Volume 2 Number 2 (2025)
Juni-Des 2025
Page: 83-89

E-ISSN: 3047-3101
P-ISSN: -
DOI:10.71155/monetarium.v2i2.166

MONETARIUM:
Journal of Economy Business and Management

The Effect Of Chatbot Use On Purchase Decisions On E-Commerce Platforms With Consumer Trust As A Mediation Variable
(Case Study of Consumer Behavior in Ponorogo Regency)

Suad Fikriawan[1] Teguh Ansori[2]
[12]Universitas Islam Negeri Kiai Ageng Muhammad Besari Ponorogo
[1]suad.fikriawan@gmail.com
[2]teguhanshory586@gmail.com

Abstract

This study aims to analyze the influence of chatbot usage on consumer purchasing decisions on e-commerce platforms, with trust as a mediating variable. Using a quantitative approach and a case study in Ponorogo Regency, data were collected through a closed-ended questionnaire from 30 randomly selected respondents. The research instrument was tested for validity and reliability using Pearson correlation and Cronbach's Alpha, and analyzed using simple linear regression and the Sobel mediation test. The results of the study showed that chatbots had a positive and significant effect on user trust ($\beta = 0.68$; $p < 0.01$), and trust significantly influenced purchasing decisions ($\beta = 0.30$; $p < 0.05$). The mediation test showed that trust significantly mediated the relationship between chatbots and purchasing decisions ($z = 2.17$; $p < 0.05$). These results support the Stimulus–Organism–Response (S-O-R) theoretical framework, where chatbots as stimuli influence internal conditions (trust), which then drive responses in the form of purchasing decisions. These findings emphasize the importance of chatbot design that is not only technically functional, but also capable of building user trust as a psychological relationship-based digital marketing strategy.

Keywords: Chatbot; Trust; Purchasing Decision; E-Commerce; S-O-R

INTRODUCTION

In this fast-paced digital era, chatbots have become the vanguard of consumer interactions with brands, from simply answering questions to guiding consumers through the purchasing process. However, the presence of chatbots doesn't always positively influence purchasing decisions; trust is key in shaping consumer perceptions of these automated systems. When users perceive a chatbot as intransparent, unresponsive, or even too "robotic," the potential for conversion can plummet. Therefore, understanding how trust in chatbots is formed and how it influences purchasing decisions is crucial, especially in today's increasingly competitive e-commerce and digital marketing context (Araujo, 2020).

This phenomenon reflects a paradigm shift in consumer behavior, where digital interactions via chatbots are no longer viewed merely as a tool, but rather as a representation of service quality and brand credibility. Several studies have shown that trust is a critical mediating factor determining the effectiveness of chatbots in influencing consumer purchase intentions and decisions (Gafen, 2003). In this context, trust is not only defined as the perception of a chatbot's technical capabilities, but also encompasses aspects of integrity, transparency, and empathy experienced by users during the virtual interaction. With consumers' increasing reliance on automated systems, trust in chatbots has become a strategic variable that requires further investigation, particularly within the context of purchasing decision-making, which is increasingly influenced by digital interactions (Adam, 2021).

Empirically, various studies have shown a positive correlation between perceived trust in chatbots and consumer purchase intentions. A 2022 survey of over 10,000 global respondents by the Capgemini Research Institute revealed that 73% of consumers are more likely to make a purchase when they have a positive and trustworthy experience interacting with a chatbot, especially one that provides fast, accurate, and personalized answers. In Indonesia, a 2023 report from the Katadata Insight Center noted that more than 60% of e-commerce users have used chatbot services, and of those, approximately 58% stated that the interaction experience influenced their decision to continue the transaction. This fact reinforces the assumption that the presence of chatbots is no longer just an additional feature, but rather a strategic component in building trust-based digital relationships.

This data clarifies the position of chatbots as new actors in the digital economy, playing a role in the consumer persuasion process. When trust is built through both consistent user experiences and perceived data security, the chances of purchase conversions increase significantly. Furthermore, chatbot technology now integrates elements of artificial intelligence such as natural language processing (*natural language processing*) and machine learning (*machine learning*), which contributes to improving the quality of interactions, but also presents new challenges regarding the perception of authenticity and personalization (Folstad, 2020). This situation reinforces the urgency of evaluating the relationship between user trust in chatbots and their purchase propensity. Therefore, this study aims to empirically analyze how dimensions of trust in chatbots influence purchasing decisions and identify the factors supporting the formation of such trust in the context of digital marketing and e-commerce.

METHOD

This research was conducted in Ponorogo Regency, collecting data from respondents aged 17 to over 50. Using a quantitative approach with a case study, the study aimed to understand the relationship between trust in chatbots and purchasing decisions in the context of consumer interactions with digital services on e-commerce platforms (Sugiono, 2019). The quantitative approach was chosen to obtain objective, measurable data that can be analyzed statistically to identify patterns of relationships between variables empirically.

Research data was collected through a closed questionnaire, which was compiled based on theoretical indicators of the trust variable (*trust*) and purchase decisions (*purchase decision*). The data obtained is primary data in the form of numbers, which are then processed and analyzed to draw relevant scientific conclusions (McKnight, 2002). The questionnaire instrument was distributed to 30 randomly selected respondents (*random sampling*) from among active users of e-commerce platforms who have interacted with chatbots in the product purchasing process.

Data collection techniques were conducted online using digital forms to reach respondents more widely and efficiently. Prior to use, the questionnaire was tested for validity and reliability using a*Pearson Product Moment dan Cronbach's Alpha*, to ensure that the instrument can measure variables consistently and accurately (Arikunto, 2013).

The data analysis technique used in this study was simple linear regression analysis to test the extent to which trust in chatbots significantly influences purchasing decisions. Furthermore, a Pearson correlation test was used to determine the strength and direction of the relationship between the two variables. All data analysis was performed using statistical software such as the latest version of SPSS (Ghozali, 2018).

RESULT AND DISCUSSION

Result

The analysis results show that all questions used in the research instrument met validity requirements, with a correlation coefficient (r-count) value > 0.30 and significant at the 95% confidence level ($p < 0.05$). This indicates that each question item in the Chatbot, Trust, and Purchase Decision variable indicators accurately measured its construct. Meanwhile, the reliability test results showed that all variables had Cronbach's Alpha values above 0.70, namely: Chatbot (0.842), Trust (0.873), and Purchase Decision (0.861). This indicates that the instrument used is reliable and consistent in measuring each construct studied.

In a simple linear regression analysis, it was found that the Chatbot variable had a positive and significant effect on Trust ($\beta = 0.68$; $p < 0.01$), and Trust had a significant effect on Purchasing Decisions ($\beta = 0.30$; $p < 0.05$). This result was reinforced by the coefficient of determination (R^2) value of 0.52, which means that 52% of the variability in purchasing decisions can be explained by the model containing the trust variable as a mediator.

Furthermore, the results of the mediation test using the Sobel test approach showed that Trust significantly mediated the relationship between Chatbots and Purchase Decisions, with a z-value of 2.17 ($p < 0.05$). This indicates that the presence of chatbots not only has a direct influence on purchasing decisions but also creates trust that strengthens consumer intentions to make transactions.

Overall, these findings support the hypothesis that chatbots play an important role in influencing purchasing decisions, both directly and indirectly through the mediating role of trust.

Discussion

Validity test results show that all questionnaire items representing the Chatbot, Trust, and Purchase Decision variables have item-total correlation values greater than 0.30 and are significant at the 5% level. This indicates that the items are valid in measuring the constructs studied. Good construct validity provides the primary basis for more confidently proceeding with further statistical analysis.

Reliability testing yielded high Cronbach's Alpha values for all three main variables, with each value exceeding 0.70. This indicates that each construct has good internal consistency and can reliably reflect respondents' perceptions. This high reliability strengthens the accuracy of the measurement results.

Furthermore, the results of a simple linear regression analysis indicate that there is a positive and significant influence between chatbots on user trust, with a regression coefficient of $\beta = 0.68$ and a significance of $p < 0.01$. This indicates that the better the quality of chatbot interactions—both in terms of ease, responsiveness, and closeness of communication—the higher the level of trust formed in users. In addition, user trust in chatbots was also shown to have a significant influence on purchasing decisions with $\beta = 0.30$ and $p < 0.05$. These results confirm that trust plays an important role in driving consumer purchasing decisions in the context of chatbot-based services.

To test the mediating role, a Sobel test was conducted, which showed that trust served as a significant intervening variable between chatbots and purchasing decisions (z-value = 2.17; $p < 0.05$). This means that chatbots not only have a direct impact on purchasing decisions but also

exert an indirect influence through the formation of trust. This mediation role is partial, as the direct relationship between chatbots and purchasing decisions remains significant even when the trust variable is included in the model.

These results align with the stimulus-organism-response (S-O-R) theory, where chatbots, as a stimulus, can influence a user's internal state (trust), ultimately driving the final response, a purchasing decision. Practically, these findings underscore the importance of developing chatbots that are not only technically functional but also designed to build a credible and trustworthy user experience.

The Stimulus–Organism–Response (S-O-R) theoretical framework developed by Mehrabian and Russell (1974) states that an external stimulus (S) will influence the internal organism (O) in the form of an individual's cognitive or affective processes, and produce a response (R) in the form of real actions or behavior (Mehrabian, 1974). This model is very relevant in explaining the dynamics of consumer behavior in a digital context, including in interactions between consumers and chatbots.

Within this research framework, Stimulus (S) is represented by a chatbot, an artificial intelligence-based automated system used by companies to provide services and information to consumers. The chatbot acts as the external stimulus that first interacts with the user (Sheehan, 2020). Organism (O) refers to consumer trust formed based on experiences interacting with the chatbot. Trust here encompasses perceptions of the security, credibility, and integrity of the system used (Gefen, 2003). Meanwhile, Response (R) is a purchasing decision made by consumers as a form of real behavior that is influenced by previously formed perceptions and beliefs (Pavlou, 2004).

This model allows for a deeper understanding that chatbots are not just technical tools, but also psychological tools that indirectly influence purchasing behavior through trust mechanisms. Therefore, companies need to consider chatbot design that builds trust, such as through personalization, response speed, and information transparency (Gnewuch, 2018).

CONCLUSION

This study confirms that trust plays a crucial role as a mediating variable in the relationship between interactions with chatbots and consumer purchasing decisions. Using the Stimulus–Organism–Response (S-O-R) theory, it was found that chatbots, as digital stimuli, significantly influence consumer trust (organism), which ultimately drives purchasing decisions (response) on digital platforms.

The results of quantitative analysis, including validity and reliability tests, simple linear regression, and mediation analysis, indicate that chatbots designed with interactive, responsive, and reliable features can significantly build consumer trust. This trust has been shown to be a key driver of online purchasing decision conversion.

The practical implications of this research point to the importance of optimizing chatbots as customer service tools that are not only operationally efficient but also capable of building trust-based psychological relationships. Therefore, digital marketing strategies and chatbot technology development must focus on personalized, trustworthy, and humanistic customer experiences to encourage sustainable purchasing behavior.

REFERENSI

Arikunto, Suharsimi. 2013.*Research Procedures A Practical Approach*. Jakarta: Rineka Cipta.

Capgemini Research Institute. 2022. *Smart Talk: How Organizations and Consumers Are Embracing Voice and Chat Assistants*. Accessed August 4, 2025. https://www.capgemini.com/research/smart-talk-chatbots

Gefen, David, Elena Karahanna, and Detmar W. Straub. 2003. "Trust and TAM in Online Shopping: An Integrated Model." *MIS Quarterly* 27 (1): 51–90. https://doi.org/10.2307/30036519

Ghozali, Imam. 2018.*Multivariate Analysis Application with IBM SPSS 25 Program*. Semarang: Diponegoro University Publishing Agency.

Gnewuch, Ulrich, Sven Morana, Marc T. P. Adam, and Alexander Maedche. 2018. "Designing Chatbots for Supporting Customer Self-Service in the Digital Workplace." In *Proceedings of the 36th International Conference on Information Systems (ICIS)*.

Katadata Insight Center. 2023.*Trends in Consumer Interaction with Chatbots in Indonesian E-Commerce*. Jakarta: Katadata.co.id.

Mehrabian, Albert, and James A. Russell. 1974. *An Approach to Environmental Psychology*. Cambridge, MA: MIT Press.

Pavlou, Paul A., and David Gefen. 2004. "Building Effective Online Marketplaces with Institution-Based Trust." *Information Systems Research* 15 (1): 37–59. https://doi.org/10.1287/isre.1040.0015

Sheehan, Brian, Hye Sun Jin, and Ursula Gottlieb. 2020. "Customer Service Chatbots: Anthropomorphism and Adoption." *Journal of Business Research* 115: 14–24. https://doi.org/10.1016/j.jbusres.2020.04.030

Sugiyono. 2019.*Quantitative, Qualitative, and R&D Research Methods*. Bandung: Alfabeta