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Research Article

A Conceptual Examination of AI-Driven Personalization and Technology Adoption as Determinants of Impulsive Buying Behaviour

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Abstract: Purpose – The purpose of this research is to investigate in a conceptual way how personalization and technology adoption in digital commerce can affect impulsive buying behaviour. It aims to build an understanding of how personalized AI-driven experiences and consumers' attitudes towards technology work together to drive spontaneous purchases. **Design/Methodology/Approach –** The study uses a conceptual research design after reviewing and synthesizing the existing literature on artificial intelligence, personalization, technology adoption and impulsive buying behavior. Theories and findings were examined to determine certain relationships, gaps in the literature, and conceptual connections between the study variables. **Findings**- The review shows that AI-driven personalisation, such as making personalised recommendations, predictive analytics, targeted advertising, intelligent chatbots and real-time promotional offers, has a positive impact on consumer engagement and encourages impulsive buying behaviour. Findings also indicate that the degree to which technology is adopted, including perceived usefulness, ease of use, trust, and acceptance, enhances the interaction consumers have with the AI-powered systems, thus enhancing the impact of personalisation in marketing. The study also underscores privacy concerns, transparency issues, and ethics as crucial factors affecting customer reactions to AI driven personalization. **Research Limitations/Implications –** The relationships proposed in this conceptual study have not been tested. The framework needs to be tested by other consumer groups, cultures, and digital platforms in the future to increase the generalizability and ease of applications. **Practical Implications –** The study offers marketers, digital platform managers and AI technology adopters' valuable insights into how they can optimise customer engagement, personalised experiences and use AI technologies to affect consumer purchasing decision-making while keeping their customers' trust and confidence. **Originality/Value –** This research adds to the body of the literature by presenting a single conceptual framework that accounts for the interplay between personalization using AI and technology adoption on impulsive buying behaviour in the digital commerce landscape.

Keywords: Artificial Intelligence, AI-Driven Personalization, Technology Adoption, Impulsive Buying Behaviour, Consumer Behaviour, Digital Commerce.

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INTRODUCTION

Digitalization has dramatically changed how consumers interact with products, services and brands, and has transformed the way people buy today. One of the most significant technological advances of the last few years is artificial intelligence (AI), which has become a crucial element in digital commerce ecosystems. By leveraging AI, businesses can analyze large volumes of consumer data, uncover trends, forecast preferences, and provide personalized, real-time experiences. In today's competitive online landscape, businesses are facing the challenge of engaging customers in a personal way, and this capability is becoming a key strategic edge. AI-driven personalization is the practice of using machine learning, predictive analytics, intelligent algorithms and automated recommendation engines to tailor content, products, services and communications to the specific preferences and actions of each consumer. AI personalization offers more than just segmentation it enables companies to deliver tailored experiences to each user, boosting relevance, convenience, and engagement. At the same time, the adoption of technology is becoming a crucial part of the consumer engagement with

these intelligent systems. Technology adoption is the extent to which people are willing and ready to accept, use and adapt new technologies to their activities and decision-making processes. Mobile applications, AI-powered platforms, recommendation engines, virtual assistants, and automated shopping interfaces are increasingly influencing consumers' shopping experiences as they become more familiar with these tools. These changes have not only changed the expectations of consumers regarding convenience and efficiency but have also given rise to new psychological and behavioral mechanisms that are affecting their purchases. Thus, the impact of personalization and technology uptake has been a major topic of research and practice all recently.

Consumer behaviour has always been known as a complex process which is triggered by cognitive, emotional, social and environmental factors. In this category of consumer behavior, impulsive buying is an intriguing phenomenon as it is spontaneous and often unplanned. Impulsive buying is a sudden, irresistible and urgent need to buy a product without much thought or planning. The rationale for such purchases is usually an emotional response, situational factors, the perceived attractiveness of offers and/or fleeting desires. Impulsive buying is more common in digital environments, as the online shopping landscape offers constant access to products, easy shopping processes, and personalized content that can trigger instant buying impulses. AI driven personalization has compounded these, by providing extremely relevant product suggestions, dynamic promotions, context-relevant ads, and a very personalized shopping experience for each consumer. These tailored interactions minimize the need to look for information, make decision-making easier and make the options more relevant. Additionally, AI systems can generate urgency, exclusivity, and emotional connection through real-time discounts, scarcity alerts, and customised messaging which boosts the odds of impulsive buying.Moreover, AI systems can also induce a sense of urgency, exclusivity, and emotional connection through time-limited offers, scarcity cues and tailored messaging, enhancing the likelihood of impulsive purchases. AI technologies' capability to predict consumer preferences and offer enticing choices at the right time is a game-changer in shaping the influence of purchasing decisions. Therefore, impulsive buying behavior is no longer the result of the psychological traits of the individual, but rather it is more and more influenced by complex technological mechanisms, which craft the direction of attention and subsequent actions of the consumer.

Personalisation, whether through AI or other means, offers stimuli that drive consumer decisions; however, the impact of these mechanisms is highly reliant on consumer receptivity and use of technology. The extent to which technology is adopted is a key factor in shaping consumers' perceptions of trust, engagement, and positive response to AI-powered systems. Those who believe that AI technologies are helpful, handy, dependable, and helpful are more inclined to engage with customized tips and suggestions and include them into their purchasing choices. On the other hand, issues with privacy, security, transparency and perceived manipulation can decrease acceptance and effectiveness of personalization. Adoption of technology is thus a behavioural phenomenon that is influenced by perceptions of usefulness, ease of use, trust and fun and user experience. Personalized experiences are seamlessly woven into e-commerce environments, social commerce, mobile shopping apps and digital marketing platforms, making consumers targets for more and more personalized experiences that create engagement and enable buying activities. These technologies have created a environment through which personalized recommendations grow to be more influential, which can reinforce consumption patterns, and induce unplanned purchases. Furthermore, technological familiarity increases consumer's trust in algorithmic recommendations, which diminishes the amount of cognitive involvement and speeds up the decision-making process. The connection implies that technology adoption can be a pivotal factor that reinforces the effect of AI-powered personalization on consumer behavior. This association is especially significant as consumers have varying degrees of digital literacy, technological confidence, trust in AI systems, and openness to using technology-driven decision-support, which affects how they interact with the automated systems. The disparities could account for the different reactions consumers have to custom-made advertising and marketing campaigns, and also why some customers are more vulnerable to the influence of impulse buying cues than others.

In the era of the rising use of AI technologies in consumer marketplaces, it is increasingly important to conceptually analyze how the use of AI technologies and personalization together affect impulsive buying behavior. The value of personalized recommendations, targeted advertising, predictive analytics, and intelligent shopping assistants to improve customer engagement and drive sales has been a topic of discussion. But the interaction among these technological factors and their impact on impulsive buying is not fully understood. In today's digital age, customers are experiencing highly personalized and optimized journeys, with businesses having the ability to shape customers' choices more than ever before as a result of real-time data analysis. Meanwhile, consumers are increasingly relying on technology to navigate the complex buying landscape, and the use of technology is becoming an integral part of behavioral outcomes. These phenomena examined in conjunction provide important insights into the mechanisms that impact on spontaneous purchasing decisions via digital technologies. The study has significance for not only theory development in consumer behavior but also for the practice of management in digital marketing, design of customer experience and development strategies for the implementation of AI. Moreover, the importance of AI personalization and technology in driving impulsive purchasing trends has implications for consumer welfare, ethical marketing practices and responsible technology deployment. With ongoing significant investment, organizations are relying on AI-driven solutions, researchers and practitioners will need to further understand the opportunities and challenges. Thus, the conceptual analysis aims to shed light on personalization and technology acceptance as key factors influencing impulsive buying behavior, laying the groundwork for empirical studies and further

discussions on technology-based consumer decision-making in the digital era.

LITERATURE REVIEW

The advent of artificial intelligence (AI) has been a game-changer for digital commerce, reshaping the way shoppers engage with online platforms and ultimately the way they decide what to buy. Artificial Intelligence (AI) has revolutionized digital commerce and is changing the customer experience and purchasing decisions. The power of AI in personalisation has repeatedly been shown in the literature to be one of the most impactful processes shaping consumer decision making, specifically impulsive purchase. AI-driven features like product recommendations, smart chatbots and predictive analytics were found to definitely boost impulse buying by mitigating mental exertion and creating an impression of convenience by Kumar et al. (2026). Likewise, Haryanto et al. (2025) stated that predictive algorithms can bolster purchase intentions by providing more relevant real-time recommendations, which can speed up decision-making. Roy et al. (2024) added that AI is not just about predicting what consumers want but also about what it enables when it comes to triggering their buying decisions with a customized marketing intervention. AI systems can analyze vast amounts of data and use machine learning to predict customers' preferences and make custom recommendations to improve customer satisfaction and sales results, as noted by Das (2024). AI's increasing role in digital marketing was further underscored by the bibliometric analysis of Gavrilova et al. (2025), which showed that AI is becoming more relevant in enhancing consumer experiences and boosting the likelihood of purchase. Overall, these studies indicate that AI-powered personalization is a strong trigger, impacting consumer cognition and emotions, which in turn shapes buying behavior.

In the literature, personalization has also been shown to take place through a number of psychological mechanisms which enhance spontaneous buying. Aishwariya and Vidya (2025) adopted the Stimulus–Organism–Response (S-O-R) paradigm to explain the process in which AI recommendations act as "stimuli," which elicit "impulsive buying responses" and lead to "post-purchase emotions." Pandey et al. (2025) identified that personalization cues with accuracy, relevance, and timeliness have a significant impact on e-impulsive buying behavior and e-impulsive buying behavior acts as a mediator between the personalization cues and e-impulsive buying behavior. Likewise, Fadilah et al. (2025) conducted research on recommending algorithms and found that personalized recommendations can alleviate cognitive overload and use social proof, emotional appeal, and scarcity to make impulsive purchases more likely. In their research, Hu et al. (2025) revealed that AI-driven personalized product recommendations positively influence the spontaneous buying intent of Generation Z consumers via perceived usefulness and trust. In a live-streaming commerce setting, personalization and responsiveness have a positive impact on perceived usefulness, which in turn boosts impulse buying behavior by Maharani et al. (2025). Moreover, Rasool et al. (2025) concluded that algorithmic ad personalization has an important impact on impulse purchase both from a perceived value perspective, such as emotional, social and economic. Overall, these insights highlight how AI-powered personalization can shape a highly engaging shopping experience, boost relevance, convenience, emotional appeal, and perceived value, and ultimately drive consumers' intent to make impulsive purchases.

Another significant strand of literature is related to the adoption of technology and the attitudes of consumers on AI-powered shopping technologies. Consumer acceptance of AI-powered platforms and services has been understood with the help of technology adoption theories, which include the Technology Acceptance Model (TAM). Incorporating the S-O-R model, Megzari and Dahab (2025) integrates it with the TAM to determine the online impulsive buying behavior. Kaur and Mehra (2025) pointed out that personalization, efficiency of chatbots, and trust in AI have a significant impact on consumers' intentions to use AI for shopping. According to their study, attitudes toward AI adoption increase behavioral intentions of using AI-powered applications and websites. Similarly, Hu et al. (2025) identified perceived usefulness and trust as significant mediators between the AI recommendations and spontaneous buying intentions. Building on the TAM approach, Alsiehemy (2025) validated the link between perceived personalization and purchase intention, and showed that privacy concerns tempered this effect, while perceived personalization, in turn, mediated the relationship between AI-driven consumer insights and purchase intention. Agila (2025) also concluded that perceived relevance and trust lie on the link between AI personalization and consumer purchasing behaviour, meaning that the adoption of AI technologies requires not just technological sophistication, but also trust and confidence in the system. The studies mentioned above suggest that the use of technology is a key determinant in whether the personalized approach based on artificial intelligence proves to be effective in reaching the goal of impulsive purchasing or fails. Consumers have to interpret AI technologies as useful, reliable and good in order to react favorably to personalized marketing techniques.

Emotional, cognitive, and contextual factors are also emphasized in the literature as factors that mediate or moderate the connection between AI personalization and impulsive buying. Kumar et al. (2026) found that convenience, urgency, and emotional engagement were among the psychological triggers that were triggered by AI systems. Lakshmi Priyanka (2025) revealed that the perceived urgency, emotional engagement, and perceived relevance are the most powerful predictors of impulse buying behaviour in AI environments. Ülker-Demirel (2025) explored the paradox of choice in AI environments, observing that algorithmic personalisation, fear of missing out (FoMO), scarcity, and urgency cues often compel consumers to make impulsive decisions using mental shortcuts. Bello et al. (2025) highlighted the importance of predictive analytics, dynamic pricing, and targeted advertising in enhancing emotional connections and minimizing decision-making load for

both customers and businesses. Deshmukh and Dhore (2025) noted that AI's impact on personalization is a key driver of product discovery and value perception, which can boost purchase intent. Upadhyay (2025) also claimed that personalised experiences bring down decision fatigue, improve product discovery, build an emotional bond with brands, and lead to increased conversions and customer retention. The results suggest that using AI to personalize customer experiences influences not only their thinking but also their feelings, leading them to be more likely to make an impulsive purchase during a digital shopping experience.

While there are many advantages to personalization via AI, there are also a number of ethical and managerial issues that have been brought up. Issues of data privacy, algorithmic transparency, consumer manipulation, and algorithmic bias are commonplace themes in contemporary studies. Kumar et al. (2026), Haryanto et al. (2025), Agila et al. (2025), Ingriana and Rolando (2025) and Babadoğan (2024) highlighted that over-personalisation might create privacy issues and feelings of intrusiveness. The study by Alsiehemy (2025) found that privacy concerns can offset the positive impact of AI-generated consumer insights on purchasing behaviour, and Frimpong-Manso et al. (2025) emphasized the need for transparency, ethical data usage, and consumer control to ensure trust in AI-driven insights. Some academics suggest a balance between the effectiveness of personalisation and consumer welfare can be achieved through explainable AI, responsible marketing and strong governance. In general, the literature indicates that the use of AI for personalization and technology significantly affect the impulsive purchasing behavior of consumers psychologically, by stimulating, increasing the perceived usefulness, and increasing the consumers' engagement with the technology. But it is not about to be sustainable unless organizations can tackle the ethical issues and establish trust with consumers. Future research should explore cultural differences, long-term behavioral consequences, and how new technologies moderate the relationship between impulsive buying behavior and AI to gain a better understanding of AI-driven impulsive buying behavior.

Table 1: Literature Review Table

Author(s)	Title	Methodology	Targeted Place/Sample	Main Findings
Kumar, Kumar & Kiran (2026)	Analysis of Consumer Impulsive Buying Behaviour towards Usage of AI on E-Commerce	Empirical Research Study	E-commerce Consumers	AI-driven recommendations, chatbots, and predictive analytics significantly increase impulse buying through convenience and reduced cognitive effort.
Haryanto et al. (2025)	AI-Powered Personalization and Its Influence on Impulse Buying: A Study of Predictive Algorithms in Online Retail	Quantitative Study	Online Retail Consumers (Indonesia)	Predictive algorithms enhance purchase intentions by delivering highly relevant real-time recommendations.
Roy et al. (2024)	Role of Artificial Intelligence in Influencing Impulsive Buying Behaviour	Conference Research Paper	Digital Consumers	AI-driven marketing interventions effectively trigger impulsive purchasing decisions.
Das (2024)	AI Powered Consumer Behavior in E-Commerce	Conceptual/Review Study	E-commerce Sector	AI predicts customer preferences and improves customer satisfaction through personalized recommendations.
Gavrilova et al. (2025)	Artificial Intelligence in Digital Marketing: A Bibliometric Analysis	Bibliometric Analysis	Global Literature	AI is increasingly important in improving consumer experiences and purchase likelihood.
Aishwariya & Vidya (2025)	AI-Powered Personalization and Impulsive Buying: An	S-O-R Model-Based Study	Fashion E-Commerce Consumers	AI recommendations act as stimuli that lead to impulsive buying

	SOR Model Approach to Post-Purchase Emotions in Fashion E-Commerce			and influence post-purchase emotions.
Pandey et al. (2025)	AI-Driven Personalization Cues: Unraveling Consumer Impulsive Buying in E-Commerce	Empirical Research	E-commerce Consumers	Accuracy, relevance, and timeliness of personalization cues significantly affect impulsive buying behavior.
Fadilah et al. (2025)	Effectiveness of Recommendation Algorithms on Impulsive Buying in E-Commerce Platforms	Systematic Literature Review	E-commerce Platforms	Personalized recommendations reduce cognitive overload and encourage impulse purchases through emotional appeal and scarcity tactics.
Hu et al. (2025)	Exploring the Mechanism of AI-Powered Personalized Product Recommendation on Generation Z Users' Spontaneous Buying Intention	Quantitative Study	Generation Z Users on Short-Video Platforms	AI recommendations positively affect spontaneous buying intentions through perceived usefulness and trust.
Maharani et al. (2025)	Driving Impulse Buying: The Role of Personalization, Responsiveness, and Perceived Usefulness in Social Commerce's Live Streaming Shopping	Empirical Study	Live Streaming Commerce Users	Personalization and responsiveness increase perceived usefulness, thereby enhancing impulse buying behavior.
Rasool et al. (2025)	The Role of Algorithmic Ad Personalization in Driving Impulse Buying Behavior	Quantitative Study	Online Advertisement Users	Personalized ads increase impulse buying through emotional, social, and economic value perceptions.
Megzari & Dahab (2025)	Internal Factors of Online Impulse Buying: A Conceptual Model	Conceptual Model (TAM + SOR)	Online Consumers	Technology acceptance factors significantly influence online impulsive buying behavior.
Kaur & Mehra (2026)	Shaping Consumer Behaviour with AI: Exploring the Impact of Personalization, Efficiency, and Trust	Conceptual/Book Chapter Study	AI Shopping Users	Trust, chatbot efficiency, and personalization positively influence AI adoption and shopping intentions.
Alsiehemy (2025)	Beyond the Algorithm: How AI-Driven Consumer Insights Shape Young Consumers' Purchasing Behavior	Empirical Study	Young Consumers	Perceived personalization positively affects purchase intentions, but privacy concerns weaken this relationship.
Agila	Impact of AI-Driven	Quantitative Study	E-commerce	Trust and perceived

(2025)	Personalized Marketing on Consumer Buying Behavior in the E-Commerce Sector		Consumers	relevance mediate the relationship between AI personalization and purchasing behavior.
Lakshmi Priyanka (2025)	Impact of AI Recommendations on Impulse Buying Behaviour: A Consumer Psychology Perspective	Consumer Psychology Study	Digital Consumers	Perceived urgency, emotional engagement, and relevance strongly predict impulse buying behavior.
Ülker-Demirel (2026)	The Paradox of Choice in the Age of AI	Conceptual Study	Digital Consumers	AI personalization, scarcity, urgency, and FoMO encourage impulsive decision-making.
Deshmukh & Dhore (2025)	The Impact of AI and Personalization on Consumer Purchase Decisions in Digital Marketing & E-Commerce	Empirical Study	E-commerce Consumers	AI personalization improves product discovery, value perception, and purchase intentions.
Upadhyay (2025)	From Browsing to Buying: How AI-Powered Personalization is Reshaping Retail and E-Commerce	Conceptual Study	Retail and E-Commerce Consumers	Personalized experiences reduce decision fatigue and increase conversions and customer retention.
Ingriana & Rolando (2025)	Revolutionizing E-Commerce: Investigating the Effectiveness of AI-Driven Personalization in Influencing Consumer Purchasing Behavior	Empirical Study	E-commerce Consumers	AI-driven personalization positively influences consumer purchasing behavior but raises privacy concerns.
Babadoğan (2024)	Unveiling the Power of AI-Driven Personalization: Transforming Consumer Behavior in the Age of Digital Marketing	Conceptual Study	Digital Marketing Environment	AI personalization significantly transforms consumer behavior and purchasing decisions.
Frimpong-Manso et al. (2025)	Impact of AI-Driven Personalization on Consumer Purchase Decisions	Empirical Research	Consumers Using AI-Based Platforms	Transparency, ethical data use, and consumer control are essential for trust in AI personalization.

RESEARCH GAP

The literature has been rich on the impact of personalized recommendations, predictive analytics, target advertising and improved shopping experiences, as tools of personalization, on consumer behavior, especially impulsive buying. In parallel, many studies have investigated factors influencing technology adoption, including perceived usefulness, ease of use, trust, and user acceptance when using AI in shopping environments. Nevertheless, most of these studies have examined technology adoption and AI-based personalisation individually and very few studies have examined them both together in relation to impulsive buying behavior. Moreover, prior studies have mainly investigated empirical evidence of direct impacts of technology adoption, with limited research exploring the conceptual mechanisms by which technology introduction enhances or enables AI personalization impact. Furthermore, there is a lack of an integrated framework designed to explain

the relationship between consumers' willingness to use and trust AI technologies and personalized digital experiences on spontaneous purchase behavior. Further, issues concerning privacy, transparency and ethical implications of AI usage have been discussed separately, with unknown implications in the personalization – technology usage – impulsive buying continuum. As a result, there is a large research gap in understanding the relationship between technology use and personalization in one go as a determinant of impulsive buying behaviour in modern digital commerce settings.

RESEARCH OBJECTIVES

- To investigate the impact of consumer impulsive buying behaviour in digital commerce environments using personalization based on artificial intelligence.
- To investigate effect of the factors associated with the use of technology (perceived usefulness, ease of use, perceived trust and consumer acceptance) on the impulsive buying behavior of the consumers.
- To examine how AI-powered personalization influences consumer buying behavior and how technology adoption affects it.
- To create a conceptual model that interprets the synergistic effect of personalization, driven by artificial intelligence (AI) and technology adoption on impulsive buying.
- To explore opportunities and challenges of personalization with AI and the privacy, transparency and consumer trust implications of impulsive buying.

CONCEPTUAL FRAMEWORK

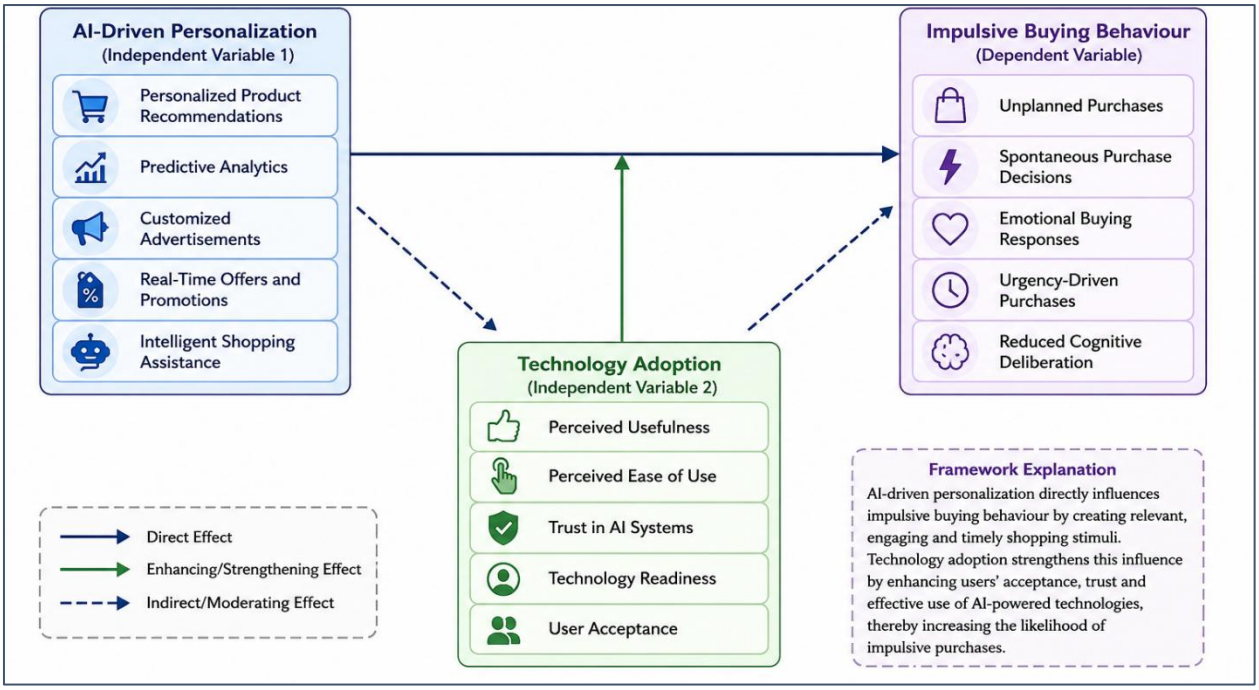

Figure 1: Conceptual Framework of AI-Enabled Consumer Impulse Purchasing

The proposed conceptual framework discusses how AI-driven personalization and technology adoption affects impulsive buying behavior in digital commerce settings. AI personalization is seen as an independent variable which helps companies provide customized shopping experiences by using personalized product suggestions, predictive analytics, personalized ads, smart chatbots, and live promotions. AI-powered capabilities enhance the relevance of information to consumers and minimize search time and improve the shopping experience. AI systems can trigger emotional responses, sense of convenience and urgency to buy, through the customization of content to match the consumer's preferences and browsing history, thereby boosting the chance of spontaneous and unplanned purchases. Therefore, AI personalization is predicted to exert a beneficial effect on impulsive purchasing behavior by making choice-making easier and the products and services more attractive via electronic channels.

The second independent variable is technology adoption, which indicates the consumer's willingness to embrace and utilize AI technologies in the shopping process. Consumer engagement with personalized digital environments is driven by their perceived usefulness, ease of use, trust in AI systems, technological readiness, and general acceptance. When consumers trust and value AI tools, they are more willing to interact with tailored product suggestions and use the algorithm's recommendations when shopping.If they believe the AI technologies are credible, useful and easy to use, then they will be more likely to interact with tailored product suggestions and trust the algorithm's suggestions during purchase decisions.

This means that the power of AI-driven personalisation is further boosted and consumers' tendency to impulsive buying is greater when technology is adopted. Therefore, the framework proposes that impulsive buying behaviour is not only influenced by personalized stimuli generated by AI but also by consumers' acceptance and use of these technologies that produce these stimuli. These factors collectively explain the consumers' purchasing behaviour in the modern era of e-commerce.

RESULTS AND DISCUSSION

The results of the present conceptual study indicate that using AI to personalise the customer experience has a significant impact on impulsive buying behavior in digital commerce contexts. The literature highlighted for consideration shows a consistent link between personalization of product suggestions, predictive analytics, targeted advertising, intelligent chatbots and real-time promotional offers with improved consumer engagement and a higher probability of impulse buying. AI-driven systems minimize the mental strain on consumers by delivering relevant and personalized information and shopping experiences, which can help them make decisions more quickly. Further, personalization triggers emotional responses such as excitement, urgency, convenience and perceived value which act as psychological "motivators" for impulsive purchasing. Moreover, the literature suggests that customization reduces product discovery issues, enhances customer satisfaction, and increases the likelihood of purchases, showing that AI is becoming an increasingly important tool in influencing customer behavior on online marketplaces. The study also emphasizes that technology plays a pivotal role in enhancing the link between AI-driven personalization and impulsive buying. When consumers feel that artificial intelligence solutions are valuable, reliable, intuitive, and advantageous, they are more inclined to interact with personalized recommendations and algorithm-driven shopping environments.If users are convinced of the usefulness, reliability, ease of use, and advantages of artificial intelligence solutions, they are more likely to interact with personalized recommendations and algorithm-driven shopping environments. Few studies have examined the relationship between the adoption of technology and consumer confidence in AI systems, and even fewer have explored the link between AI technology adoption and reliance on automated decision-support tools, which further boosts the impact of personalized marketing strategies. The results indicate that AI-generated stimuli do not directly impact impulsive buying behaviour alone, but also rely on the consumers' willingness to accept and use AI-powered technologies. Issues of privacy, transparency, algorithmic bias, and manipulation, however, could impede technology uptake and limit the impact of personalisation. In conclusion, the study suggests that both personalization through AI and the adoption of AI technologies are significant factors in impulsive buying, and that these factors can be used in combination to better understand and predict customer behaviour. The study points to future research on the subject, as well as implications for researchers, marketers, and organizations aimed at improving customer engagement through personalization and responsible AI use.

SUGGESTIONS FOR FUTURE RESEARCH

The conceptual framework proposed in this paper should be validated by empirical studies that explore the interaction between AI-based personalization, technology usage, and impulsive buying behaviour among various customer segments and platforms. The moderating and mediating effects of factors like trust, perceived usefulness, privacy concern, digital literacy and consumer innovativeness can be studied to further understand the behaviour of purchasing through technology. Cross cultural, cross age and cross geographical comparative studies would provide valuable insights into variations in consumer responses to AI-driven personalization across different contexts. Additionally, longitudinal studies are suggested to examine the long-term behavioral effects of ongoing interaction with personalized AI systems and its influence on consumer decision-making process. Moreover, it is important to consider emerging technologies like generative AI, VR, AR, and conversational commerce in future research to understand their impact on impulsive buying behaviour. Additionally, ethical issues, such as data privacy, algorithm transparency, and responsible AI use, should be addressed to facilitate sustainable and consumer-focused adoption of AI in digital commerce settings.

CONCLUSION

This conceptual study focused on the impact of personalisation through AI and technology on impulsive buying in the modern digital marketplace. The results of the literature review reveal that AI has revolutionized the online shopping environment, offering businesses the ability to provide highly personalized recommendations, targeted advertisements, predictive analysis, intelligent shopping assistant, and real-time offers. These AI-powered features have a profound impact on consumer decision-making processes, improving the relevance, convenience, emotional connection, and perceived value. The results indicate that personalization based on AI is a strong motivator that decreases the mental effort, makes it easier to process information, and stimulates urgency and attraction, which results in spontaneous and unplanned purchases. In today's rapidly changing digital landscape, AI-driven personalisation is emerging as a critical strategy for companies aiming to enhance customer experiences, boost competitive edge, and shape consumer decision-making. In an increasingly dynamic digital market, AI-driven personalisation is becoming a key strategy for businesses looking to improve customer engagement, gain competitive advantage and influence purchasing decisions.

Additionally, the study underscores the importance of technology in influencing the success of AI-powered personalization. However, if AI tools are seen as beneficial, transparent, dependable, and usable, consumers are more likely to interact with

the AI-powered personalization and to trust the AI-generated recommendations in their shopping process. As a result, the impact of AI personalization on the impulsive buying behaviour is reinforced by technology adoption, and technology innovations are a key mechanism in influencing consumers' behaviours. Overall, the findings highlight the significant positive impact of AI-driven personalization for businesses and consumers, but also point to potential privacy, transparency, ethical considerations, algorithmic bias, and consumer mistrust issues that need to be addressed to ensure sustainable and responsible use. To conclude, this conceptual research makes a significant contribution to the field of technology and consumer behaviour by suggesting the integrated model of the relationship between AI-driven personalization and the adoption of technology and impulsive buying behaviour of the consumers. The study's findings hold significant implications for the marketing world, consumer trust, and ethical business practices in the age of AI.

LIMITATIONS OF THE STUDY

- The study is conceptual and is not based on primary empirical data and so the proposed relationships between the personalization based on AI, technology adoption and impulsive buying behaviour were not statistically validated.
- The results of the study are derived from literature search, hence, the study is dependent on the extent, quality and availability of published studies on the topic studied.
- The study centers on the digital commerce and online shopping context that can restrict the transferability of the proposed framework to the traditional retail context.
- Numerous other factors related to consumer behaviour can impact their decision to engage in impulsive buying; this study focuses primarily on the role of personalisation and technology in consumer behaviour, which may overlook other significant factors.
- The conceptual framework excludes the consideration of differences between various socio-demographic segments, geographic regions, and cultures, which can affect consumers' reactions to the use of AI technology and the use of personalized marketing approaches.
- As AI and digital technologies develop quickly, over time, consumer behaviour patterns could shift, and some of the theory/relationships suggested in this study may change and evolve.

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