A Conceptual Framework on the Role of Dynamic Pricing and eWOM in Online Transportation Services: The Jakarta Experience

Hermansyah[1], Usep Suhud[2], Setyo Ferry Wibowo[3]
[1]Universitas Negeri Jakarta, Jakarta, Indonesia, hermansyah.ut2016@gmail.com
[2]Universitas Negeri Jakarta, Jakarta, Indonesia, usuhud@unj.ac.id
[3]Universitas Negeri Jakarta, Jakarta, Indonesia, setyoferry@unj.ac.id

Corresponding Author: hermansyah.ut2016@gmail.com[1]

Abstract: This conceptual study aims to explore the influence of dynamic pricing and electronic word-of-mouth (eWOM) on consumer decisions in using online transportation services in Jakarta. By employing a Systematic Literature Review (SLR) approach, this research synthesizes findings from various academic sources to develop a theoretical framework integrating consumer behavior theories with pricing and digital communication strategies. The results suggest that dynamic pricing, while effective in optimizing operational efficiency, may trigger perceptions of price unfairness if implemented non-transparently—thereby undermining consumer trust and purchase intentions. Concurrently, eWOM is identified as a critical determinant that shapes consumer perceptions, brand trust, and service loyalty through reviews and ratings. The interplay between these two factors is particularly salient in Jakarta's competitive and digitally-driven transportation market. This framework is expected to provide a basis for future empirical studies and strategic guidance for service providers aiming to enhance customer satisfaction, loyalty, and sustainable competitive advantage.

Keyword: Dynamic Pricing; Electronic Word-of-Mouth (eWOM), Consumer Decision, Online Transportation

INTRODUCTION

The development of digital technology has brought significant changes to the transportation sector, especially in big cities like Jakarta. Online transportation services such as Gojek, Grab, and Maxim have become the main solution for urban communities in meeting their daily mobility needs. The ease of access, time efficiency, and flexibility of services offered by these platforms make them an increasingly popular choice among users. According to research by (Simbolon, 2022), the use of online transportation in Jakarta shows a significant upward trend, reflecting the community's adaptation to technology-based mobility solutions.

Digitalization has not only changed the way people access transportation services, but also influenced consumer behavior in decision-making. Consumers now have easy access to

information through various digital platforms, allowing them to compare prices, read reviews, and make decisions based on real-time data. A study by (Fadhli Nursal et al., 2023) shows that digitalization has increased consumer awareness of factors such as price and service quality, which in turn influences their decisions in choosing online transportation services. One of the strategies implemented by online transportation service providers is dynamic pricing, which is a flexible price adjustment based on market demand, time, and other conditions. This strategy allows companies to optimize revenue and operational efficiency. However, the implementation of dynamic pricing can also create a perception of price unfairness among consumers, which ultimately affects their satisfaction and loyalty. Research by (Purwanto et al. 2021) shows that dynamic pricing can affect consumers' perceptions of price fairness, which has an impact on their satisfaction and purchasing decisions.

In addition, electronic word-of-mouth (eWOM) has become an important factor in shaping consumer perceptions and decisions. User reviews, ratings, and comments on digital platforms can significantly influence purchase intentions and decisions to use online transportation services. Research by (Fadhli Nursal et al., 2023) found that eWOM has a positive and significant influence on purchasing decisions for online transportation services, both directly and through the mediation of purchase intentions. Likewise, a study by (Rafqi Ilhamalimy & Ali, 2021), (Simbolon, 2022) shows that eWOM plays an important role in shaping user interest and decisions towards online transportation services.

Given the importance of dynamic pricing and eWOM in shaping consumer behavior, this study aims to develop a conceptual framework that explains how these two factors influence decisions to use online transportation services in Jakarta. By understanding this relationship, service providers can design more effective marketing and pricing strategies to increase customer satisfaction and loyalty.

Consumer Decisions in Online Transportation

Consumer behavior in choosing online transportation services is influenced by various factors, including price, convenience, time, and user experience. Consumer behavior theories such as the Theory of Planned Behavior (TPB) and the AIDA Model are often used to understand the consumer decision-making process. TPB emphasizes behavioral intentions influenced by attitudes towards behavior, subjective norms, and perceived behavioral control. Meanwhile, the AIDA Model describes the consumer stages from Attention, Interest, Desire, to Action in the purchasing process. In the context of online transportation, factors such as ease of use of the application, speed of service, and previous user experience play an important role in consumer decisions. A study by Hauslbauer et al. (2022) shows that TPB can be expanded to include factors such as environmental concerns to predict public transportation ticket subscriptions. In addition, research by (Rozenkowska, 2023) confirms the prevalence of TPB in consumer behavior research that aims to explore factors that precede behavior.

Dynamic Pricing

Dynamic pricing is a flexible pricing strategy, where the price of a product or service is adjusted in real-time based on market demand, time, and other factors. In the online transportation industry, dynamic pricing is used to balance supply and demand, and optimize company revenue. However, the implementation of dynamic pricing can affect consumers' perceptions of price fairness, which in turn can affect consumer trust and loyalty. A study by Chen and (Zhao, 2018) showed that dynamic pricing can improve market efficiency, but also poses challenges in maintaining consumers' perceptions of price fairness. In addition, a non-transparent dynamic pricing strategy can reduce consumer trust and affect their purchasing decisions. A study by (Zhang & Zhao, 2024) developed a dynamic pricing game model and a social learning network model for consumers from three public transportation modes, showing that dynamic pricing strategies can affect consumer behavior through social learning. Another

study by (Haessner et al., 2023) highlighted that a non-transparent dynamic pricing algorithm can reduce consumer trust and affect their purchasing decisions.

Electronic Word-of-Mouth (eWOM)

Electronic Word-of-Mouth (eWOM) refers to the dissemination of consumer information or opinions about products or services through digital platforms, such as reviews, ratings, and comments on social media. eWOM has a significant influence on consumer trust, perceived service quality, and usage intention. A study by Cheung and Thadani (2012) emphasized that the credibility, relevance, and quality of eWOM information can influence consumer attitudes and purchase intentions. (Ismagilova et al., 2020) also found that positive eWOM can increase brand trust and consumer loyalty. In the context of online transportation, user reviews and ratings can influence consumers' perceptions of service quality and their decisions in choosing a particular service provider. A study by (Rafqi Ilhamalimy & Ali, 2021)Abouzeid et al. (2023) showed that eWOM dimensions, such as credibility and relevance, have a significant effect on consumer purchase intention and brand trust. Another study by (Limwirya et al., 2023) found that eWOM and electronic service quality have a positive effect on purchase intention at the Arctic House restaurant.

METHOD

This research is a conceptual study that aims to develop a theoretical framework regarding the influence of dynamic pricing and electronic word-of-mouth (eWOM) on the decision to use online transportation in Jakarta. The methodology used is a qualitative approach with the Systematic Literature Review (SLR) method, which allows researchers to identify, evaluate, and synthesize relevant literature systematically and transparently. The SLR method was chosen because of its ability to provide a comprehensive understanding of the topic being studied and identify existing research gaps. The SLR process in this study follows the stages suggested by (Neubert, 2022), namely: (1) review planning, (2) study identification and evaluation, (3) data extraction, and (4) data synthesis. In the study identification stage, researchers used academic databases such as Scopus, ScienceDirect, SpringerLink, and Google Scholar with the keywords: "dynamic pricing", "eWOM", "consumer decision", and "online transportation". Inclusion criteria include articles published in the last five years (2019–2024), relevant to the research topic, and published in reputable journals.

In the context of dynamic pricing, a study by (Neubert, 2022) identified that dynamic pricing strategies can affect consumers' perceptions of price fairness and perceived value, which in turn affects consumer trust and loyalty. In addition, a study by (Zhang & Zhao, 2024) showed that dynamic pricing can improve market efficiency, but also poses challenges in maintaining consumers' perceptions of price fairness. A study by (Haessner et al., 2023) highlighted that non-transparent dynamic pricing algorithms can reduce consumer trust and affect their purchasing decisions. For the eWOM aspect, a study by (Khan et al., 2023) showed that eWOM has a significant influence on consumers' purchase intentions and brand equity. A study by (Rafqi Ilhamalimy & Ali, 2021) emphasized that credible and relevant eWOM can increase consumer trust and perceptions of service quality. In addition, a study by (Ilhamalimy, 2020)Thirfound that positive eWOM can increase consumer brand loyalty and purchase intentions.

Based on the synthesis of the literature, this study develops a conceptual framework that integrates consumer behavior theory, dynamic pricing, and eWOM in the context of online transportation use in Jakarta. This framework is expected to be the basis for further empirical research that can test these relationships quantitatively.

RESULT AND DISCUSSION

Conceptual Framework
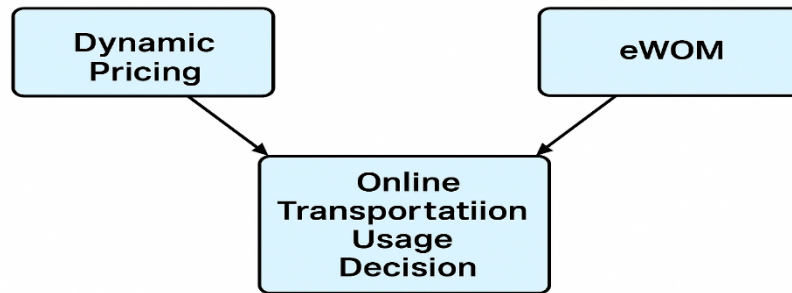
The phenomenon of online transportation usage in Jakarta has experienced significant growth, driven by the ease of access, time efficiency, and convenience offered by services such as Gojek and Grab. However, the price dynamics implemented through dynamic pricing strategies and the influence of electronic word-of-mouth (eWOM) are important factors influencing consumer decisions in using these services. Dynamic pricing strategies allow service providers to adjust prices in real-time based on market demand, time, and other factors. A study by (Zhang & Zhao, 2024) shows that dynamic pricing can improve market efficiency, but also poses challenges in maintaining the perception of price fairness in the eyes of consumers. In addition, a study by (Haessner et al., 2023) highlights that non-transparent dynamic pricing algorithms can reduce consumer trust and affect their purchasing decisions. (Gupta & Pathak, 2014) found that dynamic pricing strategy can create purchasing decisions, similarly (Aviv & Wei, 2018) found that attractive pricing strategy can influence consumer purchasing behavior, research by (Victor et al., 2018) that maximized dynamic pricing can create good advantages for pricing strategy that impacts consumer interest in making purchases, and research by (Cohen et al., 2021; Javanmard & Nazerzadeh, 2019) found that dynamic pricing has a significant effect on decisions to use products or services.

In the context of eWOM, user reviews and ratings have a significant influence on consumer trust, perceived service quality, and usage intentions. A study by (Immanuel, 2020) emphasizes that the credibility, relevance, and quality of eWOM information can influence consumer attitudes and purchase intentions. (Ismagilova et al., 2020) also found that positive eWOM can increase brand trust and consumer loyalty. In the context of online transportation, user reviews and ratings can influence consumer perceptions of service quality and their decisions in choosing a particular service provider. Research by (Nugroho & Sampurna, 2025) in Jakarta revealed that price and e-service quality significantly influence user decisions and customer loyalty, with eWOM acting as a mediator in the relationship. This shows that consumer perceptions of price and service quality can form positive eWOM, which in turn increases customer loyalty to online transportation services. During the COVID-19 pandemic, consumer behavior in using online transportation services has changed. A study by (Subriadi and Baturohmah, 2023) showed that purchase intentions and customer behavior during the pandemic influenced loyalty to ride-hailing applications, with eWOM playing an important role in shaping consumer perceptions and decisions. This confirms that eWOM remains relevant in the digital era, especially in crisis situations such as the pandemic, Another study by (Rafqi Ilhamalimy & Ali, 2021) also found that ewom plays an important role in creating trust which has an impact on purchasing decisions. In addition, research by (Almunawar et al., 2020) identified that factors such as performance expectations, social influence, and habits positively influence customer acceptance of ride-hailing services in Indonesia. This shows that in addition to price and eWOM factors, social factors and habits also play an important role in consumers'

decisions to use online transportation services.(Meenakshy et al., 2024) found that good eWOM can significantly influence consumer purchasing decisions.

In the context of intense competition in the online transportation industry, dynamic pricing and eWOM strategies can be used synergistically to increase competitiveness and customer loyalty. However, it is important for service providers to ensure transparency in the implementation of dynamic pricing and encourage positive eWOM through improving service quality and good interactions with customers.

CONCLUSION

This conceptual research aims to examine and develop a theoretical understanding framework regarding the influence of dynamic pricing and electronic word-of-mouth (eWOM) on the decision to use online transportation in Jakarta. Based on the synthesis of literature over the past five years, it was found that dynamic pricing plays an important role in improving operational efficiency and responsiveness to market demand. However, non-transparent pricing strategies can lead to perceptions of price unfairness which negatively impact consumer trust and decisions. On the other hand, eWOM has been consistently proven to influence purchasing decisions through the mechanism of consumer trust, perception of service quality, and brand loyalty. In the digital era, user reviews and ratings are indicators of reputation that greatly influence consumer decisions, especially in the context of application-based services such as Gojek and Grab. Therefore, dynamic pricing and eWOM are two strategic factors that complement each other in shaping consumer behavior in the online transportation industry in urban areas such as Jakarta.

For further researchers, it is recommended to empirically test the conceptual framework that has been developed in this study through a quantitative approach such as Structural Equation Modeling (SEM) or Partial Least Squares (PLS-SEM), involving a sample of active online transportation users in Jakarta. Empirical research will allow us to measure how strong the relationship is between variables, such as price perception, consumer trust, and reuse intention. In addition, online transportation service providers are advised to implement a more transparent dynamic pricing strategy that is oriented towards consumer perception so as not to reduce user loyalty. Service providers also need to actively manage their digital reputation, encourage positive eWOM through superior customer experience, and respond to negative reviews openly and constructively. Thus, companies can create synergy between pricing strategy and digital reputation to achieve sustainable competitive advantage in this highly dynamic market.

REFERENCES

Aviv, Y., & Wei, M. M. (2018). Innovative Dynamic Pricing: The Potential Benefits of Early-Purchase Reward Programs. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3150572

Cohen, M. C., Miao, S., & Wang, Y. (2021). Dynamic Pricing with Fairness Constraints. In *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3930622

Fadhli Nursal, M., Rianto, M. R., Rohaeni, H., & Saputra, F. (2023). Pengaruh Electronic Word of Mouth (EWOM) Terhadap Keputusan Pembelian Melalui Minat Beli Pada Jasa Transportasi Online Maxim di Kota Bekasi. *Jurnal Manajemen Dan Pemasaran Digital (JMPD)*, *1*(3), 111–118. https://creativecommons.org/licenses/by/4.0/

Gupta, R., & Pathak, C. (2014). A machine learning framework for predicting purchase by online customers based on dynamic pricing. *Procedia Computer Science*, *36*(C), 599–605. https://doi.org/10.1016/j.procs.2014.09.060

Haessner, J., Haessner, P., & McMurtrey, M. (2023). Dynamic Pricing in Different Industries. *Journal of Marketing Development and Competitiveness*, *17*(4).

https://doi.org/10.33423/jmdc.v17i4.6735

Ilhamalimy, R. R. (2020). Determinasi Minat Beli Online Shopee. *Jurnal Ilmu Manajemen Terapan*, *2*(1), 70–80. https://doi.org/10.31933/jimt.v2i1.308

Immanuel, D. M. (2020). Engaging Purchase Decision of Customers in Marketplace Channel: A Study of Fashion Online Retail. *Jurnal Bisnis Dan Manajemen*, *7*(2). https://doi.org/10.26905/jbm.v7i2.4451

Ismagilova, E., Slade, E. L., Rana, N. P., & Dwivedi, Y. K. (2020). The Effect of Electronic Word of Mouth Communications on Intention to Buy: A Meta-Analysis. *Information Systems Frontiers*, *22*(5), 1203–1226. https://doi.org/10.1007/s10796-019-09924-y

Javanmard, A., & Nazerzadeh, H. (2019). Dynamic pricing in high-dimensions. *Journal of Machine Learning Research*, *20*, 1–49. https://doi.org/10.2139/ssrn.2855843

Khan, Z., Khan, A., Nabi, M. K., Khanam, Z., & Arwab, M. (2023). The effect of eWOM on consumer purchase intention and mediating role of brand equity: a study of apparel brands. *Research Journal of Textile and Apparel*, 1108–1125. https://doi.org/10.1108/RJTA-11-2022-0133

Limwirya, M. J., Kelly, K., & Kusumawardhana, I. (2023). The effect of eWOM and e-service quality on purchase intention at Artic.house restaurant. *E3S Web of Conferences*, *426*. https://doi.org/10.1051/e3sconf/202342602141

Meenakshy, M., Prasad, K. D. V., Bolar, K., & Shyamsunder, C. (2024). Electronic word-of-mouth intentions in personal and public networks: a domestic tourist perspective. *Humanities and Social Sciences Communications*, *11*(1), 1–15. https://doi.org/10.1057/s41599-024-03753-4

Nugroho, R. I., & Sampurna, D. S. (2025). *mediation*. *11*(1), 25–40.

Rafqi Ilhamalimy, R., & Ali, H. (2021). Model Perceived Risk and Trust: E-Wom and Purchase Intention (the Role of Trust Mediating in Online Shopping in Shopee Indonesia). *Dinasti International Journal of Digital Business Management*, *2*(2), 204–221. https://doi.org/10.31933/dijdbm.v2i2.651

Rozenkowska, K. (2023). Theory of planned behavior in consumer behavior research: A systematic literature review. *International Journal of Consumer Studies*, *47*(6), 2670–2700. https://doi.org/10.1111/ijcs.12970

Simbolon, Z. (2022). Pengaruh Electronic Word of Mouth dan Daya Tarik Iklan Terhadap Minat Pengguna Jasa Transportasi Online Gojek di Kota Medan. *Prosiding Seminar Nasional*, *1*(18), 14-1 14-15.

Victor, V., Thoppan, J. J., Nathan, R. J., & Maria, F. F. (2018). Factors influencing consumer behavior and prospective purchase decisions in a dynamic pricing environment-an exploratory factor analysis approach. *Social Sciences*, *7*(9). https://doi.org/10.3390/socsci7090153

Zhang, Y., & Zhao, Z. (2024). Optimal dynamic pricing for public transportation considering consumer social learning. *PLoS ONE*, *19*(1 January), 1–19. https://doi.org/10.1371/journal.pone.0296263