SILESIAN UNIVERSITY OF TECHNOLOGY PUBLISHING HOUSE

SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY 2026
ORGANIZATION AND MANAGEMENT SERIES NO. 250

PSYCHOLOGICAL ASPECTS OF MARKET STRATEGIES IN E-COMMERCE

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Purpose: The purpose of this article is to identify and analyze the psychological determinants of consumer behavior in e-commerce from a dynamic (2018-2025) and comparative perspective, taking into account differences between markets with varying levels of digital maturity.
Design/methodology/approach: The study is based on an analysis of secondary data, consisting of a systematic review of industry reports and analytical studies. A mixed-methods approach was employed, combining qualitative and quantitative analysis, including trend analysis, comparative analysis, and elements of content analysis across selected markets (Poland, Germany, the U.S., and China).
Findings: The results indicate a shift in purchasing motivations from utilitarian to hedonic, a decline in the importance of technological risk in favor of quality-related risk, and a growing role of trust as a mediator of purchasing decisions. An increase in the importance of emotions and impulsivity was also observed, particularly in highly developed markets. The COVID-19 pandemic accelerated the transition from a rational model to a heuristic-emotional one, although these processes varied depending on cultural context and the level of market maturity.
Originality/value: The originality of this study lies in combining a dynamic (2018-2025) and cross-market perspective to analyze psychological determinants of consumer behavior in e-commerce. The paper demonstrates how the COVID-19 pandemic accelerated the shift from rational to heuristic-emotional purchasing behavior and shows that the intensity of these changes differs depending on market maturity and cultural context.
Keywords: e-commerce, consumer, shopping psychology, emotions, motivations, risk, trust.
Category of the paper: Research paper.

1. Introduction

Online shopping has become an integral part of modern consumer behavior, and online store revenues have been steadily increasing year after year (Laudon, Traver, 2023). Although the purchasing process in the digital environment appears relatively simple—consisting of selecting a product, adding it to the cart, making a payment, and arranging delivery—consumer decisions are, in reality, shaped by numerous psychological factors (Solomon, 2018). Buyers are guided not only by the product or service itself but also by the overall experience associated with interacting with a given brand (Lemon, Verhoef, 2016; Schmitt, 2010). Despite the growing body of research on e-commerce, there remains a need for a comprehensive analysis of these determinants from a dynamic and comparative perspective, taking into account differences between markets at varying stages of development (Duan et al., 2012; Hajli, 2015; Ladhari et al., 2019). A significant factor influencing the transformation of consumer behavior was the COVID-19 pandemic, which accelerated the digitization process and increased the intensity of online channel usage. As a result of mobility restrictions and the temporary closure of traditional retail outlets, consumers were forced to adapt to the digital environment, leading to lasting changes in their purchasing behavior (Guthrie et al., 2021; Gu et al., 2021). The literature emphasizes that the pandemic not only increased the scale of e-commerce usage but also altered the structure of purchasing decision determinants, leading to a rise in the importance of psychological factors such as emotions, trust, and risk perception (Laato et al., 2020; Alwan et al., 2023). These changes are reflected, among other things, in an increase in the frequency of online shopping, the growing importance of convenience, and the heightened role of user experience in the decision-making process (Gu et al., 2021). At the same time, uncertainty and emotional tension have increased, influencing consumer behavior and leading, among other things, to a rise in impulse purchases and compensatory behaviors (Laato et al., 2020).

The aim of this article is to analyze the psychological aspects of consumer behavior in e-commerce from a comparative and dynamic perspective, covering the years 2018-2025. To achieve this objective, the following research questions were formulated:

RQ1: How have purchasing motivations in e-commerce changed, and has there been a shift from utilitarian to hedonic motivations?

RQ2: What psychological mechanisms influence the reduction of risk perception, and has there been a shift from technological risk to quality-related risk?

RQ3: To what extent does trust serve as a mediator between risk perception and the purchasing decision?

RQ4: What role do emotions play in purchasing decisions in e-commerce, and is their importance increasing?

RQ5: What psychological factors determine impulsive purchasing in e-commerce?

The formulated research questions provide the basis for a comprehensive analysis of the psychological determinants of consumer behavior in e-commerce. Their verification enables the identification of changes in purchasing patterns, risk perception, trust, emotions, and impulsive behavior in the digital environment, taking into account differences between markets with varying levels of digital maturity.

2. Theoretical Background and Hypotheses

The rapid growth of e-commerce in recent decades has led to significant changes in consumer behavior, making the online environment one of the key areas of analysis in management and marketing studies. The rise of e-commerce is associated with the development of digital technologies and the increasing availability of the internet, which have transformed traditional models of purchasing decision-making (Laudon, Traver, 2023). The modern consumer operates simultaneously in both offline and online environments, and the boundaries between these spaces are becoming increasingly blurred (Żmijowska, 2023). The literature emphasizes that purchasing decisions in e-commerce are determined not only by economic factors but also by complex psychological mechanisms. Constructs such as trust, perceived risk, and the usability and ease of use of purchasing systems are of key importance (Gefen et al., 2003; Pavlou, 2003). Trust plays a particularly important role in the online environment, where the lack of direct contact with the product and the seller increases uncertainty, potentially limiting the propensity to purchase. At the same time, a high level of trust significantly reduces perceived risk and facilitates purchasing decisions (Pavlou, 2003). Another important area of research concerns the cognitive processes that influence online consumer behavior. Consumers often rely on simplified decision-making strategies (heuristics), basing their choices on other users' opinions, product ratings, or system recommendations (Lemon, Verhoef, 2016). Social proof is particularly significant in this context, as it serves as an important mechanism for reducing risk under conditions of information uncertainty and supports purchasing decisions (Cialdini, 2009). At the same time, the literature points to the growing role of emotions in the online purchasing process. The digital environment fosters impulsive purchases, which are stimulated by factors such as the visual appeal of websites, limited-time promotions, and personalized offers (Verhagen, van Dolen, 2011). Positive emotions, such as pleasure or excitement, can increase the likelihood of a purchase, whereas negative emotions such as frustration resulting from navigation difficulties can lead to transaction abandonment (Rose et al., 2012). Another key element is the customer experience, which encompasses all user interactions with a brand throughout the purchasing process. As Lemon and Verhoef (2016) point out, customer experience is multidimensional and includes cognitive, emotional, and behavioral components. Positive user experiences, resulting from factors such as an intuitive interface, website speed, and efficient logistics, lead to increased customer satisfaction and loyalty (Homburg et al., 2017). In the context of technological development, the personalization of offerings and the use of user data are also gaining importance. Recommendation systems enable the adaptation of content and products to individual consumer preferences, thereby increasing the effectiveness of marketing activities and enhancing user engagement (Adomavicius, Tuzhilin, 2005). At the same time, challenges related to privacy protection and data security are emerging, which may affect the level of consumer trust in e-commerce platforms (Martin, Murphy, 2017).

3. Research Methodology, Research Subject and Research Sample

This study is based on secondary data analysis and was conducted as a systematic review of industry reports and analytical studies on the e-commerce market (Johnston, 2014; Snyder, 2019). The research approach combines elements of qualitative and quantitative analysis, enabling both the identification of statistical trends and the interpretation of the psychological determinants of consumer behavior (Creswell, 2014; Tashakkori, Teddlie, 2010).The process of selecting research material (table 1) was purposeful and involved identifying sources that met specific quality and substantive criteria, including the credibility of the publishing institution, the periodicity of reports enabling the analysis of changes over time, the comparability of data across countries, and their thematic relevance to the phenomenon under study (Tranfield et al., 2003).

Table 1.
Selection of Countries and Analytical Sources

Country	Characteristics of the E-commerce Market	Key Reports (2018–2025)
Poland	Developing market, dynamic growth after the pandemic	Gemius – *E-commerce in Poland* (annual reports 2018–2025); IAB Poland – annual reports; PwC – consumer reports
Germany	Mature market, high level of trust	HDE – *Online Monitor* (2018–2025); Statista – e-commerce reports; Deloitte – retail reports
USA	Highly developed market, high level of innovation	U.S. Census Bureau – e-commerce statistics (2018–2025); McKinsey & Company – consumer reports; Statista – global data
China	Highly digitized market, development of social commerce	Alibaba Group – annual reports (2018–2025); Deloitte – China e-commerce; Statista – Asia e-commerce data

Source: own research.

The e-commerce markets selected for analysis exhibit significant diversity in terms of their level of development, digital maturity, and cultural factors influencing consumer behavior. Poland serves as an example of a developing market, characterized by the dynamic growth of e-commerce and a gradual transformation of consumer behavior (Dąbrowska et al., 2020). Germany represents a mature market, distinguished by a high level of consumer trust and well-developed digital infrastructure (Haucap, Heimeshoff, 2014). The United States and China are among the most advanced e-commerce markets, where technological innovation, personalization, and the expansion of mobile and social commerce play a crucial role, as reflected in the literature on contemporary e-commerce models (Verhoef et al., 2015; Lemon, Verhoef, 2016; Huang, Benyoucef, 2013).The analysis was conducted longitudinally, covering the years 2019–2025, which allows for the identification of changes occurring before, during, and after the COVID-19 pandemic. A comparative perspective was adopted, enabling the identification of similarities and differences in consumer behavior across the selected markets.

4. Presentation of research results

An analysis of industry reports from 2018 to 2025 reveals significant variations in consumer purchasing motivations depending on the level of e-commerce market development. The results of these analyses are presented in Table 2.

Table 2.
Evolution of Purchasing Motivations in E-commerce (2018-2025)

Country	Dominant Motivations (2018-2019)	Direction of Change (2018-2025)	Dominant Motivations (2023-2025)	Nature of Purchasing Decisions
Poland	Price, ability to compare offers, promotions	Clear shift from price toward convenience and availability; increased importance of order fulfillment speed	Convenience, delivery speed, product availability	From rational to mixed (rational-emotional)
Germany	Quality, transaction security, delivery reliability	High stability of motivations; slight changes over time	Quality, trust, logistical reliability	Rational, quality-oriented, planned
USA	Convenience, wide selection, availability	Strong increase in the importance of user experience, personalization, and simplification of the purchasing process	Personalization, user experience, speed	Emotional-experiential, partially impulsive
China	Convenience, mobile shopping, access to platforms	Dynamic development of e-commerce integration with social media; increasing importance of recommendations and instant purchasing	Social commerce, recommendations, immediacy of purchase	Technological-social, impulsive

Source: own research.

In Poland, a clear shift in the structure of purchasing motivations can be observed—from the dominance of economic factors, particularly price and the ability to compare offers, toward the increasing importance of convenience, availability, and order fulfillment speed (Gemius, 2020, 2023; IAB Polska, 2022). This reflects a gradual departure from a decision-making model based solely on economic criteria. The literature on online consumer behavior confirms this trend, emphasizing the growing role of both hedonic and utilitarian motivations in the purchasing decision-making process (Childers et al., 2001; Limayem et al., 2000). In the German market, purchasing motivations exhibit greater stability over time. Consumers continue to be guided primarily by product quality, delivery reliability, and transaction security, as confirmed by report data (HDE, 2021; Statista, 2023). Such behavioral patterns are characteristic of mature markets, where purchasing decisions tend to be more rational and planned, as reflected in studies on trust and risk perception in the e-commerce environment (Gefen et al., 2003). In the United States, a clear shift toward motivations related to the user experience can be observed. Factors such as personalized offers, fast delivery, and a simplified purchasing process play a key role (McKinsey & Company, 2021; U.S. Census Bureau, 2023). As a result, purchasing decisions are increasingly driven by situational and emotional factors, which aligns with the concept of the growing importance of customer experience and its influence on the decision-making process (Lemon, Verhoef, 2016). The most advanced model of purchasing motivation is evident in China, where online shopping is strongly integrated with social media and digital platforms. Consumer decisions are often influenced by recommendations, user reviews, and influencer activity, as confirmed by industry reports (Alibaba Group, 2022; Deloitte, 2023). In the literature, this phenomenon is referred to as social commerce, in which social factors and user interactions play a key role in shaping purchasing behavior (Huang, Benyoucef, 2013).

In addition to these findings, the analysis also included an examination of risk perception (Table 3), which revealed a systematic decline in perceived risk associated with online shopping across all countries studied, with the most pronounced changes observed in Poland.

Table 3.
Changes in Consumer Risk Perception in E-commerce

Country	Dominant Sources of Risk (2018-2019)	Direction of Change (2018-2025)	Dominant Sources of Risk (2023-2025)	Risk Level	Nature of Risk
Poland	Payment security, data protection, lack of trust in sellers	Clear decline in technological risk; increasing importance of shopping experience	Product quality, consistency with description, returns handling	Medium (decreasing)	Shift from technological to quality-related risk
Germany	Transaction security, data protection	Stabilization at a low level of risk; minor changes over time	Product quality, delivery reliability	Low	Primarily quality-related
USA	Transaction security, data privacy	Decline in the importance of technological risk; increasing importance of customer experience	Product quality, customer service, shopping experience	Low	Quality-experiential
China	Seller credibility, product authenticity	Transformation of risk toward a social-platform dimension	Product authenticity, user reviews, seller reputation	Differentiated	Social-platform-based

Source: own research.

In the early years of the period under review, consumers in Poland expressed relatively high levels of concern regarding transaction security, personal data protection, and product conformity with the description. In subsequent years, however, as digital infrastructure developed and user experience improved, the level of perceived risk declined significantly (Gemius, 2020, 2023). This trend is consistent with research findings indicating that increasing consumer experience and familiarity with the online environment lead to a reduction in perceived risk and a greater propensity for online shopping (Gefen et al., 2003; Pavlou, 2003). Compared to Poland, the German and U.S. markets are characterized by relatively low levels of perceived risk, which stem from their high maturity and well-developed consumer protection mechanisms. Consumers in these countries perceive online shopping as safe and predictable, and their main concerns relate more to product quality or after-sales service than to the transaction process itself (HDE, 2021; Statista, 2023; U.S. Census Bureau, 2023). The literature emphasizes that a high level of institutional trust and the standardization of purchasing procedures reduce the significance of technological risk in the decision-making process (Gefen et al., 2003). A different pattern of risk perception is observed in China, where, despite a high level of digitization, risk does not disappear but rather undergoes a transformation. Consumers are less concerned about transaction security itself and instead place greater emphasis on seller credibility, product authenticity, and quality (Alibaba Group, 2022; Deloitte, 2023).

Considering the level of trust (Table 4), it should be noted that during the analyzed period of 2018-2025, consumer trust in online shopping exhibits a clear upward trend, constituting one of the key factors driving the development of the e-commerce market.

Table 4.
Evolution of Consumer Trust in E-commerce

Country	Level of Trust (2018-2019)	Direction of Change	Main Sources of Trust	Nature of Trust
Poland	Moderate	Dynamic increase	User experience, payments, logistics	Adaptive
Germany	High	Stable	Regulations, standards, consumer protection	Institutional
USA	High	Stable / slight increase	Platforms, systems, user experience (UX)	Technological
China	Differentiated	Increasing	User reviews, influencers, platforms	Social

Source: own research.

The increase in trust can be attributed to the accumulation of positive shopping experiences, the widespread adoption of secure payment methods, and the systematic improvement in the quality of logistics services (Gemius, 2020, 2023). This trend is consistent with research findings indicating that trust develops as user experience grows and the number of positive interactions with e-commerce platforms increases (Kim et al., 2008). In more mature markets, such as Germany and the United States, the level of trust has reached relative stability and serves as a structural component of the e-commerce system. In Poland, this process is particularly dynamic and reflects a transition from initial consumer caution to the growing acceptance of shopping in the digital environment. In Germany, trust is underpinned by well-developed institutional mechanisms and a high level of consumer protection (HDE, 2021; Statista, 2023), whereas in the United States, it is closely linked to the functioning of advanced digital platforms and their ability to provide a consistent and predictable shopping experience (McKinsey & Company, 2021; U.S. Census Bureau, 2023). The literature indicates that under such conditions, trust stems from both the perceived usefulness of systems and interface quality, as well as the transparency of the purchasing process (McKnight et al., 2002). A different model of trust-building is observed in China, where its development relies heavily on social mechanisms. Purchasing decisions are strongly influenced by the opinions of other users and influencer activity (Alibaba Group, 2022; Deloitte, 2023). Research indicates that in the context of social commerce, trust is built through social interactions and user-generated content, giving it a distinctly relational character (Lu et al., 2010).

In Poland and Germany, the emotional component (Table 5) remains embedded within rational decision-making and serves a supporting function. Emotions are primarily associated with a sense of comfort, security, and satisfaction with the transaction process, indicating a relative balance between cognitive and affective processing (Gemius, 2023; HDE, 2021). This pattern suggests that, despite the growing importance of user experience, purchasing decisions remain largely rational. The role of emotions takes a different form in the U.S. market, where they become a central element of the decision-making process. The development of advanced personalization systems, dynamic marketing stimuli, and user experience design has led to an increased emphasis on immediate reactions and subjective evaluations of the shopping situation (McKinsey & Company, 2021). In this context, emotions function as a mechanism that reduces the complexity of choice and facilitates decision-making under conditions of limited information processing, as confirmed by classical approaches to hedonic and impulsive consumption (Holbrook, Hirschman, 1982; Beatty, Ferrell, 1998). The most pronounced form of emotional influence is observed in China, where emotions are strongly embedded in the social context. The integration of e-commerce with social media means that emotions are not only individual experiences but also socially constructed and amplified through user reviews, live streaming, and influencer activity (Alibaba Group, 2022; Deloitte, 2023). Under such conditions, the decision-making process becomes more collective and dynamic, with emotions intensified through social interaction mechanisms.

Table 5.
Changes in the Perception of Consumer Emotions in E-commerce

Country	Role of Emotions (2018-2019)	Direction of Change (2018-2025)	Role of Emotions (2023-2025)	Nature of Emotions
Poland	Low, supportive	Increasing importance	Decision-supporting	Affective-rational
Germany	Low to moderate	Slight increase	Complementary	Controlled
USA	Moderate	Strong increase	Dominant	Hedonic, impulsive
China	Moderate	Dynamic increase	Strongly dominant	Socio-emotional

Source: own research.

Compared to the markets analyzed, Poland is characterized by a moderate level of impulse buying. Despite the growing availability of digital tools, consumer decisions remain largely grounded in rational considerations, which limits the extent of spontaneous behavior (Gemius, 2023). A similar, though more pronounced, controlled model is observed in Germany, where a high level of purchase planning and a focus on quality and safety favor reflective decision-making (HDE, 2021). The situation is different in the United States, where impulsivity is a significant element of consumer behavior. The development of personalization technologies, advanced marketing, and user experience design is leading to an increase in the number of decisions made on the spur of the moment (McKinsey & Company, 2021). The online environment, characterized by immediacy and high stimulus intensity, fosters impulsive behavior to a greater extent than traditional channels in this context (Dholakia, 2000; Rook, Fisher, 1995). The highest level of impulsivity is observed in China, where e-commerce is strongly integrated with social media and digital platforms. Mechanisms such as live streams, time pressure, and social recommendations intensify spontaneous purchasing decisions (Alibaba Group, 2022; Deloitte, 2023).

A marked increase in impulsive behavior is one of the most noticeable changes in consumer behavior in the e-commerce environment during the period under review (Table 6).

Table 6.
Evolution of Impulse Buying in E-commerce

Country	Level of Impulsivity (2018-2019)	Direction of Change	Level of Impulsivity (2023-2025)	Determinants of Impulsivity
Poland	Low to moderate	Increase	Moderate	Convenience, availability, promotions
Germany	Low	Slight increase	Low	Planning, rationality, control
USA	Moderate	Significant increase	High	Personalization, user experience (UX), marketing stimuli
China	Moderate	Dynamic increase	Very high	Social commerce, immediacy, time pressure

Source: own research.

Compared to the analyzed markets, Poland is characterized by a moderate level of impulse buying. Despite the growing availability of digital tools, purchasing decisions remain largely anchored in rational considerations, which limits the extent of spontaneous behavior (Gemius, 2023). A similar, though more strongly controlled, model is observed in Germany, where impulsivity remains relatively low. A high level of purchase planning, combined with a strong orientation toward quality and safety, results in more reflective and structured decision-making (HDE, 2021). In the United States, impulse buying reaches a significantly higher level and constitutes an important element of consumer behavior. The development of personalization technologies, dynamic marketing communications, and user experience design has led to an increase in decisions made on the spur of the moment. Under such conditions, impulsivity is reinforced by the ease of access to products and the reduction of cognitive effort associated with the purchasing process (McKinsey & Company, 2021). Research indicates that the online environment, through its immediacy and richness of stimuli, fosters impulsive behavior to a greater extent than traditional sales channels (Dholakia, 2000; Rook, Fisher, 1995). The highest level of impulsivity is observed in China, where online shopping is strongly integrated with social media and digital platforms. Mechanisms such as live streaming, time-limited offers, and social recommendations intensify spontaneous purchasing decisions (Alibaba Group, 2022; Deloitte, 2023). In this context, impulsivity is not solely the result of individual consumer predispositions but rather emerges from the structure of the shopping environment itself, which actively stimulates rapid responses and limits the time available for reflection.

Based on the analyses conducted, a comprehensive overview of changes in consumer behavior in e-commerce was developed, covering three key phases: before the COVID-19 pandemic, during the pandemic, and in the post-pandemic period. This approach makes it possible to capture both the dynamics of change and to identify lasting shifts in the factors influencing purchasing decisions (table 7).

Table 7.
Evolution of Consumer Behavior in E-commerce Before, During, and After the COVID-19 Pandemic

Dimension	Before the Pandemic (until 2019)	During the Pandemic (2020-2021)	After the Pandemic (2022-2025)
Purchasing Motivations	Dominance of price and rationality; search for savings	Strong increase in the importance of availability and necessity of online shopping	Increased importance of convenience, speed, and user experience
Risk Perception	High (especially in developing countries); technological concerns	Decrease in risk resulting from forced adoption of e-commerce	Low technological risk; increasing importance of product quality risk
Trust	Moderate; dependent on experience	Dynamic increase in trust due to intensive usage	High and stable; trust as a standard element of the market
Emotions	Limited role; dominance of rationality	Increased importance of emotions (uncertainty, stress, need for comfort)	Emotions as a constant element of decision-making; shopping as pleasure and mood regulation
Impulsivity	Relatively low; more controlled decisions	Increase in impulsivity (ease of access, greater online exposure)	Sustained impulsivity; reinforced by technology and marketing stimuli
Dominant Consumer Model	Rational	Adaptive (pragmatic)	Emotional (experiential)

Source: own research.

A comparison of changes in consumer behavior before, during, and after the COVID-19 pandemic reveals a significant transformation in how consumers operate within the e-commerce environment. The pandemic period served as a turning point that accelerated digitalization processes and altered the structure of factors influencing purchasing decisions. In particular, a decrease in risk perception and an increase in trust in online shopping were observed, which in subsequent years led to the consolidation of new behavioral patterns. Post-pandemic, the importance of emotional factors and impulsivity is clearly on the rise, indicating a shift from the rational consumer model to one based on experience, emotions, and situational stimuli.

Summary

In summary, the results of this analysis enable us to achieve the article's objective, which was to identify and compare the psychological determinants of consumer behavior in e-commerce from a dynamic and cross-market perspective. The results indicate a clear shift in purchasing motivations from utilitarian to hedonic (PB1), accompanied by a transformation of risk perception from technological to quality- and experience-based (PB2). It was also confirmed that trust plays a significant mediating role between risk perception and the purchasing decision (PB3), stabilizing the decision-making process under conditions of uncertainty. The results also point to a systematic increase in the importance of emotions and impulsive buying (PB4-PB5), which is particularly evident in markets with a high level of digital development. This signifies an evolution toward decision-making models based on heuristics and affective responses, while simultaneously reducing the importance of analytical processing. A comparative analysis confirmed that market maturity and cultural conditions significantly differentiate the nature and intensity of the analyzed mechanisms (PB6), pointing to more rational patterns in European economies and a stronger influence of emotional and social factors in the U.S. and China. At the same time, the results obtained allow us to conclude that the COVID-19 pandemic acted as an accelerator of the observed changes, contributing to the acceleration of the transition from a rational model to a heuristic-emotional one (PB7). Consequently, contemporary consumer behavior in e-commerce is hybrid in nature, combining cognitive, emotional, and social elements, which points to the need for further research into its dynamics and implications for the theory and practice of digital marketing.

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