sciendo
ISSN 1392-1142 (Print), ISSN 2335-8750 (Online)
ORGANIZACIJŲ VADYBA:
SISTEMINIAI TYRIMAI 2024.92
https://doi.org/10.2478/mosr-2024-0010

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Generative AI's Impact on Customer Satisfaction: A FinTech Perspective

Over several decades, artificial intelligence has evolved from the initial attempts to replicate human reasoning to the advanced applications that propel business innovation across various industries. This paper examines the capacity of Generative Artificial Intelligence to improve customer satisfaction in the FinTech sector, concentrating on four essential value dimensions: functional, emotional, promotional, and innovative. According to the study, AI-driven solutions are critical for providing personalised products, automating services, and encouraging creativity in financial services. Data were collected via an online questionnaire, with responses from 312 users analysed using simple linear regression to test four hypotheses linking Generative AI to increased customer satisfaction. The results show that functional value, as measured by increased operational efficiency and reliability, has a significant impact on satisfaction. Emotional value emerged as a significant predictor, emphasising the importance of trust and positive affect in AI-powered financial interactions. Promotional value had a moderate but statistically significant impact, demonstrating AI's ability to personalise marketing strategies. Finally, innovative value was shown to be critical for distinguishing FinTech offerings and maintaining a competitive advantage. The findings suggest that FinTech companies that incorporate Generative AI into their service models can significantly improve user experiences, strengthen brand loyalty and improve overall customer satisfaction.

Keywords: Generative AI, digital marketing, AI in marketing, customer satisfaction, FinTech.

Per kelis dešimtmečius dirbtinis intelektas išsivystė nuo pradinių pastangų atkartoti žmogaus mąstymą iki pažangių taikomųjų programų, kurios skatina verslo inovacijas įvairiose pramonės šakose. Šiame straipsnyje nagrinėjamas generuojamojo dirbtinio intelekto gebėjimas didinti klientų pasitenkinimą „FinTech" sektoriuje, sutelkiant dėmesį į keturis esminius vertės aspektus: funkcinį, emocinį, reklaminį ir inovacinį. Tyrimo duomenimis, dirbtiniu intelektu paremti sprendimai yra itin svarbūs teikiant personalizuotus produktus, automatizuojant paslaugas ir skatinant kūrybiškumą finansinių paslaugų srityje. Duomenys buvo surinkti naudojant internetinį klausimyną, o 312 naudotojų atsakymai analizuoti taikant paprastąją tiesinę regresiją, siekiant patikrinti keturias hipotezes, siejančias generuojamąjį dirbtinį intelektą su didesniu klientų pasitenkinimu. Rezultatai rodo, kad funkcinė vertė, matuojama padidėjusiu veiklos efektyvumu ir patikimumu, turi reikšmingą poveikį pasitenkinimui. Emocinė vertė pasirodė esanti reikšmingas prognozuojamasis veiksnys, pabrėžiantis pasitikėjimo ir teigiamo poveikio svarbą dirbtiniu intelektu paremtame finansiniame bendravime. Reklaminė vertė turėjo vidutinį, bet statistiškai reikšmingą poveikį, o tai rodo, kad dirbtinis intelektas gali personalizuoti rinkodaros strategijas. Galiausiai paaiškėjo, kad inovacinė vertė yra labai svarbi siekiant išskirti „FinTech" pasiūlymus ir išlaikyti konkurencinį pranašumą. Išvados rodo, kad „FinTech" įmonės, kurios įtraukia generuojamąjį dirbtinį intelektą į savo paslaugų modelius, gali gerokai pagerinti naudotojų patirtį, sustiprinti lojalumą prekės ženklui ir padidinti bendrą klientų pasitenkinimą.

Raktiniai žodžiai: generuojamasis dirbtinis intelektas, skaitmeninė rinkodara, dirbtinis intelektas rinkodaroje, klientų pasitenkinimas, „FinTech".

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Introduction

The fast development of FinTech has changed the financial industry by introducing creative digital products and services meeting various consumer needs. Artificial intelligence (AI) is playing ever more important in improving service delivery, efficiency, and general customer satisfaction as the financial sector gets more and more digital.

AI has developed from its early attempts to imitate thinking like humans into advanced applications that drive business innovation in a variety of industries over the past several decades. Early pioneers like John McCarthy and researchers A. Newell and H. Simon laid the groundwork for AI systems by conceptualizing "intelligent machines" and developing techniques to automate logical problem-solving (McCarthy, 1956; Newell & Simon, 1956). AI systems can now analyse complex datasets and adapt to changing environments, allowing them to be deployed in a variety of industries such as retail, manufacturing, and financial services (Xu et al., 2021; Abdulrazzaq & Chyad, 2024). These advancements highlight AI's growing importance in improving operational efficiency, making better decisions, and automating routine tasks.

Generative AI is an important development in this field that uses sophisticated machine learning models to create new content, including text, images, music, and speech, by analysing patterns found in large datasets (Israfilzade & Sadili, 2024; Banh & Strobel, 2023). Generative AI is different from traditional AI systems, which focus mainly on data analysis. Generative AI includes aspects of human creativity, which opens up many possibilities for personalised product design and advanced decision-support frameworks. These capabilities have a particularly strong impact in fields where innovation, customisation, and rapid response are critical, reshaping how businesses approach product development and customer engagement.

Concurrently, the concept of customer satisfaction has remained central in economics and marketing, emphasizing how closely a product or service aligns with consumer expectations (Khadka & Maharjan, 2017). High levels of satisfaction foster loyalty and increase the likelihood of repeat purchases, making it a crucial performance metric for companies seeking to remain competitive in dynamic marketplaces (Syafarudin, 2021; Rane, Achari & Choudhary, 2023). Studies on customer satisfaction often highlight multiple value dimensions—ranging from functional and emotional to promotional and innovative—that collectively influence how customers perceive and evaluate their overall brand experience (Ahmed et al., 2023).

In this context, FinTech has emerged as a rapidly growing sector, leveraging AI-driven capabilities to improve customer satisfaction via tailored services, automated fraud detection, and real-time support (Muthukannan et al., 2021).

Customers today are more knowledgeable than ever before (Pilelienė, Alsharif, & Alharbi, 2022) and want experiences that are not only customised to them but also interactive (Babayev & Israfilzade, 2023). They want two-way interactions in which their questions and

feedback are quickly answered and valued (Israfilzade, 2021).

The research problem is how the application of generative AI impacts the improvement of customer satisfaction in the FinTech industry.

The research object focuses on Generative AI within the FinTech industry, examining how it impacts key customer satisfaction dimensions.

The aim of the research is to investigate the extent to which Generative AI enhances overall customer satisfaction in FinTech.

The research methods. Through empirical research utilising survey data, the study tests four hypotheses linking the use of Generative AI to improvements in each value dimension, which ultimately influence overall customer satisfaction. In the research conducted simple linear regression to analyse the link between AI-driven value dimensions and customer satisfaction.

The objectives of the article. This article tries to outline the four value dimensions that are important to FinTech customer satisfaction, evaluates the impact of Generative AI on these dimensions, empirically validates related hypotheses, and provides practical insights for improving AI-driven financial services.

By doing so, this paper not only contributes to the academic discussion on the broader role of AI in shaping customer satisfaction, but also provides FinTech practitioners with a framework for successful AI-driven innovation.

Literature review

Since its conception, the notion of AI has changed a lot. John McCarthy's description of AI in 1956 was that it is the "science and engineering of making intelligent machines" (McCarthy, 1956). The Logic Theorist, which was established by Newell, Simon, and Shaw, was one of the early achievements that helped to create the foundation for AI systems that can imitate human reasoning using logical frameworks (Newell & Simon, 1956). AI systems have become more versatile across industries due to recent advancements, which were made possible by achievements in neural networks and deep learning. In the 1950s, early research in AI looked into subjects like as problem solving and symbolic approaches. During the 1960s, the United States Department of Defence became interested in this type of work and started training computers to imitate fundamental human reasoning. For instance, the Defence Advanced Research efforts Agency (DARPA) finished street mapping efforts in the 1970s. In 2003, DARPA created intelligent personal assistants, well before Siri, Alexa, or Cortana were well known.

So, AI is a discipline of computer science that focusses on developing systems or machines capable of doing activities that normally require human intelligence. These tasks include learning using data (machine learning), reasoning, problem-solving, natural language understanding, perception (recognising speech, images, or patterns), and autonomous decision-making.

Generative Artificial Intelligence. Generative AI represents a significant advancement in the AI domain, emphasizing the creation of new content, such as text, images, music, and speech, from existing datasets (Israfilzade & Sadili, 2024). Unlike traditional AI, which primarily

focuses on data analysis and decision-making, Generative AI leverages human-like creativity to produce novel outputs, distinguishing itself as a transformative tool (Banh & Strobel, 2023).

How does generative AI work? Generative AI uses machine learning, specifically neural networks, to generate new material based on patterns extracted from large amounts of training data (Foster, 2022). Large amounts of relevant text, photographs, code, or other inputs are first categorised and analysed by AI systems to find underlying structures, which are then used to generate realistic, original results. Early Generative AI implementations required specialised tools and programming knowledge, but newer systems allow users to submit plain-language without any instruction. As users change style, tone, and subject details, this conversational agent optimises AI outputs. Generative AI's ability to personalize and automate tasks has positioned it as a valuable resource in industries seeking efficiency and innovation. For example, it has been used to construct perceptual maps, streamline teaching processes, and enhance decision-making in businesses (Mollick & Mollick, 2023). Experiments show that Generative AI provides fast and productive solutions, making it a revolutionary tool with broad applications. Its proven efficiency in marketing, optimization, and task automation underscores its growing role in shaping modern industries (Noy & Zhang, 2023).

Generative AI is also changing conversational marketing by moving away from one-way communication and towards real-time, personalised, and human-like interactions (Israfilzade, 2021). It also addresses ethical issues and provides a new framework to guide future research and practice (Israfilzade & Sadili, 2024).

Customer Satisfaction. Customer satisfaction refers to how well the products or services offered by a company align with what a customer expects. To put it differently, customer satisfaction refers to the level of happiness a customer feels following their interaction with a company. Customer satisfaction includes not just the happiness a customer feels regarding their transactions with the business, but also their entire experience with the business itself as a whole (Khadka & Maharjan, 2017).

Customer satisfaction is a fundamental concept in economics and marketing. It is recognised as a key factor in determining how customers will behave in the long run and how successful a business will be. It shows how strong the interactions are between customers and companies, where satisfaction levels indicate the likelihood of repeated purchases and brand loyalty (Syafarudin, 2021; Israfilzade & Baghirova, 2022). At its core, satisfaction is related to the emotional responses of consumers, which are driven by their evaluation of perceived value in relation to their expectations. When the delivered value meets or exceeds these expectations, it encourages loyalty and establishes long-term relationships with the brand (Rane, Achari & Choudhary, 2023). Research also emphasises the relationship between price and quality, in which higher prices are frequently associated with better quality (Ahmed et al., 2023). This reinforces the significance of perceived value in the choices made by consumers.

From a business standpoint, customer satisfaction is the foundation of competitive advantage and market performance. Therefore, it is the result of comparing the effectiveness of a product with what was expected before it was consumed (Nona, Mintarti & Kuleh, 2021). This alignment is essential for meeting the needs of consumers and for obtaining a competitive advantage in the market. When customers are happy with their purchases, they are more likely to buy from the same company again. This is important for a company's long-term success and profitability (Suchánek & Kŕaĺová, 2019).

In the long run, customer satisfaction is a complex, continually shifting concept that requires constant adjustment. In order to remain relevant, businesses must invest in understanding the needs of their clients by analysing data, improving their products, and customising their marketing strategies. Companies that prioritise customer satisfaction are able to build loyalty, improve their position in the market, and achieve long-term success. This demonstrates that customer satisfaction is both a strategic necessity and a measure of performance.

In order to stay competitive in today's fast-changing markets, businesses have come to prioritise customer satisfaction. Customers have become more selective in their assessment of products and services as the duration of product lifecycles decreases and the number of options available to consumers increases. As a result, companies try to find and take advantage of the factors that have the greatest impact on satisfaction, which in turn promotes loyalty and long-term profitability (Khan et al., 2022; Rane, Achari & Choudhary, 2023).

Functional Value is frequently mentioned as one of the main reasons for satisfaction. It pertains to the practical use, dependability, cost-effectiveness, and problem-solving abilities of goods or services (Lu & Bao-Zhong, 2022). Consumers' trust and confidence in a brand increase when they see that their fundamental needs are being met effectively (Furukawa et al., 2019). This value dimension is extremely important in a variety of industries, including commerce, finance, and niche markets. It drives engagement and loyalty by making sure that products fulfil actual needs.

Promotional Value is strongly related to awareness and perceived benefits. Clear, relevant, and timely promotions help businesses connect with both existing and potential customers, ensuring they stay informed about beneficial offers (Nainggolan & Sinaga, 2022). Effective promotional strategies—such as coupons, samples, discounts, and bonuses—can persuade customers of a product's advantages while nurturing retention through reminders and behavior adjustments (Wirakanda et al., 2021; Darmawan, 2022).

Innovative Value plays a significant role in maintaining competitiveness and satisfying evolving consumer demands. Research shows that introducing novel features and approaches can increase customer satisfaction and loyalty, especially when companies strategically integrate innovation into their business models (Daragahi, 2017; Kiumarsi et al., 2020). When firms offer fresh and transformative solutions, they often create higher perceived value and reinforce strong customer relationships (Mahmoud et al., 2017).

Emotional Value revolves around the affective responses customers experience before, during, and after a purchase. Investing in emotional engagement—through empathy, swift feedback, and personalized experiences—can significantly boost customer satisfaction (Agarwal, 2023; Boakye et al., 2023). Positive emotions lead to trust and loyalty, making emotional intelligence among staff pivotal in building lasting customer connections (Pribadi et al., 2020; Nyagadza et al., 2022).

Overall, recognizing and proactively managing these four factors enables companies to address weaknesses, enhance customer satisfaction, and strengthen their market positions.

AI in FinTech. AI has undoubtedly advanced rapidly in both theory and technology, resulting in significant investments in a variety of industries to improve business intelligence and customer service (Muthukannan et al., 2021). In the FinTech sector, AI is now driving major transformations, reshaping how financial products and services are delivered. FinTech companies can use machine learning and data analytics to improve operational efficiency and redefine traditional market practices in order to meet changing consumer demands.

In FinTech, AI's capabilities go beyond basic automation to enable autonomous financial ecosystems (Brandl & Hornuf, 2020). Startups play an important role in introducing innovation by providing retail banking solutions, international money transfers, and cryptocurrency services that challenge traditional financial models (Gozman et al., 2018). These companies use AI to study consumer behaviour and tailor offerings that improve purchase retention, customer interaction, and transaction volume (Israfilzade, 2021).

AI also improves credit evaluations and lending decisions by analysing large datasets to better predict risk (Königstorfer and Thalmann, 2022). In online trading, AI excels at algorithmic trading by rapidly processing large amounts of real-time data—an advantage that reduces the emotional biases associated with human traders. This objectivity aids in forecasting market shifts and refining investment strategies, ultimately improving performance and profitability.

It is important to note that AI-driven fraud detection mechanisms constantly monitor and analyse transactional data in order to identify any unusual or suspicious activity (Baranidharan, 2023). Such solutions strengthen anti-money laundering measures, build consumer trust, and improve risk management practices (Kerkez, 2020, Ahmed et al., 2024). AI greatly lowers operational costs and strengthens the overall security posture of financial technology (FinTech) companies by automating compliance processes and revealing hidden patterns.

Finally, AI-powered chatbots and digital assistants transform customer service by providing instant, round-the-clock support, lowering labor costs and increasing user satisfaction (Wiittmann & Lutfiju, 2021; Jenneboer et al., 2022). These solutions provide human-like support, increase consumer engagement, and encourage brand loyalty through personalised encounters and optimised data collecting. As AI continues to evolve, the basic functions of FinTech are changing,

including risk assessment, investment strategies, and customer service. At the same time, it is also raising significant questions about ethics and regulations.

Customer Satisfaction in FinTech. As FinTech enters all aspects of life, widespread adoption of new financial products and services is critical. However, customer reactions are mixed: while some users appreciate the convenience of digital platforms, others are sceptical due to trust issues with the platform or the larger financial system (Khanal et al., 2023).

Brand loyalty and customer satisfaction in FinTech are influenced by a variety of factors, including service quality, perceived value, transaction speed, security measures, data policies, and innovative functionalities. Additional research emphasizes the importance of convenience, flexibility, and tailored services—such as customized plans or seamless withdrawals—for maintaining competitiveness (Zhang & Kim, 2020). Furthermore, implementing strong privacy protocols and optimizing asset management solutions improves security perceptions (Md Ariff & Farrah, 2019).

Meeting customer needs through feedback loops and personalized offerings is also essential for long-term engagement (Rhanoui, 2022; Khanal et al., 2023). Finally, maintaining high levels of satisfaction increases user trust in this sensitive financial environment, where privacy and dependability are critical.

Empirical research

This study explores how Generative AI can impact customer satisfaction within FinTech, focusing on its influence across the four identified value dimensions. The study aims to assess the effectiveness of AI in improving these values, formulating hypotheses that evaluate AI's impact on functional, emotional, promotional, and innovative satisfaction drivers. The overall objective of the research is to determine the most effective way to employ generative AI to increase customer satisfaction in the FinTech industry. Defined hypothesis shown below:

- ***H1.*** The use of Generative AI positively impacts customer satisfaction as a matter of functional value.
- ***H2.*** The use of Generative AI positively impacts customer satisfaction as a matter of emotional value.
- ***H3.*** The use of Generative AI positively impacts customer satisfaction as a matter of promotional value.
- ***H4.*** The use of Generative AI positively impacts customer satisfaction as a matter of innovative value.

Data collection and questionnaire design. The study used an online questionnaire divided into five sections to investigate how generative AI affects customer satisfaction. Before completing the survey, participants were given a brief explanation of the research purpose to ensure that they understood its objectives. The survey targeted individuals with prior experience using FinTech platforms (e.g., digital payment systems, AI-driven financial advisors). A screening question ensured respondents had interacted with at least one FinTech service within the past six months. This criterion aimed to ensure participants could meaningfully evaluate AI's role in financial contexts. The first section also covered demographic information,

which helped contextualize responses to subsequent questions.

A 7-point Likert Scale (1 = fully disagree, 7 = fully agree) was used throughout to assess key aspects of customer satisfaction (Table 1). The second section evaluated overall satisfaction and opinions regarding AI-powered products, including whether their integration resulted in a more positive experience. The functional value section then investigated whether AI influences product design, meets consumer expectations, shapes purchasing decisions, and improves brand image.

Then emotional value was evaluated, with a view toward the positive emotions, trust, and richer user experiences driven by AI technologies. Examining the degree to which AI-driven campaigns capture interest, reach target audiences, and influence decision-making, a section on promotional value found Lastly, the innovative value section assessed whether

Table 1. **Questionnaire design**

Variable	Code	Items
Customer Satisfaction	To what extent you agree or disagree with next statements:	
	CS1	I think that employing Generative AI boosts my overall satisfaction with products.
	CS2	I experience higher satisfaction when products utilize Generative AI to improve their overall appeal.
	CS3	I view products that integrate Generative AI as delivering a higher level of satisfaction to consumers.
Functional Value	*FV1*	I find that products leveraging generative AI technologies are more likely to fulfill my functional expectations.
	FV2	Applying generative AI technologies into product design improves the product's functionality.
	FV3	Employing Generative AI algorithms to enhance functional features strongly impacts my choice to purchase.
	FV4	Generative AI-based functional features positively shape how I view a brand's overall reputation.
Emotional Value	*EV1*	I find that products created with generative AI technologies tend to cause more positive emotions.
	EV2	I trust brands that use generative AI technologies to foster positive emotions.
	EV3	Features driven by generative AI offer a user experience that feels more emotionally rewarding.
Promotional Value	*PV1*	Generative AI effectively generates promotional content that grabs my attention.
	PV2	Incorporating generative AI into promotional strategies makes it more efficient to address customer needs.
	PV3	Promotional approaches supported by generative AI have a positive impact on how I perceive a brand's marketing efforts.
	PV4	AI-generated promotions affect my purchasing decisions.
Innovative Value	*IV1*	Using generative AI in product development improves the ability to provide innovative features.
	IV2	AI-driven innovative elements lead to a more engaging and enjoyable consumer experience.
	IV3	Products that incorporate generative AI are seen as more innovative and forward-looking.
	IV4	Products utilizing generative AI to introduce innovative value trigger greater user activity.

Source: Developed by the authors based on K. Alkilani et al. (2012), S. F. Sakhaei et al. (2014), A. Pizam et al. (2016)

AI-based features add freshness and increased user interest, so providing a more engaging product experience.

The survey-maintained simplicity and gathered thorough insights by using direct, brief questions in every dimension. This framework gives a whole picture of how generative AI might influence customer satisfaction and provides a basis for more thorough investigation in the next phases of the research.

Table 2 summarises the key demographic characteristics of the 312 respondents. The sample consists of 52.9% men and 47.1% women. In terms of age, the majority of participants are aged 25 to 34 (51.9%), followed by those aged 18 to 24 (36.2%). The smallest segments are people aged 35 to 44 (8.7%), 45 to 54 (2.6%), and over 55 (0.6%).

In terms of education, 35.6% of people hold a bachelor's degree and 40.7% hold a master's degree. Those with a high school diploma make up 14.7% of respondents, while those with a professional degree make up 4.2%, and those with a doctorate make up 4.8%. In terms of employment status, half of the respondents (50.3%) are employed: 20.8% are self-employed; 18.9% are temporarily unemployed and looking for work; and 9.9% are unemployed but not looking for work.

Ensuring the reliability of empirical research is crucial for accurate data collection and valid outcomes. In this study, reliability is assessed using Cronbach's alpha and McDonald's omega. Both measures exceed 0.8 for the functional, emotional, promotional, innovative, and customer satisfaction scales, affirming good consistency. The overall Cronbach's alpha and McDonald's omega surpasses 0.94, indicating a very good index; combined with a mean of 5.47 (on a 7-point

Table 2. **Respondents profile**

Variables	Items	Frequency	% of total	Cumulative %
Gender	Male	165	53 %	52.9 %
	Female	147	47 %	100.0 %
Age Group	18 to 25	113	36%	36.2 %
	26 to 35	162	51 %	88.1 %
	36 to 45	27	8%	96.8 %
	46 to 55	8	2%	99.4 %
	More than 55	2	1 %	100.0 %
Educational background	High school diploma	46	14 %	14.7 %
	Bachelor's degree	111	35 %	50.3 %
	Master's degree	127	40 %	91.0 %
	Professional degree	13	4%	95.2 %
	Doctoral qualification	15	4%	100.0 %
Employment status	Employed	157	50 %	50.3 %
	Self-employed	65	20%	71.2 %
	Temporary unemployed (search for a job)	59	18 %	90.1 %
	Unemployed (do not search for a job)	31	10%	100.0 %

scale) and minimal standard deviation (0.849), these values confirm the reliability of the online questionnaire. Skewness and kurtosis analyses further reveal near-normal data distribution, underscoring the appropriateness of the chosen statistical methods.

The research results

The simple linear regression method was chosen to find a linear relationship between selected values as a predictor on customer satisfaction. This research paper hypothesized that Generative AI affects customer satisfaction through proposed values.

In a simple linear regression analysis (Table 3) using Functional Value (FV) to predict Customer Satisfaction in FinTech, results indicate a significant positive coefficient (0.7251, $p < 0.001$), meaning increased Functional Value leads to higher Customer Satisfaction. The intercept (1.9496) represents baseline satisfaction when FV is zero. Model fit measures show $R^2 = 0.488$, adjusted $R^2 = 0.487$ suggesting that 48.8% of customer satisfaction variability is explained by Functional Value, with a strong model fit.

Therefore, the predictive equation below demonstrates how changes in Functional Value (FV) can impact overall Customer Satisfaction (CS) levels.

$$CS = 1.9496 + 0.7251 \times FV$$

In line with these findings, the first hypothesis (H1)—that "The use of Generative AI positively impacts customer satisfaction as a matter of functional value"—***is supported***. The regression results show that enhanced functional features influenced by Generative AI significantly increase customer satisfaction in the FinTech sector, emphasising the importance of implementing AI solutions into product design and service delivery.

The next step of empirical research involves conducting a statistical analysis of Emotional Value as a predictor of customer satisfaction from the customers' perspective. Table 4 illustrates the model's key indicators: an intercept of 1.8931, a coefficient of 0.715 for EV, and an R^2 of 0.571, meaning that 57.1% of the variance in CS is accounted for by EV.

Table 3. **Simple regression using Functional Value as a predictor of Customer Satisfaction**

Predictor	Coefficient	Standard Error	*t-Statistic*	*P-value*	Model Fit	
					R^2	Adj. R^2
Intercept	1.949	0.229	8.48	< 0.001	0.488	0.487
FV	0.725	0.042	17.20	< 0.001		

Table 4. **Simple regression using Emotional Value as a predictor of Customer Satisfaction**

Predictor	Coefficient	Standard Error	*t-Statistic*	*P-value*	Model Fit	
					R^2	Adj. R^2
Intercept	1.89	0.197	9.56	< 0.001	0.571	0.57
EV	0.71	0.035	20.31	< 0.001		

The following predictive equation is provided to demonstrate the relationship between Customer Satisfaction and Emotional Value.

$$CS = 1.89312 + 0.715 \times EV$$

Consequently, the second hypothesis (H2), stating that "The use of Generative AI positively impacts customer satisfaction as a matter of emotional value", ***is supported*** by the statistical findings.

The third segment of the statistical analysis explores Promotional Value (PV) as a key driver of Customer Satisfaction (CS) in the FinTech context. Employing a simple linear regression approach, Table 5 highlights crucial indicators. Specifically, $R^2 = 0.259$ indicates that approximately 25.9% of the variation in CS can be attributed to Promotional Value. These findings reflect how effective promotions, impacted by Generative AI, can positively influence customer satisfaction in a competitive FinTech market.

Building on these insights, the regression equation is formulated as below, where it is revealing how incremental improvements in Promotional Value can elevate overall Customer Satisfaction.

$$CS = 3.39 + 0.493 \times PV$$

Based on these results, the third hypothesis (H3)—which states that the application of Generative AI has a positive impact on Customer Satisfaction through Promotional Value—receives ***empirical support***.

The final step of statistical analysis focuses on how Innovative Value (IV) shapes Customer Satisfaction (CS) through Generative AI. Simple linear regression results (Table 6) show that IV significantly influences CS, with $R^2 = 0.523$, meaning 52.3% of the variance in CS is attributable to innovation-driven enhancements.

The corresponding equation demonstrates how Generative AI–enabled innovation can effectively elevate FinTech offerings.

$$CS = 1.546 + 0.523 \times IV$$

Consequently, the fourth hypothesis (H4)—asserting that "The use of Generative AI positively impacts customer satisfaction as a matter of promotional value"—***is supported*** by the statistical evidence.

Table 5. **Simple regression using Promotional Value as a predictor of Customer Satisfaction**

Predictor	Coefficient	Standard Error	*t-Statistic*	*P-value*	Model Fit	
					R^2	Adj. R^2
Intercept	3.39	0.240	14.1	< 0.001	0.259	0.257
PV	0.493	0.0474	10.41	< 0.001		

Table 6. **Simple regression using Promotional Value as a predictor of Customer Satisfaction**

Predictor	Coefficient	Standard Error	*t-Statistic*	*P-value*	Model Fit	
					R^2	Adj. R^2
Intercept	1.546	0.236	6.54	< 0.001	0.523	0.521
IV	0.745	0.040	18.42	< 0.001		

Discussion

This study's findings provide empirical evidence that Generative AI plays a role in improving customer satisfaction in the FinTech industry. Therefore, the statistical analysis showed that using Generative AI has a positive impact on customer satisfaction by offering functional value. The strong relationship between these two variables indicates that improvements in product design, operational efficiency, and service personalization that are driven by AI have a major impact on the overall customer satisfaction. This finding aligns with previous research that shows that AI improves business processes, speeds up response times, and makes digital financial services easier to use (Muthukannan et al., 2021). Generative AI provides that services are delivered consistently by simplifying financial transactions and automating interactions with customers. This, in turn, increases the reliability and credibility of the brand.

Similarly, emotional value occurred as a significant predictor of customer satisfaction. AI applications, such as chatbots and recommendation engines, provide more personalised interactions, eliciting positive emotions and increasing customer engagement. This discovery is in line with earlier studies that highlight the significance of emotional connections in determining customer preferences and trust (Agarwal, 2023). When AI is integrated into customer service, it enables real-time support, which decreases frustration and increases satisfaction.

Promotional value was also found to be a significant predictor of customer satisfaction, even though with a lower impact than functional and emotional values. This implies that, while AI-generated promotional strategies like targeted marketing and automated advertising influence customer engagement, their overall impact on satisfaction is limited. This could be due to the fact that, while promotions are important, they do not always guarantee long-term customer retention unless they are accompanied by high service quality and reliability. However, AI-driven promotions improve personalization, making marketing efforts more effective and engaging, according to previous research (Nainggolan & Sinaga, 2022).

The study also confirmed that innovative value is a key driver of customer satisfaction, emphasizing the role of AI in transforming financial services. Generative AI helps to differentiate products by adding new features that improve the customer experience. FinTech companies have a competitive edge over traditional financial institutions because of the unique advantages that AI-driven innovations, such as automated wealth management and intelligent fraud detection, provide (Zhang & Kim, 2020). The positive relationship between innovative value and customer satisfaction shows that customers value technological improvements that make their financial transactions easier and more secure.

In practical terms, these results provide FinTech companies that are attempting to improve customer satisfaction through the use of AI applications. Companies should prioritise technologies that are powered by AI and improve efficiency, such as predictive analytics and intelligent automation. By using AI for personalised interactions and sentiment analysis, one can maximise emotional value

by ensuring that consumer concerns are resolved quickly. Moreover, companies should enhance their marketing plans by using AI to design focused campaigns appealing to personal tastes. At last, innovation is still a major determinant, which drives continuous costs in AI-powered solutions to keep a competitive edge.

Limitations and Prospects for Future Research. Despite its contributions, this study has a number of limitations that can be reasons for future research.

Firstly, the study applied a sample size that may not accurately reflect the different socioeconomic groups of FinTech customers. To improve generalisation, future studies can include a broader range of respondents from different geographic regions and socioeconomic backgrounds.

Second, this study focused on four main aspects of customer satisfaction, but there are other factors that could affect how much consumers trust AI-powered FinTech services, such as ethical concerns and transparency. Future research should investigate these factors in order to gain a more comprehensive understanding of how AI is being adopted in the financial services industry.

Finally, the study relied on self-reported data collected via online surveys, which may be prone to biases such as social desirability. Future studies could use behavioural analytics and real-time customer interaction data to validate these findings with objective metrics.

Conclusions

This study presents empirical evidence that Generative AI significantly improves customer satisfaction in FinTech. The statistical analyses show that AI implementation improve operational efficiency, trust, and service personalisation, resulting in higher customer satisfaction. AI-powered personalised interactions foster emotional value, which is critical for establishing customer trust and engagement. Promotional value, though significant, has a more moderate impact on satisfaction, suggesting that while AI-driven marketing strategies are effective, they must be supported by tangible service improvements. Finally, the study confirms that innovative value is a key driver of customer satisfaction, with Generative AI enabling FinTech firms to develop novel financial solutions.

From a theoretical perspective, this research contributes to the growing body of knowledge on AI's role in shaping consumer experiences. It expands traditional customer satisfaction models by integrating AI-specific value dimensions, offering a more comprehensive framework for evaluating AI's impact. Practically, these findings highlight the necessity for FinTech companies to invest in AI-driven solutions that optimize efficiency, enhance emotional connections with customers, and drive innovation.

Finally, Generative AI represents a game-changing opportunity for the FinTe sector, with far-reaching implications for customer experience and competitiveness. Financial institutions can improve user satisfaction, foster trust, and drive long-term innovation in an increasingly digitalised financial landscape by strategically integrating AI-powered solutions.

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The paper submitted: January 30, 2025
Prepared for publication: May 30, 2025

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GENERUOJAMOJO DIRBTINIO INTELEKTO POVEIKIS KLIENTŲ PASITENKINIMUI: „FINTECH" PERSPEKTYVA

Santrauka

Šiame tyrime nagrinėjama, kaip generuojamasis dirbtinis intelektas (DI) didina klientų pasitenkinimą „FinTech" sektoriuje, daugiausia dėmesio skiriant keturiems pagrindiniams vertės aspektams: funkciniam, emociniam, reklaminiam ir inovaciniam. Analizuojant, kaip dirbtinio intelekto sprendimai formuoja paslaugų kokybę ir personalizavimą, tyrime pabrėžiamas vis didėjantis generuojamojo dirbtinio intelekto vaidmuo automatizuojant užduotis, sudarant sąlygas priimti sprendimus realiuoju laiku ir gerinant naudotojų patirtį. Sparčiai besivystančių finansinių technologijų fone tyrimas iliustruoja, kaip dirbtinis intelektas ne tik sprendžia veiklos neefektyvumo problemas, bet ir diegia naujas funkcijas, atitinkančias besikeičiančius klientų poreikius.

Metodologiniu požiūriu taikytas kiekybinis modelis, naudojant internetinį klausimyną, kuris buvo pateiktas 312 dalyvių. Klausimyno struktūrą sudarė 7 balų Likerto skalė, kurioje buvo fiksuojamas respondentų pasitenkinimas dirbtiniu intelektu paremtomis finansinėmis paslaugomis patikimumo, emocinio ryšio, tikslinių akcijų ir naujų produktų savybių požiūriu. Paprastoji tiesinė regresija buvo naudojama tikrinant generuojamojo dirbtinio intelekto ir klientų pasitenkinimo sąsajas keturiose nustatytose vertės dimensijose, taip užtikrinant statistinį tikslumą susiejant dirbtinio intelekto sukurtus patobulinimus su apčiuopiamais pasitenkinimo rezultatais.

Išvados rodo, kad funkcinė vertė turi didžiausią poveikį bendram pasitenkinimui, pabrėžiant, kaip efektyvi veikla, patikimas aptarnavimas ir

automatizavimas tiesiogiai didina pasitikėjimą ir naudotojų pasitikėjimą. Emocinė vertė taip pat yra reikšmingas prognozuojamasis veiksnys, rodantis, kad personalizuota sąveika su dirbtiniu intelektu, pavyzdžiui, asmeninius patarimus teikiantys pokalbių robotai, skatina teigiamus jausmus ir lojalumą. Nors reklaminė vertė turi vidutinį, bet reikšmingą poveikį, tyrimas rodo, kad tikroji dirbtiniu intelektu pagrįstos rinkodaros galia slypi jau ir taip aukštos paslaugų kokybės gerinime. Galiausiai išsiskiria inovacinė vertė, suteikianti „FinTech" įmonėms konkurencinį pranašumą; tokios funkcijos kaip automatizuotas turto valdymas ir sukčiavimo aptikimas gerina produktų pasiūlą ir kartu skatina prekės ženklo diferenciaciją perpildytoje rinkoje.

Apibendrinant galima teigti, kad šiame tyrime pateikiama empirinių įrodymų, jog generuojamasis dirbtinis intelektas turi transformuojantį poveikį klientų pasitenkinimui „FinTech" srityje, o labiausiai prie to prisideda efektyvumo didinimas, emocinis įsitraukimas ir novatoriškos paslaugų savybės. Šios įžvalgos praplečia tradicines klientų pasitenkinimo sistemas, įtraukiant konkrečius DI rodiklius, suteikdamos akademinės ir praktinės vertės. „FinTech" įmonės, siekiančios pagerinti vartotojų patirtį, gali pasinaudoti šiomis išvadomis ir teikti pirmenybę dirbtiniu intelektu pagrįstam personalizavimui, veiklos patikimumui ir nuolatinėms inovacijoms – strategijoms, kurios stiprina pasitikėjimą, didina įsitraukimą ir užtikrina ilgalaikį klientų lojalumą.