Journal of
Risk and Financial Management

MDPI

Article

Enhancing Financial Advisory Services with GenAI: Consumer Perceptions and Attitudes Through Service-Dominant Logic and Artificial Intelligence Device Use Acceptance Perspectives

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Abstract: Financial institutions are currently undergoing a significant shift from traditional robo-advisors to more advanced generative artificial intelligence (GenAI) technologies. This transformation has motivated us to investigate the factors influencing consumer responses to GenAI-driven financial advice. Despite extensive research on the adoption of robo-advisors, there is a gap in our understanding of the specific contributors to, and differences in, consumer attitudes and reactions to GenAI-based financial guidance. This study aims to address this gap by analyzing the impact of personalized investment suggestions, human-like empathy, and the continuous improvement of GenAI-provided financial advice on its authenticity as perceived by consumers, their utilitarian attitude toward the use of GenAI for financial advice, and their reactions to GenAI-generated financial suggestions. A comprehensive research model was developed based on service-dominant logic (SDL) and Artificial Intelligence Device Use Acceptance (AIDUA) frameworks. The model was subsequently employed in a structural equation modeling (SEM) analysis of survey data from 822 mobile banking users. The findings indicate that personalized investment suggestions, human-like empathy, and the continuous improvement of GenAI's recommendations positively influence consumers' perception of its authenticity. Moreover, we discovered a positive correlation between utilitarian attitudes and perceived authenticity, which ultimately influences consumers' responses to GenAI's financial advisory solutions. This is manifested as either a willingness to engage or resistance to communication. This study contributes to the research on GenAI-powered financial services and underscores the significance of integrating GenAI financial guidance into the routine operations of financial institutions. Our work builds upon previous research on robo-advisors, offering practical insights for financial institutions seeking to leverage GenAI-driven technologies to enhance their services and customer experiences.

Keywords: GenAI financial advice; consumer perceptions; service-dominant logic (SDL); Artificial Intelligence Device Use Acceptance (AIDUA); perceived authenticity

Citation: Yang, Qin, and Young-Chan Lee. 2024. Enhancing Financial Advisory Services with GenAI: Consumer Perceptions and Attitudes Through Service-Dominant Logic and Artificial Intelligence Device Use Acceptance Perspectives. *Journal of Risk and Financial Management* 17: 470. https://doi.org/10.3390/jrfm17100470

Academic Editors: Jong-Min Kim and Thanasis Stengos

Received: 29 August 2024
Revised: 11 October 2024
Accepted: 15 October 2024
Published: 17 October 2024

1. Introduction

The financial sector is undergoing a profound transformation with the advent of sophisticated technologies such as robo-advisors and generative artificial intelligence (GenAI) platforms like ChatGPT. This technological revolution has fundamentally altered how individuals manage their finances and receive financial advice. While robo-advisors provide algorithm-based asset management services with minimal human intervention (Sironi 2016), GenAI technologies have significantly advanced these services by offering personalized, conversational financial advice, which represents a new frontier in digital financial services (Dewasiri et al. 2024).

Previous research has thoroughly examined the impact of robo-advisors, focusing on key factors such as behavioral biases, trust, perceived risk, and user attitudes in the adoption and effectiveness of automated financial advisory systems (Brenner and Meyll

2020; Bhatia et al. 2022; Xia et al. 2023). However, these studies have largely overlooked the specific influence of GenAI technologies, particularly in terms of how their distinct attributes reshape user experiences in financial contexts. The gap identified by prior research (Fui-Hoon Nah et al. 2023) suggests a need for future studies to explore how GenAI technologies, with their conversational nature and capacity for continuous learning, influence consumer perceptions of financial advice services. Addressing this gap, our study builds on the suggestions of previous research to advance our understanding of how GenAI platforms affect consumer attitudes and behaviors.

To address this research gap, this study focuses on the unique attributes of GenAI, such as its personalized investment suggestions, human-like empathy, and ability to continuously learn and improve. These features have the potential to significantly influence consumers' perceptions of the authenticity and reliability of financial advice (Pelau et al. 2021). Building on the gaps identified in earlier studies, we integrate service-dominant logic (SDL) and AI Device Use Acceptance (AIDUA) frameworks to explore the role these attributes play in shaping consumer trust in and acceptance of GenAI-based financial advisory services (Vargo and Lusch 2004; Gursoy et al. 2019). We employ structural equation modeling to analyze data from 822 mobile banking users, providing a comprehensive examination of the factors that drive the adoption and effectiveness of GenAI in financial advice.

Our research aims to address four principal questions:

How do GenAI's attributes influence consumers' perceptions of authenticity in using GenAI for financial advice?

What is the relationship between perceived authenticity and utilitarian attitudes towards GenAI financial advice?

How do utilitarian attitudes affect consumers' responses to GenAI financial advice?

How does AI literacy moderate the impact of GenAI's attributes on perceived authenticity?

This study contributes to both theory and practice by addressing the research gaps identified in prior studies. It offers a deeper understanding of how consumers perceive the authenticity of GenAI financial advice and provides practical insights for designing, implementing, and educating users about GenAI-powered financial services. By investigating the impact of GenAI attributes on perceived authenticity and subsequent consumer attitudes and behaviors, this research not only fills a significant gap in the literature but also offers practical guidance for developing effective GenAI-based financial advisory services.

This paper is organized as follows: Section 2 presents a literature review and the theoretical framework, focusing on the evolution of financial advisory services and the unique attributes of GenAI. Section 3 develops the research hypotheses and model, integrating service-dominant logic (SDL) and AI Device Use Acceptance (AIDUA) frameworks. Section 4 outlines the research methodology, including the data collection and the development of the measurement. Section 5 discusses the data analysis and the results of the structural model. Finally, Section 6 provides the conclusion, academic and practical implications, and suggestions for future research directions.

2. Literature Review and Theoretical Framework

2.1. Evolution of Financial Advisory Services: From Robo-Advisors to GenAI

The landscape of financial advisory services has dramatically transformed over the past decade, with the emergence of robo-advisors representing a crucial turning point. Robo-advisors emerged as a response to the demand for cost-effective and accessible financial planning tools, disrupting the traditional finance industry by providing standardized investment solutions to a wider audience (Huang and Rust 2018). These platforms use algorithms to build portfolios, reducing the need for human financial planners and lowering the overall cost of investment advice (Brenner and Meyll 2020; Roh et al. 2023; Chou et al. 2023). However, as technology rapidly advances, the limitations of robo-advisors are becoming more evident. These limitations include a lack of customization, an inability to

empathize with consumers, and a limited capacity to learn from past data. As a result, there is a growing need for a shift toward more sophisticated tools (Ullah et al. 2024).

The transition from robo-advisors to GenAI represents the next stage in the evolution of financial advisory services. GenAI platforms represent a significant technological leap, delivering interactive and personalized financial advice through advanced natural language processing (NLP) and machine learning (ML) capabilities (Roumeliotis and Tselikas 2023). In contrast to their robo-advisor predecessors, GenAI tools are capable of engaging in dynamic human–machine interactions, simulating human-like conversations, and offering tailored investment suggestions that adapt to changes in users' financial situations and the market conditions (Javaid et al. 2023; Oehler and Horn 2024).

The development of GenAI has been significantly advanced by substantial progress in NLP, which has enabled these systems to understand, interpret, and generate human language with increasing accuracy. These advancements not only increase the effectiveness of AI advisors but also enable them to engage in empathetic conversations, thereby improving the consumer experience (Aldunate et al. 2022). The capacity of GenAI to process complex inquiries and execute transactions through seamless conversations represents a paradigm shift in how consumers manage their investments, offering a more engaging and personalized advisory experience (Ko and Lee 2024).

As we continue to examine the capabilities and consequences of GenAI in finance, it becomes evident that these advancements not only indicate progress within financial institutions but also foreshadow profound changes in the nature of financial advisory services. The implications for customer engagement, service delivery, and the role of AI advisors are significant. GenAI holds immense potential to redefine the financial services industry (B. Chen et al. 2023). It is imperative that both financial institutions and consumers comprehend this evolutionary trajectory if they are to effectively leverage these technologies and navigate the new landscape of investment advice.

2.2. GenAI's Attributes: Personalized Investment Suggestion, Human-like Empathy, and Continuous Improvement

A notable feature of GenAI in financial services is its ability to provide personalized recommendations. Personalization is a key factor in consumer satisfaction and the continued use of technology-based services (Srinivasan et al. 2002; Tam and Ho 2005). Unlike robo-advisors, which typically deliver standardized recommendations using limited algorithms, GenAI tools can analyze extensive consumer input and specific data, including financial goals, risk tolerance, investment preferences, and even emotional cues, to tailor their recommendations to individual needs (Ali and Aysan 2023). This high level of personalization in GenAI-driven services enhances the relevance and effectiveness of the investment advice, potentially leading to better financial outcomes for consumers (Ko and Lee 2024).

In addition to personalization, the continuous improvement of GenAI is another critical attribute, enabled by the machine learning algorithms embedded into GenAI systems. These systems can learn and adapt through interactions with consumers, thereby enhancing their ability to provide accurate and contextual investment advice over time (Ashta and Herrmann 2021). This self-learning and improvement function is of paramount importance in a dynamic financial market where consumer needs and the market conditions are in a constant state of flux. Empirical studies have shown that AI systems capable of continuous learning and adaptation are more likely to gain user trust and be perceived as authentic (Vo et al. 2024).

Finally, while the analytical capabilities of GenAI have been widely recognized, the role of its human-like empathy has also garnered increasing attention (Nazir and Wang 2023). The incorporation of emotional intelligence into GenAI enables it to recognize and respond to consumers' emotional cues, thereby elevating its interactions beyond mere mechanical responses and providing support that aligns with consumers' emotional states. The integration of AI tools with human-like empathy can enhance consumer engagement

and trust, as emotional connection is an important component of successful consulting relationships (Pelau et al. 2021).

The combination of personalized investment suggestions, human-like empathy, and continuous improvement in GenAI represents a compelling value proposition for consumers. These attributes are combined to create a user experience that mirrors interaction with a human advisor while harnessing the effectiveness and efficiency of GenAI technology. GenAI's approach is notably different from the "one size fits all" model of traditional robo-advisors. GenAI offers a high degree of participation, adaptability, and emotional intelligence that aligns with the complex and diverse needs of consumers.

2.3. Perceived Authenticity of GenAI

The perceived authenticity of GenAI-powered financial advice is a pivotal factor in establishing trust and encouraging user engagement. Users assess the authenticity of platforms like GenAI based on their perception of the truthfulness, dependability, and impartiality of the investment recommendations provided. Research has shown that authenticity is crucial in determining users' willingness to accept and engage with AI advisors, forming the foundation for trust (Alboqami 2023; Glikson and Asscher 2023). When GenAI is perceived as authentic, it not only gains users' confidence more effectively but also fosters a stronger connection, which is vital in the context of financial information and assets given the sensitivity of such matters.

The essence of GenAI's authenticity in financial advice lies not only in the accuracy of its information but also in its ability to offer recommendations that align with users' ethical principles and financial goals (Esmark Jones et al. 2022). Moreover, it is crucial to ensure transparency in how GenAI handles user data and arrives at its recommendations in order to enhance its perceived authenticity. This transparency, in conjunction with a commitment to ethical AI practices, underscores the significance of clear communication and ethical design principles in the development of GenAI systems (Stahl and Eke 2024).

2.4. Utilitarian Attitudes towards GenAI and Consumer Responses

In evaluating consumer responses to GenAI, particularly in financial contexts, the utilitarian perspective offers a compelling lens through which to view this phenomenon. Utility is a key factor in technology adoption and a strong predictor of consumer willingness to engage with AI. If consumers believe that GenAI will enhance the efficiency of their asset management and improve the accuracy of their decisions, their willingness to interact with the technology will increase (Ma and Huo 2023).

The efficacy of GenAI, including the accuracy and relevance of its investment suggestions, is of paramount importance in determining consumer willingness to engage with it (Niu and Mvondo 2024). The capacity of GenAI to furnish consistent, personalized, and valuable counsel exerts a profound influence on the attitude of its users, which, in turn, affects their engagement, whether positive or negative. Individuals who have had positive experiences with GenAI are more likely to develop a favorable attitude toward it and engage with it again in the future (Paul et al. 2023).

However, it is important to acknowledge that not all consumers are willing to adopt GenAI's financial advice, despite its potential benefits. Consumer resistance can be attributed to various factors, including a lack of trust, perceived loss of control, privacy concerns, and discomfort with technology (Chang and Hsiao 2024). Additionally, perceived complexity and a less anthropomorphic interface may contribute to consumer resistance (Baek and Kim 2023). Some consumers may perceive GenAI as a threat to their personal autonomy or the security of their assets, which may lead to resistance to communicating with it. This resistance may be further compounded by a lack of understanding of how GenAI functions or a belief that it is incapable of replicating the intricate human comprehension essential for financial decision-making.

To comprehend the reasons behind the differing attitudes toward the utilization of GenAI, it is essential to investigate the utilitarian attitudes of consumers towards these

platforms. A nuanced understanding of these attitudes and their underlying determinants can assist in the development of GenAI applications that align with consumer needs better, thereby reducing consumer resistance.

2.5. AI Literacy

The integration of GenAI into financial services is not solely a matter of technological development; it also involves user adaptation, in which AI literacy plays a crucial role. AI literacy refers to the skills and competencies individuals need to effectively use AI technologies and applications (Ng et al. 2021). This includes understanding AI's capabilities, context, and implementation. The integration of GenAI into financial services underscores the crucial role of AI literacy in influencing the adoption and usage of AI technologies (Perchik et al. 2023).

The previous literature suggests that high AI literacy can alleviate users' doubts and help them fully harness AI's potential in financial decision-making, thereby enhancing the use of AI technology (Cardon et al. 2023). Individuals with higher levels of AI literacy are more likely to trust and rely on AI-driven financial advice (Shin et al. 2022). Furthermore, AI literacy affects the user experience as a whole. Individuals with a deeper understanding of AI are able to navigate its interface better with greater efficiency and efficacy, pose specific inquiries to AI, and interpret the recommendations provided by AI with greater accuracy, thereby leading to a more satisfactory experience (Wang et al. 2023).

Moreover, AI literacy can mitigate users' resistance to new technologies by elucidating the nature of AI and rendering its processes more transparent (Markus et al. 2024). Once users comprehend how GenAI generates financial advice, their skepticism may dissipate, reducing their resistance to utilizing such systems and fostering openness to them. The discrepancy in the levels of knowledge about AI among different user groups results in a knowledge gap. It is therefore imperative to provide education on the functioning of AI in order to bridge this gap and facilitate more effective adoption of AI among diverse user groups.

2.6. Service-Dominant Logic (SDL) and Artificially Intelligent Device Use Acceptance (AIDUA)

Service-dominant logic (SDL) has emerged as a key framework for understanding value co-creation across industries, including financial services. In accordance with SDL, value is generated through interactions between providers and consumers, rather than being inherent in the output itself (Vargo and Lusch 2004; Vargo et al. 2008). In the context of GenAI, SDL offers a perspective on how GenAI can facilitate value co-creation processes.

SDL shifts the focus from traditional goods-dominant logic, which views value as created by companies and distributed to consumers, to a service-centered perspective, where value is co-created by multiple parties, including consumers (Grönroos 2008). This shift is critically important for understanding the relational and interactive nature of the financial services provided by GenAI technology (Riikkinen et al. 2018).

The operation of GenAI financial services depends on the interaction of multiple stakeholders, including financial institutions, technology companies, and consumers. SDL posits that the efficacy of the ecosystem in jointly creating value is pivotal to the success of the service. Consequently, SDL represents a strategic instrument for understanding and enhancing the value co-creation process in GenAI-driven financial services. The importance of interaction, personalization, and resource integration in shaping the user experience and the overall service efficiency is emphasized (Zhu et al. 2024).

In addition to SDL, the development of a new theoretical framework is necessary for understanding consumer acceptance and usage behavior when integrating AI systems into consumer devices. The Artificial Intelligence Device Use Acceptance (AIDUA) model is a comprehensive framework that reveals the multifaceted nature of consumer interactions with AI technologies such as GenAI.

The AIDUA model delineates several stages for the acceptance of AI devices, including primary appraisal, secondary appraisal, and the outcome stage (Gursoy et al. 2019). Each

of these stages is crucial in the evaluation of GenAI by consumers. In light of studies that have applied the AIDUA model, it can be postulated that personalized suggestions, human-like empathy, and continuous improvement serve as the primary drivers in measuring consumers' assessment of GenAI-powered financial advice. In the secondary appraisal stage, consumers primarily evaluate their decision options and potential outcomes based on their attitudes. When deciding whether to accept or resist GenAI-driven financial advice, they assess the costs and benefits of using AI devices in service delivery, considering their perceived authenticity of these devices. Following this intricate appraisal process, consumers develop a utilitarian attitude towards GenAI-based financial advice, which subsequently determines their willingness to communicate with GenAI or their resistance to utilizing GenAI for financial guidance.

Empirical studies have demonstrated the efficacy of the AIDUA model in explaining and predicting consumer behavior toward AI devices. These studies have also validated this model's utility as a diagnostic and prescriptive tool for businesses (Ma and Huo 2023; Lin et al. 2020; Kelly et al. 2023). For practitioners, the AIDUA model suggests that marketing and design strategies for AI devices should address consumers' concerns about trust, perceived risk, and ease of use in order to increase their acceptance.

As artificial intelligence (AI) technology evolves and becomes more prevalent in financial institutions, frameworks like AIDUA will become increasingly essential for understanding and predicting consumer interactions with AI tools. This comprehensive approach allows for the design and implementation of AI technologies that align with consumer expectations and promote acceptance.

2.7. Integrating SDL and AIDUA to Understand Consumer–AI Interactions

The seamless integration of service-dominant logic (SDL) and the AI Device Use Acceptance (AIDUA) model provides a comprehensive theoretical foundation for understanding and explaining consumer interactions with generative AI (GenAI) in the service industry, particularly within financial services. By combining SDL's value co-creation perspective with AIDUA's focus on consumers' appraisal stages of AI usage, we create a powerful framework for investigating the nuances of consumer interactions with GenAI.

SDL emphasizes value co-creation through interaction and resource integration between service providers and consumers, aligning closely with the AIDUA model, which highlights consumer acceptance and resistance toward AI technologies. The two frameworks converge in the context of value-driven usage of AI, where consumers are not passive recipients but active participants in the co-creation of value (Vargo et al. 2008; Grönroos 2008). Previous studies have shown that AI technologies, when effectively integrated into service systems, enhance the consumer's role in co-creating personalized value, resulting in higher engagement and satisfaction (Riikkinen et al. 2018).

This framework posits that when services are designed to facilitate an active role of consumers in co-creating personalized value (a fundamental concept of SDL), their experiences with AI-driven systems, like GenAI, can be significantly enhanced. AIDUA complements this by focusing on the stages of consumers' interactions with AI, from initial awareness to full acceptance, which includes their evaluation of perceived authenticity, personalization, and continuous improvement—factors central to AI–human collaboration (Bag et al. 2022; Vesanen 2007). Furthermore, evidence suggests that consumers' willingness to embrace AI in service settings increases when AI systems exhibit characteristics such as empathy and anthropomorphism, which can foster more authentic and engaging interactions (Pelau et al. 2021; Ameen et al. 2021).

The decision to integrate SDL and AIDUA is also supported by recent research in both the literature on services and AI. For example, studies have highlighted the effectiveness of combining consumer technology adoption frameworks with service logic to explain the adoption of AI-driven services, particularly in high-involvement contexts like financial services (Gursoy et al. 2019; Vesanen 2007). By integrating these models, we offer a more

holistic understanding of how consumers perceive and engage with AI-based financial advisory services.

3. Hypothesis Development and the Research Model

3.1. Personalized Investment Suggestions, Human-like Empathy, and Continuous Improvement

Personalization is increasingly acknowledged as a vital component of enhancing user experience and fostering authenticity in digital interactions (Vesanen 2007). In financial advice, personalized recommendations are particularly impactful, as they demonstrate an understanding of the user's specific needs and preferences (Musto et al. 2015). The delivery of personalized financial advice through GenAI can enhance the perceived authenticity of it, as the advice appears more relevant and trustworthy. Consumer behavior studies indicate that services are often perceived as more authentic when they are closely aligned with a user's unique circumstances (Napoli et al. 2014; Morhart et al. 2015).

Moreover, empathy, especially in the form of human-like emotional intelligence, is crucial to user interactions. When users feel that AI tools can understand and respond to their emotional states, they are more likely to trust and use this technology (Chi and Hoang Vu 2023). The capacity for human-like empathy in GenAI enables it to comprehend consumers' financial concerns and objectives at an emotional level, which is crucial for enhancing the perceived authenticity of its advice (Chuah and Yu 2021). Empathetic interactions can elevate financial advice beyond being purely transactional, thereby creating a sense of care and personal connection.

Furthermore, the ability of artificial intelligence systems to continuously learn and improve over time is essential for maintaining their relevance and ensuring the delivery of high-quality services. The ongoing enhancement of GenAI's financial counsel could result in more precise and contemporary recommendations, which might enhance the credibility of its advice. The principle of continuous improvement aligns with the dynamic nature of financial markets and consumer expectations (Huang and Rust 2021). As GenAI adapts and evolves, its advice may be perceived as more authentic, reflecting up-to-date knowledge and a deeper understanding of the financial landscape. Based on these insights, we propose the following hypotheses:

H1: *Personalized investment suggestions by GenAI are positively associated with its authenticity as perceived by consumers.*

H2: *The human-like empathy of GenAI is positively associated with its authenticity as perceived by consumers.*

H3: *Continuous improvement of GenAI is positively associated with its authenticity as perceived by consumers.*

3.2. Perceived Authenticity

Following the initial evaluation of the specific characteristics of GenAI tools, perceived authenticity plays a crucial role in how consumers assess and adopt these services (Li et al. 2023). When consumers perceive a service as authentic and advice as genuine, they are more likely to find this service useful and practical. This belief fosters a utilitarian attitude towards the service, as consumers prioritize its functionality and the ability to effectively achieve their goals (Alimamy and Al-Imamy 2022).

In the realm of AI-driven financial guidance, like the services offered by GenAI, the perceived authenticity of the advice is essential in shaping users' perceptions of a service's utility. When recommendations are perceived as truthful, users are more likely to view them as reliable, precise, and tailored to their specific requirements. Consequently, this enhances the perceived usefulness of GenAI's offerings. The concept of perceived authenticity encompasses the effectiveness, efficiency, and overall usefulness of the suggestions provided by GenAI. The perceived authenticity of GenAI's financial advice exerts a direct

influence on users' utilitarian attitudes towards a service, which, in turn, determines its perceived value and adoption (Kwon et al. 2024). Based on the interrelationship between perceived authenticity, trust, and utility, the following hypothesis is proposed:

H4: *Consumers' perceived authenticity is positively associated with their utilitarian attitude towards GenAI.*

3.3. Utilitarian Attitudes

Utilitarianism in technology usage refers to the extent to which users perceive a technology as efficient and effective in achieving their objectives (Zamil et al. 2023; Fu 2024). When consumers view a technology through a utilitarian lens, they evaluate its value based on its ability to help them achieve specific goals and simplify their decision-making. Essentially, the stronger the belief in a technology's utilitarian value, the higher the likelihood of its acceptance and integration into users' daily lives. This is because users recognize its practical benefits and its ability to streamline tasks and decision-making processes (H. Kim et al. 2007).

In considering the role of GenAI in offering financial guidance, a utilitarian perspective suggests that users value a platform's capacity to deliver efficient, precise, and timely information that can support their financial decision-making process. This mindset is expected to enhance consumers' readiness to engage with GenAI, as they anticipate that the interaction will assist them in attaining their financial objectives (Dinh and Park 2023). In other words, when users perceive GenAI as a tool that can effectively streamline their financial planning and provide valuable insights, they are more likely to embrace and utilize the platform. This is driven by the belief that it will contribute to their overall financial well-being and success.

In addition to the adoption of new technology, resistance to its use is often shaped by various factors, including a lack of practicality, increased complexity, or perceived risks to personal information, established social norms, and personal habits (Hsieh 2016; Ghosh 2024). However, when consumers view a technology through a utilitarian lens, they recognize its potential to streamline tasks and boost productivity. This perception reduces the probability of consumer resistance, as the technology aligns with their values and objectives, and the advantages of its use outweigh the associated efforts, risks, and costs. In essence, a utilitarian attitude towards technology fosters a sense of value and purpose, making users more likely to embrace and incorporate it into their daily lives. They recognize the technology's practical benefits and its ability to enhance their overall efficiency and effectiveness (Attié and Meyer-Waarden 2022).

In the context of GenAI, the identification of utilitarian advantages such as time savings, cost-effectiveness, and enhanced financial results will result in a decrease in users' resistance to utilizing these AI-driven platforms for financial guidance. The perception of GenAI as a beneficial tool that aligns with their objectives will make users less likely to oppose its adoption and integration (Jan et al. 2023). Consequently, they will be more inclined to accept this innovation, recognizing its potential to positively impact their financial decision-making process and overall outcomes (Priya and Sharma 2023). In other words, the more users perceive GenAI as a practical and advantageous tool for managing their finances, the less likely they will be to resist its adoption and use. As a result, there will be a greater likelihood of adopting this AI-powered technology in their financial decision-making process. Based on this understanding, the following hypotheses are proposed:

H5: *Consumers' utilitarian attitudes towards GenAI are positively associated with their willingness to communicate with GenAI.*

H6: *Consumers' utilitarian attitudes towards GenAI are negatively associated with their resistance to communicate with GenAI.*

3.4. AI Literacy

In addition to the inherent features of AI-driven financial tools, the levels of AI literacy among users play a critical role in the communication process. AI literacy encompasses users' comprehension of AI technology, which is crucial for regulating their interactions with AI tools (Carolus et al. 2023). As AI literacy increases, users are better equipped to understand complex AI functions, such as personalized recommendations. In the context of GenAI, higher AI literacy enables consumers to grasp how the platform tailors its recommendations based on user data better, which, in turn, enhances their perceptions of its authenticity. Consequently, AI literacy can strengthen the positive relationship between GenAI's personalized advice and perceived authenticity. In other words, as users become more knowledgeable about AI technology, they are more likely to appreciate and trust the personalized financial guidance provided by GenAI, recognizing its genuine value and relevance to their specific needs and circumstances.

Moreover, the continuous improvement of GenAI represents another advanced AI feature. As users' AI literacy increases, they are better positioned to comprehend and appreciate this aspect of the platform. They are aware that the AI system will consistently refine and enhance its recommendations based on ongoing interactions, thereby enhancing the perceived authenticity of the advice provided. In this context, AI literacy can act as a moderating factor, enhancing the relationship between continuous improvement and perceived authenticity. Specifically, more knowledgeable users are more likely to place higher value on the evolution of AI in delivering precise financial guidance (Tirado-Morueta et al. 2018). In essence, as consumers become more well versed in AI technology, they are more predisposed to acknowledge and trust the ongoing advancements in GenAI's financial advice. They recognize the genuine benefits of its adaptive nature in providing tailored and relevant recommendations that align with their evolving needs and circumstances.

Finally, the human-like empathy exhibited by GenAI is the result of sophisticated programming that enables empathetic interactions. Individuals with a higher level of AI literacy are better equipped to understand and value these empathetic responses, resulting in an increased perception of its authenticity. Conversely, individuals with limited AI literacy may encounter difficulty in comprehending the nuances of empathetic AI, leading to a diminished perception of its authenticity. As a result, the development of AI literacy is expected to strengthen the correlation between human-like empathy and perceived authenticity. As users gain a deeper understanding of AI technology, they are more likely to recognize and value the genuine nature of GenAI's empathetic interactions (Baabdullah et al. 2022; Sperling et al. 2024), thereby increasing their confidence in these platforms' financial advice. Based on these insights, we propose the following hypotheses:

H7: *Consumers' AI literacy positively moderates the relationship between GenAI's personalized investment suggestions and its authenticity as perceived by customers.*

H8: *Consumers' AI literacy positively moderates the relationship between GenAI's continuous improvement and its authenticity as perceived by customers.*

H9: *Consumers' AI literacy positively moderates the relationship between GenAI's human-like empathy and its authenticity as perceived by customers.*

In essence, as users become more knowledgeable about AI technology, the impact of its personalized investment suggestions, human-like empathy, and continuous improvement on their perceptions of the authenticity of GenAI's financial advice will be amplified, ultimately leading to a higher level of trust and acceptance among consumers. The research model based on the research hypotheses so far is shown in Figure 1.

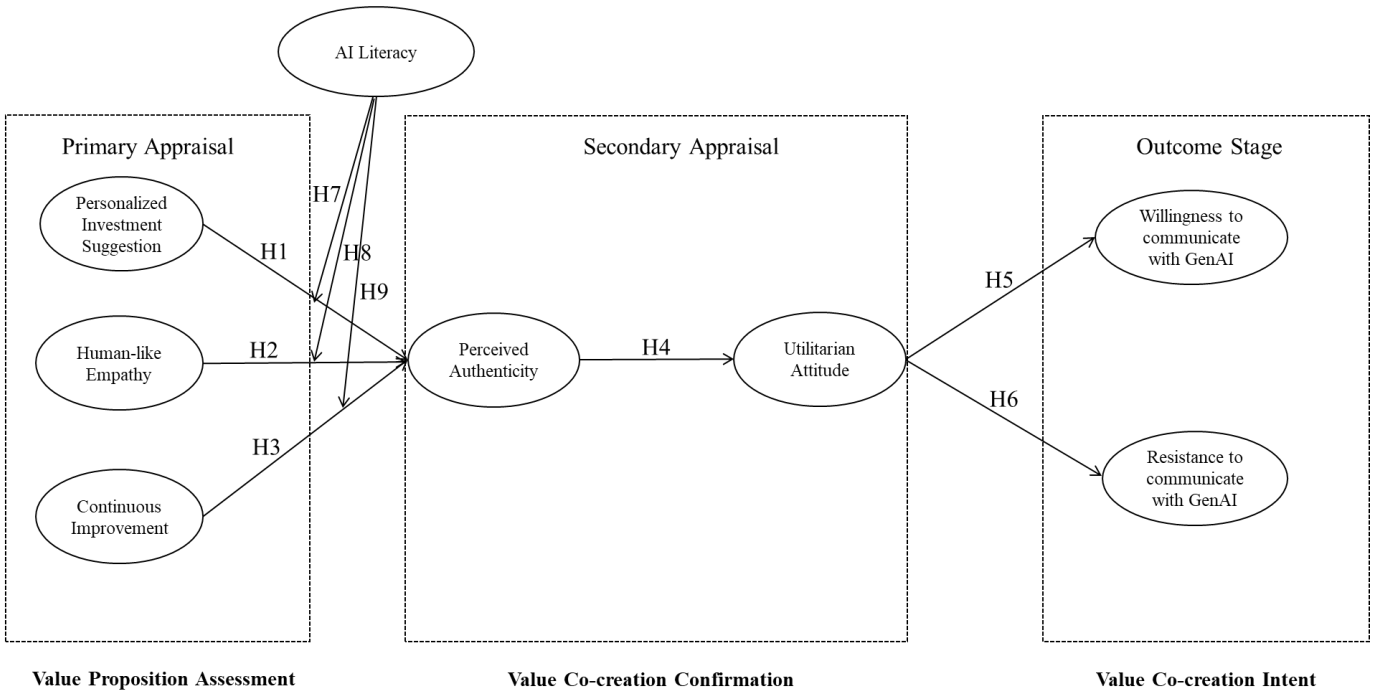

Figure 1. Research model.

4. Research Methodology

4.1. Measurement Development

We commenced our investigation by developing a comprehensive questionnaire designed to capture the relevant data necessary for our analysis. In light of the significance of expert input, we solicited evaluations from esteemed professors in the Finance, Information Technology, and Management Science departments. Their invaluable feedback prompted revisions to the questionnaire, allowing us to refine and clarify our questions for greater precision and relevance.

A rigorous methodology was employed to ensure that the questionnaire accurately assessed eight key dimensions. These included the extent to which the investment advice was personalized, GenAI's capacity for continuous improvement, its ability to demonstrate human-like empathy, the authenticity of its responses as perceived by consumers, the utilitarian attitude of consumers towards GenAI, consumers' willingness and resistance to engage with GenAI for financial guidance, and their overall AI literacy.

The introductory section of the questionnaire clearly outlined the purpose of the study, ensuring participants' confidentiality and anonymity. Additionally, survey instructions were provided. The initial part of the questionnaire included questions on basic demographic information, such as age, gender, income level, and education, to establish a foundational understanding of the respondents' backgrounds. The second part consisted of items carefully designed to assess the eight constructs under investigation.

The measurement items for personalized investment suggestions assessed the respondents' perceptions of GenAI's ability to comprehend their individual financial needs and deliver customized recommendations. The evaluation of continuous improvement assessed the respondents' views on GenAI's ability to learn from interactions and improve its suggestions over time (Q. Chen et al. 2022). Human-like empathy was measured through items (Pelau et al. 2021; Fu et al. 2023; Seitz 2024) that gauged the extent to which GenAI understood and considered the respondents' emotional and financial concerns. The perceived authenticity of GenAI's financial advice was examined by asking the respondents to rate the genuineness and reliability of its advice (Vo et al. 2024; Meng et al. 2023). The usefulness, efficiency, and practicality of GenAI's recommendations were evaluated to assess the respondents' utilitarian attitudes (Priya and Sharma 2023). The respondents'

willingness to communicate with GenAI was gauged through items (Ma and Huo 2023; Kim and Hur 2023) that determined the likelihood of future engagement with the AI for financial advice. Resistance to communicate with GenAI was evaluated by assessing the respondents' hesitation in using or reluctance to use GenAI for financial guidance (Ma and Huo 2023; Yang et al. 2023). Finally, an AI literacy scale was used to assess the respondents' knowledge and understanding of AI technologies, particularly their application to financial advice (Almatrafi et al. 2024; Kong et al. 2024). Detailed breakdowns can be found in Appendix A.

4.2. Data Collection

This study used a comprehensive approach to data collection to gather insights from mobile banking service users who had engaged with GenAI for financial guidance. The survey was designed to gather detailed information on the participants' interactions with GenAI, their evaluations of AI's authenticity, their AI literacy, and their attitudes towards using AI for financial advice.

This study targeted adult mobile banking users aged 18 and above who had interacted with GenAI financial advice features. Purposive sampling was employed to select respondents who met this criterion, ensuring that the sample was relevant for understanding the target user group. In total, 1200 participants were initially invited to take part in the survey, of which 950 respondents completed it. After data cleaning and quality control checks, a final sample of 822 respondents was retained for analysis. These participants were balanced across gender, age, and income levels, ensuring a representative cross-section of the mobile banking population. Table 1 presents their demographic characteristics, showing that the participants included individuals aged 18 to over 65 years old, with 7 participants being over 65, reflecting the inclusivity of older users in mobile banking services.

Table 1. Demographic characteristics.

Demographics		Frequency	Percentage (%)
Gender	Male	412	50.1
	Female	410	49.9
Age	18–24	139	16.9
	25–34	322	39.2
	35–44	233	28.3
	45–54	86	10.5
	55–64	35	4.3
	Above 65	7	0.9
Education Background	High school or below	164	20
	Three years of college	252	30.7
	Bachelor's	363	44.2
	Master's or above	43	5.2
Monthly income	3000 CNY or below	141	17.2
	3001–5000 CNY	423	51.5
	5001–7000 CNY	140	17
	7001–9000 CNY	61	7.4
	9000 CNY and above	57	6.9
Frequency of using GenAI	Several times per day	29	3.5
	Once a day	78	9.5
	Several times per week	106	12.9
	Once a week	364	44.3
	Several times per month	208	25.3
	Once a month	37	4.5

The data collection took place over a three-month period, from January to March 2024, and was facilitated by collaboration with a professional survey firm. The survey was distributed using multiple platforms: (1) email campaigns targeting mobile banking

users from partner banks, (2) in-app notifications within mobile banking applications encouraging participation, and (3) financial forums and social media platforms, on which the survey link was shared.

Before launching the formal survey, a pilot test was conducted with a subset of 50 participants to identify and address any potential issues with its clarity, the comprehensibility of the questions, and the overall structure of the questionnaire. The pilot survey helped refine variables such as AI literacy, perceived authenticity, and human-like empathy following the recommendations of Ref. (Van Teijlingen and Hundley 2002).

Strict filtering techniques were used during the survey collection process to maintain the data quality, ensuring that only responses from eligible participants were included. Anonymity and confidentiality were strictly maintained in compliance with ethical research standards. Table 1 provides a summary of the respondents' demographic characteristics.

5. Data Analysis and Results

5.1. The Measurement Model

Ref. (Podsakoff and Organ 1986) suggested that single-source data may be prone to common method variance (CMV). To determine the presence of common method bias (CMB) in our collected data, we conducted Harman's single-factor test. This test involves loading all the measurement items into a principal component analysis without rotation. It is widely accepted that CMB is a concern if a single factor accounts for more than 50% of the total variance. In this study, the first factor accounted for 31.95% of the variance, which is below the 50% threshold. Therefore, we can conclude that the data in this study were not affected by common method bias.

The measurement model was assessed by examining the factor loading values, composite reliability (CR), and average variance extracted (AVE). As shown in Table 2, all the factor loadings exceed the recommended threshold of 0.6. Additionally, Cronbach's α, which measures internal consistency reliability, ranged from 0.845 to 0.949, surpassing the suggested threshold of 0.7 (Hair et al. 2014). These results provide strong evidence supporting the scale's reliability.

Table 2. Reliability, CR, and AVE.

Constructs	Items	Item Loadings	Cronbach's Alpha	CR	AVE
Personalized Investment Suggestions	PIS1	0.924	0.926	0.928	0.619
	PIS2	0.778			
	PIS3	0.769			
	PIS4	0.741			
	PIS5	0.747			
	PIS6	0.744			
	PIS7	0.783			
	PIS8	0.791			
Human-Like Empathy	HLE1	0.898	0.949	0.95	0.635
	HLE2	0.793			
	HLE3	0.778			
	HLE4	0.780			
	HLE5	0.754			
	HLE6	0.788			
	HLE7	0.768			
	HLE8	0.768			
	HLE9	0.798			
	HLE10	0.814			
	HLE11	0.814			

Table 2. *Cont.*

Constructs	Items	Item Loadings	Cronbach's Alpha	CR	AVE
Continuous Improvement	CI1	0.870	0.915	0.917	0.613
	CI2	0.778			
	CI3	0.718			
	CI4	0.750			
	CI5	0.788			
	CI6	0.771			
	CI7	0.796			
Perceived Authenticity	PA1	0.886	0.845	0.853	0.660
	PA2	0.764			
	PA3	0.781			
Utilitarian Attitudes	UA1	0.887	0.865	0.876	0.587
	UA2	0.733			
	UA3	0.685			
	UA4	0.740			
	UA5	0.771			
Willingness to Communicate with GenAI	WCG1	0.888	0.894	0.898	0.596
	WCG2	0.721			
	WCG3	0.738			
	WCG4	0.726			
	WCG5	0.765			
	WCG6	0.78			
Resistance to Communicating with GenAI	RCG1	0.863	0.885	0.887	0.570
	RCG2	0.80			
	RCG3	0.672			
	RCG4	0.686			
	RCG5	0.762			
	RCG6	0.728			
AI Literacy	AIL1	0.768	0.910	0.910	0.629
	AIL2	0.757			
	AIL3	0.844			
	AIL4	0.818			
	AIL5	0.760			
	AIL6	0.808			

Composite reliability (CR) was used to evaluate the internal consistency of the scale, with higher values indicating greater reliability. Ref. (Raza et al. 2021) states that CR values between 0.6 and 0.7 are acceptable, while values between 0.7 and 0.9 are considered satisfactory to good. As shown in Table 3, all the CR values exceeded 0.8, confirming the scale's satisfactory composite reliability.

Table 3. Discriminant validity.

	PIS	HLE	CI	PA	UA	WCG	RCG	AIL
PIS	**0.787**							
HLE	0.442 **	**0.797**						
CI	0.423 **	0.446 **	**0.783**					
AIL	0.150 **	0.160 **	0.174 **	**0.793**				
PA	0.541 **	0.551 **	0.500 **	0.317 **	**0.812**			
UA	0.451 **	0.493 **	0.480 **	0.195 **	0.614 **	**0.766**		
WCG	0.348 **	0.332 **	0.324 **	0.143 **	0.413 **	0.669 **	**0.772**	
RCG	−0.315 **	−0.336 **	−0.371 **	−0.198 **	−0.473 **	−0.677 **	−0.435 **	**0.755**

Note: **, $p < 0.01$. Values in bold represent the square root of the AVE.

Additionally, the average variance extracted (AVE) values for all variables exceeded 0.5, meeting the criteria for convergent validity (Fornell and Larcker 1981). These results collectively indicate that the measurement model demonstrates strong reliability and convergent validity.

To assess discriminant validity, we used the method from Ref. (Fornell and Larcker 1981), which requires the square root of the AVE to be greater than the correlations among the constructs. Table 3 shows the square root of the AVE values along the diagonal (in bold) and the correlations among the constructs in the off-diagonal cells. These results reveal that the square root of the AVE for each construct was higher than the corresponding off-diagonal correlation values. This indicates that the measurement model has a satisfactory discriminant validity, as each construct is more strongly related to its own measures than to those of the other constructs.

Before conducting the structural equation modeling (SEM) analysis, a confirmatory factor analysis (CFA) was performed to evaluate the measurement model. The model's goodness of fit was assessed using various indices and their corresponding thresholds, as recommended by Ref. (Hu and Bentler 1999).

The CFA results indicated that the measurement model fit the data well. Specifically, the chi-square-to-degrees-of-freedom ratio (χ^2/df) was 1.173, which is within the acceptable range. The Goodness of Fit Index (GFI) and the Adjusted Goodness of Fit Index (AGFI) values were 0.938 and 0.932, respectively, with both exceeding the recommended thresholds. Additionally, the Comparative Fit Index (CFI) and the Normed Fit Index (NFI) values were 0.992 and 0.95, respectively, indicating a strong fit. The Incremental Fit Index (IFI) value of 0.992 also met the criteria. Finally, the Standardized Root Mean Square Residual (SRMR) and the Root Mean Square Error of Approximation (RMSEA) values were 0.026 and 0.015, respectively, with both falling below the recommended thresholds, further supporting the model's acceptable fit.

As shown in Table 4, all the fitting indices of the measurement model met the recommended criteria, confirming that the model adequately represented the data and was suitable for the subsequent SEM analysis.

Table 4. Measurement model fit.

Fit Indices	χ^2/df	GFI	AGFI	NFI	CFI	IFI	SRMR	RMSEA
Recommended Criteria	<3	>0.9	>0.8	>0.9	>0.9	>0.9	<0.08	<0.08
Scores	1.173	0.938	0.932	0.95	0.992	0.992	0.026	0.015

5.2. The Structural Model

The structural model was evaluated to examine the relationships between the constructs proposed in the research model. The analysis revealed that all paths were positive and significant at the 0.05 level. Table 5 presents the standardized path coefficients between the constructs, the significance levels, and the explanatory power (R^2) for each construct. According to the rule of thumb, R^2 values of 25%, 50%, and 75% indicate weak, average, and substantial explanatory power, respectively.

In this study, the R^2 values for perceived authenticity, utilitarian attitudes, willingness to communicate with GenAI, and resistance to communicating with GenAI were 56.9%, 50.5%, 50.3%, and 54.6%, respectively, indicating a satisfactory level of explanation.

The results in Table 5 show a positive association between personalized investment suggestions and perceived authenticity ($\beta = 0.318$, $p < 0.001$), supporting Hypothesis 1. Similarly, there was a positive association between human-like empathy and perceived authenticity ($\beta = 0.338$, $p < 0.001$), confirming Hypothesis 2. Additionally, continuous improvement positively influences perceived authenticity ($\beta = 0.287$, $p < 0.001$), supporting Hypothesis 3. Together, personalized investment suggestions, human-like empathy, and continuous improvement account for 56.9% of the variance in perceived authenticity.

Table 5. Hypothesis test results.

Hypothesis	Path			β	*p*-Value	R^2	Remarks
H1	PIS	→	PA	0.318	***		Supported
H2	HLE	→	PA	0.338	***	0.569	Supported
H3	CI	→	PA	0.287	***		Supported
H4	PA	→	UA	0.71	***	0.505	Supported
H5	UA	→	WCG	0.709	***	0.503	Supported
H6	UA	→	RCG	−0.739	***	0.546	Supported
Moderating Effect		**Path**		**β**	***p*-Value**		**Remarks**
H7	PIS × AIL	→	PA	0.101	***		Supported
H8	HLE × AIL	→	PA	0.097	***		Supported
H9	CI × AIL	→	PA	0.108	***		Supported

Note: ***, $p < 0.001$.

Furthermore, perceived authenticity positively impacts utilitarian attitudes (β = 0.71, $p < 0.001$), accounting for 50.5% of their variance, thereby supporting Hypothesis 4. In turn, utilitarian attitudes positively influence willingness to communicate with GenAI (β = 0.709, $p < 0.001$), supporting Hypothesis 5, and negatively affect resistance to communicating with GenAI (β = −0.739, $p < 0.001$), supporting Hypothesis 6. Utilitarian attitudes explain 50.3% of the variance in willingness to communicate with GenAI and 54.6% of the variance in resistance to communicating with GenAI.

After verifying the hypotheses, a structural model test was conducted. The results indicated that the model demonstrated an acceptable fit to the data according to the criteria recommended by Ref. (Hu and Bentler 1999). The chi-square-to-degrees-of-freedom ratio (χ^2/df) was 1.225, which is within the acceptable range. The Goodness of Fit Index (GFI) and the Adjusted Goodness of Fit Index (AGFI) values were 0.941 and 0.935, respectively, with both exceeding the recommended thresholds. Additionally, the Comparative Fit Index (CFI), Normed Fit Index (NFI), and Incremental Fit Index (IFI) values were 0.990, 0.953, and 0.990, respectively, indicating a strong fit between the model and the data. The Standardized Root Mean Squared Residual (SRMR) value of 0.038 and the Root Mean Square Error of Approximation (RMSEA) value of 0.018 were both below the recommended cutoff points, further supporting the model's acceptable fit. These fit indices, as presented in Table 6, collectively indicate that the structural model adequately represents the relationships among the constructs and provide a satisfactory explanation of the data.

Table 6. Structural model fit.

Fit Indices	χ^2/df	GFI	AGFI	NFI	CFI	IFI	SRMR	RMSEA
Recommended Criteria	<3	>0.9	>0.8	>0.9	>0.9	>0.9	<0.08	<0.08
Scores	1.173	0.938	0.932	0.95	0.992	0.992	0.026	0.015

In addition to the primary hypotheses, this study proposed that AI literacy moderates the relationships between GenAI's characteristics (personalized investment suggestions, human-like empathy, and continuous improvement) and perceived authenticity. The results presented in Table 5 demonstrate that as AI literacy increases or decreases, the positive associations between GenAI's characteristics and its authenticity as perceived by consumers remain consistent.

The interaction term between personalized investment suggestions and AI literacy is positively associated with perceived authenticity (β = 0.101, $p < 0.001$), indicating that the relationship between personalized investment suggestions and perceived authenticity is strengthened by higher levels of AI literacy. Similarly, the interaction term between human-like empathy and AI literacy is positively associated with perceived authenticity (β = 0.097, $p < 0.001$), suggesting that the relationship between human-like empathy and perceived

authenticity is enhanced by higher levels of AI literacy. Finally, the interaction term between continuous improvement and AI literacy is positively associated with perceived authenticity ($\beta = 0.108$, $p < 0.001$), indicating that the relationship between continuous improvement and perceived authenticity is reinforced by higher levels of AI literacy.

Figure 2 presents a visual representation of the standardized path coefficients and the significance levels for each hypothesis, including the moderating effects of AI literacy on the relationships between GenAI's characteristics and perceived authenticity.

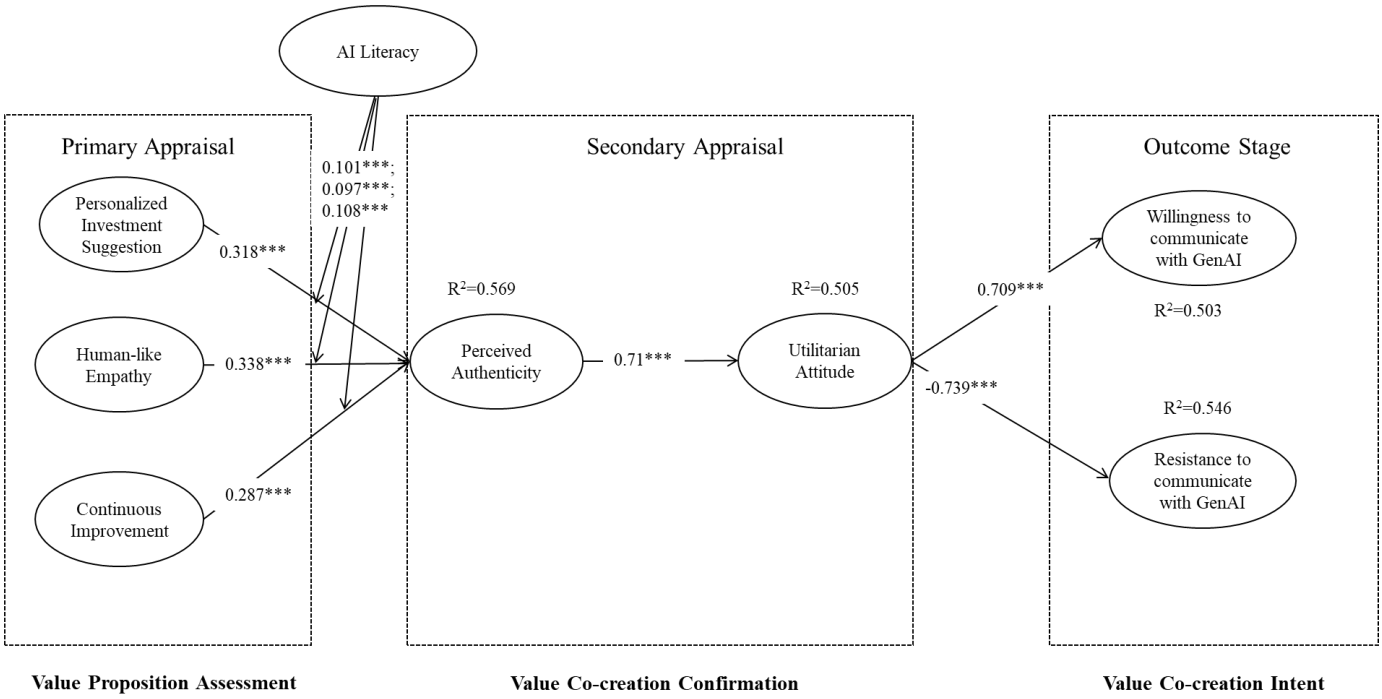

Figure 2. Path coefficients of the research model. Note: ***, $p < 0.001$.

6. Conclusions

The objective of this study was to explore the dynamics of consumer responses to GenAI-powered financial advice, addressing a critical gap in the literature on the adoption of GenAI technologies in financial services. Through a rigorous empirical analysis, it was shown that personalized investment suggestions, human-like empathy, and the continuous improvement of GenAI significantly enhance consumers' perceptions of its authenticity. These perceptions, in turn, foster a utilitarian attitude towards using GenAI for financial advice, influencing consumers' willingness to engage with and resistance to communication with GenAI. Notably, this study highlights the role of AI literacy in amplifying the positive effects of GenAI's features on perceived authenticity.

Our findings delineate a clear pathway through which GenAI's features influence consumer behaviors. The provision of personalized investment advice, the demonstration of human-like empathy, and commitment to continuous improvement enhance the perceived authenticity of GenAI's financial counsel. These insights align with Refs. (Pelau et al. 2021; J. Kim et al. 2022), which emphasized the importance of perceived human-likeness in user interactions with AI systems. Additionally, the work of Refs. (Q. Chen et al. 2022; Pitardi 2023) highlighted the role of personalization and continuous improvement in enhancing consumer trust in AI services.

We also found that perceived authenticity is crucial to developing a utilitarian attitude towards GenAI, which, in turn, increases willingness to interact with AI and reduces resistance. These findings extend previous research on the importance of authentic design of GenAI platforms (Lee and Kim 2024; Pandey and Rai 2024).

Furthermore, the significant moderating influence of AI literacy underscores the importance of consumers' understanding and familiarity with AI technologies in enhancing the effectiveness of GenAI's features. These findings support past studies on AI literacy (Ng et al. 2021; Kong et al. 2024) and demonstrate its value in the field of financial advisory services.

6.1. Academic Implications

This research significantly enhances our understanding of how generative AI (GenAI) influences consumer behavior in the realm of financial advice. This study's findings contribute to the theoretical landscape by extending the application of service-dominant logic (SDL), integrating the AI Device Use Acceptance (AIDUA) framework, and highlighting the complex interplay between AI's attributes and consumer perceptions.

These findings emphasize the importance of personalized investment suggestions, human-like empathy, and continuous improvement to GenAI's recommendations within the context of consumer value co-creation, as highlighted by SDL theory. By tailoring its services to individual consumer needs and preferences, GenAI facilitates a more interactive and collaborative experience between service providers and consumers, thus enabling value co-creation. As demonstrated by previous studies (Wen et al. 2022), personalization is crucial to enabling value co-creation, allowing for a more interactive and collaborative experience between service providers and consumers. This study's findings align with SDL principles and extend the theory by showing how digital technologies enhance personalized value co-creation, surpassing the limitations of traditional human-to-human service frameworks.

Moreover, GenAI's ability to exhibit human-like empathy significantly influences consumers' perceived authenticity by demonstrating genuine care and concern. This finding contributes to the growing body of literature on the importance of designing AI technologies that are not only competent but also genuine and transparent in their interactions (Markovitch et al. 2024). Additionally, GenAI's capacity for continuous learning enables it to adapt to evolving user needs and preferences, thereby enhancing its perceived authenticity over time (Baidoo-Anu and Ansah 2023; Raj et al. 2023).

These findings underscore the importance of integrating personalized investment suggestions, human-like empathy, and continuous improvement into GenAI-driven financial advice. This integration reflects the processes of SDL and AIDUA by co-creating value through tailored, empathetic, and adaptive financial guidance, ultimately enhancing consumer engagement, trust, and participation in GenAI-powered financial services.

This study also highlights the role of perceived authenticity in human–bot interactions, especially within the field of artificial intelligence (Seitz 2024; Meng et al. 2023). The positive correlation between GenAI's features and its perceived authenticity aligns with the authenticity principle in AI research (Esmark Jones et al. 2022; Rese et al. 2020; Kuhail et al. 2022). This emphasizes the necessity for GenAI and similar technologies to demonstrate authenticity to effectively engage and support users.

Additionally, this study identifies a strong correlation between perceived authenticity, utilitarian attitudes, and consumers' willingness to communicate or resistance to communicating with GenAI for financial advice. It expands our understanding of technology adoption theories by demonstrating that perceived authenticity enhances utilitarian attitudes towards GenAI, which, in turn, affect willingness to use or resistance to using GenAI for financial advice. This suggests that the value consumers place on authenticity can significantly influence their practical assessment of a technology's benefits (Alimamy and Kuhail 2023). These findings advocate for a broader interpretation of perceived usefulness in AI technology acceptance, highlighting the importance of authenticity in shaping utilitarian evaluations of AI technology.

Lastly, this study's focus on AI literacy adds to the theoretical landscape by suggesting that a higher level of AI literacy can enhance the effectiveness of AI features by improving their perceived authenticity and, consequently, utilitarian attitudes towards them (Du et al.

2024). This implies that individuals' interactions with AI technologies are significantly influenced by their understanding of these technologies, leading to increased acceptance and willingness to communicate with GenAI. Conversely, lower levels of AI literacy may lead to resistance to communicating with GenAI, highlighting the importance of addressing this factor to facilitate the effective integration of AI-driven services into the consumer value co-creation process.

In conclusion, this study offers a comprehensive integration of key concepts, including personalized investment suggestions, human-like empathy, continuous improvement, perceived authenticity, utilitarian attitudes, and consumers' willingness to communicate or resistance to communicating with GenAI, within the frameworks of SDL and AIDUA. Its findings show that GenAI's personalized and empathetic approach, along with its ability to continuously improve, enhances its perceived authenticity and utilitarian attitudes towards it among consumers, facilitating value co-creation as proposed by SDL. Additionally, this study extends the AIDUA model by incorporating continuous improvement as a factor influencing perceived authenticity, a key determinant of AI tool usage. This research also underscores the role of AI literacy in shaping consumers' willingness to engage or resistance to engaging with GenAI, highlighting the importance of addressing this factor to ensure the effective integration of AI-driven services into the value co-creation process. Overall, this study contributes to the growing body of literature on AI-driven services and their impact on consumer behavior, providing valuable insights for both researchers and practitioners in the field.

6.2. Practical Implications

The practical implications of this study are substantial, providing valuable insights for a wide range of stakeholders, including financial institutions, technology developers, and policymakers. For financial service providers, this study emphasizes the importance of developing GenAI technologies with enhanced human-like characteristics, such as the ability to offer personalized advice and exhibit empathy. This suggests that financial institutions should invest in AI systems that go beyond basic natural language processing and incorporate the ability to understand and adapt to individual emotional states and preferences. This research indicates that GenAI-driven chatbots capable of recognizing and responding to users' emotions can significantly enhance user satisfaction and engagement. This underscores the necessity of financial institutions employing GenAI technologies that can tailor their services to individual needs and preferences.

Furthermore, this study highlights the importance of continuous learning in maintaining and enhancing consumer trust and engagement with GenAI systems. Financial institutions should prioritize designing AI systems that can continuously update their knowledge bases and refine their algorithms based on user interactions. This approach aligns with the continuous improvement aspect of AI development and ensures that AI systems remain relevant and effective in meeting evolving consumer needs and preferences. AI systems capable of continuous learning and improvement are better equipped to build and maintain user trust over time by demonstrating an ongoing commitment to providing accurate and up-to-date information.

This study's findings also emphasize the importance of AI literacy in enhancing the positive impact of GenAI's attributes on its perceived authenticity. This suggests that financial institutions should develop educational programs and resources to improve consumers' understanding of AI. By investing in initiatives that demystify AI technologies, financial institutions can reduce resistance and increase engagement among consumers. This aligns with the broader goal of enhancing AI literacy and ensuring that consumers have the necessary knowledge and skills to interact effectively with AI-driven services. Consumers with higher levels of AI literacy are more likely to appreciate the benefits of AI-driven services and engage with them more effectively. Therefore, businesses should invest in educational initiatives to promote consumer understanding and acceptance of these technologies.

In conclusion, this study's implications highlight the importance of policymakers considering the impact of GenAI-driven financial advice on personalized investment suggestions, human-like empathy, and continuous improvement in consumer financial services. As GenAI becomes increasingly integrated into the sector, policymakers must ensure that consumers receive tailored advice that aligns with their unique financial circumstances, fostering trust and engagement. Additionally, they should prioritize consumer privacy protection while promoting equitable access to AI-driven benefits, addressing the digital divide. This may involve establishing standards for transparency in AI algorithms, ensuring data privacy, and implementing digital literacy programs. By proactively addressing these issues with a focus on personalization, empathy, and continuous improvement, policymakers can create a regulatory landscape that supports responsible innovation. This approach will ultimately encourage the development and deployment of AI technologies within the financial sector that prioritize individual needs, build meaningful connections, and continuously evolve to serve consumers better.

6.3. Limitations and Future Directions

Although this study provides valuable insights into the factors influencing consumer perceptions and attitudes towards GenAI in the context of financial advice, it is important to recognize its limitations. One limitation is its focus on mobile banking users as the sample population, which may limit the generalizability of these findings to other consumer segments. Future research could address this by exploring similar questions across different demographics. Additionally, utilizing qualitative methodologies, such as in-depth interviews or focus groups, could provide a more nuanced understanding of consumer perceptions of and attitudes towards GenAI-driven financial advice.

Another avenue for future research is to examine the influence of cultural differences on consumer reactions to GenAI-powered financial advisors. Given the variability in cultural values, norms, and expectations across societies, it is plausible that the factors influencing perceived authenticity and utilitarian attitudes towards GenAI-driven financial advice may vary. Comparative studies across different cultural contexts could offer valuable insights into designing and deploying GenAI-driven financial advisors to meet the unique needs and preferences of diverse consumer groups.

Finally, ethical considerations and privacy concerns surrounding GenAI-driven financial advice are critical areas for future research. As GenAI systems become more integrated into financial services, ensuring they are designed and deployed to respect consumer privacy, avoid bias, and promote fairness is paramount. Research on the ethical implications of GenAI-driven financial advice could inform the development of guidelines and regulations to ensure these technologies are used responsibly and in the best interests of consumers.

Author Contributions: Conceptualization, Q.Y. and Y.-C.L.; methodology, Q.Y. and Y.-C.L.; software, Q.Y.; validation, Q.Y. and Y.-C.L.; formal analysis, Q.Y. and Y.-C.L.; investigation, Q.Y.; data curation, Q.Y. and Y.-C.L.; writing—original draft preparation, Q.Y.; writing—review and editing, Y.-C.L.; visualization, Q.Y. and Y.-C.L.; supervision, Y.-C.L. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Data Availability Statement: The data that support the findings of this study are available from the authors upon reasonable request.

Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A

Table A1. Operational definitions and measurement items.

Constructs	Measurements	Source(s)
Personalized Investment Suggestions (PISs)	1. I feel that the investment suggestion by the GenAI is in line with my preferences. 2. I feel that the investment suggestion by the GenAI is in line with my taste. 3. The investment suggestion by the GenAI is what I am interested in. 4. The investment suggestion by the GenAI is better than the suggestions I get from other places. 5. I feel that the quality of investment suggestion by the GenAI is what I want. 6. My overall evaluation of the GenAI investment suggestion is very high. 7. I think the the GenAI investment suggestions are valuable. 8. The investment suggestions of the GenAI is flexible and changeable according to my question.	(Q. Chen et al. 2022)
Human-Like Empathy (HLE)	1. The GenAI makes me feel warm. 2. The GenAI makes me feel that it cares about my needs. 3. The GenAI makes me feel concerned. 4. I feel that the GenAI serves me attentively. 5. I feel that the GenAI puts my interests first. 6. The GenAI gives me personalized attention. 7. The GenAI has expressed being able to empathize with the customer's feelings. 8. The GenAI has indicated it could put itself well in the customer's shoes. 9. The GenAI is able to accurately understand the customer's concerns. 10. The GenAI can adopt my perspective and recommending the desired financial products. 11. The GenAI is preoccupied with offering me the best financial products.	(Pelau et al. 2021; Fu et al. 2023; Hu and Bentler 1999)
Continuous Improvement (CI)	1. The GenAI can learn from past experience. 2. The GenAI's ability is enhanced through learning. 3. After a period of use, the GenAI's performance is getting better and better. 4. I can feel the GenAI is constantly upgrading. 5. The GenAI fixes previous errors. 6. I feel that the GenAI is getting more and more advanced. 7. The function of the GenAI has been enhanced.	(Q. Chen et al. 2022)
Perceived Authenticity (PA)	1. When I think of the GenAI, I see a unique set of characteristics. 2. I would think of the GenAI as a unique individual. 3. Using the GenAI provided me with genuine experiences.	(Vo et al. 2024; Meng et al. 2023)
Utilitarian Attitude (UA)	1. The GenaI is useful. 2. The GenAI is productive. 3. The GenaI is necessary. 4. The GenAI is practical. 5. The GenAI is functional.	(Priya and Sharma 2023)

Table A1. *Cont.*

Constructs	Measurements	Source(s)
Willingness to Communicate with GenAI (WCG)	1. I am willing to receive financial advisory services from GenAI. 2. I will feel happy to interact with GenAI. 3. I am likely to interact with GenAI. 4. I would like to utilize the GenAI-powered financial service if there is an opportunity. 5. I intend to utilize the GenAI financial advisory service continuously. 6. I recommend the GenAI financial advisory service to my friends.	(Ma and Huo 2023; Kim and Hur 2023)
Resistance to Communicating with GenAI (RCG)	1. The financial advisory service provided by the GenAI is processed in a less humanized manner. 2. I prefer human contact when looking for investment suggestions. 3. People need emotional exchange during service transactions. 4. Interaction with the GenAI lacks social contact. 5. The existing problems with GenAI make me take a wait-and-see approach to it. 6. I do not plan to continue using GenAI.	(Ma and Huo 2023; Yang et al. 2023)
AI Literacy (AIL)	1. I can use AI to solve problems involving text and words. 2. I know how to decide which data to collect and how to process them for training AI models to solve problems. 3. I know how to interpret results obtained from AI to solve problems. 4. I know how to select AI algorithms to solve problems. 5. I know how to improve my ability to use AI for problem-solving. 6. I can use AI to solve problems involving images and videos.	(Almatrafi et al. 2024; Kong et al. 2024)

References

Alboqami, Hassan. 2023. Trust Me, I'm an Influencer!-Causal Recipes for Customer Trust in Artificial Intelligence Influencers in the Retail Industry. *Journal of Retailing and Consumer Services* 72: 103242. [CrossRef]

Aldunate, Ángeles, Sebastián Maldonado, Carla Vairetti, and Guillermo Armelini. 2022. Understanding Customer Satisfaction via Deep Learning and Natural Language Processing. *Expert Systems with Applications* 209: 118309. [CrossRef]

Ali, Hassnian, and Ahmet Faruk Aysan. 2023. What Will ChatGPT Revolutionize in Financial Industry? Available online: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4403372 (accessed on 18 August 2024).

Alimamy, Saifeddin, and Mohammad Amin Kuhail. 2023. I Will Be with You Alexa! The Impact of Intelligent Virtual Assistant's Authenticity and Personalization on User Reusage Intentions. *Computers in Human Behavior* 143: 107711. [CrossRef]

Alimamy, Saifeddin, and Samer Al-Imamy. 2022. Customer Perceived Value through Quality Augmented Reality Experiences in Retail: The Mediating Effect of Customer Attitudes. *Journal of Marketing Communications* 28: 428–47. [CrossRef]

Almatrafi, Omaima, Aditya Johri, and Hyuna Lee. 2024. A Systematic Review of AI Literacy Conceptualization, Constructs, and Implementation and Assessment Efforts (2019–2023). *Computers and Education Open* 6: 100173. [CrossRef]

Ameen, Nisreen, Ali Tarhini, Alexander Reppel, and Amitabh Anand. 2021. Customer Experiences in the Age of Artificial Intelligence. *Computers in Human Behavior* 114: 106548. [CrossRef]

Ashta, Arvind, and Heinz Herrmann. 2021. Artificial Intelligence and Fintech: An Overview of Opportunities and Risks for Banking, Investments, and Microfinance. *Strategic Change* 30: 211–22. [CrossRef]

Attié, Elodie, and Lars Meyer-Waarden. 2022. The Acceptance and Usage of Smart Connected Objects According to Adoption Stages: An Enhanced Technology Acceptance Model Integrating the Diffusion of Innovation, Uses and Gratification and Privacy Calculus Theories. *Technological Forecasting and Social Change* 176: 121485. [CrossRef]

Baabdullah, Abdullah M., Ali Abdallah Alalwan, Raed Salah Algharabat, Bhimaraya Metri, and Nripendra P. Rana. 2022. Virtual Agents and Flow Experience: An Empirical Examination of AI-Powered Chatbots. *Technological Forecasting and Social Change* 181: 121772. [CrossRef]

Baek, Tae Hyun, and Minseong Kim. 2023. Is ChatGPT Scary Good? How User Motivations Affect Creepiness and Trust in Generative Artificial Intelligence. *Telematics and Informatics* 83: 102030. [CrossRef]

Bag, Surajit, Gautam Srivastava, Md Mamoon Al Bashir, Sushma Kumari, Mihalis Giannakis, and Abdul Chowdhury. 2022. Journey of Customers in this Digital Era: Understanding the Role of Artificial Intelligence Technologies in User Engagement and Conversion. *Benchmarking* 29: 2074–98. [CrossRef]

Baidoo-Anu, David, and Leticia Owusu Ansah. 2023. Education in the Era of Generative Artificial Intelligence (AI): Understanding the Potential Benefits of ChatGPT in Promoting Teaching and Learning. *Journal of AI* 7: 52–62. [CrossRef]

Bhatia, Ankita, Arti Chandani, Rajiv Divekar, Mita Mehta, and Neeraja Vijay. 2022. Digital Innovation in Wealth Management Landscape: The Moderating Role of Robo Advisors in Behavioural Biases and Investment Decision-Making. *International Journal of Innovation Science* 14: 693–712. [CrossRef]

Brenner, Lukas, and Tobias Meyll. 2020. Robo-Advisors: A Substitute for Human Financial Advice? *Journal of Behavioral and Experimental Finance* 25: 100275. [CrossRef]

Cardon, Peter, Carolin Fleischmann, Jolanta Aritz, Minna Logemann, and Jeanette Heidewald. 2023. The Challenges and Opportunities of AI-Assisted Writing: Developing AI Literacy for the AI Age. *Business and Professional Communication Quarterly* 86: 257–95. [CrossRef]

Carolus, Astrid, Martin Jakosus Koch, Samantha Straka, Marc Erich Latoschik, and Carolin Wienrich. 2023. MAILS—Meta AI Literacy Scale: Development and Testing of an AI Literacy Questionnaire Based on Well-Founded Competency Models and Psychological Change- and Meta-Competencies. *Computers in Human Behavior* 1: 100014. [CrossRef]

Chang, Tsung-Sheng, and Wei-Hung Hsiao. 2024. Understand Resist Use Online Customer Service Chatbot: An Integrated Innovation Resist Theory and Negative Emotion Perspective. *Aslib Journal*. [CrossRef]

Chen, Boyang, Zongxiao Wu, and Ruoran Zhao. 2023. From Fiction to Fact: The Growing Role of Generative AI in Business and Finance. *Journal of Chinese Economic and Business Studies* 21: 471–96. [CrossRef]

Chen, Qian, Yeming Gong, Yaobin Lu, and Jing Tang. 2022. Classifying and Measuring the Service Quality of AI Chatbot in Frontline Service. *Journal of Business Research* 145: 552–68. [CrossRef]

Chi, Nguyen Thi Khanh, and Nam Hoang Vu. 2023. Investigating the Customer Trust in Artificial Intelligence: The Role of Anthropomorphism, Empathy Response, and Interaction. *CAAI Transactions on Intelligence Technology* 8: 260–73. [CrossRef]

Chou, Szu-Yu, Chih-Wei Lin, Yi-Chun Chen, and Jyh-Shen Chiou. 2023. The Complementary Effects of Bank Intangible Value Binding in Customer Robo-Advisory Adoption. *International Journal of Bank Marketing* 41: 971–88. [CrossRef]

Chuah, Stephanie Hui-Wen, and Joanne Yu. 2021. The Future of Service: The Power of Emotion in Human-Robot Interaction. *Journal of Retailing and Consumer Services* 61: 102551. [CrossRef]

Dewasiri, Narayanage Jayantha, Karunarathnage Sajith Senaka Nuwansiri Karunarathna, Mananage Shanika Hansini Rathnasiri, Dunusinghe Dharmarathne, and Kiran Sood. 2024. Unleashing the Challenges of Chatbots and ChatGPT in the Banking Industry: Evidence from an Emerging Economy. In *The Framework for Resilient Industry: A Holistic Approach for Developing Economies*. London: Routledge, pp. 23–37.

Dinh, Cong-Minh, and Sungjun Park. 2023. How to Increase Consumer Intention to Use Chatbots? An Empirical Analysis of Hedonic and Utilitarian Motivations on Social Presence and the Moderating Effects of Fear across Generations. *Electronic Commerce Research* 6: 1–41. [CrossRef]

Du, Hua, Yanchao Sun, Haozhe Jiang, A. Y. M. Atiquil Islam, and Xiaoqing Gu. 2024. Exploring the Effects of AI Literacy in Teacher Learning: An Empirical Study. *Humanities and Social Sciences Communications* 11: 559. [CrossRef]

Esmark Jones, Carol L., Tyler Hancock, Brett Kazandjian, and Clay M. Voorhees. 2022. Engaging the Avatar: The Effects of Authenticity Signals during Chat-Based Service Recoveries. *Journal of Business Research* 144: 703–16. [CrossRef]

Fornell, Claes, and David F. Larcker. 1981. Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research* 18: 39–50. [CrossRef]

Fu, Jindi, Samar Mouakket, and Yuan Sun. 2023. The Role of Chatbots' Human-Like Characteristics in Online Shopping. *Electronic Commerce Research and Applications* 61: 101304. [CrossRef]

Fu, Xuemei. 2024. Understanding the Adoption Intention for Electric Vehicles: The Role of Hedonic-Utilitarian Values. *Energy* 301: 131703. [CrossRef]

Fui-Hoon Nah, Fiona, Ruilin Zheng, Jingyuan Cai, Keng Siau, and Langtao Chen. 2023. Generative AI and ChatGPT: Applications, Challenges, and AI-Human Collaboration. *Journal of Information Technology Case and Application Research* 25: 277–304. [CrossRef]

Ghosh, Manimay. 2024. Empirical Study on Consumers' Reluctance to Mobile Payments in a Developing Economy. *Journal of Science and Technology Policy Management* 15: 67–92. [CrossRef]

Glikson, Ella, and Omri Asscher. 2023. AI-Mediated Apology in a Multilingual Work Context: Implications for Perceived Authenticity and Willingness to Forgive. *Computers in Human Behavior* 140: 107592. [CrossRef]

Grönroos, Christian. 2008. Service Logic Revisited: Who Creates Value? And Who Co-Creates? *European Business Review* 20: 298–314. [CrossRef]

Gursoy, Dogan, Oscar Hengxuan Chi, Lu Lu, and Robin Nunkoo. 2019. Consumers' Acceptance of Artificially Intelligent (AI) Device Use in Service Delivery. *International Journal of Information Management* 49: 157–69. [CrossRef]

Hair, Joseph Franklin, Marcelo Luiz Dias da Silva Gabriel, and Vijay K. Patel. 2014. AMOS Covariance-Based Structural Equation Modeling (CB-SEM): Guidelines on its Application as a Marketing Research Tool. *Brazil Journal of Marketing* 13: 1–15. [CrossRef]

Hsieh, Pi-Jung. 2016. An Empirical Investigation of Patients' Acceptance and Resistance Toward the Health Cloud: The Dual Factor Perspective. *Computers in Human Behavior* 63: 959–69. [CrossRef]

Hu, Li-Tze, and Peter M. Bentler. 1999. Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives. *Structural Equation Modeling* 6: 1–55. [CrossRef]
Huang, Ming-Hui, and Roland T. Rust. 2018. Artificial Intelligence in Service. *Journal of Service Research* 21: 155–72. [CrossRef]
Huang, Ming-Hui, and Roland T. Rust. 2021. Engaged to a Robot? The Role of AI in Service. *Journal of Service Research* 24: 30–41. [CrossRef]
Jan, Ihsan Ullah, Seonggoo Ji, and Changju Kim. 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. [CrossRef]
Javaid, Mohd, Abid Haleem, and Ravi Pratap Singh. 2023. A Study on ChatGPT for Industry 4.0: Background, Potentials, Challenges, and Eventualities. *Journal of Economy and Technology* 1: 127–43. [CrossRef]
Kelly, Sage, Sherrie-Anne Kaye, and Oscar Oviedo-Trespalacios. 2023. What Factors Contribute to the Acceptance of Artificial Intelligence? A Systematic Review. *Telematics and Informatics* 77: 101925. [CrossRef]
Kim, Hee Woong, Hock Chuan Chan, and Sumeet Gupta. 2007. Value-Based Adoption of Mobile Internet: An Empirical Investigation. *Decision Support Systems* 43: 111–26. [CrossRef]
Kim, Juran, Seungmook Kang, and Joonheui Bae. 2022. Human Likeness and Attachment Effect on the Perceived Interactivity of AI Speakers. *Journal of Business Research* 144: 797–804. [CrossRef]
Kim, Woo Bin, and Hee Jin Hur. 2023. What Makes People Feel Empathy for AI Chatbots? Assessing the Role of Competence and Warmth. *International Journal of Human–Computer Interaction* 40: 4674–87. [CrossRef]
Ko, Hyungjin, and Jaewook Lee. 2024. Can ChatGPT Improve Investment Decisions? From a Portfolio Management Perspective. *Finance Research Letters* 64: 105433. [CrossRef]
Kong, Siu-Cheung, William Man-Yin Cheung, and Olson Tsang. 2024. Developing an Artificial Intelligence Literacy Framework: Evaluation of a Literacy Course for Senior Secondary Students Using a Project-Based Learning Approach. *Computers & Education: Artificial Intelligence* 6: 100214. [CrossRef]
Kuhail, Mohammad Amin, Justin Thomas, Salwa Alramlawi, Syed Jawad Hussain Shah, and Erik Thornquist. 2022. Interacting with a Chatbot-Based Advising System: Understanding the Effect of Chatbot Personality and User Gender on Behavior. *Informatics* 9: 81. [CrossRef]
Kwon, Jookyung, Eklou Amendah, and Jiseon Ahn. 2024. Mediating Role of Perceived Authenticity in the Relationship between Luxury Service Experience and Life Satisfaction. *Journal of Strategic Marketing* 32: 137–51. [CrossRef]
Lee, Garim, and Hye-Young Kim. 2024. Human vs. AI: The Battle for Authenticity in Fashion Design and Consumer Response. *Journal of Retailing and Consumer Services* 77: 103690. [CrossRef]
Li, Jian, Jinsong Huang, and Yaqi Li. 2023. Examining the Effects of Authenticity Fit and Association Fit: A Digital Human Avatar Endorsement Model. *Journal of Retailing and Consumer Services* 71: 103230. [CrossRef]
Lin, Hongxia, Oscar Hengxuan Chi, and Dogan Gursoy. 2020. Antecedents of Customers' Acceptance of Artificially Intelligent Robotic Device Use in Hospitality Services. *Journal of Hospitality Marketing and Management* 29: 530–49. [CrossRef]
Ma, Xiaoyue, and Yudi Huo. 2023. Are Users Willing to Embrace ChatGPT? Exploring the Factors on the Acceptance of Chatbots from the Perspective of AIDUA Framework. *Technology in Society* 75: 102362. [CrossRef]
Markovitch, Dmitri G., Rusty A. Stough, and Dongling Huang. 2024. Consumer Reactions to Chatbot Versus Human Service: An Investigation in the Role of Outcome Valence and Perceived Empathy. *Journal of Retailing and Consumer Services* 79: 103847. [CrossRef]
Markus, André, Jan Pfister, Astrid Carolus, Andreas Hotho, and Carolin Wienrich. 2024. Effects of AI Understanding-Training on AI Literacy, Usage, Self-Determined Interactions, and Anthropomorphization with Voice Assistants. *Computers & Education Open* 6: 100176. [CrossRef]
Meng, Lu, Tongmao Li, Xiaolin Shi, and Xin Huang. 2023. Double-Sided Messages Improve the Acceptance of Chatbots. *Annals of Tourism Research* 102: 103644. [CrossRef]
Morhart, Felicitas, Lucia Malär, Amélie Guèvremont, Florent Girardin, and Bianca Grohmann. 2015. Brand Authenticity: An Integrative Framework and Measurement Scale. *Journal of Consumer Psychology* 25: 200–18. [CrossRef]
Musto, Cataldo, Giovanni Semeraro, Pasquale Lops, Marco de Gemmis, and Georgios Lekkas. 2015. Personalized Finance Advisory through Case-Based Recommender Systems and Diversification Strategies. *Decision Support System* 77: 100–11. [CrossRef]
Napoli, Julie, Sonia J. Dickinson, Michael B. Beverland, and Francis Farrelly. 2014. Measuring Consumer-Based Brand Authenticity. *Journal of Business Research* 67: 1090–98. [CrossRef]
Nazir, Anam, and Ze Wang. 2023. A Comprehensive Survey of ChatGPT: Advancements, Prospects Applications, and Challenges. *Meta-Radiology* 1: 100022. [CrossRef]
Ng, Davy Tsz Kit, Jac Ka Lok Leung, Samuel Kai Wah Chu, and Maggie Shen Qiao. 2021. Conceptualizing AI Literacy: An Exploratory Review. *Computers & Education: Artificial Intelligence* 2: 100041. [CrossRef]
Niu, Ben, and Gustave Florentin Nkoulou Mvondo. 2024. I Am ChatGPT, the Ultimate AI Chatbot! Investigating the Determinants of Users' Loyalty and Ethical Usage Concerns of ChatGPT. *Journal of Retailing and Consumer Services* 76: 103562. [CrossRef]
Oehler, Andreas, and Matthias Horn. 2024. Does ChatGPT Provide Better Advice than Robo-Advisors? *Finance Research Letters* 60: 104898. [CrossRef]
Pandey, Palima, and Alok Kumar Rai. 2024. Analytical Modeling of Perceived Authenticity in AI Assistants: Application of PLS-Predict Algorithm and Importance-Performance Map Analysis. *South Asian Journal of Business Studies*. [CrossRef]

Paul, Justin, Akiko Ueno, and Charles Dennis. 2023. ChatGPT and Consumers: Benefits, Pitfalls and Future Research Agenda. *International Journal of Consumer Studies* 47: 1213–25. [CrossRef]
Pelau, Corina, Dan-Cristian Dabija, and Irina Ene. 2021. What makes an AI device human-like? The role of interaction quality, empathy and perceived psychological anthropomorphic characteristics in the acceptance of artificial intelligence in the service industry. *Computers in Human Behavior* 122: 106855. [CrossRef]
Perchik, Jordan D., A. D. Smith, A. A. Elkassem, J. M. Park, S. A. Rothenberg, M. Tanwar, and H. Sotoudeh. 2023. Artificial Intelligence Literacy: Developing a Multi-Institutional Infrastructure for AI Education. *Academic Radiology* 30: 1472–80. [CrossRef]
Pitardi, Valentina. 2023. Personalized and Contextual Artificial Intelligence-Based Services Experience. In *Artificial Intelligence in Customer Service: The Next Frontier for Personalized Engagement*. Cham: Springer, pp. 101–22. [CrossRef]
Podsakoff, Philip M., and Dennis W. Organ. 1986. Self-Reports in Organizational Research: Problems and Prospects. *Journal of Management* 12: 531–44. [CrossRef]
Priya, Bhanu, and Vivek Sharma. 2023. Exploring Users' Adoption Intentions of Intelligent Virtual Assistants in Financial Services: An Anthropomorphic Perspectives and Socio-Psychological Perspectives. *Computers in Human Behavior* 148: 107912. [CrossRef]
Raj, Rohit, Arpit Singh, Vimal Kumar, and Pratima Verma. 2023. Analyzing the Potential Benefits and Use Cases of ChatGPT as a Tool for Improving the Efficiency and Effectiveness of Business Operations. *BenchCouncil Transactions on Benchmarks, Standards and Evaluations* 3: 100140. [CrossRef]
Raza, Syed A., Wasim Qazi, Komai Akram Khan, and Javeria Salam. 2021. Social Isolation and Acceptance of the Learning Management System (LMS) in the Time of COVID-19 Pandemic: An Expansion of the UTAUT Model. *Journal of Educational Computing Research* 59: 183–208. [CrossRef]
Rese, Alexandra, Lena Ganster, and Daniel Baier. 2020. Chatbots in Retailers' Customer Communication: How to Measure Their Acceptance? *Journal of Retailing and Consumer Services* 56: 102176. [CrossRef]
Riikkinen, Mikko, Hannu Saarijärvi, Peter Sarlin, and Ilkka Lähteenmäki. 2018. Using Artificial Intelligence to Create Value in Insurance. *International Journal of Bank Marketing* 36: 1145–68. [CrossRef]
Roh, Taewoo, Byung Il Park, and Shufeng Xiao. 2023. Adoption of AI-Enabled Robo-Advisors in Fintech: Simultaneous Employment of UTAUT and the Theory of Reasoned Action. *Journal of Electronic Commerce Research* 24: 29–47. Available online: https://api.semanticscholar.org/CorpusID:258835831 (accessed on 11 October 2024).
Roumeliotis, Konstantinos I., and Nikolaos D. Tselikas. 2023. ChatGPT and Open-AI Models: A Preliminary Review. *Future Internet* 15: 192. [CrossRef]
Seitz, Lennart. 2024. Artificial Empathy in Healthcare Chatbots: Does it Feel Authentic? *Computers in Human Behavior: Artificial Humans* 2: 100067. [CrossRef]
Shin, Donghee, Azmat Rasul, and Anestis Fotiadis. 2022. Why Am I Seeing This? Deconstructing Algorithm Literacy through the Lens of Users. *Internet Research* 32: 1214–34. [CrossRef]
Sironi, Paolo. 2016. *FinTech Innovation: From Robo-Advisors to Goal Based Investing and Gamification*. Hoboken: John Wiley & Sons.
Sperling, Katarina, Carl-Johan Stenberg, Cormac McGrath, Anna Åkerfeldt, Fredrik Heintz, and Linnea Stenliden. 2024. In Search of Artificial Intelligence (AI) Literacy in Teacher Education: A Scoping Review. *Computers and Education Open* 6: 100169. [CrossRef]
Srinivasan, Srini S., Rolph Anderson, and Kishore Ponnavolu. 2002. Customer Loyalty in E-Commerce: An Exploration of its Antecedents and Consequences. *Journal of Retailing* 78: 41–50. [CrossRef]
Stahl, Bernd Carsten, and Damian Eke. 2024. The Ethics of ChatGPT–Exploring the Ethical Issues of an Emerging Technology. *International Journal of Information Management* 74: 102700. [CrossRef]
Tam, Kar Yan, and Shuk Ying Ho. 2005. Web Personalization as a Persuasion Strategy: An Elaboration Likelihood Model Perspective. *Information Systems Research* 16: 271–91. [CrossRef]
Tirado-Morueta, Ramón, José Ignacio Aguaded-Gómez, and Ángel Hernando-Gómez. 2018. The Socio-Demographic Divide in Internet Usage Moderated by Digital Literacy Support. *Technology in Society* 55: 47–55. [CrossRef]
Ullah, Rafid, Hishamuddin Bin Ismail, Mohammad Tariqul Islam Khan, and Ali Zeb. 2024. Nexus between ChatGPT Usage Dimensions and Investment Decisions Making in Pakistan: Moderating Role of Financial Literacy. *Technology in Society* 76: 102454. [CrossRef]
Van Teijlingen, Edwin R., and Vanora Hundley. 2002. The importance of pilot studies. *Social Research Update* 35: 1–4. Available online: http://sru.soc.surrey.ac.uk/SRU35.html (accessed on 11 October 2024). [CrossRef]
Vargo, Stephen L., and Robert F. Lusch. 2004. Evolving to a New Dominant Logic for Marketing. *Journal of Marketing* 68: 1–17. [CrossRef]
Vargo, Stephen L., Paul P. Maglio, and Melissa Archpru Akaka. 2008. On Value and Value Co-Creation: A Service Systems and Service Logic Perspective. *European Management Journal* 26: 145–52. [CrossRef]
Vesanen, Jari. 2007. What is Personalization? A Conceptual Framework. *European Journal of Marketing* 41: 409–18. [CrossRef]
Vo, Diem-Trang, Long T. V. Nguyen, Duy Dang-Pham, and Ai-Phuong Hoang. 2024. When Young Customers Co-Create Value of AI-Powered Branded App: The Mediating Role of Perceived Authenticity. *Young Consumers* 25: 557–78. [CrossRef]
Wang, Bingcheng, Pei-Luen Rau, and Tianyi Yuan. 2023. Measuring User Competence in Using Artificial Intelligence: Validity and Reliability of Artificial Intelligence Literacy Scale. *Behaviour & Information Technology* 42: 1324–37. [CrossRef]
Wen, Haitao, Lulu Zhang, Ao Sheng, Mingda Li, and Bingfeng Guo. 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: 863313. [CrossRef]

Xia, Huosong, Qian Zhang, Justin Zuopeng Zhang, and Leven J. Zheng. 2023. Exploring Investors' Willingness to Use Robo-Advisors: Mediating Role of Emotional Response. *Industrial Management & Data Systems* 123: 2857–81. [CrossRef]
Yang, Bo, Yongqiang Sun, and Xiao-Liang Shen. 2023. Understanding AI-Based Customer Service Resistance: A Perspective of Defective AI Features and Tri-Dimensional Distrusting Beliefs. *Information Processing and Management* 60: 103257. [CrossRef]
Zamil, Ahmad M. A., Saqib Ali, Minhas Akbar, Vaclav Zubr, and Farhan Rasool. 2023. The Consumer Purchase Intention toward Hybrid Electric Car: A Utilitarian-Hedonic Attitude Approach. *Frontiers in Environmental Science* 11: 1101258. [CrossRef]
Zhu, Hui, Olli Vigren, and Inga-Lill Söderberg. 2024. Implementing Artificial Intelligence Empowered Financial Advisory Services: A Literature Review and Critical Research Agenda. *Journal of Business Research* 174: 114494. [CrossRef]