

The Effects of Consumer Preferences on Competition Among Payment Systems¹

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ABSTRACT

This study examines the influence of consumer preferences on the competitive dynamics of electronic payment (e-payment) systems within the e-commerce ecosystem. Through a correlational research design, data were collected from 415 online shoppers in Turkey via a structured survey and analyzed using SPSS 27.00. The research explores how consumer perceptions—encompassing perceived benefit, security, and personalization—shape decision-making processes regarding e-payment systems. Findings indicate that demographic factors, such as gender, age, and education level, significantly influence preferences, with women, younger individuals, and highly educated respondents showing greater inclination toward e-payment systems. Card payments emerged as a preferred method, reflecting trust in this mechanism. Statistical analyses reveal a strong correlation between E-Customer Perception and Consumer Decision Making Styles ($r = 0.756$, $p < 0.001$), with the former explaining 55.8% of the variance in the latter. These results highlight the critical role of perceived benefits, security, and personalization in driving consumer behavior, offering valuable insights for e-payment providers to enhance adoption and satisfaction through targeted strategies.

Keywords: E-Commerce, E-Payment Systems, Consumer Preferences, Digital Banking, Competitive Dynamics

Tüketici Tercihlerinin Ödeme Sistemleri Arasındaki Rekabet Üzerindeki Etkileri

ÖZET

Bu çalışma, e-ticaret ekosisteminde elektronik ödeme (e-ödeme) sistemlerinin rekabet dinamiklerini ve tüketici tercihlerinin bu dinamikler üzerindeki etkisini incelemektedir. Korelasyonel bir araştırma tasarımıyla, Türkiye’de çevrimiçi alışveriş yapan 415 yetişkinden yapılandırılmış bir anket yoluyla veri toplanmış ve SPSS 27.00 kullanılarak analiz edilmiştir. Araştırma, algılanan fayda, güvenlik ve kişiselleştirme gibi tüketici algılarının e-ödeme sistemlerine yönelik karar verme süreçlerini nasıl şekillendirdiğini değerlendirmiştir. Bulgular, cinsiyet, yaş ve eğitim düzeyi gibi demografik faktörlerin tercihleri önemli ölçüde etkilediğini göstermektedir; kadınlar, genç bireyler ve yüksek eğitilmişler e-ödeme sistemlerine daha fazla ilgi duymaktadır. Kart ödemeleri, bu mekanizmaya duyulan güveni yansıtarak tercih edilen bir yöntem olarak öne çıkmıştır. İstatistiksel analizler, E-Müşteri Algısı ile Tüketici Karar Verme Stilleri arasında güçlü bir ilişki olduğunu ($r = 0.756$, $p < 0.001$) ve E-Müşteri Algısının karar verme stillerindeki varyansın %55.8’ini açıkladığını ortaya koymuştur. Bu sonuçlar, algılanan fayda, güvenlik ve kişiselleştirmenin tüketici davranışını yönlendirmedeki kritik rolünü vurgulamakta ve e-ödeme sağlayıcılarına hedefe yönelik stratejilerle benimsenmeyi ve memnuniyeti artırma konusunda önemli bilgiler sunmaktadır.

Anahtar Kelimeler: E-Ticaret, E-Ödeme Sistemleri, Tüketici Tercihleri, Dijital Bankacılık, Rekabetçi Dinamikler

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1. INTRODUCTION

The research focuses on examining the role of payment systems within the e-commerce ecosystem and the competition among electronic payment (e-payment) systems. Specifically, it aims to analyze the influence of consumer preferences on this competitive landscape. The study seeks to evaluate consumers' perceptions of e-payment systems and how these perceptions shape their decision-making processes.

The primary objective of the research is to elucidate the competitive dynamics among e-payment systems and to assess the impact of consumer preferences on these systems. Within this framework, it endeavors to clarify the role that consumer perceptions and decision-making styles play in the adoption of e-payment systems. The significance of this study lies in its detailed examination of the effects of these systems on consumer behavior during a period marked by rapid growth in the e-commerce sector and the increasing prevalence of digital payment methods. This analysis provides valuable insights for postgraduate researchers, market participants (including consumers and businesses), and policymakers.

The research was conducted using a structure model designed to explore consumers' preferences for e-payment systems and the underlying factors driving these preferences. Data were collected through an online survey and analyzed using SPSS version 27.00. Demographic characteristics were assessed through frequency distributions, followed by factor analysis, reliability analysis, and validity analysis applied to the E-Customer Perception and Consumer Decision Making Styles scales. Regression analysis was employed as the primary method of analysis.

The research population comprises consumers in Turkey who engage in online shopping and utilize various electronic payment (e-payment) systems. The sample consists of 415 adults aged 18 and over, selected through random sampling, who shop online and use at least one e-payment system. The primary research problem is to ascertain the competitive dynamics of e-payment systems within the e-commerce ecosystem and to understand how consumer preferences influence this competition.

The study posits the following hypotheses:

1. A positive correlation exists between consumer perceptions—such as perceived benefit, security, and personalization—and their preferences for e-payment systems;
2. The frequency of e-payment system usage impacts consumers' perceptions and decision-making styles regarding these systems;
3. Demographic factors, including gender, age, and education level, significantly affect preferences for e-payment systems.

The scope of the research is limited to online shoppers in Turkey. Data were collected via an online survey, which restricted the sample to individuals with internet access. Participants were expected to complete the survey accurately and comprehensively; however, some data loss may have occurred. Additionally, the subjective nature of consumers' perceptions and preferences toward e-payment systems constitutes a further limitation.

The primary objective of the research is to comprehend the competitive dynamics among electronic payment (e-payment) systems and the influence of consumer preferences on these systems. Within this framework, the study seeks to elucidate the role that consumer perceptions and decision-making styles play in the adoption of e-payment systems. The significance of this research lies in its detailed examination of the effects of e-payment systems on consumer behavior during a period marked by rapid growth in the e-commerce sector and the increasing prevalence of digital payment methods. This analysis provides valuable insights for postgraduate researchers, market participants (including consumers and businesses), and policymakers.

1.1. The Market for E-Payment Systems

The e-payment systems market encompasses financial transactions conducted using digital technologies to facilitate payments for goods and services accessed online within the e-commerce ecosystem (Kauffman and Walden, 2020).

From the perspective of market concentration and competition, the payment systems sector exhibits an oligopolistic structure. Global giants such as Visa and Mastercard, alongside local players like Troy, compete for market share. The market is characterized by high entry barriers, including regulatory requirements and financial and technological obligations, which make it challenging for new entrants to penetrate the market. Consumer preferences are primarily driven by perceptions of security, speed, and user experience. Post-COVID-19, there has been a significant surge in the use of digital wallets and contactless payments, a trend influenced by both consumer preferences and the exigencies of the period.

The e-payment systems market within the e-commerce ecosystem continues to grow, driven by innovative technologies and an evolving market structure. Despite the dominance of established players, fintech firms and blockchain-based solutions are intensifying competition. Balanced regulatory enforcement and support for innovative services are critical for the future development of the e-payment systems market.

The concept of a multi-sided marketplace refers to digital platforms that bring together multiple user groups (e.g., buyers, sellers, and service providers) to facilitate interactions among them (Evans and Schmalensee, 2016). Multi-sided marketplaces, particularly in the context of accelerated digitalization, are shaping the future of commerce through the effective integration of e-commerce and e-payment systems (Rochet and Tirole, 2003).

E-commerce involves the buying and selling of goods and services through digital platforms (Laudon and Traver, 2021). This form of commerce transcends the limitations of traditional physical stores, offering consumers the opportunity to shop without geographical constraints. It also provides advantages such as a wide product range, price comparison options, and 24/7 accessibility, thereby enhancing customer satisfaction (Chaffey, 2022). For sellers, e-commerce reduces operational costs and enables access to a broader customer base.

E-payment systems encompass secure, fast, and traceable payment methods used for transactions on digital platforms (Dahlberg et al., 2015). These systems include various payment methods such as credit cards, digital wallets, mobile payments, and bank transfers. Notably, e-payment systems minimize fraud risks through advanced security protocols and multi-factor authentication methods, thereby enhancing user experience (Teoh, Chong, and Lin, 2013). Additionally, they optimize trade processes by increasing transaction speed.

Multi-sided marketplaces integrate e-commerce, e-payment systems, logistics, and other service providers to offer a comprehensive ecosystem that meets user needs.

Digital transformation in financial services is shaped by technology and global competition, with innovations such as payment systems, fintech, AI, blockchain, and cryptocurrencies driving significant changes in the sector. In payment systems, mobile payments, digital wallets, and QR code-based methods are tangible outcomes of digitalization. Blockchain-based payment infrastructures eliminate intermediaries, enabling faster and more reliable financial processes. The expansion of e-commerce, coupled with big data analytics and fintech solutions, allows businesses to understand consumer behavior and optimize their strategies.

Substitute services in the e-payment systems market are alternative services that fulfill similar functions, addressing user needs through different means. E-payment systems create a complementary ecosystem with directly related regions and services. Complementary services and products in the e-payment systems market support payment processes or enhance user experience. These include:

- Virtual POS systems, which enable businesses to accept online payments;
- E-commerce platforms such as Trendyol and Amazon;
- Security services like 3D Secure and encryption technologies;
- Bill payment platforms that integrate electricity, water, and natural gas payments with payment systems;
- Logistics services that offer delivery solutions compatible with payment systems, among others.

The e-payment systems market is rooted in the financial services sector integrated with digital technologies. It encompasses both technology firms providing payment systems and e-commerce platforms utilizing these

systems. E-payment services are tied to regional banking infrastructures and national regulations, such as PSD2 and PSD3 in Europe and e-money licensing requirements in Turkey. The market can be defined in terms of geographical scope (local, e.g., Turkey, and global, e.g., international payment systems), product or service scope (card-based payments, digital wallets, cryptocurrencies, etc.), and user segments (consumers and businesses). User preferences for speed, security, and ease of use are fundamental characteristics of the market.

Typically, the regulators of this market include the Central Bank of the Republic of Turkey (TCMB), the Banking Regulation and Supervision Agency (BDDK), and the Competition Authority. Consumers, such as individuals shopping online, and businesses, such as e-commerce sites and SMEs, constitute the market for these products and services.

1.2. Payment Methods and Developments

The payment sector is experiencing heightened competition due to the emergence of new entrants, such as fintech companies, alongside traditional banks. The regulations introduced by PSD2 have far-reaching implications, impacting not only the payment industry but also the broader data economy. PSD2, PSD3, and open banking regulations in Europe have spurred innovation within financial services.

Fintech poses a challenge to the intermediary role of banks by providing consumers with faster, more cost-effective, and accessible services (OECD, 2020). The fintech sector, particularly within payment systems, is significantly reshaping consumer behavior.

High-technology exports serve as a vital resource for economic growth strategies. A comparative analysis of OECD countries and Turkey underscores Turkey's shortcomings in this domain. The proportion of high-technology products in Turkey's total exports is notably lower than that of other OECD countries, a disparity linked to inadequate prioritization of R&D investments (Konak, 2018).

Fintech companies offer small and medium-sized enterprises (SMEs) integrated technological services that banks are less equipped to provide on the same scale. However, the entry of foreign players into the Turkish market presents a risk by intensifying competition. Stringent regulations in Turkey, nonetheless, act as a significant barrier to entry for these players. For fintech firms achieving a certain trade volume in Turkey, neighboring regions such as the Middle East, the Balkans, and Central Asia offer substantial market potential.

Fintech firms that strategically position themselves in the market can enable customers to manage accounts across all banks from a single platform.

The consolidation of payment services may heighten systemic risks. Over-reliance on a single payment infrastructure could trigger cascading effects in the event of a service disruption. Protecting user data and managing fraud risks remain critical challenges for regulators.

Non-bank institutions are increasingly involved in various stages of the payment process, including pre-transaction, authorization, clearing, settlement, and post-transaction services (CPMI, 2014).

The pandemic has accelerated the shift toward a cashless economy, while technological innovations and regulatory frameworks have redefined the payment systems sector. In 2023, new financial tools such as Buy Now, Pay Later (BNPL) and open finance gained prominence, while 2024 witnessed transformations driven by AI, cloud-based systems, instant payments, and open banking.

A 2020 international study found that debit card usage in Europe reached 43%, while cash usage dropped to 36%. Additionally, 44% of European consumers now prefer smartphone-based payments more frequently. In Turkey, open banking is a relatively new concept, with amendments to Law No. 6493 introducing definitions for "payment initiation services" and "account information services. TCMB is developing the technical infrastructure through secondary regulations.

BTC companies typically offer lower-risk, larger credit volumes, whereas fintech firms tend to target niche markets.

As of 2019, Apple Pay was operational in over 40 countries worldwide, boasting nearly 500 million users. Google Wallet was active in more than 30 countries during the same year, fiercely competing with Apple Pay

in the mobile payment market. Alipay is expanding rapidly beyond China, while Amazon Pay operates in 100 countries globally, supporting payments not only on Amazon.com but also with third-party retailers.

Peer-to-peer (P2P) payments represent one of the fastest-growing segments of digital payments. Platforms such as Facebook's Libra project (now rebranded as Diem) and Tencent's WeChat Pay facilitate seamless payment transfers between users through P2P solutions.

A significant barrier to fintech growth stems from the anticompetitive behaviors of major players seeking to obstruct new entrants. Large financial institutions, in particular, impede new ventures, and technological shifts can adversely affect competition within the sector. Practices such as market foreclosure and cartel formation are monitored to identify such obstacles. These behaviors hinder new entrants from accessing the market and restrict consumers' access to a wider range of services. Legal regulations, market research, and the prevention of anticompetitive practices are essential to unlocking fintech's full potential.

- Global payment methods are undergoing rapid transformation, driven by digitalization and evolving consumer preferences.
- Digital wallets have surged in popularity among consumers due to their convenience, security, and speed.
- BNPL methods are expanding by offering interest-free payment options to consumers.
- The use of cryptocurrencies as a payment method remains limited.
- Account-to-account (A2A) payments are gaining traction due to low transaction costs and real-time payment (RTP) systems.
- Cash payments are declining globally as digital payment methods rise in prominence.

1.3. Factors Influencing Consumers' Preferences for E-Payment Systems

Understanding the factors that shape consumer behavior is critical to achieving success in the e-commerce sector. As companies continue to develop strategies in this domain, gaining comprehensive insights into the psychological and cognitive factors underlying consumers' online shopping preferences is becoming increasingly vital. Such knowledge ensures the effective and accurate implementation of relevant strategies (Turan, 2011).

In today's marketplace, consumers face a multitude of brand options, which places them in a complex decision-making process. Throughout this process, consumers exhibit diverse purchasing behaviors to meet their needs. While striving to identify the most suitable brand that effectively addresses their requirements and ultimately delivers satisfaction, their purchasing behaviors are influenced by numerous factors (Türkay, 2011). Consequently, understanding consumer behavior and identifying the factors that influence it are of paramount importance in addressing their demands and needs.

According to a study by İzgi and Şahin (2013), the e-retail sector and online shopping have been significantly impacted by rapid technological advancements and increased internet usage. All stages of the transaction process, from placing orders to making payments, are now conducted online. The researchers conducted a survey with 384 Turkish users to examine the characteristics of e-commerce consumers and the e-retail sector. The findings revealed that both technology-related factors and consumer preferences play significant roles in online shopping. The continuous evolution of technology and the growing prevalence of online shopping have encouraged consumers to engage in e-commerce, leading to variations in product preferences. Despite the implementation of advanced security measures, consumers continue to face trust-related concerns.

Security remains a significant challenge for both individuals and businesses engaged in e-commerce. Consumers' purchasing decisions are shaped by a variety of factors, including personal needs, motivations, learning processes, perceptions, attitudes, and beliefs. These decisions are also influenced by social and cultural factors such as culture, social class, reference groups, and family dynamics. Additionally, businesses play a crucial role in shaping consumer behavior through branding efforts. The factors influencing consumer purchasing behavior can generally be classified into cultural, social, personal, and psychological categories

(Varinli and Çakır, 1999). Consumer behavior is affected by various factors, which can be divided into two main groups: individual and social factors. Furthermore, the internet, often hailed as the miracle of the 20th century, is widely recognized as a significant factor in shaping consumer behavior.

Among Turkish consumers, purchasing habits and security concerns are the primary barriers to online shopping. Despite closely following digital advancements, consumers remain hesitant to participate in e-commerce due to perceived risks and a lack of trust. Over time, the introduction and widespread adoption of secure systems such as BKM Express, PayU, and Iyzico, along with prepaid cards, have the potential to alleviate security concerns related to credit card payments, a common worry among Turkish consumers (Büyükyıldırım, 2015).

The emergence of the internet and e-commerce has prompted researchers to investigate the intricacies of consumers' online shopping habits. Two prominent theories, the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB), have been instrumental in shedding light on this phenomenon. Additionally, when it comes to new communication technologies, six main categories of conceptual theories explain consumer behavior and preferences (Turan, 2011; Uygun, Özçiftçi, and Uslu Divanoğlu, 2011):

- Technology Acceptance Model (TAM);
- Theory of Planned Behavior (TPB);
- Theory of Reasoned Action (TRA);
- Perceived Behavioral Control (PBC);
- Diffusion of Innovations Theory;
- Uses and Gratifications Theory.

According to the International E-Commerce Survey conducted by WITSA (2000), the report outlines various barriers to e-commerce and their proportional distribution:

- Lack of trust in e-commerce: 26%;
- Lack of knowledge and understanding of e-commerce: 21%;
- Costs associated with transitioning to and implementing e-commerce: 10%;
- Incompatibility of existing business procedures with e-commerce: 10%;
- Inadequate employee skills and knowledge for e-commerce: 10%;
- Regulatory issues, such as taxation: 8%;
- Institutional budgets: 7%;
- Technological limitations: 1%;
- Other barriers: 6%;
- No perceived barriers: 1%.

The same study also identifies security issues that hinder institutions from adopting and implementing e-commerce, ranked as follows:

- Distrust in new technologies for payments: 25%;
- Belief that technological infrastructure is inadequate to prevent attacks: 17%;
- Uncertainty regarding information confidentiality and data integrity: 15%;
- Uncertainty about the identity of transacting parties: 14%;
- Lack of trust in adhering to established commercial behavior patterns: 9%;
- Uncertainty regarding risks: 8%;
- Absence of international standards: 6%;
- Other: 1%.

In their studies, Tağıyev (2005) and Ak (2009) categorize factors influencing consumer behavior into three main groups, emphasizing that while these factors are beyond marketers' control, they must still be considered when analyzing purchasing decisions. The internet is also included in this classification:

- Social factors: These include culture and subculture, social class, reference groups, roles, and family dynamics, all of which influence an individual's behavior and identity.
- Psychological factors: Motivation, perception, learning, attitudes, beliefs, and personality are internal factors that affect individual behavior.
- Personal factors: These encompass demographic factors (e.g., age, gender, marital status, income level, education, and occupation) and situational factors, which refer to the conditions and circumstances influencing a consumer's purchasing decision.

For companies operating in both physical and online environments, maintaining a website is essential for a successful marketing program. Effectively presenting products and services to consumers is critical, and website development constitutes a key aspect of online marketing.

The examination of factors influencing consumers' online behavior can be divided into five main areas: consumer characteristics, product characteristics, brand, service and other commercial considerations, environmental factors, and intermediary factors such as user-friendliness and service quality (Oskaybaş, Dursun, and Yener, 2014).

As defined by Yoon and Kim (2009), these factors can be classified into system quality, service quality, and information quality.

2. LITERATURE REVIEW AND ACADEMIC FINDINGS

Nadler, Chen, and Lin (2019) investigated the adoption of e-payment systems among young urban users in China and the factors influencing this adoption. The study builds on Davis's Technology Acceptance Model (TAM), incorporating extended hypotheses and considering perceived benefit, ease of use, quality, security, self-efficacy, and trust as independent variables. Regression and correlation analyses identified trust as the most significant determinant of e-payment adoption ($R^2 = 0.062$). A positive correlation was observed between security, ease of use, and perceived quality. Additionally, usage frequency exhibited a statistically significant relationship with monthly expenditure and spending percentage ($p < 0.05$). The findings further revealed that young male users adopt technology more rapidly, leading to higher e-payment system usage ($t = 2.544$, $p < 0.01$). Trust perception was identified as a critical factor influencing usage decisions ($t = 3.292$, $p < 0.01$). However, the lack of significance for perceived benefits and security variables suggests the influence of government-supported policies in China on user perceptions.

Mukesh and Ragothaman (2020) analyzed how the technological revolution has transformed consumer behavior and payment systems, exploring the reasons behind the preference for e-payment systems. Technological innovations have made e-payment systems more accessible and user-friendly, while the widespread adoption of smartphones and increased internet accessibility have accelerated their uptake.

The digital payment chain comprises primary actors, including merchants, acquiring banks, card networks, issuing banks, and consumers, who collaborate in transaction verification and authorization processes. Secondary actors, such as POS providers, payment gateways, processors, digital wallets, and software developers, support the seamless operation of the payment infrastructure.

According to the SWOT analysis of the e-payment sector (TÖDEB, 2023), its strengths include fast and flexible solutions, user-friendliness, and innovation focus. Weaknesses encompass intense competition, a shortage of skilled human resources, and the partial prevalence of traditional banking. Opportunities include the acceleration of digitalization post-COVID-19, market consolidation, diverse payment methods, openness to artificial intelligence and machine learning, support for vertical and digital integration, ease of access, and the capacity to deliver customer-centric solutions. Threats include competitive disparities, cyberattacks, and risks to data security and privacy.

In 2019, 253 mergers and acquisitions were recorded in the e-payment sector, with a total transaction value of USD 140.9 billion (Dealogic, 2019).

Habib Attia's (2020) study examines innovative solutions provided by cross-border payment systems to enhance financial inclusion for individuals, SMEs, and governments. Limited access to these benefits restricts financial inclusion. The study suggests that integrating non-payment services with payment systems is a key strategy for improving financial inclusion.

The competition within India's digital payment market, particularly between Unified Payments Interface (UPI) and Card-based Digital Payments (CDP), has been mathematically analyzed using the Lotka-Volterra model. This model was adapted to understand the market share dynamics between competing payment platforms. Time-series analysis employing the ARIMA model predicted an exponential increase in digital payment transaction volumes, with UPI leading this growth. Conversely, the Lotka-Volterra model indicated that CDP could maintain a sustainable role by retaining its user base in specific market segments.

Luther highlights Bitcoin's significance not only as a payment instrument but also as a technology capable of transforming financial systems. Other cryptocurrencies (altcoins), such as Litecoin and Ripple, leverage second-mover advantages to offer more flexible solutions, addressing Bitcoin's limitations through innovative features.

The analysis of competition among payment systems within the e-commerce ecosystem underscores the importance of aligning these systems with innovative approaches and evaluating the impacts of technological transformation. The digitization of e-commerce payment systems and banking services has led to profound changes in consumer behavior (Aggarwal and Patel, 2023). According to Statista, the growth of the digital payment market is driven by technologies that enhance user experience and provide cost-effective solutions.

E-payment systems are structured around three primary actors: users (wholesalers, retailers, and consumers), issuers (banks and financial institutions), and regulators (institutions ensuring the integrity of payment mechanisms). The facilitation of B2B, B2C, and C2G transactions through e-payment systems enables broader adoption and application.

In 2023, the cross-border payment market was valued at USD 25 trillion, with projections estimating a rise to USD 50 trillion by 2030.

Cai, Milojevic, Syromyatnikov, Kurilova, and Slusarczyk (2021) emphasize that payment systems are critical financial infrastructure supporting economic growth and reducing systemic risks. Their study examines the impact of fintech innovations on competition in the global payment market using a mathematical framework. The analysis employed ordinal logistic regression and correlation analyses, confirming the influence of economic factors such as cost ($z = 1.74$) and maintenance costs ($z = 3.30$) on customer satisfaction ($z = 3.15$) and the competitive advantage of fintech innovations ($m = 4.32$). The study further explores the effects of costs, service quality, privacy, security, customer satisfaction, and technological innovations on the competitiveness of payment systems.

Garrouch (2021) examined the key factors influencing consumer perceptions of e-payment systems in Saudi Arabia, analyzing the effects of perceived e-shopping value, e-payment benefits, and compliance with Islamic Sharia on attitudes toward e-payment systems. The study demonstrated that the speed, security, and ease of transactions offered by e-payment systems significantly influence consumer preferences (Chou, 2004; Liao and Yang, 2020). Measurement tools included Teoh et al.'s (2013) e-payment benefits scale, Venkatesh et al.'s (2012) e-shopping value scale, and scales assessing perceived compliance with Islamic Sharia. Data analysis using structural equation modeling (SEM) and multi-group analysis confirmed a positive and significant impact of e-payment benefits on e-payment perceptions.

Thakur and Sharma (2021) comprehensively explored how digital payment systems, driven by technological advancements and shifting user habits, have transformed the e-commerce ecosystem. The study identifies five key trends shaping digital payment systems: the proliferation of mobile devices, adoption of contactless payment technologies, the rise of cryptocurrencies and blockchain, the use of biometric authentication, and AI-driven personalization solutions. Opportunities provided by digital payment systems

are categorized into five areas: e-commerce growth, the rise of mobile payments, cross-border payment solutions, blockchain-driven innovations, and enhanced financial inclusion.

According to Baryshevska et al. (2022), platforms such as PayPal, Apple Pay, Samsung Pay, AliPay, and WeChat Pay are leading players in the digital payment ecosystem.

Mahesh and Bhat (2022) note that the 2016 demonetization process in India, which involved the withdrawal of high-value banknotes, accelerated the adoption of digital payments. The Indian government's initiative to transfer social welfare benefits directly to bank accounts further bolstered consumer confidence.

Statista's (2023) consumer trend analysis indicates that, as of 2024, factors such as the pursuit of quality, ethical spending, stress management, and data personalization will directly influence e-payment systems. Digital payment platforms enhance customer satisfaction by offering speed, convenience, and transparency, enabling banks to reach a broader customer base. The study underscores that increasing financial literacy and implementing large-scale awareness campaigns are critical steps in promoting digitalization.

3. METHODOLOGY AND FINDINGS

In this study, a correlational research design—one of the quantitative research methods—was employed to evaluate the potential effects of consumer preferences on the competitive dynamics among electronic payment (e-payment) systems utilized in e-commerce. The correlational research design is a methodological approach used to investigate relationships between variables. The research model was specifically developed to understand consumers' preferences for e-payment systems and the factors influencing these preferences. In particular, it aims to analyze the relationships between relevant factors by focusing on E-Customer Perception and Consumer Decision Making Styles.

Data collection tools were structured using two primary scales:

- E-Customer Perception Scale: This scale was utilized to assess consumers' perceptions and attitudes toward online shopping sites (Ateş, 2017).
- Consumer Decision Making Styles Scale: This scale was applied to examine the decision-making styles that influencing consumers' purchasing decisions (Dursun et al., 2013).

The data collection process was conducted through an online survey form, which included demographic information and items from the aforementioned scales.

3.1. Data Analysis

The analysis of the collected data was conducted using various statistical methods within the SPSS 27.00 software package. Initially, demographic characteristics were examined through frequency distributions, enabling the establishment of the participant profile. Subsequently, factor analysis, reliability analysis, and validity analyses were performed on the scales of E-Customer Perception and Consumer Decision Making Styles.

Regression analysis was employed as the primary analytical method. This analysis seeks to test the proposed model by investigating the impact of E-Customer Perception on Consumer Decision Making Styles. The results of the regression analysis will reveal the manner in which E-Customer Perception influences Consumer Decision Making Styles and whether this effect is statistically significant.

The findings derived from these methods will significantly contribute to understanding the competitive landscape of electronic payment (e-payment) systems utilized in e-commerce, as well as to analyzing the motivations behind consumers' preferences for these systems. Furthermore, the research outcomes will offer valuable insights for the development of marketing strategies, the enhancement of user experiences on e-commerce platforms, and for postgraduate students engaged in studies related to this topic.

3.2. Descriptive Analysis Findings

Based on the survey results from 415 adults in Turkey, aged 18 and above, who engage in online shopping and utilize at least one electronic payment (e-payment) system, the following descriptive analysis findings are particularly noteworthy:

- Women exhibit a greater interest in digital banking and e-payment topics or demonstrate a higher willingness to participate in survey research;
- Participants generally possess a high level of education, suggesting that educational attainment may influence the utilization of digital banking services;
- The predominant representation of younger age groups indicates a higher preference for digital banking and e-payment systems among younger users;
- The higher proportion of single participants, particularly within younger age groups, suggests a heightened interest in digital banking and a more intensive utilization of digital services;
- The substantial representation of students reveals that digital platforms are extensively utilized by the younger and student demographic;
- A significant portion of participants belong to the low-income bracket, underscoring the necessity for digital banking and e-payment systems to be cost-effective and accessible;
- The distribution reveals variability in the frequency of e-payment system usage, with a notable segment of users who do not utilize these systems regularly;
- The high preference for card payments demonstrates that the platform caters to a wide user base and is regarded as a trustworthy payment mechanism.

3.3. Exploratory Factor Analysis Findings

Factor analysis is a statistical technique that reduces a large number of interrelated variables to a smaller set, rendering them meaningful and independent of one another. To determine whether the data are suitable for factor analysis, three methods are employed:

Creation of the Correlation Matrix: The suitability of the data for factor analysis is first assessed by examining the correlation coefficients of the variables. High correlation coefficients are necessary to form common factors, while low correlations indicate that common factors cannot be established.

Bartlett's Test of Sphericity: This test evaluates the probability that high correlations exist between at least the variables. For the analysis to proceed, the null hypothesis—that the correlation matrix is an identity matrix—must be rejected. Rejection of this hypothesis indicates the presence of correlations between variables, confirming the data's suitability for analysis.

Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy: This index compares the magnitudes of the observed correlation coefficients with those of the partial correlation coefficients. A KMO value above 0.5 is required for the data to be considered adequate for factor analysis.

According to Table 1, in the context under examination, a KMO value of 0.967 indicates that the dataset for the E-Customer Perception scale is highly suitable for factor analysis and that the data items are capable of forming common factor structures.

TABLE 1: Exploratory Factor Analysis Results for the E-Customer Perception Scale

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0,967
Bartlett's Test	Approximate Chi-Square	10314,290
	Degrees of Freedom	528
	p-value	0,000

A p-value less than 0.05 indicates that the correlation matrix among the variables is not an identity matrix, signifying the presence of significant correlations between variables. Consequently, this result supports the feasibility of conducting factor analysis and demonstrates that the data are suitable for factor structures.

In the analysis, four primary factors emerged: Perceived Benefit, Perceived Security, Perceived Personalization, and Perceived Customer Relationships. Eigenvalues and the percentage of total variance explained are specified for each factor. Perceived Benefit Factor: This factor exhibits the highest eigenvalue of 17.222 and accounts for 52.187% of the total variance explained. It reflects customers' perceptions of the functionality of online shopping sites.

Perceived Security Factor: With an eigenvalue of 1.697 and a cumulative total variance explained of 57.330%, this factor constitutes the second-highest factor loading among the scale items. It represents a critical element in customers' sense of security on online shopping platforms.

Perceived Personalization Factor: This factor ranks third, with an eigenvalue of 1.333 and a cumulative total variance explained of 61.370%. Personalization is a significant component in enhancing customer satisfaction and loyalty.

Perceived Customer Relationships Factor: The final factor, with an eigenvalue of 1.074 and a cumulative total variance explained of 64.624%, influences customers' relationships with websites and their satisfaction levels.

The exploratory factor analysis (EFA) has identified four core dimensions of the E-Customer Perception scale: Perceived Benefit, Perceived Security, Perceived Personalization, and Perceived Customer Relationships. Each factor represents distinct aspects of customer perception, providing a detailed evaluation of the impact of online shopping sites on customer experience.

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, presented in Table 2, was used to assess the suitability of the analyzed data for factor analysis. In this study, a KMO value of 0.958 was obtained, indicating that the data are exceptionally well-suited for factor analysis. Thus, the high KMO value demonstrates that the data from the Consumer Decision Making Styles scale are highly appropriate for factor analysis, ensuring the reliability of the resulting findings.

TABLE 2: Exploratory Factor Analysis Results for the Consumer Decision Making Styles Scale

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0,958
Bartlett's Test	Approximate Chi-Square	11399,832
	Degrees of Freedom	820
	p-value	0,000

The results of Bartlett's Test of Sphericity yielded an approximate Chi-Square value of 11,399.832, with 820 degrees of freedom and a p-value of 0.000. A p-value less than 0.05 in Bartlett's test indicates a sufficient level of correlation among the variables, confirming the applicability of factor analysis.

The findings suggest that consumers prioritize quality most prominently in their decision-making processes. The dimension of Perfectionism-High Quality Consciousness emerges as the strongest factor, highlighting consumers' efforts to seek out the best and highest-quality products. Additionally, Brand Orientation underscores a tendency to favor well-known and prestigious brands, with a well-established brand image shown to influence consumer decisions.

The exploratory factor analysis (EFA) results for the Consumer Decision-Making Styles scale show that consumer behavior is shaped by five core factors. These factors—Quality (Perfectionism), Brand, Novelty (Fashion), Entertainment (Hedonism), and Price—facilitate an understanding of consumers' decision-making processes. The high eigenvalues and percentages of variance explained for each factor underscore their significance and reliability in the context of consumer decision-making.

3.4. Normality Analysis Findings

Table 3 presents the results of the normality analysis for the scales and their subscales used in this study. Normality analysis is employed to assess whether the data conform to a normal distribution. The table provides the minimum (Min), maximum (Max), mean (M), standard error (S.E.), skewness, kurtosis, and Kolmogorov-Smirnov test results for each scale and subscale.

TABLE 3: Normality Analysis of the Scales and Subscales Used in the Study

Scales and Subscales	Min	Max	M	S.E.	Skewness	Kurtosis	Kolmogorov-Smirnov
E-Customer Perception Scale	1	5	3,59	0,74	-0,679	1,810	0,000
Perceived Benefit	1	5	3,63	0,79	-0,745	1,391	0,000
Perceived Security	1	5	3,56	0,81	-0,620	1,051	0,000
Perceived Personalization	1	5	3,66	0,85	-0,887	1,216	0,000
Perceived Customer Relationships	1	5	3,39	0,95	-0,443	-0,093	0,000
Consumer Decision Making Styles Scale	1	5	3,52	0,73	-0,439	1,865	0,000
Perfectionism	1	5	3,56	0,83	-0,619	0,733	0,000
Brand Orientation	1	5	3,34	0,89	-0,239	-0,053	0,000
Fashion Orientation	1	5	3,40	0,92	-0,458	0,034	0,000
Hedonism Orientation	1	5	3,78	0,85	-0,887	0,989	0,000
Price Orientation	1	5	3,58	0,88	-0,689	0,846	0,000

A significant Kolmogorov-Smirnov test result ($p < 0.05$) indicates that the data exhibit a tendency to deviate from a normal distribution.

Across the scale in question, the mean was calculated as 3.52, with a standard error of 0.73. The skewness value is -0.439, and the kurtosis value is 1.865, with a Kolmogorov-Smirnov test result of 0.000. The skewness and kurtosis values suggest a deviation from a normal distribution. The significant test result further confirms that the data do not conform to a normal distribution.

The normality analysis results indicate that the scales and their subscales used in this study largely deviate from a normal distribution. For all scales and subscales, the skewness and kurtosis values point to a tendency to diverge from normality, and the Kolmogorov-Smirnov test results are statistically significant. This situation suggests that the data are not suitable for parametric tests and that the use of non-parametric tests would be more appropriate.

3.5. Reliability Analysis Findings

Table 4 presents the results of the reliability analysis for the scales and their subscales used in this study. Reliability analysis is employed to assess the consistency and internal reliability of a scale or its subscales. The table provides the sample size (N) and Cronbach's Alpha coefficient (α) for each scale and subscale. The Cronbach's Alpha coefficient ranges between 0 and 1, with a value typically above 0.70 indicating that the scale is reliable.

For the E-Customer Perception scale, the Cronbach's Alpha coefficient was calculated as 0.97, demonstrating excellent internal consistency. This 33-item scale reliably measures participants' e-customer perceptions.

The reliability analysis results in Table 4 indicate that all scales and subscales used in the study exhibit a high level of reliability. In this context, the scales and their subscales consistently and reliably measure participants' attitudes and perceptions.

TABLE 4: Reliability Analysis of the Scales and Subscales Used in the Study

Scales and Subscales	N	Cronbach's Alpha (α)
E-Customer Perception Scale	33	0,97
Perceived Benefit	11	0,93
Perceived Security	10	0,93
Perceived Personalization	6	0,89
Perceived Customer Relationships	4	0,86
Consumer Decision Making Styles Scale	41	0,96
Perfectionism	7	0,89
Brand Orientation	8	0,89
Fashion Orientation	5	0,86
Hedonism Orientation	5	0,88
Price Orientation	3	0,76

3.6. Difference Analysis Findings

Based on survey results from 415 adults in Turkey, aged 18 and above, who engage in online shopping and use at least one electronic payment (e-payment) system, the following difference analysis findings stand out:

- General E-Customer Perception appears similar across genders;
- Education level significantly affects E-Customer Perception and its subscales. As education level increases, scores for Perceived Benefit, Perceived Security, Perceived Personalization, Perceived Customer Relationships, and overall E-Customer Perception also rise;
- General E-Customer Perception and its subscales do not exhibit significant differences across age groups;
- General E-Customer Perception and its subscales show no significant association with marital status;
- General E-Customer Perception does not vary significantly across occupational groups. However, specific occupational groups demonstrate notable differences in Perceived Personalization, with public and private sector employees exhibiting higher scores compared to housewives and the unemployed;
- General E-Customer Perception does not show significant variation based on income level;
- The frequency of transactions emerges as a key factor significantly shaping General E-Customer Perception;
- In terms of E-Customer Perception, card payments score higher than other payment platforms;
- No significant gender differences are observed in General Consumer Decision Making Styles;
- As education level increases, Consumer Decision Making Styles become more pronounced, indicating that education significantly shapes individuals' consumption behaviors and decision-making processes;
- General Consumer Decision Making Styles show no statistically significant differences across age groups;
- Marital status does not significantly influence General Consumer Decision Making Styles;
- Retirees and private sector employees exhibit more distinct Consumer Decision Making Styles compared to other groups;
- No significant differences are found across income groups in the General Consumer Decision Making Styles scale;
- Significant differences in General Consumer Decision Making Styles are observed based on e-payment frequency;

- Significant differences are identified in the Consumer Decision Making Styles dimension among users of different e-payment platforms, with card payment users demonstrating a more cautious and analytical approach in their decision-making processes.

3.7. Correlation Analysis Findings

Table 5 presents the Spearman correlation analysis of the scales and their subscales used in this study. The analysis examines the strength and statistical significance of the relationships between the scales.

Overall, the Consumer Decision Making Styles dimension exhibits strong correlations with most other scales, underscoring its central role in understanding consumer behavior. Notably, significant relationships are observed between Consumer Decision Making Styles and E-Customer Perception ($r = 0.756$, $p < 0.001$) and Perfectionism-High Quality Consciousness ($r = 0.865$, $p < 0.001$). These findings indicate that consumers' digital experiences and perceptions of quality exert a substantial influence on their decision-making processes. Specifically, the results suggest that consumers' online interactions and their perceptions of product or service quality are pivotal factors in shaping purchasing decisions. The strong correlation with E-Customer Perception highlights the extent to which decision-making processes in digital shopping platforms reflect consumers' online experiences. However, the relationship with Perfectionism-High Quality Consciousness emphasizes that the importance consumers place on quality is a key determinant in shaping their decision-making styles. This suggests a tendency among consumers to gravitate toward higher-quality and prestigious products in both online and traditional shopping contexts. In summary, these findings highlight the importance of brands and retailers considering these factors when shaping customer experiences.

TABLE 5: Correlation Analysis of the Scales and Subscales Used in the Study

Spearman Correlation	1	2	3	4	5	6	7	8	9	10	11
1 - Perceived Benefit	r 1,000										
	p										
2 - Perceived Security	r ,822**	1,000									
	p 0,000										
3 - Perceived Personalization	r ,705**	,657**	1,000								
	p 0,000	0,000									
4 - Perceived Customer Relationships	r ,610**	,626**	,426**	1,000							
	p 0,000	0,000	0,000								
5 - E-Customer Perception	r ,932**	,923**	,784**	,722**	1,000						
	p 0,000	0,000	0,000	0,000							
6 - Perfectionism-High Quality Consciousness	r ,653**	,593**	,539**	,602**	,681**	1,000					
	p 0,000	0,000	0,000	0,000	0,000						
7 - Brand Orientation	r ,530**	,556**	,286**	,638**	,575**	,633**	1,000				
	p 0,000	0,000	0,000	0,000	0,000	0,000					
8 - Fashion Orientation	r ,546**	,573**	,355**	,568**	,591**	,656**	,697**	1,000			
	p 0,000	0,000	0,000	0,000	0,000	0,000	0,000				
9 - Hedonism Orientation	r ,561**	,454**	,623**	,398**	,568**	,555**	,317**	,395**	1,000		
	p 0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000			
10 - Price Orientation	r ,585**	,530**	,456**	,497**	,591**	,662**	,614**	,644**	,519**	1,000	
	p 0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000		
	r ,717**	,687**	,530**	,657**	,756**	,865**	,814**	,822**	,613**	,787**	1,000

11 - Consumer Decision Making Styles											
p	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Note: ** indicates significance at the 0.001 level											

3.8. Regression Analysis Findings

Table 6 presents the regression analysis of the scales used in this study. The analysis examines the relationship between the dependent variable, Consumer Decision Making Styles, and the independent variable, E-Customer Perception.

According to the model summary, the variance explained by the model (R^2) is 0.558. This indicates that 55.8% of the variability in Consumer Decision Making Styles is accounted for by E-Customer Perception in the given context. The adjusted R^2 value of 0.557 further suggests that the explanatory power of E-Customer Perception on Consumer Decision Making Styles remains consistent, even when unnecessary variables are not included in the model.

The ANOVA table for the regression analysis reveals that the model is statistically significant ($F(1, 413) = 522.403$, $p < 0.001$). This demonstrates that E-Customer Perception has a significant effect on Consumer Decision Making Styles and that the model is overall statistically meaningful.

Examining the model coefficients, the standardized coefficient (Beta) for E-Customer Perception is 0.747, which is highly statistically significant ($t = 22.856$, $p < 0.001$). This indicates a strong positive effect of E-Customer Perception on Consumer Decision Making Styles. In other words, an improving in Customer Experience Perception can positively influence consumers' decision-making styles.

TABLE 6: Regression Analysis of the Scales Used in the Study

Model Summary						
Model	R	R ²	Adjusted R ²	Std. Error of the Estimate		
1	,747a	0,558	0,557	0,48632		
Independent Variable: E-Customer Perception						
ANOVA ^a						
	Model	Sum of Squares	df	Mean Square	F	p
1	Regression	123,552	1	123,552	522,403	,000b
	Residual	97,677	413	0,237		
	Total	221,229	414			
^a Dependent Variable: Consumer Decision Making Styles						
^b Independent Variable: E-Customer Perception						
Coefficients ^a						
	Model	Unstandardized Coefficients		Standardized Coefficients	t	p
		B	Std. Error	Beta		
1	(Constant)	0,899	0,117		7,651	0,000
	Customer Experience	0,732	0,032	0,747	22,856	0,000
^a Dependent Variable: Consumer Decision Making Styles						

4. DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

4.1. Discussion

In summary, the findings suggest that e-payment system providers should develop strategies that consider users' demographic and socioeconomic characteristics. Enhancing education levels, strengthening perceived security, and offering personalized services could increase the adoption of e-payment systems and improve consumer satisfaction (Yeşilkuş, 2020). Furthermore, delivering high-quality and reliable services tailored to the expectations of young, educated consumers is crucial for fostering loyalty within this consumer segment. These findings offer valuable guidance for refining marketing strategies for e-payment systems and better addressing consumer needs (Erdem, 2016; Ayhan Gökçek, 2019).

The research results provide significant insights into the complex relationships between e-payment systems and consumer behavior. Correlation and regression analyses elucidate how consumer perceptions and decision-making processes are shaped by e-payment systems.

According to the correlation analysis, a very strong relationship exists between Perceived Benefit and E-Customer Perception ($r = 0.932$, $p < 0.001$). This indicates that users' e-customer experiences significantly influence the benefits they perceive. The benefits provided by e-payment systems positively shape the overall customer experience, contributing to consumer satisfaction and loyalty. Additionally, the high correlation between Perceived Security and Perceived Benefit ($r = 0.822$, $p < 0.001$) is noteworthy. Security concerns directly impact the perceived benefits of e-payment systems, underscoring the need for e-payment providers to prioritize security measures.

The strong correlation between Perceived Personalization and E-Customer Perception ($r = 0.784$, $p < 0.001$) highlights the critical role of personalized services in shaping consumer experiences. Users tend to place greater value on services tailored to their needs, which enhances their loyalty to e-payment systems.

Significant correlations between Perfectionism-High Quality Consciousness and both E-Customer Perception ($r = 0.681$, $p < 0.001$) and Consumer Decision Making Styles ($r = 0.865$, $p < 0.001$) emphasize the influence of quality perceptions on consumer behavior. Consumers with a high quality consciousness place greater importance on the reliability and service quality of e-payment systems, directly affects their decision-making processes.

The robust correlations between Consumer Decision Making Styles and E-Customer Perception ($r = 0.756$, $p < 0.001$) and Perfectionism-High Quality Consciousness ($r = 0.865$, $p < 0.001$) demonstrate the sensitivity of consumer decision-making processes to factors such as e-customer experience and quality perception. These findings indicate that consumers consider both experience and quality when selecting e-payment platforms.

The regression analysis reveals that E-Customer Perception, as an independent variable, has a significant effect on Consumer Decision Making Styles, the dependent variable. The model's explained variance ($R^2 = 0.558$) indicates that 55.8% of the variability in Consumer Decision Making Styles is accounted for by E-Customer Perception. This underscores the substantial influence of customer experience perception on consumer decision-making styles.

Specifically, the determining effects of Perceived Benefit, Perceived Security, and Perceived Personalization on both E-Customer Experience and Consumer Decision Making Styles suggest that e-payment providers should align their strategies accordingly. Investing in security measures, offering personalized services, and enhancing the overall customer experience can increase the adoption of e-payment systems and boost consumer satisfaction.

The success of e-payment systems hinges on factors such as perceived benefit, security, and personalization. Improving these elements can enhance consumer loyalty and engagement, thereby promoting broader adoption of e-payment systems. These findings serve as a roadmap for developing marketing strategies for e-payment systems and addressing consumer needs more effectively.

4.2. Conclusion

The influence of electronic payment (e-payment) systems on economic growth manifests in multiple ways and can be analyzed by considering factors such as increased consumer spending, expanded financial inclusion, enhanced productivity, and the reduction of the informal economy.

Hasan, De Renzis, and Schmiedel (2012) argue that digital payments not only facilitate the growth of consumer spending but also contribute significantly to overall economic progress.

According to Demirgüç-Kunt, Klapper, Singer, and Ansar (2018), the widespread adoption of financial inclusion is a critical factor in ensuring the sustainability of economic growth.

Bounie, François, and Waelbroeck (2016) assert that digital payment systems enhance business efficiency, thereby generating positive effects on economic growth. A primary example is the optimization of financial processes through automated payment systems, which ensure timely and accurate invoice payments.

Secure payment systems foster a safe shopping environment by protecting users' personal and financial information.

The positive effects of e-payments on economic growth are clearly evident through various outcomes, including increased consumer spending, greater financial inclusion, improved productivity, and reduced informal economic activities. Furthermore, the widespread adoption of e-payment systems stems from their inherent advantages, such as enhanced security measures, accelerated transaction speeds, cost-effectiveness, and superior user experiences.

This study evaluated the role of electronic payment (e-payment) systems within the e-commerce ecosystem and the competitive dynamics among these systems, focusing on the context of consumer preferences and perceptions. The research findings underscore the significant influence of e-payment systems on consumer decision-making processes and reveal how these systems are perceived by users.

A key finding of the study is that demographic characteristics substantially affect the usage of e-payment systems. Female participants demonstrate greater utilization of e-payment systems compared to their male counterparts. Individuals with higher education levels tend to evaluate e-payment systems more favorably and use them more frequently. Additionally, younger age groups exhibit more intensive use of e-payment systems and display a more positive attitude toward them. These findings illustrate how demographic factors shape interest in and adoption of e-payment systems.

A strong relationship exists between E-Customer Perception and Perceived Benefit. The perceived benefits users derive from e-payment systems positively influence their overall customer experience. This suggests that the practicality and convenience offered by e-payment systems in users' daily lives have a significant impact on overall satisfaction. Furthermore, a high correlation is observed between Perceived Security and Perceived Benefit. Security concerns directly influence the perceived benefits of e-payment systems, highlighting the critical role of security measures in the success of these systems.

The strong correlation between Perceived Personalization and E-Customer Perception indicates that personalized services play a vital role in shaping consumer experiences. Users attribute greater value to services tailored to their needs, which enhances their loyalty to e-payment systems. Additionally, notable correlations between Perfectionism-High Quality Consciousness and both E-Customer Perception and Consumer Decision Making Styles emphasize the impact of quality perceptions on consumer behavior. Consumers with a high-quality consciousness place greater emphasis on the reliability and service quality of e-payment systems, directly influencing their decision-making processes.

4.3. Recommendations

Based on the research findings, it is recommended that e-payment system providers develop strategies that account for users' demographic and socioeconomic characteristics. Given the notable interest of women and younger individuals in e-payment systems, tailored marketing strategies should be designed to target these

groups specifically. Enhancing education levels, reinforcing perceived security, and offering personalized services could increase the adoption of e-payment systems and elevate consumer satisfaction.

E-payment providers must place significant emphasis on security measures. Users' security concerns directly influence the perceived benefits they derive from e-payment systems. Consequently, maintaining high security standards and continually monitoring innovations in this domain are imperative. Furthermore, recognizing the importance of personalized services, solutions should be offered that align with users' individual needs and preferences.

Finally, achieving success in e-payment systems requires a focus on factors such as perceived benefit, security, and personalization. Improving these elements can enhance consumer loyalty and engagement, thereby facilitating broader adoption of e-payment systems across diverse populations. These findings provide valuable guidance for the development of marketing strategies for e-payment systems and for addressing consumer needs more effectively.

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