



## Antecedents and Consequences of Consumers' Attitudes Towards Artificial Intelligence in Social Media

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**Abstract:** *This study investigates the antecedents and consequences of consumers' attitudes toward artificial intelligence in the social media era. Through an empirical study, data was collected from 388 consumers in Turkey. SmartPLS was used to test the proposed hypotheses. Several key findings were reached: (i) Anthropomorphism impacts consumers' performance expectations positively. (ii) Anthropomorphism does not influence positive attitudes towards artificial intelligence. (iii) Consumers' performance expectations have significantly positive effects on positive attitudes towards artificial intelligence and also on positive emotions. (iv) Positive emotions do not influence positive attitudes towards artificial intelligence. (v) Positive attitudes towards artificial intelligence significantly have positive effects on consumers' engagement on social media. (vi) Social media self-efficacy has a positive effect on consumers' engagement on social media. (vii) Consumers' social media engagement impacts purchase behavior positively. Establishing a comprehensive framework, this study offers valuable insights into the intricate relationships among anthropomorphism, performance expectations, emotions, attitudes, social media self-efficacy, social media engagement, and consumer purchase decisions in the evolving landscape of artificial intelligence. The study contributes to the literature by examining the antecedents and consequences of consumers' positive attitudes toward artificial intelligence with a comprehensive model. Besides, understanding the drivers that push consumers to generate positive attitudes toward artificial intelligence and the consequences of these positive attitudes is crucial for marketing managers and businesses.*

**Keywords:**

Anthropomorphism, Performance Expectations Towards AI, Consumers' Positive Attitudes Towards AI, Consumer Engagement on Social Media, Social Media Self-Efficacy, Customer Purchase

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### 1. Introduction

In the ever-evolving landscape of technology, the intersection between humanity and artificial intelligence (AI) has become increasingly prominent. One intriguing aspect of this interaction is the phenomenon of anthropomorphism, wherein humans attribute human-like qualities to non-human entities, including AI. Anthropomorphism involves imbuing non-human entities with human characteristics, behaviors, or emotions (Salles et al., 2020). In the context of AI, this often means endowing machines or virtual assistants with human-like traits, fostering a sense of familiarity and connection. As AI systems become more sophisticated, consumers increasingly interact with them in ways that mirror human relationships. The level of anthropomorphism can significantly influence performance expectations towards AI. When consumers perceive AI systems as more human-like, they may expect higher levels of performance,

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responsiveness, and adaptability (Yang et al., 2022). Understanding and managing these expectations is crucial for developers and businesses to deliver AI solutions that meet or exceed consumer expectations.

Expectations of performance have a significant impact on consumer attitudes about AI (Anayat et al., 2023). High expectations have been raised about AI's potential due to its quick breakthroughs, which include tailored experiences and improved efficiency and problem-solving. Positive emotions are typically fostered when people expect AI to perform at a specific level and those expectations are met or exceeded (Riedel et al., 2022). One important influence on consumer attitudes is the emotional component of dealing with AI. Satisfaction, trust, and delight are examples of positive emotions that are essential to creating a positive rapport between humans and AI. Positive emotional reactions are produced when AI systems provide experiences that are precise, effective, and easy to use (Henkel et al., 2020; Pantano & Scarpi, 2022). These feelings then influence people's perceptions of AI as a useful and reliable technology.

A combination of factors, including performance expectations, anthropomorphism, and pleasant emotions, have a major influence on consumers' overall attitudes toward artificial intelligence (Lerner et al., 2015; Youn & Cho, 2023; Wen et al., 2022). An optimistic outlook is influenced by a favorable AI experience. Conversely, disappointments and unfavorable emotional experiences might cause doubt and resistance. Comprehending these processes is crucial for developers, enterprises, and legislators who aim to cultivate a favorable and accommodating atmosphere for the incorporation of AI. A feedback loop is created by the connections among good feelings, performance expectations, and general sentiments regarding AI. When high performance standards are reached, positive feelings are produced, which promotes a good view of AI (Pantano & Scarpi, 2022). On the other hand, low expectations might cause dissatisfaction or disappointment, which can elicit unpleasant feelings and make one more cynical. This interaction highlights how crucial it is to control and harmonize expectations to guarantee that AI capabilities are understood and conveyed correctly.

Consumers' attitudes toward AI play a pivotal role in shaping their interactions with technology (Jan et al., 2023). Some view AI as a revolutionary force that enhances efficiency and convenience, while others harbor concerns about privacy, job security, and the ethical implications of machine decision-making. Understanding these diverse attitudes is crucial for businesses aiming to integrate AI seamlessly into their customer experience strategies.

In the age of social media dominance, consumers' self-efficacy—their belief in their ability to navigate and effectively use social platforms—becomes a crucial factor. As individuals become more proficient in leveraging social media for communication, information gathering, and self-expression, their confidence in these spaces influences their receptiveness to AI-driven technologies embedded in social platforms (Liu et al., 2019).

Social media platforms have evolved beyond mere communication channels; they are now dynamic spaces for brand-consumer interaction. Consumers engage with brands through comments, likes, shares, and direct messages. AI, in the form of chatbots and personalized algorithms, enhances this engagement by providing tailored content, recommendations, and customer service (Chai et al., 2020). Positive interactions on social media can significantly impact consumers' perceptions of a brand and influence their purchase decisions (Sheriff et al., 2019).

Consumers' engagement on social media platforms ultimately influences customer purchase decisions (Shofiya & Fachira, 2021). Brands that successfully integrate AI into their social media strategies can create a more personalized and efficient customer experience. Personalized recommendations, timely responses through chatbots, and interactive content contribute to a positive customer journey and increase the purchase rates.

Businesses need to navigate this landscape with a nuanced understanding of consumer attitudes toward AI and the role of social media in shaping these perceptions. By leveraging AI to enhance customer engagement on social media, companies can not only stay ahead in the digital age but also create meaningful connections that drive positive purchasing behavior (Prasad et al., 2019). As technology continues to

advance, the synergy between AI, social media, and consumer attitudes will play an increasingly vital role in shaping the future of commerce.

This study delves into the relationships between anthropomorphism, performance expectations towards AI, positive emotions, consumers' general attitudes towards artificial intelligence, social media self-efficacy, consumer engagement on social media, and its impact on customer purchases. The study will contribute to the literature by examining the antecedents and consequences of consumers' positive attitudes toward AI with a comprehensive model. Besides, understanding the drivers that push consumers to generate positive attitudes toward AI and the consequences of these positive attitudes is crucial for marketing managers and businesses.

The second part of the study includes the conceptual framework and the development of the hypotheses. In the third and fourth sections, detailed information is given about the analysis carried out within the scope of the research and the findings obtained are discussed. After the interpretation of the findings, in the fifth section, the results are discussed, the limitations of the research are mentioned and suggestions are made for future studies.

## **2. Literature Review**

### **2.1. Conceptual Framework**

#### **2.1.1. Anthropomorphism**

The attribution of human traits, feelings, or actions to non-human beings or objects—such as animals, gods, the natural world, or even inanimate objects—is known as anthropomorphism. It is a widespread human tendency to ascribe human traits to things that are not human, often as a way to make them more relatable or understandable. Anthropomorphism can be found in various cultures, mythologies, literature, and art throughout history. Though little is known about its cognitive underpinnings, this theory has significant roots in a variety of domains and is believed to have biological roots (Varella, 2018). It is essential in determining how people interact with non-human entities like technology and animals (Yue et al., 2021). Anthropomorphism in the context of robotics and AI has been studied in great detail, with implications for consumer perceptions and adoption of these technologies (Han et al., 2023). Furthermore, anthropomorphism's effects on customer behavior and brand communication have been conducted, previously (Pramesti et al., 2021).

Anthropomorphism is the process of imputing human-like characteristics or behaviors to artificial intelligence (AI) systems (Salles et al., 2020). Anthropomorphism influences the way we think about artificial intelligence (Placani, 2024). This phenomenon has been extensively studied and seen in a range of contexts, such as chatbots used for financial decision-making (Cui, 2022), AI-enabled voice assistants in the hotel industry (Cai et al., 2022), and customer service chatbots (Adam et al., 2021). Giving AI systems a social presence and human emotions that are genuine enough to allow people to interact with them in meaningful ways is the aim of anthropomorphism in AI (Shin, 2022). It is believed to be a basic psychological mechanism that satisfies people's basic needs for understanding, control, and social connection by enabling social interaction with non-human objects.

#### **2.1.2. Performance Expectation Towards AI**

The specific environment and implementation of AI technologies can influence performance expectations. A lot of people have high expectations about AI systems' performance, particularly when it comes to data analysis, image recognition, and natural language processing (Chi et al., 2022). AI is expected to improve efficiency and be reliable and consistent in its performance. AI systems are expected to adapt to changing conditions and data patterns. They should learn and improve over time, making them more valuable in dynamic environments. Users expect AI to respect privacy, avoid discrimination, and comply with laws and regulations related to data protection, transparency, and fairness (Pillai et al., 2020).

Studies indicate that when an AI agent handles a transaction, customer involvement tends to drop, potentially because of a perception of the agent's lack of human mental or emotional qualities (Garvey et al., 2023). Additionally, consumers' beliefs about AI's performance in subjective and objective tasks can influence their reactions to AI-based recommendations (Zhu et al., 2023). Additionally, young consumers' expectations and opinions of AI's competency influence their motivation to use AI tools during their buying experiences (Chopra, 2019). Fear of negative evaluation and the influence of AI services on consumers' preferences have been identified as significant factors affecting consumers' attitudes towards AI services (Wang & Chen, 2023). Moreover, AI and predictive marketing play a crucial role in understanding complex consumer behavior and predicting consumer expectations (Zaman, 2022). The goal of implementing human-like AI systems is to reduce customer concern and make AI gadgets more user-friendly (Pelău & Ene, 2020). It has been discovered that the desire to adopt AI technology is impacted when expectations regarding AI performances are not met, underscoring the need to match user expectations with AI performance (Hong, 2021). Additionally, the characteristics of AI products, such as accuracy, autonomy, anthropomorphism, and affinity, may influence consumers' perception of task attractiveness and interpersonal attraction, ultimately affecting their willingness to adopt AI products.

### **2.1.3. Positive Emotions**

When it comes to their interactions with AI systems, consumers' emotions are very important. Customers' emotional responses to service providers, level of satisfaction, and propensity to stick with technology are all impacted by the kind of AI intelligence (Pantano & Scarpi, 2022). According to Bakpayev et al. (2022), consumers tend to have positive opinions of both human and AI-created advertisements that appeal to thinking, but they evaluate AI-created advertisements that appeal to feeling less favorably. Moreover, consumers are reluctant to support medical AI because they believe it lacks the emotional intelligence necessary to perform medical activities (Yun et al., 2021). When AI gives financial advice instead of human employees, customers in the financial services sector feel less affectionate and other good feelings (Riedel et al., 2022). Nonetheless, there are times when users of AI systems react favorably. AI systems that encourage responsible conduct are expected to receive a good response from mainstream customers, demonstrating the usefulness of AI in sustainable tourism (Tussyadiah & Miller, 2019). Furthermore, consumers may become attached to AI as a result of the emotional intelligence and humanization of AI apps, which could also change human-to-AI interactions into human-like relationships (Hermann, 2022). Human-AI relationships are strengthened when users have joyful chats with AI chatbots, as reported by Lee et al. (2022). Tran et al. (2021) mentioned that anthropomorphic chatbots may lead to positive emotions. Song and Kim (2021) conclude that customers are more willing to communicate and engage with robots when they believe their encounters with them to be innately entertaining and they have positive feelings towards robots. However, customers' apprehension about receiving a bad review can cause social anxiety, which will affect their choice of AI services (Wang & Chen, 2023). Whereas consumers show a negative attitude toward AI applications in marketing, indicating a lack of trust in AI's judgment, responses, and suggestions, businesses and marketers may create positive feelings toward AI (Chen et al., 2022). According to Yao et al. (2024), emotions play a more significant role in predicting intentions toward human-AI interaction than trust.

### **2.1.4. Consumers' Positive Attitudes Towards AI**

Consumers' attitudes toward artificial intelligence can vary widely, but there are some common themes and factors that influence their attitudes. These attitudes can be positive, or negative, depending on various factors, including their experiences, knowledge, and the context in which AI is used (Martin et al., 2020). Many consumers appreciate AI for its ability to streamline tasks, automate processes, and enhance convenience in their daily lives. Examples include virtual assistants, smart home devices, and recommendation algorithms that suggest personalized content. AI-driven recommendation systems can create a sense of personalization, offering tailored content, product recommendations, and services that match individual preferences. However, consumers may also have negative attitudes towards AI. Many consumers are apprehensive about the data that AI systems collect and how it is used. Privacy breaches and data misuse can erode trust in AI (Kronemann et al., 2023). Some consumers feel they have limited control

over AI systems, leading to a sense of powerlessness. They simultaneously fear and are curious about AI, as they are uncertain about its implications and potential risks. Depending on the application and context, consumers may have both optimistic and skeptical views about AI based on their trust in AI (Nagy & Hajdu, 2021).

The studies point to different consumer attitudes toward AI. A theoretical model is constructed by Gursoy et al. (2019) to explain why customers are willing to accept the usage of AI devices in service encounters. The model identifies several elements that influence customers' attitudes toward AI devices, including anthropomorphism, hedonic motivation, and social influence. According to Martin et al. (2020), customers who use smartphones, have a strong anthropomorphic attitude, and demand for cognition are more likely to be pleased with AI-curated travel recommendations. Song et al. (2022) mention that customers view humans as having greater communication capabilities than chatbots. The widespread consensus among users is that they feel more understood by humans and enjoy the encounter more. Besides, Wang et al. (2022) state that consumers' exploratory consuming behaviors are more enhanced when they observe a service robot during an interaction than when they receive standard human staff assistance. According to Liang et al. (2020), performance risk, perceived utility, and convenience of use all have an impact on consumers' attitudes toward artificial intelligence in the fashion sector. According to Sabir et al. (2023), customers' attitudes toward AI robo-advisors are influenced by their perceived simplicity of use, usefulness, and convenience. Kaya et al. (2024), conclude that positive attitudes toward artificial intelligence are significantly predicted by the level of computer use, level of knowledge about artificial intelligence, and AI learning anxiety.

#### **2.1.5. Consumer Engagement on Social Media**

Consumer engagement on social media is a vital aspect of modern marketing and communication strategies. AI applications are increasingly playing a significant role in enhancing consumer engagement on social media platforms. Through the utilisation of AI's analytical powers and a theoretical grasp of consumer engagement, brands may formulate precise and pertinent marketing tactics that cultivate stronger customer relationships and propel corporate expansion (Babatunde et al., 2024). Here are some ways in which AI is applied to improve consumer engagement on social media: personalized content, chatbots, virtual assistants, sentiment analysis, social listening, content creation, predictive analytics, ad targeting, influencer marketing, social media monitoring and automation, and content analysis. AI applications in social media are continually evolving, offering brands new ways to connect with their audience, provide better customer experiences, and gain valuable insights. However, it's important to use AI responsibly and ethically to ensure privacy and data security while respecting consumer preferences and consent. Pillai et al. (2020) conclude that insecurity is effective on the perceived usefulness of AI-powered retail stores in a negative way. Increased brand loyalty, awareness, and purchase intent are just a few advantages that come with higher customer involvement. In their discussion of AI's place in personalized engagement marketing, Kumar et al. (2019) highlight the technology's ability to help develop tailored products for consumers.

According to Liu et al. (2019), brand loyalty and participation in social media communities are influenced by consumer readiness and personal interaction. According to Brzozowska-Woś and Schivinski (2019), behavioral and demographic characteristics influence social media participation related to brands. Customer engagement may be impacted by several social media post-related aspects for brands. Kyu Kim et al. (2021) show that the specificity of claims and type of benefit appeals in social media ads impact engagement. Oc et al. (2023) suggest that machine learning and AI can help tailor dynamic content to engage different target segments.

#### **2.1.6. Social Media Self-Efficacy**

Social media self-efficacy refers to a person's confidence in their ability to achieve particular objectives on social media platforms (Choi et al., 2017). It includes having faith in oneself to use social media for networking, communication, and information exchange, among other things. Improved online social connections, flexibility on new platforms, and adept handling of security and privacy settings are all linked to

higher social media self-efficacy. Experience, computer literacy, and the particular objectives or activities one hopes to accomplish on social media can all have an impact. According to Hocevar et al. (2014), those who have higher social media self-efficacy view information shared on social media as more reliable and place more weight on social media and the opinions of others when forming opinions. According to Alber et al. (2016), social media self-efficacy differs among health education experts' areas of responsibility and is correlated with prior social media experience. Kim and Um (2016) discover that self-efficacy mediates the favorable impact of social recognition on behavioral reactions on social media. Furthermore, psychological elements that have been linked to social media tiredness include a user's perceived self-efficacy and degree of confidence in their usage of social media (Bright et al., 2021). Customers who have a strong interdependent self-efficacy are more inclined to share content and to have good opinions toward social media posts, according to Hofmann et al. (2021).

## **2.2. Hypotheses Development**

### **2.2.1. Anthropomorphism and Consumers' Performance Expectations Toward AI**

The effect of anthropomorphism on consumers' performance expectations regarding AI has been the subject of numerous studies. Araujo (2018) looks into how anthropomorphic design elements and communicative agency framing affect customers' perceptions of conversational agents. The study finds that human-like cues, like language style and name, as well as the framing used to introduce the chatbot, can affect users' impressions of social presence. Chi et al. (2020) discover that visitors' acceptance of AI in service contexts is influenced by anthropomorphism in addition to other elements including social influence and feelings toward AI equipment. The influence of anthropomorphism on consumers' expectations extends to various domains, including brand attitude, trust in intelligent personal assistants, and brand relationship outcomes (Chen & Lin, 2021; Chen & Park, 2021; Zhang et al., 2020). Additionally, the embodied anthropomorphism of personal assistants is found to affect user attitudes and confidence in embodied AI systems (Schneiders et al., 2021). Blut et al. (2021) look at the impact of anthropomorphism on service delivery, including chatbots and actual robots. The study discovers that customers may feel uneasy and spooky when perceived anthropomorphism rises. Additionally, Cui (2022) studies how anthropomorphizing AI chatbots affect users' risk preferences when making financial decisions. The study discovers that when AI is anthropomorphized, investors' risk aversion increases noticeably. However, Yuan et al. (2022) conclude that AI assistant anthropomorphism statistically has a positive impact on hedonic value and hedonic value significantly has positive influence on willingness to accept AI assistant. According to Yang et al. (2022), when there is a strong perceived control, customers expect AI service agents with more anthropomorphic designs to perform better and prefer more human-like AI service agents. When customers don't feel in control of the situation, they are more likely to feel intimidated by AI service agents with more anthropomorphic designs; in fact, they prefer less human-like AI service agents. Consumer impressions of AI are influenced by anthropomorphism, personalization, and privacy concerns, according to research done by Kronemann et al. (2023). According to the study, anthropomorphism can influence customers to regard AI as a sentient entity and make it seem more lifelike.

In summary, consumers' performance expectations towards AI can be greatly influenced by anthropomorphism. Customers' opinions of social presence, their acceptance of AI in particular fields, their attitudes, and their decision-making processes can all be influenced by anthropomorphism. Therefore, for the adoption and acceptance of AI to be successful, it is imperative to comprehend the role of anthropomorphism and how it affects consumer expectations. In the light of this information, the following hypothesis is created.

*H<sub>1</sub>: Anthropomorphism has a significant effect on consumers' performance expectation towards artificial intelligence.*

### 2.2.2. Anthropomorphism and Consumers' Positive Attitudes Towards AI

Anthropomorphism can also influence consumers' general attitudes towards AI in various ways. When AI systems or robots are designed with anthropomorphic features, such as a human-like voice or facial expressions, consumers may feel a stronger emotional connection to them. This can make AI seem more relatable and less intimidating. Anthropomorphic AI might be perceived as more trustworthy and approachable. People tend to trust systems that appear more human-like, which can positively impact their attitudes towards AI technology. Anthropomorphic design elements can make AI interfaces more intuitive and user-friendly. If AI systems resemble human interactions, users may find them easier to understand and interact with, leading to a more positive attitude.

Kim et al. (2019) highlight that even in cases when anthropomorphizing consumer robots increases perceived warmth, liking still decreases due to the uncanny valley effect. According to Martin et al. (2020), attitudes toward reviews compiled by AI are significantly impacted by anthropomorphism. Consumers' intentions to use artificially intelligent gadgets are influenced by several factors, including social influence, hedonic incentive, anthropomorphism, performance and effort expectations, and sentiments toward these devices (Lin et al., 2020). According to Yang et al. (2022), customers' inclination to interact with AI service agents is influenced by the level of anthropomorphism, and their preferences vary based on the perceived control and service environment. Using anthropomorphism and the Unified Theory of Acceptance and Use of Technology (UTAUT) features, one study looks at how customers' acceptance behavior is affected by these elements (Tian & Wang, 2022). The results imply that customers' acceptance of AI systems may be influenced by their perceptions of the anthropomorphism and intelligence of AI. The usage of human-like cues and the high level of anthropomorphism in AI chatbots have been found to generate more positive attitudes and intentions to use the AI chatbot app (Youn & Cho, 2023). The study conducted by Kronemann et al. (2023) investigates the favorable effects of anthropomorphism and personalization on customer attitudes and intentions about the disclosure of personal information to AI, whereas privacy concerns have an adverse effect. Additionally, it is demonstrated that customers' perceptions of anthropomorphic AI robots during service delivery are influenced by the individual component of "consumer mindset" (Han et al., 2023). In conclusion, these studies together imply that, depending on the particular situation and variables like perceived control, service context, and privacy concerns, anthropomorphism may have a variable impact on customers' attitudes about AI. With this information, the following hypothesis is developed.

*H<sub>2</sub>: Anthropomorphism has a significant effect on consumers' positive attitudes towards artificial intelligence.*

### 2.2.3 Consumers' Performance Expectations Towards AI and Consumers' Positive Attitudes Towards AI

Consumers' performance expectations of AI greatly influence their attitudes toward AI. Numerous investigations on this relationship have revealed several variables that affect customers' attitudes towards AI. Liang et al. (2020) emphasize that consumers' evaluation of perceived usefulness and ease of use significantly influences their attitude toward AI, underscoring the impact of performance expectations on consumer attitudes. According to one study, anthropomorphism, hedonic motivation, social impact, performance and effort anticipation, and feelings toward AI gadgets all affect tourists' acceptance of these devices when it comes to the provision of tourism services (Chi et al., 2022). According to Nagy and Hajdu (2021), trust is a significant element influencing customer sentiments toward AI. This implies that people's perceptions of AI can be greatly influenced by their level of trust in AI technologies. An additional investigation concerning programmatic advertising in online retailing discovered that customers' views of artificial intelligence as advantageous can amplify the influence of ad relevance on their disposition toward programmatic advertising (Ciuchita et al., 2023). Furthermore, it was discovered that elements like optimism about AI and environmental awareness had an impact on consumers' performance and effort expectancies, which in turn improved their attitudes about AI (Chu et al., 2022). The way that customers view AI technology can also have an impact on how they rate AI-enabled goods and services, which can have an impact on how frequently they engage and how they think of them (Wen et al., 2022). It is stated that the influence of AI image on consumer evaluation is moderated by consumers' prior notions about AI hazards and self-

affirmation (Wang et al., 2023). Consumers' attitudes towards AI are influenced by various factors, including their expectations of AI performance (Anayat et al., 2023). These results emphasize how crucial it is to comprehend customer expectations and views of AI to influence favorable attitudes toward AI. In this regard, the following hypothesis is generated.

*H<sub>3</sub>: Consumers' performance expectation of AI has a significant effect on their positive attitudes towards artificial intelligence.*

#### **2.2.4. Consumers' Performance Expectations of AI and Positive Emotions**

Research on the effect of AI on consumer emotions has also recently been conducted. Numerous research looks into the connection between consumers' good feelings and their expectations for AI's performance. Positive feelings may arise when consumers have high expectations for AI's performance and those expectations are met or surpassed. Customers may, however, feel let down if they believe AI is not living up to their expectations (Zhigang et al., 2020). Customers may have both positive and negative emotions in response to various forms of AI (Pantano & Scarpi, 2022). Furthermore, users of expressive AI, report increased degrees of like and pleasant affective responses while interacting with the system (Riedel et al., 2022). Besides, consumers' willingness to use AI for tasks involving subjectivity, intuition, and emotion is influenced by their beliefs that AI lacks empathy and emotion (Zhang et al., 2022). This implies that customers' readiness to interact with AI is influenced by their expectations regarding AI's emotional intelligence. Moreover, Zhu et al. (2023) indicate that when AI meets consumers' expectations for utilitarian consumption, favorable emotional responses result.

According to the literature, customers' positive attitudes are significantly influenced by their performance expectations of artificial intelligence. Greater levels of perceived value, trust, and contentment are correlated with higher expectations of AI performance, which in turn leads to happier feelings. These findings emphasize the significance of controlling customer expectations to improve good emotional experiences, which has ramifications for marketers and AI technology developers. The following hypothesis is established in this context.

*H<sub>4</sub>: Consumers' performance expectation of AI has a significant effect on their positive emotions.*

#### **2.2.5. Positive Emotions and Consumers' Positive Attitudes Towards AI**

Customers' attitudes toward AI are greatly influenced by their positive experiences. Studies have examined the relationship between consumers' perceptions toward AI and their feelings. According to the research of Vredevelde (2018), emotions can affect consumers' views of brands. An unfavorable attitude toward AI-related emotions can worsen an already poor attitude about AI, according to Hong (2021). Furthermore, the ability of AI to identify and respond to a consumer's emotions may alter the consumer's perspective of AI in general. A study by Lerner et al. (2015) mentions that emotions have a significant impact on decision-making, and that influence can even extend to consumers' perceptions of AI. Researches indicate that customers' opinions towards AI are influenced by positive feelings like pride and affection (Pantano & Scarpi, 2022; Penna et al., 2022). In their study, Riedel et al. (2022) examine how customers' political ideologies influence how they react to AI in the provision of financial services. The study discovers that the association between AI and brand attitudes is mediated by emotions like affection. In the light of the studies mentioned above, the following hypothesis has been generated.

*H<sub>5</sub>: Consumers' positive emotions have a significant effect on consumers' positive attitudes towards artificial intelligence.*

#### **2.2.6. Positive Attitudes Towards AI and Consumer Engagement on Social Media**

The pertinent references make it clear that consumer engagement on social media is significantly impacted by attitudes regarding AI. Customer attitudes regarding AI have a big impact on how active they are on social media (Chai et al., 2020). Furthermore, Santy et al. (2021) demonstrate how AI might improve the efficacy of social media marketing initiatives. User experiences on social media platforms change as a



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result of the application of AI technology (Kang & Lou, 2022). Jan et al. (2023), state that attitudes towards the usage of AI-powered conversational agents affect consumers' behavioral intentions.

In conclusion, the studies collectively support the significant effect of general attitudes towards AI on consumer engagement on social media. These findings underscore the importance of understanding consumer perceptions and attitudes towards AI in shaping effective strategies for consumer engagement on social media platforms. Understanding these attitudes and their underlying factors is crucial for marketers and social media platforms to effectively engage with consumers. By considering the usefulness of AI, its potential for social good, and addressing ethical considerations, marketers can leverage AI technology to enhance social media engagement and improve marketing effectiveness. Regarding this, the ensuing hypothesis is put forward.

*H<sub>6</sub>: Positive attitudes towards artificial intelligence have a significant effect on consumer engagement on social media.*

### **2.2.7. Social Media Self-Efficacy and Consumers' Engagement on Social Media**

The connection between consumer participation and self-efficacy in the context of social media has been the subject of numerous research. Elements including recognition, community identity, and self-efficacy are important drivers of consumer involvement in social media brand communities (Liu et al., 2019). De Silva (2021) also stresses how crucial self-efficacy is for customer behavioral involvement in social media marketing. Concerns about privacy, perceived self-efficacy regarding social media use, and the ease of utilizing technology are all connected to social media weariness, a symptom brought on by excessive use of social media (Bright et al., 2021). Moreover, self-efficacy is linked to consumers' adoption of social media activities, highlighting the influence of personal views on online involvement (Khan et al., 2021). Mathur et al. (2023) emphasize the role that self-efficacy plays in shaping brand-related psychological states and interactive consumer experiences in the context of brand engagement.

These findings collectively suggest that self-efficacy plays a crucial role in shaping consumer engagement on social media. Individuals with higher levels of self-efficacy may exhibit more trust in the information shared on social media, leading to increased engagement with brands and content. Understanding the relationship between consumer engagement and self-efficacy is essential for businesses and marketers aiming to leverage social media for effective consumer interactions and brand promotion. These results lead to the development of the following hypothesis.

*H<sub>7</sub>: Social media self-efficacy has a significant effect on consumers' engagement on social media.*

### **2.2.8. Consumers' Engagement on Social Media and Customer Purchase**

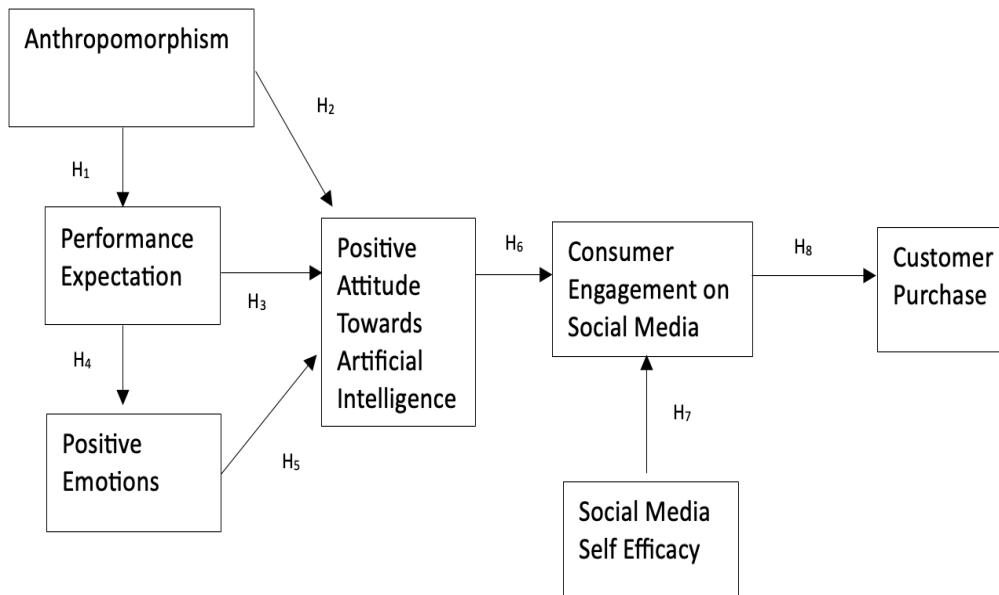
Because it may affect consumers' purchasing decisions, social media user involvement draws more attention. Numerous research investigates the connection between social media user engagement and the influence it has on purchasing decisions. Sheriff et al. (2019) highlight the benefits of online consumer engagement for sales, brand evangelism, and loyalty, underscoring the significance of customer involvement on social media platforms. Furthermore, the results of Prasad et al. (2019) mention the impact of social media involvement on consumer behavior and decision-making by showing that social media and electronic word-of-mouth have a significant influence on customer purchase decisions. Mohammed and Al-Swidi (2019) corroborate the association between customer participation on social media and purchasing behavior by demonstrating the beneficial impact of social media activity and consumer involvement on customer loyalty. Prentice and Nguyen (2020) find that service experience with AI has a significant effect on customer engagement and moreover, customer engagement positively effects consumer loyalty. Furthermore, Shofiya and Fachira (2021) highlight how customer involvement functions as a go-between in social media marketing, and directly affects consumers' inclinations to make purchases. The study by Matusin et al. (2023) reveals that social media marketing positively affects consumer engagement and electronic word-of-mouth, indicating its potential impact on influencing consumer behavior and purchase decisions.

In conclusion, the synthesis of these studies provides robust evidence supporting the significant effect of consumers' social media engagement on customer purchase decisions. The findings collectively underscore the influential role of social media engagement in shaping consumer behavior and driving purchase intentions. The following hypothesis is proposed in the light of this information.

*H<sub>8</sub>: Consumers' engagement on social media has a significant effect on customer purchase.*

Figure 1 shows the hypotheses and the model of the research developed in the light of the detailed literature review.

**Figure 1.** Research Model



### 3. Methods

#### 3.1. Sample and Data

The universe of the study consists of consumers residing in Turkey. While creating the sample, the convenience sampling method was used. The sample size was determined according to Yazicioğlu and Erdoğan (2004) sample sizes table. According to the table, it is stated that at least 384 people can be included in the sample for a population of 10 million or more. Results based on the address-based population registration system show that there are approximately 60 million individuals aged 18 and over in Turkey (Wikipedia). 388 Turkish customers over the age of 18 provides the data of this study. Ethics committee approval has been taken from Nuh Naci Yazgan University on 12 March 2024. The process of gathering data took roughly one month. The data was gathered using convenience sampling, a non-random sampling technique. The online platforms were used to administer the questionnaire surveys. The questionnaires were prepared with Google forms and the form was shared with the participants through e-mail, mobile phone and social platforms. Before taking part in the survey, participants gave their consent, and it was an entirely voluntary process. Table 1 displays the demographic data of the participants.

When the demographic characteristics are examined, it is seen that 222 participants are single and 166 participants are married. 49.7% of the participants are men and 50.3% are women. 72.7% of the respondents have an income of 45000 TL and below and 69.6% are 38 years old and below. Moreover, 31.2% of the participants graduated from undergraduate programs and 19.6% graduated from master's and doctoral programs.

**Table 1.** Demographic Profiles

Measures	Values	Frequency	Percent
<b>Gender</b>	Male	193	49.7
	Female	195	50.3
<b>Marital Status</b>	Single	222	57.2
	Married	166	42.8
<b>Monthly Income (TL)</b>	15000 and below	96	24.7
	15001-30000	107	27.6
	30001-45000	79	20.4
	45001-60000	49	12.6
	60001-75000	22	5.7
	75001 and above	35	9.0
<b>Age</b>	18-28	127	32.7
	29-38	143	36.9
	39-48	71	18.3
	49-58	47	12.1
	58 and above	0	0
<b>Education</b>	Primary School	45	11.6
	High School	56	14.4
	Associate Degree	90	23.2
	Undergraduate	121	31.2
	Graduate	76	19.6

### 3.2. Measures

A five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), was used to measure each item on the scale. The expressions in all the scales were translated into Turkish, and a pilot application was conducted on 30 people before sharing the survey with the respondents. Moreover, reliability and validity analysis were re-conducted for all items in this study (Table 4). The scales used in the research are mentioned in detail below.

*Anthropomorphism:* A 4-item scale adopted by Lin et al. (2020) from Gursoy et al.'s (2019) paper on the AIDUA model development, was used to measure anthropomorphism. Lin et al. (2020) conducted reliability and validity analysis (Cronbach's Alpha: 0.92; AVE: 0.75). The sample item is "AI devices have a mind of their own."

*Performance Expectation Towards AI:* Performance expectation questions were prepared by the scale which was adapted by Gursoy et al. (2019) from the UTAUT scale developed by Venkatesh et al. (2012). The reliability and validity of the scale were checked by Gursoy et al. (2019) (Cronbach's Alpha: 0.88; AVE: 0.64). There are 4 items on the scale and one of the items is "Artificial intelligence devices make fewer mistakes than humans."

*Consumer Engagement on Social Media:* A 6-item scale, adopted by Nazir et al. (2023) from the study of Hollebeek et al. (2014), was used for measuring consumer engagement on social media. The "Consumer Brand Engagement in Social Media Scale" developed by Hollebeek et al. (2014) consists of 10 items. Nazir et al. (2023) conducted the reliability and validity analysis of the 6-item scale (Cronbach's Alpha: 0.85; AVE: 0.52) The items in the scale were rearranged to address the social media sites of the brands that consumers prefer. The sample item is "Using the social media sites of the brand I shop at makes me think more about the brand".

*Social Media Self-Efficacy:* The social media self-efficacy scale was benefited from the study of Bozkurt et al. (2023) who adopted the scale from the study conducted by Meuter et al. (2005). The scale consists of 4 items. The authors conducted the reliability and validity analysis (Cronbach's Alpha: 0.92; AVE: 0.75). One of the items is "I am fully capable of using social media".

**Positive Attitudes Towards AI:** The scale adopted by Kaya et al. (2024) from the scale developed by Schepman and Rodway (2020) was used in this study to gauge people's positive general attitudes toward AI. 20 items make up the original scale: 8 for the negative attitudes and 12 for the positive attitudes. Only 12 positive items were employed in this study. The reliability and validity of the positive items were checked by Kaya et al. (2024) (Cronbach's Alpha: 0.88). "There are many beneficial applications of artificial intelligence," states the sample item.

**Positive Emotions:** The scale, adopted by Lin et al. (2020) from Gursoy et al.'s (2019) paper on the AIDUA model development, was used in this study. The reliability and validity analysis of the scales were conducted by Lin et al. (2020) (Cronbach's Alpha: 0.94; AVE: 0.75). There are 5 negative and 5 positive emotions on the scale. However, only 5 positive emotion statements have been applied in this study. One of the items is: "I am hopeful".

**Customer Purchase:** The customer purchase scale adopted by Bozkurt et al. (2023) from the studies conducted by Bozkurt et al. (2021) and Kumar and Pansari (2016), is used in this study. Bozkurt et al. (2023) conducted validity and reliability analysis of the items (Cronbach's Alpha: 0.82; AVE: 0.55). The scale contains 4 items. The items were rearranged for the products/services of the brands using social media actively. The sample item is "My purchases from the brands using social media actively make me content".

**4. Data Analysis and Results**

In this study, quantitative data were analyzed using SmartPLS 4, a partial least squares-based program that employs variance-based structural equation modeling (VB-SEM) to assess predicted relationships between study variables with minimal sample size constraints. When the proposed model includes higher-order formative elements, this strategy works well (Hair et al., 2016). Common method bias in the data was checked using Harman's single-factor test. For data analysis, PLS-SEM (structural equation modeling) is a widely used method. Confirmatory factor analysis (CFA) was the first step. Figure 2 displays the PLS-SEM model for confirmatory factor analysis along with the factor loadings and coefficient of determination ( $R^2$ ) values.

**Figure 2. PLS-SEM output for CFA**

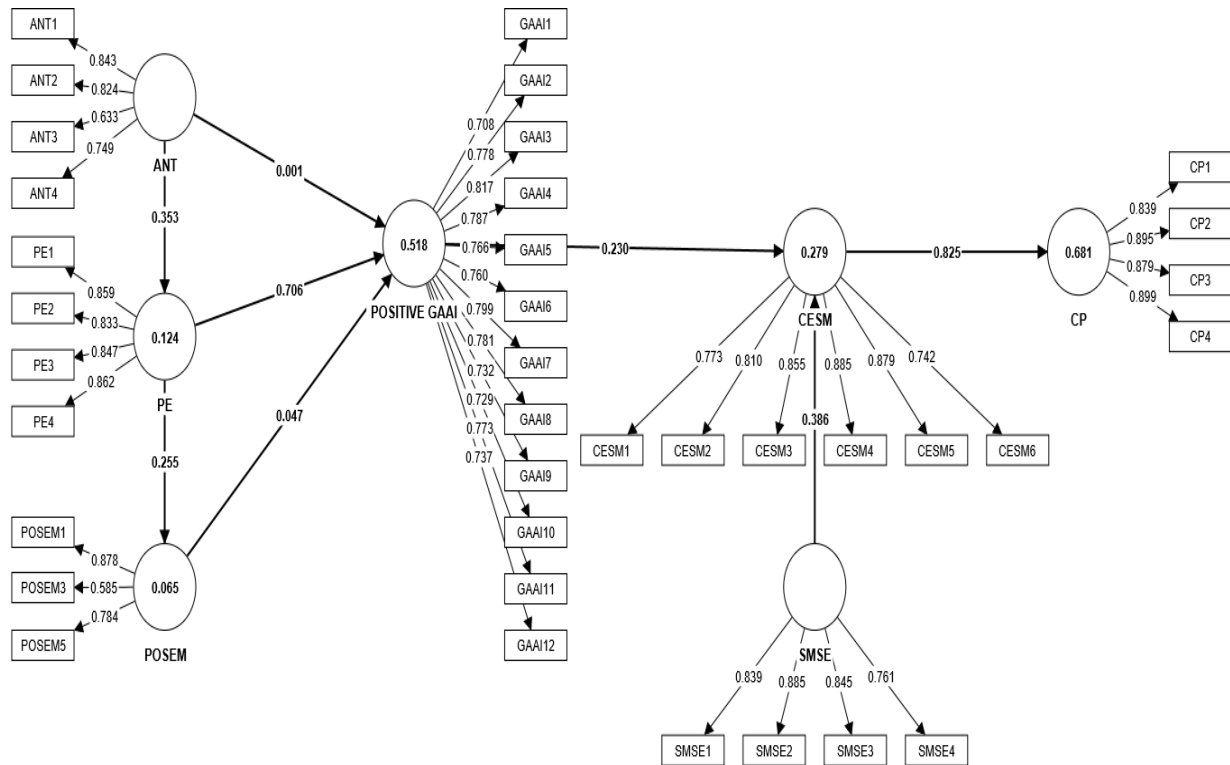


Table 2 lists the model fit indices that were obtained following CFA. There are generally three goodness-of-fit values in the SmartPLS package program. These goodness of fit values are SRMR (Standardized Root Mean Square Residual), NFI (Normed Fit Index), and  $\chi^2$  values (Hair et al., 2017). Hu and Bentler (1999) state that a satisfactory fit is indicated by an SRMR score of 0.08 or less than 0.10. Henseler et al. (2014) provide the SRMR as a goodness-of-fit statistic for PLS-SEM to avoid model misspecification. The SRMR (0,063) value is below 0.8. NFI value should be above 0.90 for a perfect fit between the model and the data (J. F. Hair et al., 2017). NFI value is 0.915. The chi-square value is significant. In the light of these information, it can be said that model is in good fit with the data.

**Table 2.** Model Fit

<b>SRMR</b>	<b>0.063</b>
<b>Chi-square</b>	1759.464
<b>NFI</b>	0.915

The outer loadings obtained as the result of CFA are shown in Table 3. Since POSEM2 "I am a contented person" and POSEM4 "I am a satisfied person" had outer loadings below 0.50, they were extracted from the model. During confirmatory factor analysis, expressions with a factor load of 0.50 or less should be excluded from the analysis (Hair et al., 2019)). The factor loadings of the items are shown in Table 3.

**Table 3.** Outer Loadings

<b>ANT1</b>	<b>"AI devices have a mind of their own. "</b>	<b>0.843</b>
<b>ANT2</b>	"AI devices have consciousness"	0.824
<b>ANT3</b>	"AI devices have their own free will."	0.633
<b>ANT4</b>	"AI devices will experience emotions."	0.749
<b>CESM1</b>	"Using the social media sites of the brand I shop at makes me think more about the brand"	0.773
<b>CESM2</b>	"Using the social media sites of the brand I shop for increases my interest in learning more about brands."	0.810
<b>CESM3</b>	"I feel very positive when I use the social media sites of the brand I shop for"	0.855
<b>CESM4</b>	"I am happy to use the social media sites of the brand I shop for"	0.885
<b>CESM5</b>	"I feel good when I use the social media sites of the brand I shop for"	0.879
<b>CESM6</b>	"I am proud to use the social media sites of the brand I shop for."	0.742
<b>CP1</b>	"I will continue buying the products/services of the brands using social media in the near future"	0.839
<b>CP2</b>	"My purchases from the brands using social media actively make me content"	0.895
<b>CP3</b>	"I get my money's worth when I purchase from the brands using social media actively"	0.879
<b>CP4</b>	"Owning the products/services of the brands using social media actively makes me happy"	0.899
<b>GAAI1</b>	"I am interested in using artificially intelligent systems in my daily life."	0.708
<b>GAAI2</b>	"There are many beneficial applications of Artificial Intelligence."	0.778
<b>GAAI3</b>	"Artificial Intelligence is exciting."	0.817
<b>GAAI4</b>	"Artificial Intelligence can provide new economic opportunities for this country."	0.787
<b>GAAI5</b>	"I would like to use Artificial Intelligence in my own job."	0.766
<b>GAAI6</b>	"An artificially intelligent agent would be better than an employee in many routine jobs."	0.760
<b>GAAI7</b>	"I am impressed by what Artificial Intelligence can do."	0.799
<b>GAAI8</b>	"Artificial Intelligence can have positive impacts on people's wellbeing."	0.781
<b>GAAI9</b>	"Artificially intelligent systems can help people feel happier."	0.732
<b>GAAI10</b>	"Artificially intelligent systems can perform better than humans."	0.729
<b>GAAI11</b>	"Much of society will benefit from a future full of Artificial Intelligence."	0.773
<b>GAAI12</b>	"For routine transactions, I would rather interact with an artificially intelligent system than with a human."	0.737
<b>PE1</b>	"Artificial intelligence devices make fewer mistakes than humans."	0.859
<b>PE2</b>	"AI devices are more accurate than human beings."	0.833
<b>PE3</b>	"AI devices provide more consistent service than human beings."	0.847
<b>PE4</b>	"Information provided by AI devices are more consistent."	0.862

**Table 3.** Outer Loadings (Continue)

<b>POSEM1</b>	<b>"I am a relaxed person."</b>	<b>0.878</b>
<b>POSEM3</b>	<b>"I am a hopeful person."</b>	0.585
<b>POSEM5</b>	<b>"I am pleased."</b>	0.784
<b>SMSE1</b>	<b>"I am fully capable of using social media."</b>	0.839
<b>SMSE2</b>	<b>"I am confident in my ability to use social media."</b>	0.885
<b>SMSE3</b>	<b>"Using social media is well within the scope of my abilities."</b>	0.845
<b>SMSE4</b>	<b>"I feel I am qualified for the task of using social media."</b>	0.761
<b>ANT: Anthropomorphism</b>		
<b>CESM: Consumer engagement on social media</b>		
<b>CP: Customer purchase</b>		
<b>PE: Performance expectancy</b>		
<b>POSEM: Positive emotions</b>		
<b>GAAI: Positive attitudes towards AI</b>		
<b>SMSE: Social media self-efficacy</b>		

Cronbach alpha, composite reliability (CR), and average variance extracted (AVE) values were examined to ensure the validity and reliability of the scales. Table 4 displays reliability and composite reliability values that surpass the 0.70 level. The average variance extracted (AVE) for all constructs varied between 0.576 and 0.772. According to Hair et al. (2016), the values for the Cronbach alpha and composite reliability (CR) should all be above 0.7 and the average variance extracted (AVE) should be above 0.50. AVE, CR, and Cronbach alpha values demonstrate the validity and reliability of the model's scales.

**Table 4.** Reliability and Validity

	<b>Cronbach's Alpha</b>	<b>Composite Reliability (rho_a)</b>	<b>Composite Reliability (rho_c)</b>	<b>Average Variance Extracted (AVE)</b>
<b>ANT</b>	0.784	0.808	0.849	0.588
<b>CESM</b>	0.906	0.912	0.928	0.682
<b>CP</b>	0.901	0.903	0.931	0.772
<b>PE</b>	0.872	0.875	0.913	0.723
<b>POSEM</b>	0.755	0.761	0.799	0.576
<b>POSITIVE GAAI</b>	0.935	0.935	0.944	0.585
<b>SMSE</b>	0.855	0.873	0.901	0.695

Fornell and Larcker's (1981) technique was applied to ascertain the model's discrimination validity. According to this method, discrimination validity is satisfied if the square root of a factor's mean explained variance value (AVE) is higher than the factor's correlation values with other factors. The model's dimensions were found to be distinct constructs based on the analyses performed, and discrimination validity values were given in Table 5.

**Table 5.** Discrimination Validity

	<b>ANT</b>	<b>CESM</b>	<b>CP</b>	<b>PE</b>	<b>POSEM</b>	<b>POSITIVE GAAI</b>	<b>SMSE</b>
<b>ANT</b>	0.767						
<b>CESM</b>	0.249	0.826					
<b>CP</b>	0.205	0.825	0.878				
<b>PE</b>	0.353	0.363	0.375	0.850			
<b>POSEM</b>	0.170	0.204	0.216	0.255	0.759		
<b>POSITIVE GAAI</b>	0.258	0.398	0.481	0.718	0.227	0.765	
<b>SMSE</b>	0.149	0.486	0.541	0.318	0.397	0.434	0.834

Variance inflation factor (VIF) values greater than 10 indicate the existence of a multicollinearity problem among the expressions (Hair et al., 2003). When the linearity statistics of the outer model and inner model in Table 6-7 are reviewed, it can be observed that there is no issue with multicollinearity between the variables and the expressions.

**Table 6.** Outer Model VIF Values

ANT1	1,698
ANT2	2.112
ANT3	1.625
ANT4	1.365
CESM1	2.004
CESM2	2.087
CESM3	2.604
CESM4	3.483
CESM5	3.356
CESM6	1.890
CP1	2.226
CP2	2.828
CP3	2.901
CP4	3.064
GAAI1	2.024
GAAI2	2.763
GAAI3	3.175
GAAI4	2.556
GAAI5	2.358
GAAI6	2.281
GAAI7	2.740
GAAI8	2.451
GAAI9	2.206
GAAI10	2.205
GAAI11	2.312
GAAI12	2.057
PE1	2.224
PE2	2.061
PE3	2.035
PE4	2.234
POSEM1	1.310
POSEM3	1.213
POSEM5	1.347
SMSE1	2.018
SMSE2	2.402
SMSE3	1.988
SMSE4	1.721

**Table 7.** Inner Model VIF Values

	ANT	CESM	CP	PE	POSEM	POSITIVE GAAI	SMSE
ANT				1.000		1.151	
CESM			1.000				
CP							
PE					1.000	1.195	
POSEM						1.078	
POSITIVE GAAI		1.233					
SMSE		1.233					

The structural equation model was used to test the hypotheses of the research. The path analysis was conducted using SmartPLS4. Figure 3 shows the bootstrapping output, significance values, and determination of coefficient ( $R^2$ ) values.

Figure 3. Bootstrapping Output

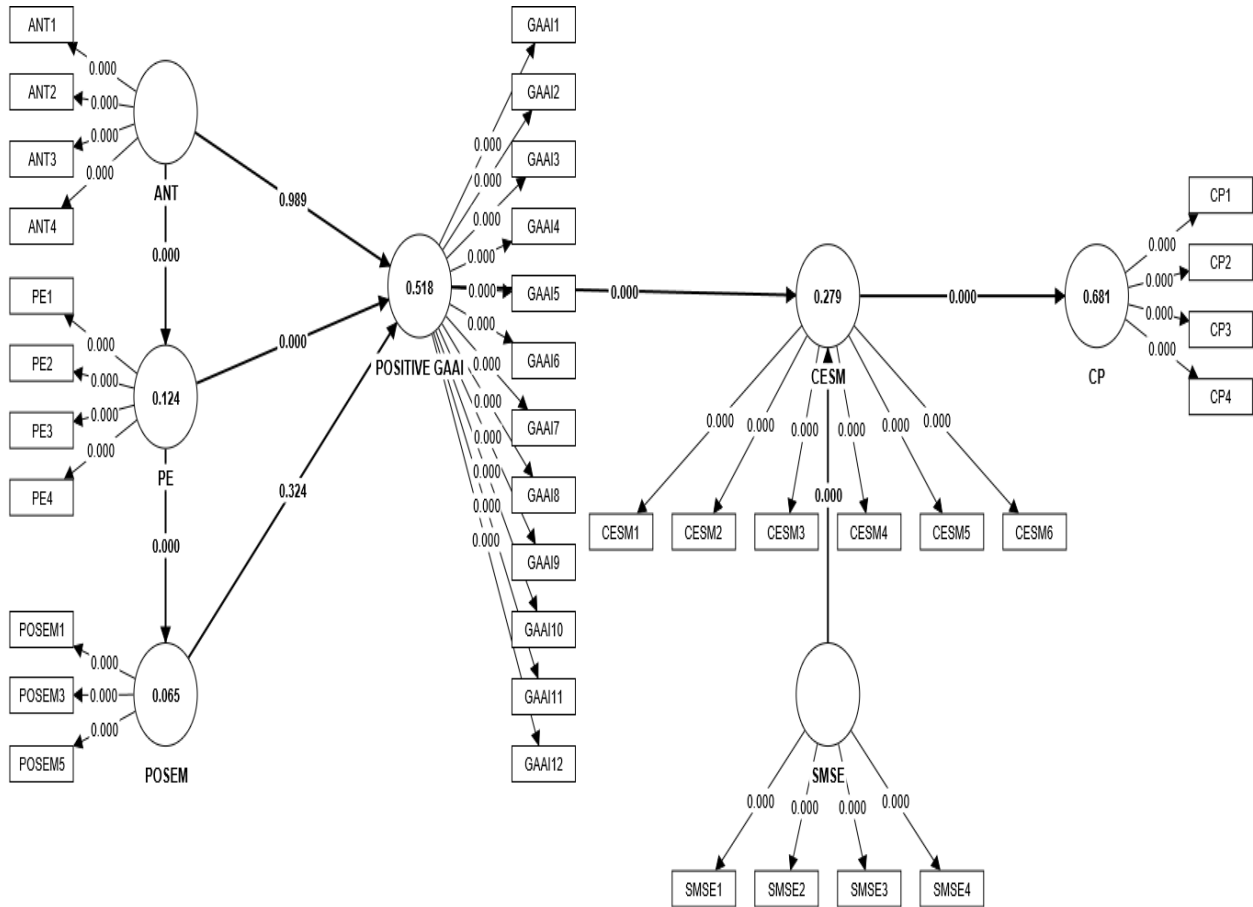


Table 8. Path Analysis Results

Hypotheses	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	Conf. interval (2.5%)	Conf. interval (97.5%)	T statistics ( O/STDEV )	P values	Result
H <sub>1</sub> ANT -> PE ANT -> POSITIVE GAAI	0.353	0.359	0.053	0.258	0.463	6.703	0.000	Supported
H <sub>2</sub> PE -> POSITIVE GAAI	0.001	0.004	0.049	-0.092	0.100	0.013	0.989	Not supported
H <sub>3</sub> POSITIVE GAAI -> CESM	0.706	0.704	0.040	0.618	0.780	17.544	0.000	Supported
H <sub>4</sub> PE -> POSEM POSEM -> POSITIVE GAAI	0.255	0.265	0.056	0.151	0.372	4.574	0.000	Supported
H <sub>5</sub> POSITIVE GAAI -> SMSE	0.047	0.050	0.047	-0.041	0.143	0.986	0.324	Not supported
H <sub>6</sub> POSITIVE GAAI -> CESM	0.230	0.231	0.065	0.104	0.360	3.553	0.000	Supported
H <sub>7</sub> SMSE -> CESM	0.386	0.388	0.061	0.263	0.502	6.290	0.000	Supported
H <sub>8</sub> CESM -> CP	0.825	0.826	0.021	0.781	0.865	38.470	0.000	Supported



The results of path analysis (Table 8) show that anthropomorphism significantly affects performance expectation ( $\beta=0.353$ ,  $p<0.01$ ) but does not affect positive attitudes towards AI. Performance expectation affects positive attitudes towards AI ( $\beta=0.706$ ,  $p<0.01$ ) and positive emotions ( $\beta=0.255$ ,  $p<0.01$ ). However, positive emotions do not have a significant effect on positive attitudes towards AI. Positive attitudes towards AI effects consumer engagement on social media ( $\beta=0.230$ ,  $p<0.01$ ), social media self-efficacy affects consumer engagement on social media ( $\beta=0.386$ ,  $p<0.01$ ) and consumer engagement on social media affects customer purchase ( $\beta=0.825$ ,  $p<0.01$ ). Thus, H<sub>1</sub>, H<sub>3</sub>, H<sub>4</sub>, H<sub>6</sub>, H<sub>7</sub> and H<sub>8</sub> were supported, but H<sub>2</sub> and H<sub>5</sub> were not supported.

The determination of coefficient values are displayed in Table 9. The impact of independent factors over the dependent variables is described by the R<sup>2</sup> test. A high or strong effect of independent variables over the dependent variable is indicated if the R<sup>2</sup> value is 0.75 or higher. A moderate influence is indicated by an R<sup>2</sup> value of 0.5, while a low or poor effect is indicated by an R<sup>2</sup> value of 0.25 or less (Hair et al., 2016).

According to the results, positive attitudes towards AI and social media self-efficacy explain 27.9% (moderate effect) of the variance in consumer engagement on social media. Besides, customer purchase is explained by consumer engagement on social media with a percentage of 68.1 (moderate effect). Anthropomorphism explains 12.4% (low effect) of the variance in performance expectancy. Performance expectancy makes a 6.5% (low effect) change in positive emotions. Finally, positive attitudes towards AI are explained by performance expectancy with a rate of 51.8% (moderate effect).

**Table 9.** Determination of Coefficients (R<sup>2</sup>)

	R-square	R-square adjusted
<b>CESM</b>	0.279	0.274
<b>CP</b>	0.681	0.680
<b>PE</b>	0.124	0.121
<b>POSEM</b>	0.065	0.062
<b>POSITIVE GAAI</b>	0.518	0.513

The f-square is another test used to assess the structural model. It describes how latent factors have an impact. A low effect is indicated by a f<sup>2</sup> value of less than or equal to 0.02, a medium effect by a value of 0.15, and a strong effect by a value equal to or greater than 0.35 (Cohen, 1988). Table 10 shows that the f<sup>2</sup> values in the current study. Consumer engagement on social media has a strong effect on customer purchase (f<sup>2</sup>= 2.135) and performance expectancy has a strong effect on positive attitudes towards AI (f<sup>2</sup>= 0.866). Besides, social media self-efficacy has a medium effect on consumer engagement on social media (f<sup>2</sup>= 0.168). All of the f-square values are shown in Table 10.

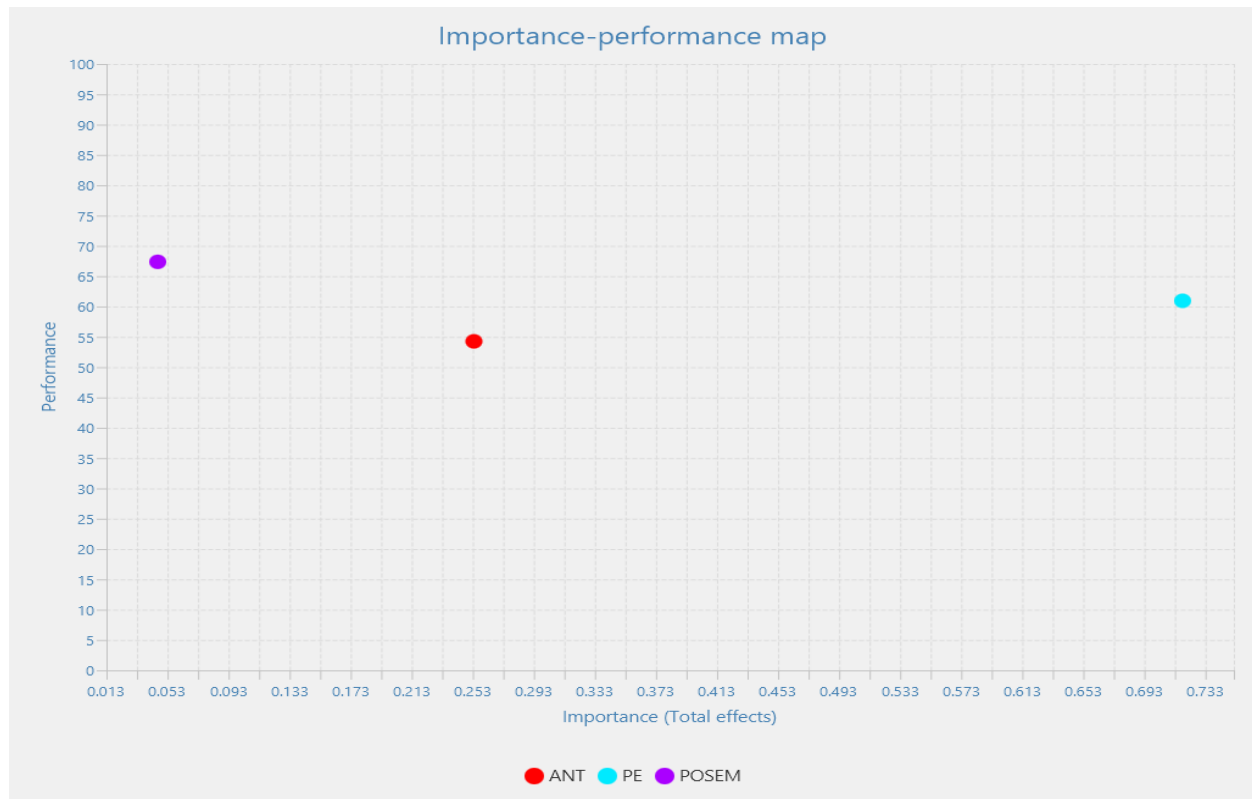
**Table 10.** F-square Values

<b>ANT -&gt; PE</b>	<b>0.142</b>
<b>ANT -&gt; POSITIVE GAAI</b>	0.000
<b>CESM -&gt; CP</b>	2.135
<b>PE -&gt; POSEM</b>	0.069
<b>PE -&gt; POSITIVE GAAI</b>	0.866
<b>POSEM -&gt; POSITIVE GAAI</b>	0.004
<b>POSITIVE GAAI -&gt; CESM</b>	0.060
<b>SMSE -&gt; CESM</b>	0.168

Importance- Performance Map's (IPMA) goal, according to Ringle and Sarstedt (2016), is to identify the components that perform poorly yet are crucial to the target constructions. In PLS-SEM, IPMA is a reliable and helpful analysis that expands on the usual path coefficient estimates in a more meaningful manner. In this study, three antecedents predict consumers' positive attitudes toward AI. Positive attitudes toward AI

are significantly influenced by only the performance expectation variable (Table 8). The outcomes of the IPMA are displayed in Figure 4.

**Figure 4.** Importance-Performance Map Analysis for Consumers' Positive Attitudes towards AI



Based on Figure 4, the IPMA Analysis of positive attitudes toward AI suggests that performance expectation is the most important predictor for the consumers' attitudes toward AI. Based on IPMA statistics, it is very clear that performance expectation has a strong effect on attitudes towards AI.

**Table 11.** Total Effect and Performance Values for Consumers' Positive Attitudes towards AI

	<i>Total Effects</i>	<i>Performance</i>
<b>ANT</b>	0.254	54.258
<b>PE</b>	0.718	60.943
<b>POSEM</b>	0.047	67.372

Although the performance value of positive emotions is really high, it does not have a significant effect on positive attitudes towards AI (Table 8). Performance expectation has the highest importance score (0.718) on customer purchase. Table 11 provides a comprehensive set of the importance-performance map analysis values.

**Figure 5.** Importance-Performance Map Analysis for Customer Purchase



Figure 5 shows all of the variables that have direct or indirect effects on customer purchases. According to the results, the most effective variable on customer purchase is consumer engagement on social media. Table 12 includes the total effect and performance values for IPMA analysis conducted for customer purchase variable.

**Table 12.** Total Effect and Performance Values for Customer Purchase

	<i>Total Effect</i>	<i>Performance</i>
<b>ANT</b>	0.048	54.258
<b>CESM</b>	0.825	55.077
<b>PE</b>	0.136	60.943
<b>POSEM</b>	0.009	67.372
<b>POSITIVE GAAI</b>	0.190	63.532
<b>SMSE</b>	0.319	63.754

Table 12 describes that consumer engagement on social media is the most important factor for explaining customer purchase behavior with a total effect value of 0.825. However, the highest performance score (63.754) belongs to social media self-efficacy which has an indirect effect on customer purchase behavior.

## 5. Conclusion

### 5.1. Discussion and Theoretical Contribution

The aim of this study is to understand the antecedents and consequences of consumers' positive attitudes towards AI with a comprehensive model. The first finding of this study is that anthropomorphism has a significant effect on consumers' performance expectations of artificial intelligence applications. This

finding is similar to the findings of many studies stating that anthropomorphism has an impact on consumers' performance expectations towards AI applications (Chen & Lin, 2021; Chen & Park, 2021; Zhang et al., 2020). Defining humanoid features in AI applications for consumers leads to increased performance expectations for AI (Kronemann et al., 2023). In this sense, the fact that AI applications developed for consumers have humanoid features will pave the way for consumers to shop through brands using AI.

A different result reached in this study is that anthropomorphism does not have a direct effect on consumers' positive attitudes toward AI applications. This finding differs from other results reached in the literature. Some studies have found that anthropomorphism has a significant effect on positive attitudes toward AI (Lin et al., 2020; Youn and Cho, 2023). In this study, it was determined that anthropomorphism was effective on performance expectation, and performance expectation was effective on positive attitudes towards AI. In other words, consumers' attitudes towards AI applications are not directly affected by anthropomorphism, but positive attitudes emerge through consumers' performance expectations. Based on this, to increase consumers' performance expectations, brands should humanize AI tools on social media applications and add human features so that they can be closer to consumers (Anayat et al., 2023; Chi et al., 2022; Chu et al., 2022; Wen et al., 2022). In this way, consumers' performance expectations will increase and their attitudes will change positively.

Moreover, this study found that consumers' performance expectations have an impact on positive emotions. When consumers have high expectations of AI's performance and those expectations are met or exceeded, it can lead to positive emotions. However, negative feelings may arise if customers feel that AI is not performing up to their expectations (Zhigang et al., 2020). The findings obtained in the study are similar to the results of some studies conducted in the literature (Pantano & Scarpi, 2022; Zhu et al., 2023). Consumer willingness to use AI for tasks involving subjectivity, intuition, and emotion is influenced by the perception that AI lacks emotional capacity or empathy (H. Zhang et al., 2022). As a result, increasing the level of performance expected from AI tools causes positive emotions in consumers.

This study shows that positive emotions do not have a direct impact on the development of positive attitudes towards AI. In this respect, the findings differ from some studies in the literature (Lerner et al., 2015; Pantano and Scarpi, 2022; Penna et al., 2022). It is thought that this difference may be because the samples consist of different cultures. It may be possible to obtain different results on different samples.

One of the most important findings of the study is that positive attitudes towards AI have a positive effect on consumers' social media engagement. This finding is in agreement with previous studies (Chai et al., 2020). Consumers' positive attitudes towards AI tools increase consumers' participation in social media platforms. Therefore, marketing managers need to discover under what conditions consumers develop positive attitudes towards AI. In this way, customer participation in social media platforms can be increased.

Besides attitudes, social media self-efficacy also has a meaningful effect on social media engagement. Self-efficacy is defined as a significant driver of consumer engagement in social media brand communities, further emphasizing the role of self-efficacy in shaping online interactions (Liu et al., 2019). Moreover, self-efficacy is crucial for customer behavioral involvement in social media marketing (De Silva, 2021). Increasing consumers' social media self-efficacy may help them engage in brands' social media platforms more frequently which, in turn, may result in purchase behavior. Because consumer engagement in social media results with purchase behavior, as concluded in this study. Consumers' participation in the social media platforms of the brands they shop from increases their brand loyalty and shopping intention behavior. This situation has been supported by many studies in the literature (Matusin et al., 2023; Sheriff et al., 2019; Shofiya and Fachira, 2021). The findings obtained in this study are similar to previous studies.

The biggest contribution of this study is that it examines the antecedents (emotions, performance expectancy, anthropomorphism) and consequences (social media participation and purchasing behavior) of consumers' positive attitudes towards AI from a broad perspective, including social media self-efficacy. It is thought to contribute to the literature by comprehensively examining the precursors of consumers' behavioral reactions to brands that actively use social media. Although there are some studies conducted on different variables of this research (as mentioned above), the study contributes as it is a model that examines

these variables together in a comprehensive manner. This study, which includes the inner world of consumers in the AI-social media relationship, not only contributes to the literature but also provides important findings for the business and marketing world.

## **5.2. Practical and Managerial Implications**

Companies should leverage anthropomorphism in their AI interfaces to positively influence consumers' performance expectations. Designing AI with human-like qualities can enhance user experience and build trust. Understanding and managing consumers' performance expectations of AI is crucial. Customer service and AI interactions should align with realistic performance expectations to foster positive attitudes and emotions. Given the impact of positive attitudes towards AI on social media engagement, businesses should incorporate AI-related content in their social media strategies. Highlighting AI advancements, benefits, and success stories can enhance positive perceptions. Enhancing social media self-efficacy can be achieved through user training and support. Providing resources and assistance to users in navigating AI-driven features on social media platforms can improve their confidence and engagement. Companies should consider incorporating anthropomorphic features not only in AI interfaces but also in their social media interactions. This can create a more relatable and engaging experience for consumers.

In product development, managers should prioritize designing AI interfaces that evoke positive emotions and attitudes. User-centric design principles, with a focus on meeting performance expectations, can contribute to overall customer satisfaction. Marketing teams should tailor their social media strategies to align with consumers' positive attitudes towards AI. Content that highlights the benefits, ethical considerations, and real-world applications of AI can be effective in shaping positive perceptions. Implementing training programs for both employees and consumers can enhance social media self-efficacy. This can be especially important in industries where AI-driven technologies play a significant role in customer interactions. Managers should monitor and analyze customer engagement metrics on social media platforms. By understanding the impact of positive attitudes and social media self-efficacy, businesses can refine their strategies and focus on areas that drive customer engagement. Collaboration between marketing and technology teams is essential. Ensuring that AI capabilities are effectively communicated in marketing materials and align with consumer expectations requires close coordination between these departments.

By incorporating these practical and managerial considerations, businesses can better navigate the intersection of anthropomorphism, consumer expectations, social media, and AI, ultimately enhancing customer engagement and purchase behavior.

## **5.3. Limitations and Future Research**

The findings of this study may have limitations in terms of generalizability across diverse contexts and industries. The study focused on a specific set of conditions and demographics (with convenience sampling method), and variations in cultural backgrounds or industry-specific factors may influence the observed relationships differently. The research heavily relies on survey-based data, which is subject to respondents' interpretation and self-reporting biases. Future studies could complement survey data with other methods, such as experimental designs or observational techniques, to provide a more comprehensive understanding of the relationships examined. The cross-sectional nature of the data restricts the ability to establish causation definitively. Future research could employ longitudinal designs to capture changes over time and strengthen causal inferences regarding the identified relationships.

Future research could delve into the underlying mechanisms that mediate the observed relationships. Investigating factors that mediate the impact of anthropomorphism on performance expectations, or the mediating role of attitudes and emotions in the relationship between performance expectations and engagement, would provide a more comprehensive picture. Given the potential influence of cultural factors on consumer perceptions, future studies could explore how cultural variations impact the relationships identified in this research. This could enhance the external validity of the findings and contribute to a more nuanced understanding of the cultural dimensions influencing AI acceptance. Different

AI applications may elicit distinct consumer responses. Future research could compare consumer perceptions and behaviors across various AI applications to identify whether the observed relationships hold consistently or vary based on the specific context of AI use.

With rapid advancements in AI technology, future research could explore how emerging AI features and capabilities influence consumer perceptions and engagement. This includes investigating the effects of new functionalities on performance expectations, attitudes, and emotions toward AI. While this study examined the relationship between social media engagement and customer purchases, future research could extend the investigation to explore the long-term effects of AI-related perceptions and engagements on customer loyalty and retention.

Addressing these limitations and pursuing these future research directions will contribute to a more robust understanding of the intricate dynamics between anthropomorphism, performance expectations, attitudes, emotions, social media engagement, and ultimately, consumer behavior in the context of AI.

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## References

- Adam, M., Wessel, M., & Benlian, A. (2021). AI-based chatbots in customer service and their effects on user compliance. *Electronic Markets, 31*(2), 427-445. <https://doi.org/10.1007/s12525-020-00414-7>
- Alber, J. M., Paige, S., Stellefson, M., & Bernhardt, J. M. (2016). Social media self-efficacy of health education specialists. *Health Promotion Practice, 17*(6), 915-921. <https://doi.org/10.1177/1524839916652389>
- Anayat, S., Rasool, G., & Pathania, A. (2023). Examining the context-specific reasons and adoption of artificial intelligence-based voice assistants: A behavioural reasoning theory approach. *International Journal of Consumer Studies, 47*(5), 1885-1910. <https://doi.org/10.1111/ijcs.12963>
- Araujo, T. (2018). Living up to the chatbot hype: The influence of anthropomorphic design cues and communicative agency framing on conversational agent and company perceptions. *Computers in Human Behavior, 85*, 183-189. <https://doi.org/10.1016/j.chb.2018.03.051>
- Babatunde, S. O., Odejide, O. A., Edunjobi, T. E., & Ogundipe, D. O. (2024). The role of AI in marketing personalization: A theoretical exploration of consumer engagement strategies. *International Journal of Management & Entrepreneurship Research, 6*(3), 936-949. <https://doi.org/10.51594/ijmer.v6i3.964>
- Bakpayev, M., Baek, T. H., van Esch, P., & Yoon, S. (2022). Programmatic creative: AI can think but it cannot feel. *Australasian Marketing Journal, 30*(1), 90-95. <https://doi.org/10.1016/j.ausmj.2020.04.002>
- Blut, M., Wang, C., Wunderlich, N. V., & Brock, C. (2021). Understanding anthropomorphism in service provision: A meta-analysis of physical robots, chatbots, and other AI. *Journal of the Academy of Marketing Science, 49*(4), 632-658. <https://doi.org/10.1007/s11747-020-00762-y>
- Bozkurt, S., Gligor, D. M., & Babin, B. J. (2021). The role of perceived firm social media interactivity in facilitating customer engagement behaviors. *European Journal of Marketing, 55*(4), 995-1022. <https://doi.org/10.1108/EJM-07-2019-0613>

- Bozkurt, S., Gligor, D., Locander, J., & Ahmad Rather, R. (2023). How social media self-efficacy and social anxiety affect customer purchasing from agile brands on social media? *Journal of Research in Interactive Marketing*, 17(6), 813-830. <https://doi.org/10.1108/JRIM-08-2022-0242>
- Bright, L. F., Lim, H. S., & Logan, K. (2021). "Should I post or ghost?": Examining how privacy concerns impact social media engagement in US consumers. *Psychology & Marketing*, 38(10), 1712-1722. <https://doi.org/10.1002/mar.21499>
- Brzozowska-Woś, M., & Schivinski, B. (2019). The influence of interpersonal motivation on polish consumers' online brand-related activity. *Argumenta Oeconomica*, 2(43), 213-231. <https://doi.org/10.15611/aoe.2019.2.09>
- Cai, R., Cain, L. N., & Jeon, H. (2022). Customers' perceptions of hotel AI-enabled voice assistants: Does brand matter? *International Journal of Contemporary Hospitality Management*, 34(8), 2807-2831. <https://doi.org/10.1108/IJCHM-10-2021-1313>
- Chai, C. S., Wang, X., & Xu, C. (2020). An extended theory of planned behavior for the modelling of Chinese secondary school students' intention to learn artificial intelligence. *Mathematics*, 8(11), 2089. <https://doi.org/10.3390/math8112089>
- Chen, H., Chan-Olmsted, S., Kim, J., & Mayor Sanabria, I. (2022). Consumers' perception on artificial intelligence applications in marketing communication. *Qualitative Market Research: An International Journal*, 25(1), 125-142. <https://doi.org/10.1108/QMR-03-2021-0040>
- Chen, K. J., & Lin, J. S. (2021). Revisiting the effects of anthropomorphism on brand relationship outcomes: The moderating role of psychological disposition. *European Journal of Marketing*, 55(8), 2174-2200. <https://doi.org/10.1108/EJM-07-2018-0471>
- Chen, Q. Q., & Park, H. J. (2021). How anthropomorphism affects trust in intelligent personal assistants. *Industrial Management & Data Systems*, 121(12), 2722-2737. <https://doi.org/10.1108/IMDS-12-2020-0761>
- Chi, O. H., Denton, G., & Gursoy, D. (2020). Artificially intelligent device use in service delivery: A systematic review, synthesis, and research agenda. *Journal of Hospitality Marketing & Management*, 29(7), 757-786. <https://doi.org/10.1080/19368623.2020.1721394>
- Chi, O. H., Gursoy, D., & Chi, C. G. (2022). Tourists' attitudes toward the use of artificially intelligent (AI) devices in tourism service delivery: Moderating role of service value seeking. *Journal of Travel Research*, 61(1), 170-185. <https://doi.org/10.1177/0047287520971054>
- Choi, D. H., Yoo, W., Noh, G. Y., & Park, K. (2017). The impact of social media on risk perceptions during the MERS outbreak in South Korea. *Computers in Human Behavior*, 72, 422-431. <https://doi.org/10.1016/j.chb.2017.03.004>
- Chopra, K. (2019). Indian shopper motivation to use artificial intelligence. *International Journal of Retail & Distribution Management*, 47(3), 331-347. <https://doi.org/10.1108/IJRDM-11-2018-0251>
- Chu, T. H., Chao, C. M., Liu, H. H., & Chen, D. F. (2022). Developing an extended theory of UTAUT 2 model to explore factors influencing Taiwanese consumer adoption of intelligent elevators. *SAGE Open*, 12(4), 215824402211422. <https://doi.org/10.1177/21582440221142209>
- Ciuchita, R., Gummerus, J. K., Holmlund, M., & Linhart, E. L. (2023). Programmatic advertising in online retailing: Consumer perceptions and future avenues. *Journal of Service Management*, 34(2), 231-255. <https://doi.org/10.1108/JOSM-06-2021-0238>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Routledge.
- Cui, Y. (Gina). (2022). Sophia Sophia tell me more, which is the most risk-free plan of all? AI anthropomorphism and risk aversion in financial decision-making. *International Journal of Bank Marketing*, 40(6), 1133-1158. <https://doi.org/10.1108/IJBM-09-2021-0451>
- De Silva, S. K. D. U. (2021). Motives of social media usage on building consumer behavioural engagement. *Proceedings of International Conference on Business Management*, 17. <https://doi.org/10.31357/icbm.v17.5160>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.1177/002224378101800104>
- Garvey, A. M., Kim, T., & Duhachek, A. (2023). Bad news? Send an AI. Good news? Send a human. *Journal of Marketing*, 87(1), 10-25. <https://doi.org/10.1177/00222429211066972>
- Gursoy, D., Chi, O. H., Lu, L., & Nunkoo, R. (2019). Consumers acceptance of artificially intelligent (AI) device use in service delivery. *International Journal of Information Management*, 49, 157-169. <https://doi.org/10.1016/j.ijinfomgt.2019.03.008>

- Hair, J. F., Bush, R. P., & Ortinau, D. J. (2003). *Marketing research: Within a changing information environment*. The McGraw-Hill.
- Hair, J. F., Hult, G. T. M., Ringle, J. M., & Sarstedt, M. A. (2017). *Primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hair, Jr., J. F., Sarstedt, M., Matthews, L. M., & Ringle, C. M. (2016). Identifying and treating unobserved heterogeneity with FIMIX-PLS: Part I – method. *European Business Review*, 28(1), 63-76. <https://doi.org/10.1108/EBR-09-2015-0094>
- Han, B., Deng, X., & Fan, H. (2023). Partners or opponents? How mindset shapes consumers' attitude toward anthropomorphic artificial intelligence service robots. *Journal of Service Research*, 26(3), 441-458. <https://doi.org/10.1177/10946705231169674>
- Henkel, A., Bromuri, S., İren, D., & Urovi, V. (2020). Half human, half machine – augmenting service employees with ai for interpersonal emotion regulation. *Journal of Service Management*, 31(2), 247-265. <https://doi.org/10.1108/josm-05-2019-0160>
- Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., Ketchen, D. J., Hair, J. F., Hult, G. T. M., & Calantone, R. J. (2014). Common beliefs and reality about PLS. *Organizational Research Methods*, 17(2), 182-209. <https://doi.org/10.1177/1094428114526928>
- Hermann, E. (2022). Anthropomorphized artificial intelligence, attachment, and consumer behavior. *Marketing Letters*, 33(1), 157-162. <https://doi.org/10.1007/s11002-021-09587-3>
- Hocevar, K. P., Flanagan, A. J., & Metzger, M. J. (2014). Social media self-efficacy and information evaluation online. *Computers in Human Behavior*, 39, 254-262. <https://doi.org/10.1016/j.chb.2014.07.020>
- Hofmann, V., Schwayer, L. M., Stokburger-Sauer, N. E., & Wanisch, A. T. (2021). Consumers' self-construal: Measurement and relevance for social media communication success. *Journal of Consumer Behaviour*, 20(4), 959-979. <https://doi.org/10.1002/cb.1927>
- Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social media: Conceptualization, scale development and validation. *Journal of interactive marketing*, 28(2), 149-165. <https://doi.org/10.1016/j.intmar.2013.12.002>
- Hong, J. (2021). Artificial intelligence (AI), don't surprise me and stay in your lane: An experimental testing of perceiving humanlike performances of AI. *Human Behavior and Emerging Technologies*, 3(5), 1023-1032. <https://doi.org/10.1002/hbe2.292>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55. <https://doi.org/10.1080/10705519909540118>
- Jan, I. U., Ji, S., & Kim, C. (2023). What (de) motivates customers to use AI-powered conversational agents for shopping? The extended behavioral reasoning perspective. *Journal of Retailing and Consumer Services*, 75, 103440. <https://doi.org/10.1016/j.jretconser.2023.103440>
- Kang, H., & Lou, C. (2022). AI agency vs. human agency: understanding human–AI interactions on TikTok and their implications for user engagement. *Journal of Computer-Mediated Communication*, 27(5). <https://doi.org/10.1093/jcmc/zmac014>
- Kaya, F., Aydin, F., Schepman, A., Rodway, P., Yetişensoy, O., & Demir Kaya, M. (2024). The roles of personality traits, AI anxiety, and demographic factors in attitudes toward artificial intelligence. *International Journal of Human–Computer Interaction*, 40(2), 497-514. <https://doi.org/10.1080/10447318.2022.2151730>
- Khan, I., Saleh, M. A., Quazi, A., & Johns, R. (2021). Health consumers' social media adoption behaviours in Australia. *Health Informatics Journal*, 27(2), 146045822110099. <https://doi.org/10.1177/14604582211009917>
- Kim, S. Y., Schmitt, B. H., & Thalmann, N. M. (2019). Eliza in the uncanny valley: Anthropomorphizing consumer robots increases their perceived warmth but decreases liking. *Marketing Letters*, 30(1), 1-12. <https://doi.org/10.1007/s11002-019-09485-9>
- Kim, S., & Um, N. H. (2016). Recognition in social media for supporting a cause: Involvement and self-efficacy as moderators. *Social Behavior and Personality: An International Journal*, 44(11), 1863-1877. <https://doi.org/10.2224/sbp.2016.44.11.1863>



- Kronemann, B., Kizgin, H., Rana, N., & K. Dwivedi, Y. (2023). How AI encourages consumers to share their secrets? The role of anthropomorphism, personalisation, and privacy concerns and avenues for future research. *Spanish Journal of Marketing - ESIC*, 27(1), 3-19. <https://doi.org/10.1108/SJME-10-2022-0213>
- Kumar, V., & Pansari, A. (2016). Competitive advantage through engagement. *Journal of Marketing Research*, 53(4), 497-514. <https://doi.org/10.1509/jmr.15.0044>
- Kumar, V., Rajan, B., Venkatesan, R., & Lecinski, J. (2019). Understanding the role of artificial intelligence in personalized engagement marketing. *California Management Review*, 61(4), 135-155. <https://doi.org/10.1177/0008125619859317>
- Kyu Kim, Y., Yim, M. Y.-C., Kim, E. (Anna), & Reeves, W. (2021). Exploring the optimized social advertising strategy that can generate consumer engagement with green messages on social media. *Journal of Research in Interactive Marketing*, 15(1), 30-48. <https://doi.org/10.1108/JRIM-10-2019-0171>
- Lee, C. T., Pan, L. Y., & Hsieh, S. H. (2022). Artificial intelligent chatbots as brand promoters: A two-stage structural equation modeling-artificial neural network approach. *Internet Research*, 32(4), 1329-1356. <https://doi.org/10.1108/INTR-01-2021-0030>
- Lerner, J. S., Li, Y., Valdesolo, P., & Kassam, K. S. (2015). Emotion and decision making. *Annual Review of Psychology*, 66(1), 799-823. <https://doi.org/10.1146/annurev-psych-010213-115043>
- Liang, Y., Lee, S. H., & Workman, J. E. (2020). Implementation of artificial intelligence in fashion: Are consumers ready? *Clothing and Textiles Research Journal*, 38(1), 3-18. <https://doi.org/10.1177/0887302X19873437>
- Lin, H., Chi, O. H., & Gursoy, D. (2020). Antecedents of customers' acceptance of artificially intelligent robotic device use in hospitality services. *Journal of Hospitality Marketing & Management*, 29(5), 530-549. <https://doi.org/10.1080/19368623.2020.1685053>
- Liu, L., Liu, R., Lee, M., & Chen, J. (2019). When will consumers be ready? A psychological perspective on consumer engagement in social media brand communities. *Internet Research*, 29(4), 704-724. <https://doi.org/10.1108/IntR-05-2017-0177>
- Martin, B. A. S., Jin, H. S., Wang, D., Nguyen, H., Zhan, K., & Wang, Y. X. (2020). The influence of consumer anthropomorphism on attitudes towards artificial intelligence trip advisors. *Journal of Hospitality and Tourism Management*, 44, 108-111. <https://doi.org/10.1016/j.jhtm.2020.06.004>
- Mathur, M., Lawrence, D., & Chakravarty, A. (2023). Leveraging consumer personality and social media marketing to improve a brand's social media equity. *International Journal of Consumer Studies*, 47(3), 1076-1094. <https://doi.org/10.1111/ijcs.12888>
- Matusin, I. O., Matusin, A. R., Nasution, C. F., & Irma, D. (2023). The effect of social media marketing on consumer engagement and electronic word-of-mouth. *International Journal of Social Science and Human Research*, 06(02). <https://doi.org/10.47191/ijsshr/v6-i2-06>
- Meuter, M. L., Bitner, M. J., Ostrom, A. L., & Brown, S. W. (2005). Choosing among alternative service delivery modes: An investigation of customer trial of self-service technologies. *Journal of Marketing*, 69(2), 61-83. <https://doi.org/10.1509/jmkg.69.2.61.60759>
- Mohammed, A., & Al-Swidi, A. (2019). The influence of CSR on perceived value, social media and loyalty in the hotel industry. *Spanish Journal of Marketing - ESIC*, 23(3), 373-396. <https://doi.org/10.1108/SJME-06-2019-0029>
- Nagy, S., & Hajdu, N. (2021). Consumer acceptance of the use of artificial intelligence in online shopping: Evidence from Hungary. *Amfiteatru Economic*, 23(56), 155-173. <https://doi.org/10.24818/EA/2021/56/155>
- Nazir, S., Khadim, S., Ali Asadullah, M., & Syed, N. (2023). Exploring the influence of artificial intelligence technology on consumer repurchase intention: The mediation and moderation approach. *Technology in Society*, 72, 102190. <https://doi.org/10.1016/j.techsoc.2022.102190>
- Oc, Y., Plangger, K., Sands, S., Campbell, C. L., & Pitt, L. (2023). Luxury is what you say: Analyzing electronic word-of-mouth marketing of luxury products using artificial intelligence and machine learning. *Psychology & Marketing*, 40(9), 1704-1719. <https://doi.org/10.1002/mar.21831>
- Pantano, E., & Scarpi, D. (2022). I, robot, you, consumer: Measuring artificial intelligence types and their effect on consumers emotions in service. *Journal of Service Research*, 25(4), 583-600. <https://doi.org/10.1177/10946705221103538>
- Pelău, C., & Ene, I. (2020). Interaction between consumers and emerging forms of artificial intelligence: A discriminant analysis. *Studia Universitatis „Vasile Goldis” Arad – Economics Series*, 30(2), 1-12. <https://doi.org/10.2478/sues-2020-0008>

- Penna, A. C. G., Durço, B. B., Pagani, M. M., Pimentel, T. C., Mársico, E. T., Silva, A. C. O., & Esmerino, E. A. (2022). Kefir with artificial and natural dyes: Assessment of consumer knowledge, attitude, and emotional profile using emojis. *Journal of Sensory Studies, 37*(2). <https://doi.org/10.1111/joss.12734>
- Pillai, R., Sivathanu, B., & Dwivedi, Y. K. (2020). Shopping intention at AI-powered automated retail stores (AIPARS). *Journal of Retailing and Consumer Services, 57*, 102207. <https://doi.org/10.1016/j.jretconser.2020.102207>
- Placani, A. (2024). Anthropomorphism in AI: Hype and fallacy. *AI and Ethics, 1-8*. <https://doi.org/10.1007/s43681-024-00419-4>
- Pramesti, D. A., Kurnia, M., & Santosa, M. (2021). Brand anthropomorphism and culture effect to younger consumer visit intention. *Proceedings of the 2nd Borobudur International Symposium on Humanities and Social Sciences, BIS-HSS 2020, 18 November 2020, Magelang, Central Java, Indonesia*. <https://doi.org/10.4108/eai.18-11-2020.2311729>
- Prasad, S., Garg, A., & Prasad, S. (2019). Purchase decision of generation Y in an online environment. *Marketing Intelligence & Planning, 37*(4), 372-385. <https://doi.org/10.1108/MIP-02-2018-0070>
- Prentice, C., & Nguyen, M. (2020). Engaging and retaining customers with AI and employee service. *Journal of Retailing and Consumer Services, 56*, 102186. <https://doi.org/10.1016/j.jretconser.2020.102186>
- Riedel, A., Mulcahy, R., & Northey, G. (2022). Feeling the love? How consumer's political ideology shapes responses to AI financial service delivery. *International Journal of Bank Marketing, 40*(6), 1102-1132. <https://doi.org/10.1108/IJBM-09-2021-0438>
- Ringle, C. M., & Sarstedt, M. (2016). Gain more insight from your PLS-SEM results. *Industrial Management & Data Systems, 116*(9), 1865-1886. <https://doi.org/10.1108/IMDS-10-2015-0449>
- Sabir, A. A., Ahmad, I., Ahmad, H., Rafiq, M., Khan, M. A., & Noreen, N. (2023). Consumer acceptance and adoption of AI robo-advisors in fintech industry. *Mathematics, 11*(6), 1311. <https://doi.org/10.3390/math11061311>
- Salles, A., Evers, K., & Farisco, M. (2020). Anthropomorphism in AI. *AJOB Neuroscience, 11*(2), 88-95. <https://doi.org/10.1080/21507740.2020.1740350>
- Santy, R. D., Habibillah, M. I., Dimiyati, Y. R., Nofia, V. S. S., Luckyardi, S., Gaol, T. V. L., & Oktafiani, D. (2021). Artificial intelligence as human behavior detection for auto personalization function in social media marketing. *International Journal of Research and Applied Technology, 1*(1), 25-34. <https://doi.org/10.34010/injuratech.v1i1.5456>
- Schepman, A., & Rodway, P. (2020). Initial validation of the general attitudes towards artificial intelligence scale. *Computers in Human Behavior Reports, 1*, 100014. <https://doi.org/10.1016/j.chbr.2020.100014>
- Schneiders, E., Papachristos, E., & van Berkel, N. (2021). The effect of embodied anthropomorphism of personal assistants on user perceptions. *33rd Australian Conference on Human-Computer Interaction, 231-241*. <https://doi.org/10.1145/3520495.3520503>
- Sheriff, N. M., Zulkifli, A. S., & Othman, W. N. S. W. (2019). Accentuating customer engagement, visual presentation and copywriting for effective social media marketing: A case study. *International Journal of Academic Research in Business and Social Sciences, 8*(12). <https://doi.org/10.6007/IJARBS/v8-i12/5263>
- Shin, D. (2022). The perception of humanness in conversational journalism: An algorithmic information-processing perspective. *New Media & Society, 24*(12), 2680-2704. <https://doi.org/10.1177/1461444821993801>
- Shofiya, N. A., & Fachira, I. (2021). Effects of social media marketing towards probiotic chicken customers' purchase intention: Customer engagement as a mediator. *Malaysian Journal of Social Sciences and Humanities (MJSSH), 6*(8), 518-531. <https://doi.org/10.47405/mjssh.v6i8.943>
- Song, C. S., & Kim, Y.-K. (2021). Predictors of consumers' willingness to share personal information with fashion sales robots. *Journal of Retailing and Consumer Services, 63*, 102727. <https://doi.org/10.1016/j.jretconser.2021.102727>
- Song, M., Xing, X., Duan, Y., Cohen, J., & Mou, J. (2022). Will artificial intelligence replace human customer service? The impact of communication quality and privacy risks on adoption intention. *Journal of Retailing and Consumer Services, 66*, 102900. <https://doi.org/10.1016/j.jretconser.2021.102900>
- Tian, Y., & Wang, X. (2022). A study on psychological determinants of users' autonomous vehicles adoption from anthropomorphism and UTAUT perspectives. *Frontiers in Psychology, 13*. <https://doi.org/10.3389/fpsyg.2022.986800>

- Tran, A. D., Pallant, J. I., & Johnson, L. W. (2021). Exploring the impact of chatbots on consumer sentiment and expectations in retail. *Journal of Retailing and Consumer Services*, 63, 102718. <https://doi.org/10.1016/j.jretconser.2021.102718>
- Tussyadiah, I., & Miller, G. (2019). Perceived impacts of artificial intelligence and responses to positive behaviour change intervention. In *Information and Communication Technologies in Tourism 2019* (pp. 359–370). Springer International Publishing. [https://doi.org/10.1007/978-3-030-05940-8\\_28](https://doi.org/10.1007/978-3-030-05940-8_28)
- Varella, M. A. C. (2018). The biology and evolution of the three psychological tendencies to anthropomorphize biology and evolution. *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.01839>
- Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS Quarterly*, 36(1), 157-178.
- Vredevelde, A. J. (2018). Emotional intelligence, external emotional connections and brand attachment. *Journal of Product & Brand Management*, 27(5), 545-556. <https://doi.org/10.1108/JPBM-10-2017-1613>
- Wang, L., & Chen, J. (2023). The influence of fear of negative evaluation on consumers' preference for AI services. *Proceedings of the 2022 2nd International Conference on Management Science and Software Engineering (ICMSSE 2022)* (pp. 561-565). [https://doi.org/10.2991/978-94-6463-056-5\\_82](https://doi.org/10.2991/978-94-6463-056-5_82)
- Wang, X., Zhu, H., Jiang, D., Xia, S., & Xiao, C. (2023). "Facilitators" vs "substitutes": The influence of artificial intelligence products' image on consumer evaluation. *Nankai Business Review International*, 14(1), 177-193. <https://doi.org/10.1108/NBRI-05-2022-0051>
- Wang, Y., Kang, Q., Zhou, S., Dong, Y., & Liu, J. (2022). The impact of service robots in retail: Exploring the effect of novelty priming on consumer behavior. *Journal of Retailing and Consumer Services*, 68, 103002. <https://doi.org/10.1016/j.jretconser.2022.103002>
- Wen, H., Zhang, L., Sheng, A., Li, M., & Guo, B. (2022). From "human-to-human" to "human-to-non-human"—influence factors of artificial intelligence-enabled consumer value co-creation behavior. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.863313>
- Wikipedia (2023). Turkey demographics. [https://tr.wikipedia.org/wiki/T%C3%BCrkiye\\_demografisi\\_\(Access Date: 30.04.2024\)](https://tr.wikipedia.org/wiki/T%C3%BCrkiye_demografisi_(Access%20Date:30.04.2024))
- Yang, Y., Liu, Y., Lv, X., Ai, J., & Li, Y. (2022). Anthropomorphism and customers' willingness to use artificial intelligence service agents. *Journal of Hospitality Marketing & Management*, 31(1), 1-23. <https://doi.org/10.1080/19368623.2021.1926037>
- Yao, D., Holopainen, J., & Laukkanen, T. (2024). Human-AI Interaction—Is It Trust or Emotions That Mediates Behavioral Intentions? *Proceedings of the 57th Hawaii International Conference on System Sciences*, 1448-1456.
- Yazıcıoğlu, Y., & Erdoğan, S. (2004). *SPSS uygulamalı bilimsel araştırma yöntemleri*. Detay Yayıncılık
- Youn, K., & Cho, M. (2023). Business types matter: New insights into the effects of anthropomorphic cues in AI chatbots. *Journal of Services Marketing*, 37(8), 1032–1045. <https://doi.org/10.1108/JSM-04-2022-0126>
- Yuan, C., Zhang, C., & Wang, S. (2022). Social anxiety as a moderator in consumer willingness to accept AI assistants based on utilitarian and hedonic values. *Journal of Retailing and Consumer Services*, 65, 102878. <https://doi.org/10.1016/j.jretconser.2021.102878>
- Yue, D., Tong, Z., Tian, J., Li, Y., Zhang, L., & Sun, Y. (2021). Anthropomorphic strategies promote wildlife conservation through empathy: The moderation role of the public epidemic situation. *International Journal of Environmental Research and Public Health*, 18(7), 3565. <https://doi.org/10.3390/ijerph18073565>
- Yun, J. H., Lee, E., & Kim, D. H. (2021). Behavioral and neural evidence on consumer responses to human doctors and medical artificial intelligence. *Psychology & Marketing*, 38(4), 610-625. <https://doi.org/10.1002/mar.21445>
- Zaman, K. (2022). Transformation of marketing decisions through artificial intelligence and digital marketing. *Journal of Marketing Strategies*, 4(2), 353–364. <https://doi.org/10.52633/jms.v4i2.210>
- Zhang, H., Bai, X., & Ma, Z. (2022). Consumer reactions to AI design: Exploring consumer willingness to pay for AI-designed products. *Psychology & Marketing*, 39(11), 2171-2183. <https://doi.org/10.1002/mar.21721>
- Zhang, M., Li, L., Ye, Y., Qin, K., & Zhong, J. (2020). The effect of brand anthropomorphism, brand distinctiveness, and warmth on brand attitude: A mediated moderation model. *Journal of Consumer Behaviour*, 19(5), 523-536. <https://doi.org/10.1002/cb.1835>
- Zhigang, W., Lei, Z., & Xintao, L. (2020). Consumer response to corporate hypocrisy from the perspective of expectation confirmation theory. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.580114>

Zhu, H., Zhu, Z., Ou, Y., & Yin, Y. (2023). To be precise (imprecise) in utilitarian (hedonic) contexts: Examining the influence of numerical precision on consumer reactions to artificial intelligence-based recommendations. *Psychology & Marketing*, 40(12), 2668-2685. <https://doi.org/10.1002/mar.21904>