fact that the majority of the participants are students. According to the level of education, associate's/ bachelor's degree ranked first with 44,6% and the lowest level of education was postgraduate with 6,5%. Finally, according to the marital status of the participants, 64,2% of the participants were single and 35,8% were married

The averages for measuring participants' attitudes towards shopping activities through e-commerce sites are given in Table 2.

Table 2. Participants' Attitudes Towards Shopping Activities on E-Commerce Sites

Scale Statements	N	Mean	Sd.
1. I can find the products I need at much more affordable prices on e-commerce sites than others.	386	3.91	1.04
2. If I see discounts, promotions, gift vouchers, installments, etc. on the products I need, I can buy more than one.	386	2.44	1.02
3. I prefer e-commerce sites in terms of time, cost and ease of payment.	386	3.43	1.19
4. I find e-commerce sites safe in terms of product content and price policies.	386	3.81	1.14
5. The fast product delivery and easy return policies of e-commerce sites affect me positively.	386	2.62	1.11
6. E-Commerce sites facilitate my purchasing decision as they provide product variety and comparison opportunities.	386	3.2	0.98
7. User experience reviews about the products I need influence my purchase decision.	386	3.75	1.1
8. I think I find the products and services I need from e-commerce sites.	386	3.56	1.03
9. I find the customer service and approach of e-commerce sites consistent and credible.	386	3.78	1.12
10. When I shop from e-commerce sites, I think I contribute to the national economy.	386	4.16	0.72

1: Never, … , 5: Always Agree

When the averages reflected in Table 2 regarding the attitudes of the participants towards shopping activities through e-commerce sites are examined, it is seen that they generally put contributing to the national economy at the top of the importance list (4,16), and making multiple purchases (2,44) in products with discounts, promotions, gift vouchers, installments, etc. for the products they need is an important factor. Again, the favorable price policies of e-commerce sites (3,91) are another reason for preference. Another reason affecting the participants' orientation towards e-commerce sites is that they find them safe in terms of product content and price policies (3,81). However, another striking result is that the participants care about the user experiences related to the products and services they need before purchasing and shape their purchasing decisions accordingly (3,75).

In the study, t-test and Oneway-ANOVA analysis methods were used to determine whether the attitudes of the individuals participating in the survey towards their shopping experiences on e-commerce sites make a difference according to their demographic characteristics. In the analyzes conducted in terms of the demographic characteristics of the participants (ANONA), no difference was found in their attitudes towards shopping experiences

on e-commerce sites according to their educational and professional status ($p > 0.05$). However, a significant difference was found for income levels and age categories. The analysis data related to the research result are given in Table 3.

Table 3. Difference in Attitudes Towards E-Commerce Experiences in Terms of Participants' Demographic Characteristics (Income and Age)

Attitudes	F	P
If I see discounts, promotions, gift vouchers, installments, etc. on the products I need, I can buy more than one.	1.395	0.037*
I prefer e-commerce sites in terms of time, cost and ease of payment.	2.653	0.045*
I can find the products I need at much more affordable prices on e-commerce sites than others.	2.209	0.042*

*$p < 0.05$

In the analyses conducted according to the income levels of the participants, the statement "If I see discounts, promotions, gift vouchers, installments, etc. on the products I need, I can buy more than one" ($F = 1.395$, $p = 0.037$) no significant difference was detected. This difference was analyzed with the LSD (post hoc) test in which income group this difference was seen more frequently, and it was concluded that especially individuals with low income levels (15,000 and below) tended to benefit from such opportunities more than others.

The difference between the age categories of the individuals participating in the survey and their attitudes towards shopping experiences through e-commerce sites is revealed in the fact that they prefer e-commerce sites in terms of time, cost and ease of payment and have the advantage of purchasing the products they need at much more affordable prices from these sites. According to the results obtained from the LSD (post hoc) test conducted for both statements, it was determined that individuals aged 46-55 did price research more than those in other age groups. Individuals in the 56-65 age category were also found to be more sensitive than others in terms of time, cost and ease of payment.

A t-test was conducted to understand whether the participants' attitudes towards shopping experiences through e-commerce sites differ according to their gender and marital status, which are other demographic characteristics of the participants. According to the test results, it was determined that there was a relationship between the gender of the individuals and their attitudes towards shopping experiences through e-commerce sites, and the statement "e-commerce sites facilitate my purchase decision because they provide product variety and comparison" and gender. According to the test results (t-value = 2.420 and p (2-tailed) = 0.01), it is understood that this statement facilitates women's decision-making because it is more difficult for women to make decisions at the purchasing stage than men. The mean result of women (3.69) and men (3.16) for this attitude shows that women are more inclined.

Another demographic characteristic of the participants, marital status, was investigated to determine whether there was a difference between their attitudes. The result obtained in this regard is that there is a difference in the statement "comments on user experience related to the products needed affect my purchase decision". It is also understood from the data that married individuals are more affected by comments about customer experience than single individuals (t-value= 3.073, p (2-tailed) = 0.02). When the group averages are analyzed, differences in the opinions of married individuals (3.78) and single individuals (3.06) emerge.

For businesses, knowing the attitudes of individuals regarding their shopping experiences through e-commerce sites can be very useful in creating policies for customer relations. Another return on investment for consumers is to ensure customer satisfaction. For this purpose, e-

commerce sites should offer values such as ease of use, reliability, entertainment and socialization, product and service quality, user activity and customer satisfaction to their users during shopping activities. In this part of the study, the results of the analysis including the averages of the six-dimensional questions consisting of 20 statements about customer satisfaction are evaluated.

Table 4. Scale Statements and Factor Averages

Statements	N	Mean	Sd.
Ease of Use			
I can easily find the products I need on e-commerce sites.	386	2.76	1.07
It takes me a lot of time to learn how to use e-commerce sites.	386	2.98	1.04
For me, e-commerce sites are the easiest and fastest way to shop.	386	2.41	0.93
I find the general layout of e-commerce sites clear and understandable.	386	2.64	1.05
Reliability			
I do not worry about whether the product I order from e-commerce sites will be delivered or not.	386	3.77	1.28
All transactions (purchase, payment, warranty, return, exchange, etc.) on e-commerce sites are fast and easy.	386	3.85	1.26
I believe that my personal information is fully protected on e-commerce sites.	386	3.81	1.24
Entertainment and Socialization			
Product images of e-commerce sites are a lot of fun.	386	3.46	1.13
When I shop on e-commerce sites, I think I have fun and socialize.	386	3.24	0.98
While researching the products I need, interacting with other users and learning about their opinions and experiences generally pleases and socializes me.	386	3.37	1.1
Compared to physical shopping, shopping from e-commerce sites is more fun and more satisfying.	386	3.12	1.08
Product and Service Quality			
In general, I find the product and service understanding of e-commerce sites to be of high quality.	386	3.27	0.99
The customer services of e-commerce sites are very interested and responsive in solving potential problems.	386	3.52	1.18
I think that after-sales services are inadequate in the product orders I place from e-commerce sites.	386	3.49	1.15
User Activity			
Shopping from e-commerce sites allows me to use my time more efficiently and effectively.	386	2.95	1.02
Getting information about the products I need from multiple sources and making comparisons influence my purchasing decision.	386	2.87	1.06
I can easily navigate e-commerce sites and actively interact when necessary.	386	2.43	0.95
Customer Satisfaction			
I like shopping through e-commerce sites.	386	2.81	0.98
In general, I am satisfied with the products and services of e-commerce sites.	386	3.56	1.09
I think shopping from e-commerce sites is a positive experience for me	386	3.64	1.1

When the responses of the participants to the scale expressions and factor averages in Table 4 are evaluated, it is seen that the factor averages related to "Ease of Use" and "User Effectiveness" regarding their shopping experiences on e-commerce sites give a result that can be considered low. A relatively high rate is observed in the customer satisfaction factor. In the "Reliability", "Entertainment and Socialization" and "Product and Service Quality" factors of the table, it can be said that the participants showed a high level of participation. In other words, it can be thought that the participants are not very concerned about e-commerce sites in terms of reliability, they have fun and socialize during shopping activities, and they are quite satisfied with the quality of products and services offered to them.

T-test and Analysis of Variance (Oneway-ANOVA) were conducted to determine whether there is a relationship between the demographic characteristics (age, income, occupation and education level) and the participants' perceptions of customer satisfaction in their shopping experiences through e-commerce sites.

Table 5. The Relationship Between Participants' Age and Customer Satisfaction in E-Commerce Experiences

Statements	F	p
I find the general layout of e-commerce sites clear and understandable.	3,98	0,01*
Shopping from e-commerce sites allows me to use my time more efficiently and effectively.	2,48	0,04*
Getting information about the products I need from multiple sources and making comparisons influence my purchasing decision.	2,86	0,04*
I think shopping on e-commerce sites is a positive experience for me.	3,29	0,03*

*p < 0.05

According to the results in Table 5, participants' finding e-commerce sites clear and understandable, wanting to use time efficiently in shopping activities, obtaining information from multiple sources when choosing the products they need, comparing products and adopting shopping from e-commerce sites may show differences when evaluated according to age categories. These differences reveal that there is a relationship between age and customer satisfaction in participants' shopping experiences on e-commerce sites. Post hoc tests were used in the study in order to identify and scientifically explain the reasons for the difference in age ranges. According to the results obtained from the test, individuals in the age category of 46 years and above find the product and service presentations and usage of e-commerce sites more clear and understandable than other categories. In another result, it was determined that participants aged 36 years and above attach more importance to the issue of using time more efficiently and effectively than other categories. In the table, the results of the individuals (36-45 and 46-55 age groups) in the statement "I make my purchasing decision by obtaining information from more than one source about the products needed and making comparisons" were very close to each other and it was seen that they had a high level of sensitivity compared to other groups. Another result from the test is that the participants over the age of 46 in the table find the e-commerce experience positive for themselves.

Table 6. The Relationship Between Participants' Income Status and Customer Satisfaction in E-Commerce Experiences

Statements	F	p
Compared to physical shopping, shopping from e-commerce sites is more fun and more satisfying.	3.32	0.03*
In general, I find the product and service understanding of e-commerce sites to be of high quality.	2.58	0.04*
Getting information about the products I need from multiple sources and making comparisons influence my purchasing decision.	2.64	0.04*
I like shopping through e-commerce sites.	2.66	0.04*
In general, I am satisfied with the products and services of e-commerce sites.	2.71	0.04*

*p < 0.05

In Table 6, a post hoc test was conducted to determine the differences between the income status of the participants in their e-commerce experiences and their customer satisfaction. Participants' attitudes of finding shopping on e-commerce sites more fun and more satisfying than physical shopping and their attitudes of obtaining information from more than one source and making comparisons before making purchasing decisions about the products they need are higher in individuals with low income levels (15,000 TL and below) compared to others. Individuals with an income level between 15,001-40,000 TL have a higher desire to shop through e-commerce sites compared to others. It is understood that individuals with an income level between 70,001-100,000 TL find the product and service understanding of e-commerce sites to be of higher quality.

Table 7. The Relationship Between Occupation and Customer Satisfaction in Participants' E-Commerce Experiences

Statements	F	p
I can easily find the products I need on e-commerce sites.	2.77	0.04*
All transactions (purchase, payment, warranty, return, 342xchange, etc.) on e-commerce sites are fast and easy.	2.92	0.04*
When I shop on e-commerce sites, I think I have fun and socialize.	3.45	0.03*
The customer services of e-commerce sites are very interested and responsive in solving potential problems.	3.58	0.03*
In general, I am satisfied with the products and services of e-commerce sites.	4.09	0.01*

*p < 0.05

In this part of the study, it was determined that there were differences in the relationship between the participants' professions and customer satisfaction in their e-commerce experiences. A post hoc test was conducted to determine the main reasons for these differences. According to the test results, it was found that the highest group in terms of entertainment and socialization was the students, and in the self-employed group, the difference in the statement "All transactions (purchase, payment, guarantee, return, 342xchange, etc.) are made quickly and easily on e-commerce sites" was higher than the other occupational groups. The fact that public employees can easily find the products they need was found to be the statement with the highest difference compared to other occupational groups.

Table 8. The Relationship Between Participants' Educational Background and Customer Satisfaction in E-Commerce Experiences

Statements	F	p
I find the general layout of e-commerce sites clear and understandable.	3.48	0.03*
I believe that my personal information is fully protected on e-commerce sites.	3.72	0.03*
Product images of e-commerce sites are a lot of fun.	4.44	0.01*
In general, I am satisfied with the products and services of e-commerce sites.	4.46	0.01*

*p < 0.05

Post hoc tests were applied to determine the differences in the relationship between educational status and customer satisfaction in the e-commerce experiences of the participants and to determine at which educational level these differences are higher. According to the data obtained as a result of the application, it was seen that the difference levels of the participants at primary and secondary education level were higher regarding the statement that the general layout and applications of e-commerce sites are simpler and more understandable. Again, the satisfaction of the participants in this category with the product and service strategies of e-commerce sites is higher than the others. Participants at the associate's/undergraduate and postgraduate education levels are also more likely than others to believe that my personal information is fully protected in e-commerce sites.

In this part of the research, t-tests were conducted to determine whether there is any difference in terms of gender and marital status in terms of customer satisfaction in the shopping experiences of the individuals participating in the survey through e-commerce sites. As a result of the test, it was understood that there was no difference in terms of the gender of the participants. In terms of marital status, a difference was found in the statement "In general, I am satisfied with the products and services of e-commerce sites" (t value = 2.32, p (two-tailed) = 0.02). It can be said that the reason for this difference is that it is seen to be higher especially in working individuals who cannot spare much time for shopping, the variety of products on e-commerce sites compared to traditional stores and the prices are partially more affordable.

Discussion and Conclusion

Digitalisation, which first began its journey in the United States in the 1950s, has developed rapidly throughout the process up to the present day with the widespread use of technological tools and has permeated almost every area. This situation, which has affected many areas, has also paved the way for very important structural changes and transformations in economic and social life. Today, humanity lives in a digital age dominated by the internet. As a consequence, the concepts of time and space have become limitlessly and freely available, thanks to new communication technologies. The idea of limitlessness, which broadens people's mental perspectives, has begun to profoundly affect daily life, manifesting itself in different ways in behavioural and experiential practices. From a strategic perspective, digital transformation is a multidimensional process in which rapid developments in information and communication technologies fundamentally change businesses' activities, ways of working, and organisational structures. This process encompasses not only the renewal of technological infrastructure but also the digitisation of business strategies, management approaches, and organisational culture.

Zhu et al. (2021) examined the most significant effects of digital transformation on businesses by applying various bibliometric and visual analysis methods related to digital transformation between 2000 and 2020. In their study, they stated that the increase in operational efficiency, automation systems, artificial intelligence applications, and big data analytics enabled businesses to run their business processes faster, at lower costs, and with fewer errors. They concluded that this situation encouraged the effective use of resources and also increased operational performance. Verhoef et al. (2021), drawing on the existing literature, conducted research on the three stages of digital transformation, namely 'digitisation, digitalisation and digital transformation'. They found that digital transformation equips businesses with new competencies, brings them to the fore in terms of data analysis and technology-based problem-solving skills, and has a significant impact on the workforce structure through remote and hybrid working models. Similarly, Sezen and Şenaras (2022) conducted a literature review explaining the concepts of digitisation, digitalisation, and digital transformation, highlighting the differences between the concepts and emphasising the importance of transformation for businesses, economic development, and social progress.

Online shopping, or e-commerce as it is known today, is the equivalent of the revolutionary transformation created by the digital age in marketing. The "Gutenberg Revolution", which is accepted as the beginning of the information revolution in the history of humanity in the 1450s, and the transformation that has continued its development until today with the "Industrial Revolution" that followed, radically changes the classical understanding of trade and offers innovative techniques and pragmatic approaches to businesses and consumers through digital channels. Today, approximately 4,5 billion people on the globe use internet-based social media channels. The usage rate of e-commerce is approximately 2.8 billion people. At this point, it seems meaningful to examine and evaluate the developments in digital marketing and e-commerce, which deeply affect people's lives and involve all layers of life, from a different perspective, and to examine consumers' e-commerce experiences and behavioral practices.

In this quantitative study, e-commerce, which is the most radical reflection of the digital age and the transformation it has created in marketing, is discussed. Within the scope of the subject, in addition to the current literature review, descriptive and correlational research model was used to obtain numerical data on consumers. The resulting data were tested with frequency distributions, t-test and Analysis of Variance (ANOVA) model, which is an inferential statistical test. When analyzed in terms of the demographic profiles of the consumers participating in the research; it was determined that female consumers with 55.4% adopted e-commerce experience more than male consumers and especially consumers in the category that can be considered young use e-commerce more. Looking at the general average of the participants' attitudes towards shopping activities through e-commerce sites, it is understood that they care about contributing to the national economy, prefer to make more than one purchase in products with discounts, promotions, gift vouchers, installments, etc. for the products they need, and generally have a positive attitude towards the affordable price policy. In addition, considering that they prefer e-commerce sites in terms of time, cost and ease of payment, it is important for businesses to implement strategies that will not cause suspicion and lose trust. Another finding obtained from the research is that married individuals are more affected by comments on user experience related to the products needed at the purchase decision stage than single individuals. In fact, the fact that the participants want to use time efficiently in shopping activities, obtain information from multiple sources when choosing the products they need and compare products can be seen as a reflection of this influence.

In the results regarding whether there is a relationship between the demographic characteristics of the participants and their perceptions of customer satisfaction in their

shopping experiences through e-commerce sites, many differences were found according to age, marital status, educational status and income levels. However, when we look at the general average of the research, it is understood that consumers do not compromise on quality, especially in product and service understanding, they see e-commerce as an important means of entertainment and socialization, they find e-commerce sites easy, clear and understandable, and they obtain information from multiple sources and make comparisons before making purchasing decisions about the products they need. In general, it can be said that all these determinants positively affect consumers' shopping experiences on e-commerce sites and increase their satisfaction levels.

In line with the transformations brought about by the digital age in marketing, it is important for e-commerce businesses to adopt an approach that is as customer-centric as it is technology-focused. In this context, it is recommended that industry players develop fast, secure and personalised e-commerce platforms that prioritise user experience. Furthermore, the harmonious use of digital tools such as social media, mobile marketing, content marketing and search engine optimisation will also increase brand visibility and competitiveness. However, as consumer trust has become a critical factor in the digital age, it is recommended that the sector adopt a more sensitive and proactive approach to data privacy, cyber security and transparent communication.

In the e-commerce environment, where digital marketing applications are intensifying, it is crucial for consumers to develop a conscious and critical attitude. It is recommended that consumers pay attention not only to marketing messages but also to product information, user reviews, and reliability indicators during their purchasing decision process. This approach will contribute to more rational and satisfying purchasing experiences in the digital environment. Furthermore, consumers need to increase their awareness regarding personal data sharing and online security issues. The fact that marketing activities in the digital age are largely data-driven makes it imperative for consumers to be aware of their rights and responsibilities. In this regard, consumers are advised to review the privacy policies of e-commerce websites and opt for secure payment systems.

The transformations brought about by the digital age in the field of marketing offer a broad and dynamic area of research for academic studies. In this context, it is recommended that academics address digital marketing applications in the context of e-commerce sites using an interdisciplinary approach. In particular, examining variables such as consumer behaviour, technology acceptance, digital trust and user experience together will provide comprehensive contributions to the literature. It is important that academic studies are designed to encompass current technological developments and new digital platforms in order to adapt to the rapidly changing digital marketing environment.

Author contribution rate

All processes of this study (design, data collection, analysis, writing and editing) were carried out equally by Musa Çakır.

Ethics committee approval

Ethical approval for this study was obtained from the Ethics Committee of the Siirt University dated 23.05.2025 and numbered 9254.

Declaration of conflict of interest

There is no conflict of interest with any person/institution in this study.

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