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# FEATURE INNOVATION AND PERCEIVED EASE OF USE AS PREDICTORS OF E-WALLET USAGE: EVIDENCE FROM A LOCAL RETAIL BUSINESS IN PALEMBANG, INDONESIA


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**Abstract**
This study examines the associations of feature innovation and perceived ease of use with e-wallet usage among consumers of Global Cell, a digital retail business in Palembang, Indonesia. A quantitative cross-sectional survey was conducted with 99 purposively selected consumers who used non-cash payment services. Data were collected through a five-point Likert-scale questionnaire and analysed using multiple linear regression in IBM SPSS Statistics 26. The reported instrument results indicated item–total correlations above the stated critical value and Cronbach's alpha coefficients of .937 for feature innovation, .888 for perceived ease of use, and .899 for e-wallet usage. The regression results showed that feature innovation was positively associated with e-wallet usage ($B = 0.499$, $\beta = .587$, $t = 10.243$, $p < .001$), as was perceived ease of use ($B = 0.458$, $\beta = .403$, $t = 7.036$, $p < .001$). The overall model was statistically significant, $F(2, 96) = 284.432$, $p < .001$, and explained 85.6% of the observed variance in e-wallet usage ($R^2 = .856$; adjusted $R^2 = .853$). Feature innovation had the larger standardized coefficient in this model. The findings suggest that users' evaluations of functional feature development and operational simplicity are relevant correlates of e-wallet usage in a local retail setting. Because the study is cross-sectional, purposively sampled, and based on self-reported measures, the results should be interpreted as associations rather than causal effects or population-wide estimates. The paper contributes context-specific evidence to technology-acceptance research and offers practical considerations for retailers and digital-payment providers.


**Keywords:** e-wallet usage; feature innovation; perceived ease of use; digital payments; technology acceptance; Indonesia


## Introduction

Digital payment technologies have changed the way consumers complete retail transactions. Mobile wallets and other electronic payment instruments enable consumers to initiate payments through mobile devices, reducing reliance on physical cash and integrating payment functions with broader digital services. In retail environments, the practical value of these systems depends not only on their availability but also on whether consumers perceive their functions as useful, understandable, and sufficiently straightforward to operate. Research on mobile payment adoption consequently draws on technology-acceptance models, innovation-diffusion perspectives, and consumer evaluations of convenience, risk, and trust (Davis, 1989; Dahlberg et al., 2008; Oliveira et al., 2016; Jain & Jain, 2025).

The Technology Acceptance Model (TAM) identifies perceived usefulness and perceived ease of use as central beliefs associated with technology acceptance (Davis, 1989). Later models, including the Unified Theory of Acceptance and Use of Technology (UTAUT), broadened this explanation by incorporating performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003). The extended UTAUT2 framework further considered consumer-oriented mechanisms, including hedonic motivation, price value, and habit (Venkatesh et al., 2012). These frameworks provide a basis for examining how consumers evaluate e-wallet applications and how such evaluations relate to their use.

The present study focuses on two explanatory constructs. The first, feature innovation, refers in this article to users' perceptions that an e-wallet provides relevant, updated, and functionally useful features. This operational framing is narrower than innovation at the firm or ecosystem level and should not be interpreted as a direct measure of technological novelty. The second construct, perceived ease of use, concerns the degree to which consumers believe that learning and operating an e-wallet requires relatively little effort (Davis, 1989). These constructs are conceptually related but distinct: a payment application may offer a broad set of features while remaining difficult to navigate, or it may be simple to operate while offering limited functionality.

Prior research has examined mobile payment adoption in different markets and contexts. Studies have identified the relevance of perceived usefulness, ease of use, trust, security, compatibility, convenience, and consumer experience (Shin, 2009; Mallat, 2007; Schierz et al., 2010; Chawla & Joshi, 2019). Research on in-store mobile payment has also emphasized the role of perceived value and risk in shaping consumer adoption (Oliveira et al., 2016). Reviews of mobile-payment scholarship indicate that the field is theoretically diverse and that adoption is shaped by a combination of technological, individual, and contextual factors (Dahlberg et al., 2008; Abdullah et al., 2021; Jain & Jain, 2025).

Despite this growing literature, local retail settings remain useful sites for examining whether perceived feature development and operational simplicity are associated with reported usage. Global Cell in Palembang provides a specific retail context in which consumers use several e-wallet services, including DANA, GoPay, ShopeePay, and OVO. The source manuscript reports an increase in average daily digital transactions from approximately 30–50 in 2023 to around 250 in 2026. These figures are treated here as contextual information reported by the business, not as independently audited transaction records. The manuscript does not provide the underlying monthly records or a formal method for calculating these averages; therefore, they are not used as outcome data in the statistical analysis.

The study addresses three questions: (1) Is perceived feature innovation associated with e-wallet usage among Global Cell consumers? (2) Is perceived ease of use associated with e-wallet usage? (3) Are the two predictors jointly associated with e-wallet usage? Its contribution is contextual rather than a claim of a new general theory: it provides a local retail application of technology-acceptance reasoning using a measure of reported usage rather than focusing exclusively on behavioural intention. The cross-sectional design, however, does not establish temporal order or causality.

## Theoretical framework

Feature innovation and e-wallet usage. Innovation-diffusion theory suggests that the perceived attributes of an innovation—including relative advantage, compatibility, complexity, trialability, and observability—are relevant to adoption and diffusion (Rogers, 2003). In a mobile-payment setting, features such as QR-based payments, transfers, bill payments, transaction histories, promotional functions, and security options may increase perceived functional value when they are relevant to consumers' needs. Empirical work on mobile wallets and mobile payments has considered the role of relative advantage, service characteristics, and technology-related beliefs in adoption and continued use (Shin, 2009; Oliveira et al., 2016; Mombeuil, 2020). On this basis, the study proposes:

H1: Perceived feature innovation is positively associated with e-wallet usage.

Perceived ease of use and e-wallet usage. TAM proposes that perceived ease of use is an important belief in technology acceptance and may also contribute to perceived usefulness (Davis, 1989; Venkatesh & Davis, 2000). In the context of mobile payments, ease of learning, navigating, and completing transactions can reduce the effort required to use an application. Previous mobile-payment studies have identified usability and ease-related perceptions as relevant adoption factors (Shin, 2009; Schierz et al., 2010; Oliveira et al., 2016). Accordingly:

H2: Perceived ease of use is positively associated with e-wallet usage.

Joint explanatory contribution. The two constructs represent complementary aspects of the user experience: feature-related value and operational effort. TAM and UTAUT provide a rationale for considering multiple technology-related beliefs in one explanatory model (Venkatesh et al., 2003, 2012). The third hypothesis concerns the joint statistical contribution of the predictors, not an interaction or synergistic effect:

H3: Feature innovation and perceived ease of use jointly explain a statistically significant proportion of variance in e-wallet usage.

## Research Method

### Research design and setting

The study used a quantitative, cross-sectional survey design at Global Cell, a digital retail business in Palembang, Indonesia. The unit of analysis was the individual consumer. The design estimates associations among respondents' perceptions and self-reported e-wallet usage at one point in time; it does not support causal inference.

### Population and sample

The source manuscript reports a population of 14,400 consumers, comprising 5,400 cash-transaction consumers and 9,000 non-cash-transaction consumers. A sample of 99 respondents was calculated using the Slovin formula with a 10% margin of error and then selected purposively based on e-wallet use. The reported distribution was DANA (n = 59), GoPay (n = 25), ShopeePay (n = 10), and OVO (n = 5). The sampling description requires clarification before submission: the stated population includes cash and non-cash consumers, whereas the eligibility criterion appears to restrict respondents to e-wallet users. In addition, a formula-based sample-size calculation does not convert purposive sampling into probability sampling. Accordingly, the sample should be described as a purposive sample of 99 eligible users, and the Slovin calculation should be retained only if the authors can document the precise target population and justify its use.

The source manuscript does not report the survey dates, the number of people approached, the response rate, detailed inclusion/exclusion criteria, or whether respondents could use more than one e-wallet. These details should be added from the original field records; they must not be inferred.

**Measures and data collection**

Data were collected using a researcher-administered questionnaire with a five-point Likert response scale ranging from 1 (strongly disagree) to 5 (strongly agree). Feature innovation was measured with nine items, perceived ease of use with nine items, and e-wallet usage with ten items. The original manuscript describes feature innovation using feature availability and benefits; perceived ease of use using ease of understanding and operating the system; and e-wallet usage using frequency, duration, habits, and dependence on use. The complete item wording, item sources, translation/adaptation procedure, and evidence of content validity were not included in the supplied manuscript and should be provided in a supplementary instrument or described in this section.

**Data analysis**

The source reports that data were analysed using IBM SPSS Statistics version 26. The reported procedures included item–total Pearson correlations, Cronbach's alpha, a one-sample Kolmogorov–Smirnov test with Lilliefors correction for regression residuals, tolerance and variance inflation factors (VIF), the Glejser test, and multiple linear regression. Statistical significance was evaluated at $\alpha = .05$. The regression model was specified as:

$$E\text{-wallet usage} = \beta_0 + \beta_1(\text{Feature innovation}) + \beta_2(\text{Perceived ease of use}) + \varepsilon$$

The analysis reports unstandardized coefficients (B), standardized coefficients (β), t statistics, an omnibus F statistic, $R^2$, and adjusted $R^2$. A reported significance value of .000 is presented as $p < .001$, consistent with statistical reporting conventions. The source does not provide confidence intervals, descriptive statistics for the scale scores, or the complete SPSS output; these should be added if available. Measurement quality should be evaluated as a broader validity argument rather than inferred from reliability coefficients alone (Churchill, 1979; Cronbach, 1951).

## Results

### Respondent characteristics

The sample comprised 99 respondents: 27 men and 72 women. Recalculation from the reported frequencies yields 27.3% men and 72.7% women. The percentages in the source table (26% and 74%) were therefore corrected.

| **Gender** | **n** | **%** |
|---|---|---|
| Men | 27 | 27.3 |
| Women | 72 | 72.7 |
| Total | 99 | 100.0 |

The sample was predominantly female. This is a description of the obtained sample and does not demonstrate that women generally prefer e-wallets more than men; such a population-level conclusion would require an appropriate comparative design and sampling strategy.

**Instrument validity and reliability**

All nine feature-innovation items had reported item–total correlations ranging from .782 to .846, exceeding the stated critical value of .202. The nine perceived-ease-of-use items ranged from .675 to .792, and the ten e-wallet-usage items ranged from .693 to .767. The source reports all items as statistically valid. However, the manuscript does not provide the exact p values or clarify whether the reported correlations were corrected item–total correlations. These statistics should be checked against the original SPSS output.

| Construct | Items | Reported r range | Cronbach's α |
|---|---|---|---|
| Feature innovation | 9 | .782–.846 | .937 |
| Perceived ease of use | 9 | .675–.792 | .888 |
| E-wallet usage | 10 | .693–.767 | .899 |

The reported Cronbach's alpha coefficients exceeded .88 for all three scales, indicating high internal consistency in this sample. Alpha alone does not establish construct validity or unidimensionality; future reporting should include the instrument's theoretical basis, item content, and preferably factor-analytic evidence where the sample and measurement design permit.

**Regression diagnostics**

| Diagnostic | Reported result | Interpretation |
|---|---|---|
| Kolmogorov–Smirnov test of unstandardized residuals | D = .079, p = .138 | No statistically significant departure from normality was detected by this test. |
| Multicollinearity: feature innovation | Tolerance = .458; VIF = 2.183 | Below the stated VIF threshold of 10; no severe multicollinearity indicated. |
| Multicollinearity: perceived ease of use | Tolerance = .458; VIF = 2.183 | Below the stated VIF threshold of 10; no severe multicollinearity indicated. |
| Glejser test: feature innovation | p = .225 | No evidence of heteroscedasticity detected by the reported test. |
| Glejser test: perceived ease of use | p = .826 | No evidence of heteroscedasticity detected by the reported test. |

The source manuscript interprets the Kolmogorov–Smirnov result as evidence that all variables were normally distributed. The more precise interpretation is that the test did not detect a statistically significant departure from normality in the unstandardized residuals. Regression

diagnostics should ideally be supplemented by residual plots and an assessment of linearity and influential observations; these were not reported in the source.

**Multiple regression and hypothesis testing**

| Predictor | B | SE | β | t | p |
|---|---|---|---|---|---|
| Constant | 6.046 | 1.592 | — | 3.798 | .000* |
| Feature innovation | .499 | .049 | .587 | 10.243 | .000* |
| Perceived ease of use | .458 | .065 | .403 | 7.036 | .000* |

Note. Dependent variable: e-wallet usage. *The source reports .000; this is conventionally reported as $p < .001$.

The estimated regression equation is: e-wallet usage = 6.046 + 0.499(feature innovation) + 0.458(perceived ease of use). Holding the other predictor constant, a one-unit increase in the feature-innovation score was associated with a 0.499-unit increase in the e-wallet-usage score. A one-unit increase in perceived ease of use was associated with a 0.458-unit increase in the usage score. These are unstandardized associations and should not be interpreted as causal effects.

| Model statistic | Reported value |
|---|---|
| R | .925 |
| $R^2$ | .856 |
| Adjusted $R^2$ | .853 |
| Standard error of estimate | 1.681 |
| F statistic | 284.432 |
| Degrees of freedom | 2, 96 |
| Model significance | $p < .001$ |

The omnibus regression model was statistically significant, $F(2, 96) = 284.432$, $p < .001$. The model accounted for 85.6% of the observed variance in e-wallet usage ($R^2 = .856$; adjusted $R^2 = .853$). The standardized coefficient for feature innovation ($\beta = .587$) was larger than that for perceived ease of use ($\beta = .403$), indicating a stronger relative association within this specific model. This comparison does not establish that feature innovation is universally more important across other populations or e-wallet settings.

H1 was supported because feature innovation had a positive coefficient and a statistically significant t statistic ($B = .499$, $\beta = .587$, $t = 10.243$, $p < .001$). H2 was supported because perceived ease of use was also positively and significantly associated with e-wallet usage ($B = .458$, $\beta = .403$, $t = 7.036$, $p < .001$). H3 was supported in the limited statistical sense that the two predictors jointly produced a significant regression model ($F(2, 96) = 284.432$, $p < .001$). The F test does not test whether the predictors interact or produce a synergistic effect.

## Discussion

### Feature innovation and e-wallet usage

The results indicate a positive association between perceived feature innovation and e-wallet usage among the surveyed Global Cell consumers. The standardized coefficient ($\beta = .587$) was larger than the coefficient for perceived ease of use, suggesting that, within this sample and model, respondents who evaluated e-wallet features more favourably also tended to report greater usage. This pattern is consistent with innovation-diffusion reasoning: consumers are more likely to evaluate an innovation favourably when they perceive meaningful advantages and compatibility with their transaction needs (Rogers, 2003).

The finding is also broadly consistent with mobile-payment studies that identify the importance of functional value, service attributes, and consumer perceptions in technology adoption (Mallat, 2007; Shin, 2009; Oliveira et al., 2016). However, the current study's feature-innovation construct is based on questionnaire items whose exact wording is not supplied. The authors should therefore avoid claiming that particular functions—such as QR payments, transfers, cashback, or security tools—were individually shown to drive usage unless these functions were explicitly measured and analysed. The result supports the overall measured construct, not separate causal effects for each feature.

For retailers and payment providers, the practical implication is to monitor whether available functions solve concrete user problems rather than simply increasing the number of features. Clear information about payment options, transaction confirmation, transaction history, and accessible support may help users perceive the service as relevant. These recommendations are managerial implications derived from the construct and literature, not interventions tested by this study.

### Perceived ease of use and e-wallet usage

Perceived ease of use was also positively associated with e-wallet usage ($\beta = .403$, $p < .001$). The result is consistent with TAM, which positions ease of use as a salient belief in technology acceptance and as a potential antecedent of perceived usefulness (Davis, 1989; Venkatesh & Davis, 2000). In mobile-payment contexts, users must be able to learn the interface, navigate functions, and complete transactions without excessive effort. A frictionless process may reduce the perceived effort associated with repeated use.

The finding is compatible with prior research on mobile wallets and mobile payments, including studies that examine usability, ease-related perceptions, and adoption in consumer settings (Shin, 2009; Schierz et al., 2010; Chawla & Joshi, 2019; Estiyanti et al., 2021). Nevertheless, the present design cannot establish whether ease of use increases usage, whether frequent users become more familiar with the interface and consequently report greater ease, or whether both are influenced by other factors such as digital literacy, habit, trust, and prior experience. Longitudinal or experimental research would be needed to examine these possibilities.

### Joint explanatory contribution and theoretical implications

The joint model was statistically significant and explained a substantial proportion of sample variance ($R^2 = .856$). This result indicates that the two measured predictors collectively account for variation in reported e-wallet usage in this dataset. It does not mean that they explain 85.6% of e-wallet usage in the wider population, nor does it establish that omitted variables account for

exactly 14.4% in a causal sense. The model may also be affected by common-method variance because predictors and outcome were collected from the same questionnaire at the same time.

The results offer a context-specific application of technology-acceptance perspectives to an operating retail environment. TAM provides a useful conceptual basis for perceived ease of use, while innovation-diffusion theory helps interpret users' evaluations of feature-related advantages (Davis, 1989; Rogers, 2003). The findings should not be presented as a test of the complete TAM or UTAUT models because perceived usefulness, behavioural intention, social influence, facilitating conditions, habit, trust, and perceived risk were not included as measured constructs.

**Implications**

First, retailers should prioritise feature relevance and reliability. The larger standardized coefficient for feature innovation suggests that users' perceptions of useful functionality were particularly salient in this sample. Second, application providers and merchants should reduce operational friction through intuitive navigation, clear transaction steps, and understandable confirmation messages. Third, retailers should provide assistance for consumers who experience difficulties with registration, top-ups, refunds, or failed transactions. These implications should be treated as context-sensitive recommendations rather than universal prescriptions.

**Conclusion**

This study examined the associations of perceived feature innovation and perceived ease of use with e-wallet usage among 99 purposively selected consumers of Global Cell in Palembang. Both predictors were positively and significantly associated with e-wallet usage. Feature innovation showed the larger standardized coefficient ($\beta = .587$) compared with perceived ease of use ($\beta = .403$). The overall regression model was statistically significant and explained 85.6% of the observed variance in the sample. The results suggest that perceived functional relevance and operational simplicity are important correlates of e-wallet usage in this specific retail context. The findings should be interpreted cautiously because the study is cross-sectional, based on self-reported data, and limited to a purposive sample from one business. They do not establish causal effects or represent all e-wallet consumers in Indonesia.

**Limitations and directions for future research**

Several limitations qualify the interpretation. First, the sample consisted of 99 purposively selected consumers from one retail business; it is not a probability sample and cannot support broad population estimates. Second, the cross-sectional survey and self-reported measures do not establish causality or objectively verified usage frequency. Third, the source manuscript does not provide complete questionnaire items, descriptive statistics, confidence intervals, item-level p values, survey dates, response rate, or full regression output. Fourth, the reported $R^2$ is unusually high for a two-predictor behavioural model and should be checked against the original SPSS output, item construction, and possible overlap between predictor and outcome measures. Fifth, the sampling frame and Slovin calculation require clarification. Because all constructs were collected from the same respondents using the same instrument, common-method variance is also a potential concern (Podsakoff et al., 2003).

Future studies should use multi-site and probability-based or transparently recruited samples, report complete measurement items and psychometric evidence, and incorporate objective transaction records where consent and data governance permit. A longitudinal design could

distinguish initial adoption from continued use. Additional predictors—such as perceived usefulness, trust, perceived security, digital financial literacy, habit, social influence, and facilitating conditions—could also be examined, while avoiding an overfitted model. Researchers should preregister hypotheses where feasible and report confidence intervals, effect sizes, and diagnostic plots.

**CRediT Author Contribution Statement**

Author contributions to this research. Tania Faradilla: Conceptualization; Methodology; Investigation; Data curation; Formal analysis; Writing – original draft. Erdiansyah: Conceptualization; Methodology; Validation; Supervision; Writing – review & editing. Mohamad Nur Arriyanto: Conceptualization; Validation; Resources; Writing – review & editing.

**Declarations**

**Ethics approval:** The source manuscript does not include an ethics approval number or an official determination from an institution.

**Informed consent:** Not applicable to the analysis of publicly accessible online reviews, subject to the relevant institutional and journal ethics requirements.

**Data availability:** The review corpus was collected from TripAdvisor. The authors should state whether the extracted review data can be shared, subject to platform terms of use and applicable data-protection requirements.

**Conflict of interest:** The authors declare that there are no conflicts of interest in this study.

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