

Analysis of Factors Influencing the Shift in Payment Methods for Ride-Hailing Services

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ABSTRACT

This study analyzes the effects of perceived transaction cost, dissatisfaction, perceived ease of use, perceived value, and inertia on users' switching intention to shift from OVO to QRIS as a payment method in Grab ride-hailing services. Grounded in the Push-Pull-Mooring (PPM) framework, the study adopts a quantitative approach by administering an online questionnaire to 200 Generation Z and young Millennial respondents aged 18–35 years in the Greater Jakarta area (Jabodetabek) who had experience using OVO and were familiar with the QRIS payment feature on the Grab application. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. The measurement model confirmed that all constructs achieved the required validity and reliability criteria. The structural model indicated that dissatisfaction, perceived ease of use, and perceived value had significant positive effects on switching intention, whereas perceived transaction cost and inertia were not found to have significant effects. These findings suggest that users' intention to switch to QRIS is primarily driven by dissatisfaction with the existing payment method and by the perceived convenience and value offered by QRIS. The study provides practical insights for Grab and digital payment providers in formulating strategies to accelerate the adoption of interoperable digital payment systems.

Keywords: *Dissatisfaction; Inertia; Perceived Ease of Use; Perceived Transaction Cost; Perceived Value; Push-Pull-Mooring; QRIS; Switching Intention.*

ABSTRAK

Penelitian ini menganalisis pengaruh perceived transaction cost, dissatisfaction, perceived ease of use, perceived value, dan inerti terhadap switching intention pengguna untuk beralih dari OVO ke QRIS sebagai metode pembayaran pada layanan ride-hailing Grab. Penelitian didasarkan pada kerangka Push-Pull-Mooring (PPM) dengan menggunakan pendekatan kuantitatif melalui penyebaran kuesioner secara daring kepada 200 responden Generasi Z dan Milenial Muda berusia 18–35 tahun di wilayah Jabodetabek yang memiliki pengalaman menggunakan OVO serta mengetahui fitur pembayaran QRIS pada aplikasi Grab. Data dianalisis menggunakan Partial Least Squares Structural Equation Modeling (PLS-SEM) berbantuan SmartPLS 4. Hasil pengujian model pengukuran menunjukkan bahwa seluruh konstruk telah memenuhi kriteria validitas dan reliabilitas. Hasil model struktural menunjukkan bahwa dissatisfaction, perceived ease of use, dan

perceived value berpengaruh positif signifikan terhadap switching intention, sedangkan perceived transaction cost dan inertia tidak berpengaruh signifikan. Temuan ini mengindikasikan bahwa niat pengguna untuk beralih ke QRIS lebih dipengaruhi oleh ketidakpuasan terhadap metode pembayaran yang digunakan sebelumnya serta persepsi mengenai kemudahan penggunaan dan nilai manfaat yang ditawarkan QRIS. Hasil penelitian ini memberikan implikasi praktis bagi Grab dan penyedia layanan pembayaran digital dalam merumuskan strategi yang dapat mempercepat adopsi sistem pembayaran digital yang terbuka dan interoperable.

Kata kunci : Ketidakpuasan; Inersia; Niat Berpindah; Nilai yang Dirasakan; Persepsi Biaya Transaksi; Persepsi Kemudahan Penggunaan; Push–Pull–Mooring; QRIS

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INTRODUCTION

The rapid growth of Indonesia's digital economy has accelerated the adoption of cashless payment systems, with digital wallets becoming one of the most widely used payment methods due to their convenience and efficiency. Jakpat (2025) reported that approximately 80% of Indonesian consumers use digital wallets for daily transactions, while Sahi et al. (2021) argued that users increasingly prefer payment methods that offer greater convenience, efficiency, and flexibility. In the ride-hailing industry, Grab has integrated OVO as its primary payment method; however, reduced promotional incentives and additional transaction fees have encouraged users to reconsider their payment preferences. To address this issue, Grab introduced QRIS as an interoperable payment alternative that allows transactions through various financial service providers.

Despite its advantages, users do not automatically switch from OVO to QRIS. According to Mu and Lee (2021), the Push–Pull–Mooring (PPM) framework explains switching behavior through the interaction of push, pull, and mooring factors. Accordingly, this study examines the effects of Perceived Transaction Cost, Dissatisfaction, Perceived Ease of Use, Perceived Value, and Inertia on users' Switching Intention from OVO to QRIS in Grab ride-hailing services.

Although previous studies have investigated digital payment switching behavior, limited research has focused on switching between payment methods within the same platform. Therefore, this study aims to analyze the determinants of users' Switching Intention from OVO to QRIS in Grab ride-hailing services. The findings are expected to contribute to the literature on digital payment switching behavior and provide practical insights for digital payment providers in developing more effective and interoperable payment services.

LITERATURE REVIEW

This study adopts the Push–Pull–Mooring (PPM) framework as the theoretical foundation for explaining users' switching intention in digital payment services. The framework has been widely used to explain why users decide to switch from an existing service to an alternative one by considering the interaction of factors that encourage switching, attract users to another service, and influence their willingness to change (Bansal *et al.*, 2005). Accordingly, this study develops a research model consisting of *perceived transaction cost*, *dissatisfaction*, *perceived ease of use*, *perceived value*, *inertia*, and *switching intention*. The following sections discuss the theoretical background and operationalization of each construct.

Push–Pull–Mooring (PPM)

The Push–Pull–Mooring (PPM) framework originates from Ravenstein's migration theory (1885), which explains that individuals move from one place to another because of factors that encourage them to leave their current location and factors that attract them to a new destination. Bansal *et al.* (2005) later adapted this concept to explain customer switching behavior in the marketing context. The framework consists of three main components: push factors, which encourage users to leave their current service; pull factors, which attract users to an alternative service and mooring factors, which may strengthen or inhibit switching decisions. In this study, the PPM framework is applied to explain users' switching intention from OVO to QRIS in Grab ride-hailing services.

Perceived Transaction Cost

Perceived transaction cost is classified as a push factor because it reflects users' perceptions of the time, effort, and financial costs involved in using a payment method. Higher perceived transaction costs may encourage users to consider alternative payment methods that provide a more efficient transaction process. In the context of Grab ride-hailing services, this variable explains users' evaluation of the costs associated with using OVO before deciding to switch to QRIS. Following Li *et al.* (2023), perceived transaction cost is measured through searching and information costs, monitoring and enforcement costs, and negotiating costs.

Dissatisfaction

Dissatisfaction is another push factor that reflects users' negative evaluations of their current payment method when the service does not meet their expectations. Users who experience dissatisfaction are more likely to consider switching to an alternative payment method that offers a better transaction experience. In this study, dissatisfaction describes users' dissatisfaction with OVO as a payment method in Grab ride-hailing services. Following Mu and Lee (2021), this variable is measured using economic dissatisfaction, process dissatisfaction, and relationship dissatisfaction.

Perceived Ease of Use

Perceived ease of use is classified as a pull factor because an alternative payment method that is simple to learn and operate is more attractive to users. Park and Kim (2023) stated that technologies perceived as easy to understand and use are more likely to be accepted by users, while Davis (1989) emphasized that perceived ease of use reflects the extent to which a system can be used with minimal effort. In this study, perceived ease of use reflects users' perceptions of the simplicity of using QRIS as an alternative payment method in Grab ride-hailing services. This variable is measured using the dimensions of Ease of Learning, Ease of Navigation, and Ease of Use.

Perceived Value

Perceived value is categorized as a pull factor because it reflects users' overall evaluation of the benefits received compared with the costs or sacrifices involved in using a payment method. Indarwati *et al.* (2025) explained that users are more likely to switch when they perceive that an alternative service provides greater value than the current one. In this study, perceived value represents users' evaluation of the benefits offered by QRIS compared with OVO in Grab ride-hailing services. This construct is measured using four dimensions: Value vs. Cost, Expected Benefits, Convenience, and Overall Value.

Inertia

Inertia represents the mooring factor because it explains users' tendency to continue using their current payment method due to habit, familiarity, and previous experience. Lin and Hsieh (2022) explained that stronger inertia may reduce users' willingness to switch even when an alternative service offers better benefits. In this study, inertia reflects users' tendency to continue using OVO despite the availability of QRIS as an alternative payment method. The construct is measured using Behavioral Habit, Cognitive Dependence, and Affective Attachment.

Switching Intention

Switching intention refers to users' willingness to replace their current payment method with an alternative service. According to Indarwati et al. (2025), switching intention reflects users' behavioral tendency to discontinue using an existing service and adopt another service that is perceived to provide greater benefits. In this study, switching intention refers to users' intention to switch from OVO to QRIS when making transactions through Grab ride-hailing services. This variable is measured using four dimensions: Intention to Stop, Considering Switching, Adoption Likelihood, and Future Plan.

METHODS OF RESEARCH

This study employed a quantitative approach to examine the factors influencing users' switching intention from OVO to QRIS in Grab ride-hailing services. Data were collected through an online questionnaire distributed between April and May 2026 and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4, which is suitable for testing the relationships among multiple latent constructs and evaluating the proposed structural model (Hair et al., 2022). The population consisted of Grab ride-hailing users in the Jabodetabek area and was treated as infinite. Using purposive sampling based on predetermined criteria, a total of 200 valid responses were obtained for analysis.

The research instrument employed a five-point Likert scale to measure six constructs: Perceived Transaction Cost, Dissatisfaction, Perceived Ease of Use, Perceived Value, Inertia, and Switching Intention. The measurement model was evaluated through convergent validity using outer loading and Average Variance Extracted (AVE), as well as reliability using Cronbach's Alpha and Composite Reliability. The structural model was subsequently assessed using R-Square, F-Square, Q-Square, and bootstrapping, where a hypothesis was considered significant if the t-statistic exceeded 1.96 and the p-value was below 0.05 (Hair et al., 2022).

RESULT AND DISCUSSION

Among the 200 respondents who participated in this study, female respondents accounted for 56.0%, while male respondents represented 44.0%, indicating a relatively balanced gender distribution. In terms of age, the majority of respondents were between 18–24 years old (55.5%), followed by those aged 25–29 years (29.0%) and 30–35 years (15.5%). Regarding domicile, most respondents resided in Jakarta (35.5%), followed by Bekasi (25.5%), Tangerang (16.0%), Bogor (14.0%), and Depok (9.0%). In terms of education, most respondents held a bachelor's degree or equivalent (52.0%), while the majority were office employees (53.5%), followed by unemployed respondents (25.0%) and entrepreneurs (21.5%). These characteristics indicate that the respondents were predominantly young adults with higher educational backgrounds who actively use digital payment services and ride-hailing applications.

1) Outer Model

The convergent validity assessment revealed that all indicators belonging to the five research variables produced outer loading values in excess of 0.70 and AVE values surpassing 0.50.

Table 1. Convergent Validity (Outer Loading & AVE)

Variable	Outer Loading	AVE
Perceived Transaction Cost	0.689–0.889	0.669
Dissatisfaction	0.745–0.857	0.662
Perceived Ease of Use	0.687–0.833	0.601
Perceived Value	0.673–0.764	0.534
Inertia	0.808–0.873	0.728
Switching Intention	0.635–0.789	0.526

Source: processed by the author (2026).

Since all AVE values exceed the recommended threshold of 0.50, each construct demonstrates adequate convergent validity by explaining more than half of the variance in its respective indicators. This finding indicates that the indicators within each construct consistently measure the same underlying concept. Although several indicators reported outer loading values slightly below the recommended threshold of 0.708, they were retained because the corresponding AVE values remained above 0.50 and the indicators were considered theoretically relevant, consistent with the recommendation of Hair et al. (2022). Overall, these results confirm that the measurement model provides sufficient validity to represent the six research constructs and serves as an appropriate basis for subsequent structural model evaluation.

Discriminant validity was assessed using the Heterotrait–Monotrait Ratio (HTMT), which evaluates whether each construct is empirically distinct from the other constructs in the research model. Following Hair et al. (2022), HTMT values below 0.90 indicate adequate discriminant validity, suggesting that each construct measures a unique concept without excessive overlap.

Table 2. Discriminant Validity (HTMT)

Construct	DIS	IN	PEOU	PTC	PV	SI
DIS	–					
IN	0.405	–				
PEOU	0.267	0.132	–			
PTC	0.815	0.328	0.184	–		
PV	0.308	0.303	0.185	0.398	–	
SI	0.639	0.572	0.403	0.571	0.596	–

Source: processed by the author (2026).

All HTMT values were below the recommended threshold of 0.90, ranging from 0.132 to 0.815, indicating that all constructs satisfied the discriminant validity criterion. The highest HTMT value was observed between Perceived Transaction Cost and Dissatisfaction (0.815), yet it remained below the

threshold, suggesting that the two constructs are empirically distinct despite representing related push factors within the Push–Pull–Mooring (PPM) framework. The remaining HTMT values ranged from 0.132 to 0.639, with the lowest value found between Perceived Ease of Use and Inertia. These results indicate that each construct measures a distinct aspect of users' switching behavior without substantial conceptual overlap. Therefore, the discriminant validity assessment confirms that the measurement model is appropriate for subsequent structural model analysis.

Reliability testing was conducted to evaluate the internal consistency of the indicators in measuring each latent construct. In this study, reliability was assessed using Cronbach's Alpha, rho_A, and Composite Reliability (rho_C). According to Hair et al. (2022), a construct is considered reliable when the values of Cronbach's Alpha and Composite Reliability exceed 0.70, indicating that the indicators consistently measure the same underlying concept.

Table 3 Reliability Test.

Variable	Cronbach's Alpha	Composite (rho_a)	Reliability	Composite (rho_c)	Reliability
Perceived Transaction Cost	0.874	0.883		0.909	
Dissatisfaction	0.872	0.876		0.907	
Perceived Ease of Use	0.833	0.840		0.882	
Perceived Value	0.712	0.726		0.821	
Inertia	0.906	0.909		0.930	

Source: processed by the author (2026)

All constructs achieved Cronbach's Alpha, Composite Reliability (rho_A), and Composite Reliability (rho_C) values above the recommended threshold of 0.70, indicating satisfactory internal consistency. Inertia demonstrated the highest level of reliability, with a Cronbach's Alpha of 0.906, a rho_A value of 0.909, and a Composite Reliability (rho_C) of 0.930. Perceived Transaction Cost and Dissatisfaction also showed strong reliability, recording Composite Reliability (rho_C) values of 0.909 and 0.907, respectively. Meanwhile, Perceived Value produced the lowest reliability coefficients, with a Cronbach's Alpha of 0.712 and a Composite Reliability (rho_C) of 0.821. However, these values remain above the recommended threshold, indicating that the construct is sufficiently reliable for subsequent analysis.

2) Inner Model

The inner model evaluation in this study consists of three sub-tests, namely the coefficient of determination (R-Square), effect size (F-Square), and predictive relevance (Q-Square), followed by the hypothesis testing itself, which is discussed separately in the next subsection.

Coefficient of Determination (R-Square)

The coefficient of determination (R-Square) measures the variance in an endogenous construct explained by a model's exogenous constructs. Following Hair et al. (2022), R-Square values of 0.75, 0.50, and 0.25 indicate substantial, moderate, and weak explanatory power, respectively.

Table 4. R- Square Values

Variable	R-Square	Adjusted R-Square
Switching Intention	0.539	0.527

Source: processed by the author (2026)

Switching Intention obtained an R-Square value of 0.539 and an Adjusted R-Square value of 0.527, indicating that 53.9% of the variance in users' switching intention from OVO to QRIS in Grab ride-hailing services is explained by Perceived Transaction Cost, Dissatisfaction, Perceived Ease of Use, Perceived Value, and Inertia, while the remaining 46.1% is influenced by other factors outside the proposed model. According to Hair et al. (2022), this R-Square value indicates moderate explanatory power, suggesting that the Push–Pull–Mooring (PPM) framework provides a satisfactory explanation of users' switching intention in the context of Grab ride-hailing payment services.

Predictive Relevance (Q-Square)

The final structural model evaluation is predictive relevance (Q^2), which was assessed using the blindfolding procedure in SmartPLS 4. Unlike R-Square, which measures explanatory power, Q^2 evaluates the model's predictive capability. According to Hair et al. (2022), a Q^2 value greater than zero indicates that the model has adequate predictive relevance for the endogenous construct.

Table 5. Predictive Relevance

Variable	Q-Square
Switching Intention	0.493

Source: processed by the author (2026).

Switching Intention obtained a Q-Square value of 0.493, which is greater than zero. According to Hair et al. (2022), this result indicates that the proposed structural model has adequate predictive relevance. Combined with the R-Square and effect size results, these findings confirm that the model demonstrates satisfactory predictive capability in explaining users' switching intention from OVO to QRIS in Grab ride-hailing services.

Hypothesis

Hypothesis testing was performed via bootstrapping in SmartPLS 4, evaluating each hypothesized path based on its coefficient, t-statistic, and p-value.

Table 6. Direct Hypotesis Testing Results

Hypothesis	Path	Coefficient	t-statistics	p-values	Decision
H1	Perceived Transaction Cost → Switching Intention	0.120	1.650	0.099	Rejected
H2	Dissatisfaction → Switching Intention	0.368	4.950	0.001	Accepted
H3	Perceived Ease of Use → Switching Intention	0.378	5.258	0.001	Accepted
H4	Perceived Value → Switching Intention	0.313	4.476	0.001	Accepted
H5	Inertia → Switching Intention	-0.305	4.463	0.001	Accepted

Source: processed by the author (2026).

The hypothesis testing results indicate that four of the five proposed hypotheses were supported, while one was rejected. Perceived Ease of Use had the strongest positive effect on Switching Intention ($\beta = 0.378$), followed by Dissatisfaction ($\beta = 0.368$) and Perceived Value ($\beta = 0.313$). In contrast, Inertia exerted a significant negative effect ($\beta = -0.305$), whereas Perceived Transaction Cost did not significantly influence Switching Intention ($\beta = 0.120$, $p = 0.099$). These findings indicate that users' switching intention is primarily driven by the perceived ease and value of QRIS, dissatisfaction with the current payment method, and habitual behavior rather than by transaction costs.

The rejection of H1 suggests that transaction cost is not a key determinant of users' switching decisions. Conversely, the significant effects of Dissatisfaction, Perceived Ease of Use, and Perceived Value support their respective roles as push and pull factors, while the negative effect of Inertia confirms its role as a mooring factor that restrains switching behavior. Overall, these findings demonstrate that the Push–Pull–Mooring (PPM) framework provides a satisfactory explanation of users' switching intention from OVO to QRIS in Grab ride-hailing services.

CONCLUSION

This study concludes that Dissatisfaction, Perceived Ease of Use, and Perceived Value have positive and significant effects on users' Switching Intention from OVO to QRIS in Grab ride-hailing services, while Inertia has a significant negative effect. In contrast, Perceived Transaction Cost does not significantly influence users' switching intention. These findings confirm that the Push–Pull–Mooring (PPM) framework provides a satisfactory explanation of payment method switching behavior, with the proposed model explaining 53.9% of the variance in Switching Intention.

Based on these findings, Grab and digital payment providers are encouraged to improve the ease of use and overall value of QRIS while maintaining a seamless payment experience that can encourage users to switch from OVO. Efforts such as simplifying payment procedures, enhancing transaction convenience, and communicating the benefits of QRIS may further increase users' switching intention. Future studies are recommended to include additional variables, such as trust, perceived risk, promotional incentives, or

digital literacy, and to expand the research scope beyond the Jabodetabek area to improve the generalizability of the findings.

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