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The Influence of Application Based Information Technology Usage on the Loyalty and Retention of Gojek Partner Drivers in Jabodetabek

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ABSTRACT
This study examines the influence of application-based information technology usage on the loyalty and retention of Gojek partner drivers in Jabodetabek. Employing a quantitative explanatory approach, data were collected through a five-point Likert scale questionnaire from 100 active drivers selected via purposive sampling. The constructs measured include ease of use, system reliability, information quality, and user interaction as independent variables, with loyalty and retention as dependent variables. Data were analyzed using Structural Equation Modeling with Partial Least Squares (SEM-PLS) to assess measurement validity, reliability, and structural relationships. The results show that application-based information technology usage significantly and positively affects both loyalty and retention. However, loyalty does not significantly influence retention, and mediation analysis indicates that loyalty does not mediate the relationship between technology usage and retention. These findings suggest that technology's impact on retention is primarily direct, highlighting the need for continuous improvements in usability, reliability, and transparency to sustain driver engagement in a competitive ride-hailing market.

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INTRODUCTION

The advancement of information technology has brought about significant transformation across various aspects of life, including the way people commute. One tangible impact of this transformation is the emergence of application-based transportation service platforms, such as Gojek, which has revolutionized the conventional transportation system in Indonesia (Hutasoit et al., 2025). These application-based services offer speed, convenience, and efficiency for urban communities in need of smart mobility solutions. As a pioneer of local online transportation services, Gojek not only provides services to consumers but also creates new economic opportunities for partner drivers, who are an integral part of its business ecosystem. For these drivers, the use of digital applications is not merely a navigation tool but

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also serves as a medium for managing daily work, tracking income, and evaluating performance (Nur et al., 2023). In this context, driver loyalty and retention become crucial factors for the sustainability of Gojek's business model. Both are heavily influenced by the experience of using the information technology provided by the company, including application interface quality, ease of use, system reliability, and responsive technical support (Ningrum et al., 2025). When application technology fails to function optimally, the potential churn rate among partners increases.

Several studies highlight that satisfaction with digital applications plays a significant role in shaping loyalty, especially in service-based sectors. Negative experiences due to system failures, GPS errors, or unresponsive notifications can decrease drivers' motivation to work (Pratiwi & Suryani, 2024). Therefore, it is essential for companies to integrate user experience (UX) principles into technology development. Other research indicates that the level of driver adaptation to technology systems is also influenced by factors such as trust in the application, perceived usefulness, and perceived ease of use, which ultimately affect the intention to continue using the service (Hidajat & Tanamal, 2024). In this regard, loyalty is not solely determined by financial incentives but also by the ease of use and functional benefits of the application technology itself.

According to the Expectation Confirmation Model (ECM), when drivers' expectations of the application are met or even exceeded, satisfaction emerges, encouraging continued use. However, when these expectations are unmet, frustration and the potential to switch platforms may arise (Hidajat & Tanamal, 2024). This poses a unique challenge for Gojek in maintaining driver loyalty amid increasingly fierce competition.

Security, comfort, and speed of access to the application are also important determinants of driver satisfaction. Research by Nugraha et al. (2025) shows that safety aspects, driving comfort, and positive interactions with users contribute to partners' positive perceptions of the platform. Applications that facilitate effective communication between partners and customers can enhance engagement and retention. Furthermore, driver loyalty is also determined by the clarity of task assignment algorithms, transparency of earnings, and the work time flexibility offered by the application. Lack of system transparency can create perceptions of unfairness, leading to dissatisfaction (Tampubolon, 2025). Therefore, optimizing transparency-based technological features becomes a necessity.

Gojek has implemented a complex management information system to support operational processes, including Customer Relationship Management (CRM) and Customer Support Management (CSM) systems that respond to partner issues in real-time (Nur et al., 2023). These systems must be continuously improved to respond adaptively and dynamically to partner needs. On the other hand, the influence of technology on loyalty cannot be separated from emotional and social dimensions. Digital interactions that feel rigid or impersonal may create psychological distance between partners and the platform (Hutasoit et al., 2025). Thus, companies need to design more personal and empathetic features to foster emotional closeness with partners.

A study by Doli and Nurbaiti (2020) also indicates that application-based promotional pricing strategies can affect drivers' perceptions of the economic value of their work. When

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algorithms and pricing systems are perceived as unfair, loyalty can decline drastically. Therefore, technology should support principles of fairness and utility. In the context of competition among platforms such as Grab, Maxim, and Indrive, partner loyalty becomes a strategic asset determining the sustainability of the service ecosystem. As Pratiwi and Suryani (2024) point out, companies need to create digital systems that address not only functional needs but also the psychological and sociological aspects of users.

As a technology company, Gojek must continue to innovate through system updates based on partner feedback. The implementation of new features must undergo feasibility testing based on user experience to ensure smooth adaptation by partners (Ningrum et al., 2025). This evaluation can be conducted using the HEART Metrics approach or ECM, both of which have proven relevant in various digital service studies. Awareness of the importance of partner loyalty and retention in the digital ecosystem demonstrates that the success of information technology is determined not only by innovation but also by the quality of human–technology relationships. A healthy relationship between partners and the platform will result in strong and sustainable business continuity. Therefore, this research is highly relevant in addressing Gojek's contextual needs to maintain and improve driver loyalty and retention. The focus on optimizing the use of application-based information technology is expected to provide constructive recommendations for developing more adaptive, efficient, and equitable digital work systems.

METHODS

This study employed a quantitative explanatory approach to examine the causal relationship between application-based information technology usage and the loyalty and retention of Gojek partner drivers. The quantitative design was selected to enable objective and measurable analysis of the phenomenon through statistical processing of numerical data (Sugiyono, 2019).

Data were gathered using a structured questionnaire with a five-point Likert scale, distributed to active Gojek partner drivers in the Greater Jakarta (Jabodetabek) area. The instrument measured constructs including ease of use, system reliability, information quality, and user interaction, as well as loyalty and retention. This facilitated the quantification of respondents' perceptions regarding application usability, trustworthiness, and their long-term engagement (Sekaran & Bougie, 2016).

The population consisted of all active partner drivers registered in Gojek's operational system. Due to the large and geographically dispersed population, purposive sampling was employed, with criteria including a minimum of six months of active service and at least ten completed trips per week (Creswell, 2014). Using Lemeshow's (1990) formula, a minimum sample size of 100 was determined, with 120 questionnaires collected to anticipate incomplete or invalid responses. The survey was disseminated online through WhatsApp and Telegram driver communities, accompanied by an informed consent form.

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Table 1. Operationalization of Variables

Variable	Dimension / Indicator	Measurement Item
Application-Based Information Technology Usage	Ease of Use	The application is easy to navigate; features are intuitive to operate
	System Reliability	The system operates without errors; GPS and notifications function accurately
	Information Quality	Information provided by the app is accurate, clear, and timely
	User Interaction	The application facilitates effective communication between drivers and customers
Driver Loyalty	Continuance Intention	Intention to continue working with Gojek
	Recommendation	Willingness to recommend Gojek to others
	Long-Term Commitment	Desire to remain as a Gojek partner over the long term
Driver Retention	Length of Membership	Duration of being registered as a partner driver
	Operational Frequency	Number of working days per week
	Attendance Consistency	Regularity in logging into the system and accepting orders

The research instrument underwent validity testing using Pearson's Product Moment correlation and reliability testing using Cronbach's Alpha, with coefficients above 0.70 considered indicative of acceptable internal consistency (Ghozali, 2018). Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) to evaluate the influence of the independent variables—ease of use, system reliability, information quality, and user interaction—on loyalty and retention (Hair et al., 2019). Loyalty was operationalized through indicators such as continuation intention, willingness to recommend to others, and long-term commitment, whereas retention was measured by length of membership, operational frequency, and consistency of attendance (Hidajat & Tanamal, 2024; Pratiwi & Suryani, 2024).

To enhance external validity, the findings were compared with prior empirical studies, including Hutasoit et al. (2025), which confirmed that perceptions of the Gojek application significantly influence satisfaction and loyalty. The Expectation-Confirmation Theory (Oliver, 1980) served as the conceptual framework for interpreting results. Ethical considerations were addressed by ensuring respondent confidentiality, voluntary participation, and adherence to established social research ethics guidelines (Neuman, 2014). This

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methodological approach is expected to yield empirical evidence on the role of application-based information technology in fostering driver loyalty and retention, offering practical implications for stakeholders in the technology-driven transportation sector.

RESULTS AND DISCUSSION

Results

The outer model evaluation ensures that the instruments used are valid and reliable

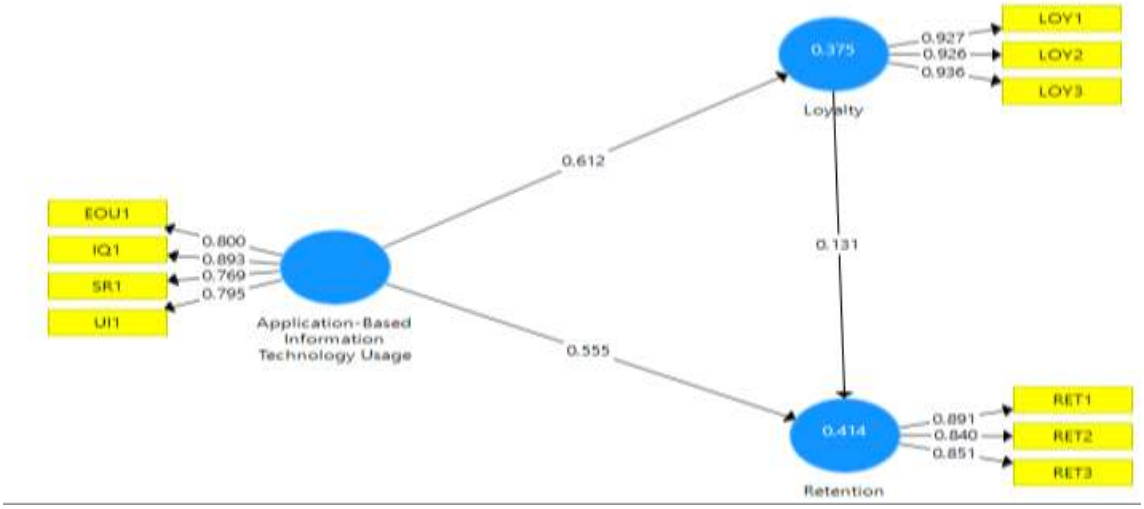

Figure 1. Structural Equation Model

The analysis shows that Application-Based Information Technology Usage strongly influences Loyalty (0.612) and Retention (0.555), with Loyalty also affecting Retention (0.131). High outer loadings confirm measurement validity. Enhancing usability, reliability, information quality, and interaction can boost loyalty and retention, sustaining Gojek's competitive advantage.

Tabel 1. Outer Loadings

Outer Loadings			
	Application-Based Information Technology Usage	Loyalty	Retention
EOU1	0,800		
IQ1	0,893		
LOY1		0,927	
LOY2		0,926	
LOY3		0,936	
RET1			0,891
RET2			0,840
RET3			0,851
SR1	0,769		
UI1	0,795		

Table 1 presents the outer loading values for all indicators within the constructs of Application-Based Information Technology Usage, Loyalty, and Retention. The construct

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Application-Based Information Technology Usage is reflected by five indicators, namely EOU1 (0.800), IQ1 (0.893), SR1 (0.769), and UI1 (0.795), all of which exceed the recommended threshold of 0.70. This indicates that each indicator has strong convergent validity and is a reliable measure of the underlying construct.

The *Loyalty* construct is represented by LOY1 (0.927), LOY2 (0.926), and LOY3 (0.936), which show very high outer loading values above 0.90, signifying excellent measurement strength and consistency. Meanwhile, the *Retention* construct is defined by RET1 (0.891), RET2 (0.840), and RET3 (0.851), also meeting the minimum threshold for convergent validity. These results confirm that all indicators demonstrate strong relationships with their respective constructs, ensuring the reliability and validity of the measurement model. This provides a solid foundation for subsequent structural model analysis to assess the relationships among constructs.

Table 2. Construct Reliability and Convergent Validity

Construct Reliability and Validity	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Application-Based Information Technology Usage	0,832	0,840	0,888	0,665
Loyalty	0,921	0,927	0,950	0,864
Retention	0,826	0,832	0,896	0,741

Table 2 presents the reliability and convergent validity results for each construct. All constructs meet the recommended threshold values, with Cronbach's Alpha ranging from 0.826 to 0.921, indicating strong internal consistency. The Composite Reliability values, ranging from 0.888 to 0.950, exceed the minimum standard of 0.70, confirming that the measurement model is reliable. Furthermore, the Average Variance Extracted (AVE) values—0.665 for Application-Based Information Technology Usage, 0.864 for Loyalty, and 0.741 for Retention—are all above the 0.50 threshold, demonstrating adequate convergent validity. These results confirm that each construct is measured consistently and captures a substantial proportion of variance from its indicators, ensuring suitability for further structural model analysis.

Table 3. Coefficient of Determination (R^2) and Adjusted R^2

R Square	R Square	R Square Adjusted
Loyalty	0,375	0,369
Retention	0,414	0,402

Table 3 presents the coefficient of determination (R^2) and adjusted R^2 values for the endogenous constructs. The R^2 value for Loyalty is 0.375, indicating that 37.5% of the variance in loyalty is explained by application-based information technology usage. The adjusted R^2 value of 0.369 reflects a minimal decrease, showing model stability after

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accounting for the number of predictors. For Retention, the R^2 value is 0.414, meaning that 41.4% of the variance in retention is explained by application-based information technology usage and loyalty combined. The adjusted R^2 value of 0.402 similarly confirms the robustness of the explanatory power. These results suggest that the model has moderate explanatory strength, indicating that while technology usage and loyalty significantly influence retention, other factors beyond the model may also contribute.

Table 4. Effect Size (f^2) for Exogenous Predictors

f Square			
	Application-Based Information Technology Usage	Loyalty	Retention
Application-Based Information Technology Usage		0,600	0,328
Loyalty			0,018
Retention			

These results indicate that Servant Leadership contributes the most to Lecturer Performance, followed by Psychological Safety with a moderate contribution, while Psychological Empowerment has a minor impact. This confirms the importance of service-oriented leadership in enhancing lecturer performance, supported by a psychologically safe work environment.

Table 4 reports the f^2 effect sizes showing each predictor's contribution to the endogenous constructs. Application-Based Information Technology Usage exhibits a large effect on Loyalty (f^2 = 0.600) and a medium effect on Retention (f^2 = 0.328), indicating substantial explanatory contribution. Conversely, Loyalty shows a negligible incremental effect on Retention (f^2 = 0.018). These results imply that improvements in application usability, reliability, information quality, and user interaction drive meaningful gains in loyalty and, to a moderate extent, in retention, while loyalty adds only a small additional explanatory share to retention beyond technology usage.

Table 5. Path Coefficients, T-Statistics, and P-Values

Path Coefficients Mean, STDEV, T-Values, P-Values					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Application-Based Information Technology Usage -> Loyalty	0,612	0,617	0,069	8,867	0,000
Application-Based Information Technology Usage -> Retention	0,555	0,550	0,110	5,066	0,000

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Loyalty -> Retention	0,131	0,131	0,111	1,183	0,237

Table 5 presents the path coefficients, t-statistics, and p-values for the hypothesized relationships. The path from Application-Based Information Technology Usage to Loyalty has a coefficient of 0.612, with a t-statistic of 8.867 and a p-value of 0.000, indicating a positive and highly significant effect. Similarly, the path from Application-Based Information Technology Usage to Retention yields a coefficient of 0.555, a t-statistic of 5.066, and a p-value of 0.000, also demonstrating a significant positive relationship.

In contrast, the path from Loyalty to Retention shows a coefficient of 0.131 with a t-statistic of 1.183 and a p-value of 0.237, indicating that this relationship is not statistically significant at the 5% level. These findings imply that the direct influence of application-based information technology usage on both loyalty and retention is strong and significant, whereas loyalty does not significantly contribute to retention when technology usage is accounted for.

Table 6. Mediation Effects

Specific Indirect Effects Mean, STDEV, T-Values, P-Values	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Application-Based Information Technology Usage -> Loyalty -> Retention	0,080	0,082	0,072	1,114	0,266

Table 6 presents the results of the mediation analysis, specifically examining the indirect effect of Application-Based Information Technology Usage on Retention through Loyalty. The mediation path shows an original sample coefficient of 0.080 with a t-statistic of 1.114 and a p-value of 0.266. Since the p-value exceeds the 0.05 significance threshold, the mediation effect is statistically insignificant. This indicates that while application-based information technology usage has a significant direct influence on both loyalty and retention, the indirect pathway through loyalty does not provide a meaningful additional effect on retention. In practical terms, improvements in technology usage contribute more effectively to retention through direct mechanisms rather than relying on loyalty as a mediating factor.

Discussion

The results of the structural model analysis demonstrate that Application-Based Information Technology Usage has a significant and positive effect on Loyalty and Retention among Gojek partner drivers in Jabodetabek. The path coefficient from technology usage to loyalty ($\beta = 0.612$; $p < 0.05$) indicates that improved usability, reliability, information quality, and user interaction lead to higher levels of loyalty. This finding aligns with the Expectation Confirmation Model (ECM) proposed by Oliver (1980), which explains that when users'

expectations of a system are met or exceeded, satisfaction is achieved, thereby fostering continued usage intentions and loyalty. In the context of this study, partner drivers who perceive the Gojek application as easy to use, reliable, and capable of delivering accurate information are more likely to maintain long-term commitment to the platform.

These results are consistent with the findings of Hidajat and Tanamal (2024), who reported that perceived usefulness, perceived ease of use, and trust significantly influence loyalty in digital service contexts. Similarly, Ningrum et al. (2025) emphasized that system reliability and responsive support contribute substantially to sustaining user engagement in ride-hailing platforms. The convergence of these findings underscores that loyalty in technology-based services is not solely dependent on financial incentives but also on the functional and experiential quality of the application.

The analysis also reveals that Application-Based Information Technology Usage significantly influences Retention ($\beta = 0.555$; $p < 0.05$). This indicates that when the technology provided by Gojek meets drivers' operational needs effectively—through accurate GPS, transparent earnings systems, and effective communication tools—it increases the likelihood that drivers will remain active on the platform. This supports the argument of Nugraha et al. (2025), who found that security, comfort, and positive interactions within digital platforms strengthen user retention. Furthermore, this result is in line with the perspective of Pratiwi and Suryani (2024), who highlighted that retention is not merely a product of contractual or financial arrangements, but also a result of sustained satisfaction with the operational systems provided by the platform.

Interestingly, the study finds that Loyalty does not have a significant direct effect on Retention ($\beta = 0.131$; $p > 0.05$). This suggests that while drivers may express commitment and satisfaction with the platform, these factors alone may not guarantee continued operational presence. External factors—such as competitive offers from other platforms, changes in market demand, or personal circumstances—could influence retention independently of loyalty. This contrasts with some prior studies, such as Hidajat and Tanamal (2024), who identified loyalty as a key predictor of retention in digital ecosystems, but supports the notion presented by Doli and Nurbaiti (2020) that economic and competitive dynamics can override loyalty in platform-based employment.

The mediation analysis further reveals that loyalty does not significantly mediate the relationship between technology usage and retention ($p > 0.05$). This implies that the primary driver of retention in this context is the direct impact of the technological system rather than loyalty as an intermediate variable. In practical terms, enhancing the usability, reliability, and transparency of the Gojek application has a more immediate and measurable effect on retaining drivers than relying on loyalty-building measures alone.

These findings reinforce the theoretical premise of ECM and extend its application in the ride-hailing sector, demonstrating that technology acceptance and confirmation of expectations are critical to both loyalty and retention. They also highlight that in competitive digital labor markets, functional performance and operational efficiency of the platform may outweigh attitudinal loyalty in sustaining an active partner base.

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CONCLUSION

The findings of this study confirm that application-based information technology usage plays a crucial role in enhancing both loyalty and retention among Gojek partner drivers in the Jabodetabek area. The results indicate that ease of use, system reliability, information quality, and user interaction significantly and positively influence loyalty, consistent with the Expectation Confirmation Model (ECM), which asserts that fulfillment or exceeding of user expectations drives satisfaction and continued use. Similarly, the direct relationship between technology usage and retention is significant, underscoring that operational efficiency, transparent earnings systems, accurate GPS, and effective communication tools are key factors in maintaining long-term driver engagement. Interestingly, the analysis shows that loyalty does not have a significant direct effect on retention, suggesting that while drivers may feel committed to the platform, external factors such as competitive offers or personal circumstances can influence their continued participation. Moreover, the mediation test reveals that loyalty does not significantly mediate the relationship between technology usage and retention, indicating that technology's impact on retention is largely direct. Overall, these findings highlight the strategic importance for Gojek to prioritize continuous improvements in application usability, system stability, and transparency, as these elements have a more immediate and substantial impact on sustaining driver participation than loyalty-driven initiatives alone.

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