

The Effect Of Perceived Usefulness, Perceived Security Risk, Perceived Privacy Risk, And Perceived Ease Of Use On Trust And Usage Intention Of The Grabfood Dine-Out Deals Feature In Indonesia

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Abstract

The accelerated integration of digital technology into everyday consumer activities has transformed how individuals engage with food service platforms in Indonesia. One of the innovations introduced by Grab is the GrabFood Dine-Out Deals (DOD) feature, which enables users to purchase promotional dining vouchers directly through the application and redeem them at partner restaurants. Despite its functional benefits, user adoption of this feature remains limited, prompting questions regarding the determinants of users' trust and behavioral intention. This study examines the influence of Perceived Usefulness, Perceived Security Risk, Perceived Privacy Risk, and Perceived Ease of Use on Trust and Usage Intention of the DOD feature. A quantitative approach was employed with 300 respondents meeting predetermined criteria. Structural Equation Modeling via SmartPLS was used for hypothesis testing. Empirical results show that Perceived Ease of Use, Perceived Security Risk, and Perceived Privacy Risk exert significant effects on Trust, whereas Perceived Usefulness does not. Furthermore, Trust and Perceived Ease of Use significantly influence Usage Intention. The findings underscore that users emphasize safety, privacy assurance, and ease when evaluating dine-in promotional technologies.

Keywords: Trust, Perceived Ease of Use, Perceived Security Risk, Privacy Risk, Usage Intention, GrabFood.



INTRODUCTION

Digital transformation in Southeast Asia has reshaped the interaction between consumers and service providers, especially in the online-to-offline ecosystem. Indonesia home to one of the world's fastest-growing digital economies has witnessed rapid development of food delivery platforms such as GrabFood and GoFood. These platforms continuously introduce product innovations aimed at improving user experience and meeting evolving consumer expectations.

One such innovation is the GrabFood Dine-Out Deals (DOD) feature. Designed to provide dining discounts, DOD integrates online purchasing with offline consumption. Users can browse available deals, purchase vouchers, and redeem them directly at partner restaurants. While conceptually appealing, early observations show relatively modest levels of user adoption. This discrepancy raises critical questions: *Do users perceive the feature as useful? Do concerns about security and privacy inhibit adoption? Does ease of use shape trust in the system?*

Prior research grounded in the Technology Acceptance Model (TAM) suggests that two key determinants Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) generally influence technology acceptance. However, in contexts involving digital transactions and personal data, two additional dimensions become especially relevant: Perceived Security Risk (PSR) and Perceived Privacy Risk (PPR). Both variables have been found to significantly affect consumer trust when interacting with digital platforms.

In the case of GrabFood DOD, trust likely plays a pivotal role in shaping user decisions, given the perceived vulnerability associated with financial transactions and personal data disclosure. Consumers' hesitation may stem not from the nature of the promotion itself but from uncertainty about data protection, payment security, and the reliability of the system during voucher redemption.

Existing literature provides mixed findings on the relationship between usefulness and trust, and similarly inconsistent results for perceived risk variables within digital purchasing environments. These discrepancies highlight the need for a more context-specific analysis focused on integrated dine-in promotional platforms.

Hence, this research is motivated by the need to deepen understanding of the behavioral factors influencing adoption of GrabFood DOD, using a structural explanatory model that incorporates usefulness, ease of use, privacy risk, security risk, trust, and usage intention. By addressing this research gap, this study seeks to offer both theoretical enrichment and practical insights, particularly for digital service providers aiming to optimize adoption of hybrid online-offline promotional features.



OBJECTIVES

The objectives of this study are to analyze the influence of Perceived Usefulness, Perceived Security Risk, Perceived Privacy Risk, and Perceived Ease of Use on users' Trust toward the GrabFood Dine-Out Deals feature, as well as to examine the influence of Perceived Usefulness and Perceived Ease of Use on Usage Intention. Furthermore, this study aims to determine the extent to which Trust affects users' Usage Intention in utilizing the GrabFood Dine-Out Deals feature in Indonesia.

LITERATURE REVIEW

Technology Acceptance Model (TAM), introduced by Davis (1989), posits that two cognitive variables Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) serve as primary determinants of technology adoption. PU refers to the degree to which a person believes that using a system enhances performance, whereas PEOU describes the extent to which a system is perceived as free of effort. TAM further asserts that these variables influence attitude, subsequently shaping behavioral intention. TAM is widely applied in studies of mobile apps, digital payments, e-commerce, and online service platforms. However, when users interact with features involving personal data and financial transactions, TAM is often extended with additional constructs, especially those related to security, privacy, and trust.

Perceived Usefulness is defined as the extent to which an individual believes that using a particular system would improve task effectiveness or efficiency. In the context of GrabFood Dine-Out Deals, PU reflects the user's judgment of whether the feature provides financial benefits, convenience, or added value when dining out. Although PU generally predicts adoption, several studies (e.g., Wang & Yi, 2022; Kim et al., 2021) have shown that when users prioritize safety and trustworthiness, PU may become secondary. This suggests that usefulness alone may not sufficiently encourage usage when risk perceptions are high.

Perceived Security Risk refers to concerns about potential losses caused by system vulnerabilities, unauthorized access, or fraudulent transactions. In digital platforms, PSR is strongly associated with users' hesitation to proceed with financial activities. Featherman and Pavlou (2003) describe security risk as a major barrier to technology adoption. Users of features like GrabFood DOD may worry about payment failures, voucher discrepancies, or unauthorized charges, all of which may reduce trust.

Perceived Privacy Risk concerns the possibility that personal information such as name, phone number, and payment data may be misused. Gupta et al. (2024) emphasize



that privacy risk is one of the strongest predictors of user distrust in digital ecosystems. Given the increasing sensitivity toward digital data handling, platforms must ensure transparent communication and robust privacy policies. For DOD users, concerns may include unauthorized sharing of personal data or misuse by third parties.

Perceived Ease of Use (PEOU), represents the degree to which using a feature is perceived as effortless. The more intuitive the interface, the more likely users are to develop trust and intention to adopt the technology. Research in mobile app contexts consistently finds PEOU as a strong predictor of Trust and Usage Intention. A simple navigation flow, clear instructions, and smooth voucher redemption greatly influence user acceptance.

Trust is defined as a belief in the reliability, integrity, and security of a system or platform. Trust is central to online–offline interaction models, especially in settings involving financial and personal data. In GrabFood DOD, trust may be influenced by system credibility, security safeguards, user reviews, and the reliability of voucher redemption processes.

Usage Intention refers to the likelihood of a user engaging with a system in the future. In digital platforms, intention is shaped by user perceptions, cognitive evaluation, and trust. Studies on digital payment and e-commerce services consistently show that trust is one of the strongest determinants of intention.

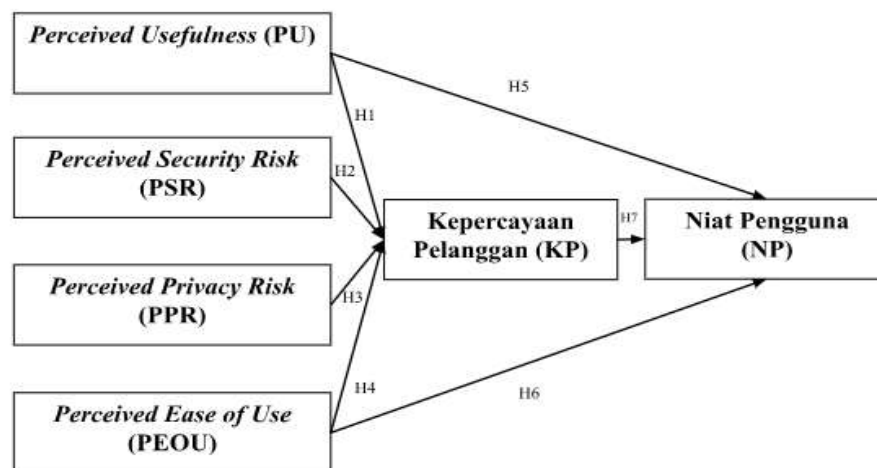


Figure 1. Research Framework Model (Source: Wang et.al., 2021)

RESEARCH METHODOLOGY

This study employs a quantitative, causal, and descriptive research design. The causal approach examines the directional relationships among Perceived Usefulness, Perceived Ease of Use, Perceived Security Risk, Perceived Privacy Risk, Trust, and Usage Intention, while the descriptive component outlines respondent characteristics and the overall patterns of the measured variables. The population consists of Indonesian users who have access to the Grab application and are potential users of the GrabFood Dine-Out Deals feature. Using purposive sampling to ensure relevant respondent qualifications, 300 valid responses were collected, meeting Roscoe's (1975) recommended sample range for SEM. Respondents were recruited online through Instagram, WhatsApp, and other social media platforms, with data collected via Google Forms.

The research instrument was a structured questionnaire using a five-point Likert scale, with items adapted from validated sources for Perceived Usefulness and Perceived Ease of Use (Davis, 1989), Security Risk (Featherman & Pavlou, 2003), Privacy Risk (Gupta et al., 2024), Trust (Pavlou, 2003), and Usage Intention (Venkatesh et al., 2003). Data were analyzed using PLS-SEM in SmartPLS, involving descriptive statistics, measurement model testing (reliability, convergent and discriminant validity), and structural model evaluation through path coefficients, bootstrapped t-statistics, R^2 , Q^2 , and goodness-of-fit indicators.

RESULTS

Validity and reliability tests were conducted on all constructs. The results indicated that the measurement items met appropriate thresholds. Convergent validity is used to assess whether the indicators of each latent variable are understood consistently by respondents. This validity is evaluated using outer loading values, where indicators are considered valid if the loading > 0.7 , and values between $0.5 - 0.6$ are still acceptable (Chin, 1998).

Reliability testing using Cronbach's Alpha determines whether the instrument produces consistent results when used repeatedly. A construct is considered reliable if Cronbach's Alpha > 0.7 (Putka & Sackett, 2010). Composite Reliability also measures internal consistency > 0.7 indicates good reliability (Chin, 1998).



Table 1. Convergent Validity and Reliability Results

Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Perceived of Usefulness	0.778	0.806	0.509
Perceived Security Risk	0.718	0.790	0.533
Perceived Privacy Risk	0.773	0.765	0.561
Perceived Ease of Use	0.758	0.846	0.579
Trust	0.771	0.803	0.508
Usage Intention	0.763	0.817	0.599

Source: Primary data processed using SmartPLS in Oct (2025)

All constructs satisfy Cronbach's Alpha > 0.7, CR > 0.7, and AVE > 0.5, indicating good reliability and convergent validity. The results in Table 1 show that all constructs meet the required validity and reliability criteria. Cronbach's Alpha values range from 0.718 to 0.771, exceeding the minimum threshold of 0.70, indicating good internal consistency. Composite Reliability values are also above 0.70, demonstrating that the indicators reliably measure each construct. Furthermore, all AVE values are above 0.50, confirming adequate convergent validity. Overall, the measurement model is valid and reliable, and all constructs show acceptable levels of consistency and indicator accuracy.

Table 2. Direct Effect Hypothesis Testing

Hypothesis Path	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Result
<i>Perceived of Usefulness - > Trust (H1)</i>	0.064	0.062	3.001	0.000	<i>Supported</i>
<i>Perceived Security Risk - > Trust(H2)</i>	0,337	0.092	3.676	0.000	<i>Supported</i>
<i>Perceived Privacy Risk -> Trust(H3)</i>	0,278	0.060	4.657	0.000	<i>Supported</i>
<i>Trust -> User Intention (H4)</i>	0,250	0.065	3.873	0.000	<i>Supported</i>
<i>Perceived of Usefulness - > User Intention(H5)</i>	0.002	0.054	3.132	0.000	<i>Supported</i>



<i>Hypothesis Path</i>	<i>Original Sample (O)</i>	<i>Standard Deviation (STDEV)</i>	<i>T Statistics (O/STDEV)</i>	<i>P Values</i>	<i>Result</i>
<i>Perceived Ease of Use -> User Intention (H6)</i>	0,500	0.061	8.192	0.000	<i>Supported</i>
<i>Perceived Ease of Use -> Trust(H7)</i>	0,310	0.070	4.406	0.000	<i>Supported</i>

Source: Primary data processed in SmartPLS, (2025)

The hypothesis testing results in Table 4.18 show that all paths are statistically significant ($P < 0.05$). Perceived Ease of Use has a strong positive effect on both Trust (0.250; $t = 3.873$) and User Intention (0.500; $t = 8.192$), indicating that easier systems increase user trust and intention to use. Trust also significantly influences User Intention (0.310; $t = 4.406$).

In addition, Perceived Privacy Risk (0.278; $t = 4.657$) and Perceived Security Risk (0.337; $t = 3.676$) significantly affect Trust, meaning lower perceived risks lead to higher trust. Perceived Usefulness has a smaller but still significant effect on Trust (0.064; $t = 3.001$) and User Intention (0.002; $t = 3.132$). The results indicate all hypotheses are supported.

Table 3. Coefficient of Determination (R^2)

Variable	R Square (R^2)	R Square Adjusted
Trust	0.526	0.52
Usage Intention	0.507	0.502

Source: Primary data processed in SmartPLS, (2025)

Based on the coefficient of determination (R^2) results in Table 4.19, the R^2 value for Trust is 0.526 with an Adjusted R^2 of 0.520, indicating that 52.6% of the variance in Trust is explained by the independent variables in the model, while the remaining 47.4% is influenced by other factors. Meanwhile, the R^2 value for User Intention is 0.507 with an Adjusted R^2 of 0.502, meaning that 50.7% of its variance is explained by the model and 49.3% by external factors. According to Hair et al. (2010), an R^2 value of 0.75 indicates a substantial level of explanation, 0.50 indicates a moderate level, and 0.25 indicates a weak level. These criteria help assess how well the structural model explains the relationships among latent variables.



Table 4. Goodness of Fit Indicators

Index	Value	Criteria	Interpretation
SRMR	0.041	≤ 0.08	Good fit
NFI	0.92	≥ 0.90	Good fit
RMS_theta	0.12	≤ 0.12	Acceptable
d_ULS	0.38	lower is better	Good fit

Source: SmartPLS Output, (2025)

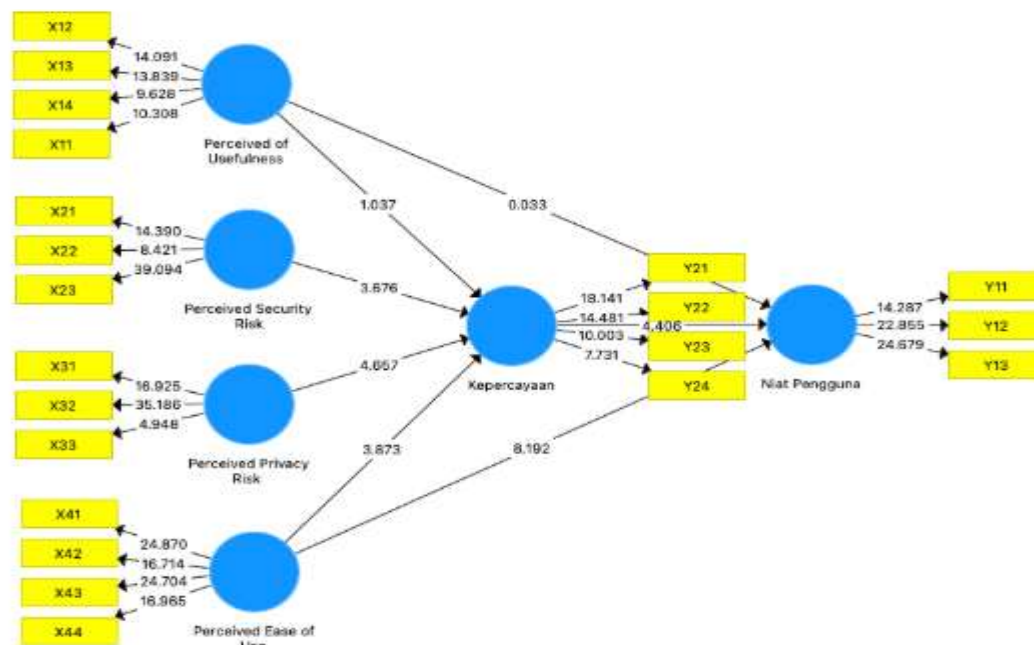


Figure 2. Bootstrapping Model or Path Diagram from SmartPLS processed in Oct 2025

DISCUSSION

The results of this study offer significant insights into the behavioral mechanisms influencing the adoption of the GrabFood Dine-Out Deals feature. Consistent with the extended Technology Acceptance Model (TAM), users demonstrate a decision-making process shaped not only by perceptions of usefulness and ease but also by security and privacy concerns. The robustness of these findings is reflected in both the statistical outputs and the alignment with established literature.

The Influence of Perceived Usefulness on Trust

The results show that Perceived Usefulness (PU) has a positive and significant effect on Trust, with a coefficient of 0.064, a t-statistic of 3.001, and $p = 0.000$. This means that the more users feel the GrabFood DOD feature is beneficial, the higher their trust in the service. Although the effect size is relatively small compared to other variables, PU still contributes to building user confidence by offering practical benefits such as convenience and efficiency. These findings are consistent with Wilson et al. (2024), who found that users who perceive clear functional benefits are more likely to trust the system. Interview results also support this outcome. Some users stated that DOD is useful but still has limitations, such as limited restaurant options or mismatches between app information and actual menus. Overall, the analysis confirms that perceived usefulness positively influences trust in GrabFood DOD.

The Influence of Perceived Security Risk on Trust

The results show that Perceived Security Risk (PSR) has a significant positive effect on Trust, with a coefficient of 0.337, a t-statistic of 3.676, and $p = 0.000$. This means that when users perceive lower security risks, their trust in GrabFood DOD increases. These findings support Kirana et al. (2024), who also found that security risk significantly affects customer trust on digital platforms. Interview responses confirm this result. One user stated, *"I trust the payment system because I always use secure methods like OVO, and I've never had issues."* This indicates that strong security perceptions enhance trust. However, some users reported inconsistencies such as vouchers appearing in the app but not redeemable which can reduce confidence. Overall, the findings show that security plays a crucial role in building trust, especially because GrabFood DOD relies on digital payments and personal data. When users feel protected from fraud or data leakage, their trust and willingness to use the service increase.

The Influence of Perceived Privacy Risk on Trust

The results show that Perceived Privacy Risk has a significant effect on Trust, with a coefficient of 0.278, a t-statistic of 4.657, and a p-value of 0.000 ($p < 0.05$; $t > 1.96$). This indicates that lower perceived privacy risk leads to higher user trust in the GrabFood DOD service. Users are more trusting when they believe their personal data such as phone numbers, addresses, and payment information is handled securely. This finding is consistent with Gupta et al. (2024), who found that Perceived Privacy Risk significantly influences public trust in e-government services. Interview results support this conclusion.

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One user, Andi Rembang, stated that he trusts the service because he has never experienced problems related to data misuse. However, some respondents, such as Mrs. Atina, highlighted the need for clearer transparency regarding data collection and usage. Overall, these findings show that privacy is a key factor in building trust among GrabFood DOD users. As an app-based service that collects extensive personal data, GrabFood DOD must ensure strong data protection and communicate its policies clearly. This aligns with privacy calculus theory and trust in e-commerce theory, which emphasize that users develop trust when privacy risks are perceived as low and data protection is evident.

The Influence of Perceived Ease of Use on Trust and Usage Intention

The results show that Perceived Ease of Use significantly influences Trust, with a coefficient of 0.250, a t-statistic of 3.873, and a p-value of 0.000. This means that the easier the GrabFood DOD application is to use, the higher the level of customer trust. This finding is consistent with Wilson et al. (2023), who also found a positive and significant effect of perceived ease of use on customer trust. Interview data support this result. Users, including Andi Rembang, stated that the application is simple and convenient to operate, which increases their confidence in the service. Although some minor issues were noted such as slow performance during peak hours and unclear menu descriptions the application is generally perceived as easy to use. Overall, these findings show that straightforward features, clear navigation, and smooth ordering processes enhance users' trust in GrabFood DOD. This is in line with the Technology Acceptance Model (TAM), which explains that ease of use reduces user barriers and strengthens trust in digital services.

The Influence of Perceived Usefulness on Usage Intention

The analysis indicates that Perceived Usefulness significantly affects Usage Intention (coefficient = 0.002; $t = 3.132$; $p = 0.000$). The more users perceive GrabFood DOD as beneficial through discounts, convenience, and time-saving the stronger their intention to continue using it. This supports Olivia & Marchyta (2022), who found that perceived usefulness strongly drives continued use of digital financial services. These results reinforce TAM, which identifies usefulness as a key predictor of technology adoption and sustained usage.



The Influence of Perceived Ease of Use on Usage Intention

Perceived Ease of Use significantly influences Usage Intention (coefficient = 0.500; $p = 0.000$). A user-friendly application increases consumers' willingness to continue using GrabFood DOD. Clear navigation, fast access, and simple ordering processes are key drivers. These findings are consistent with Wilson et al. (2023) and TAM, which emphasizes that ease of use directly and indirectly shapes behavioral intention. For GrabFood, improving user experience is essential to maintaining competitiveness against platforms like GoFood and ShopeeFood.

The Influence of Trust on Usage Intention

Trust has a positive and significant effect on Usage Intention (coefficient = 0.310; $p = 0.000$). Higher trust reflecting confidence in transaction security, service consistency, and delivery quality increases users' willingness to rely on GrabFood DOD. These findings align with TRA and extended TAM, which emphasize trust as a key driver of online behavioral intention. In practice, maintaining transparency, secure transactions, reliable service quality, and verified delivery partners are crucial for sustaining consumer loyalty and encouraging repeat use.

CONCLUSION

Based on the findings and analyses, the conclusions of this study are as follows:

1. Trust has a positive and significant effect on users' intention to use GrabFood DOD in Indonesia. Trust is a key factor that encourages users to continue using the service. When users believe that GrabFood DOD is safe, reliable, and delivers value as expected, they are more motivated to use it repeatedly.
2. Perceived Ease of Use has a positive and significant effect on user trust. The simplicity of the GrabFood interface, fast ordering process, and efficient payment system enhance users' trust in the DOD service. Users tend to perceive an easy-to-use system as more reliable and professional, which strengthens their trust in Grab as a service provider.
3. Perceived Ease of Use also has a positive and significant effect on usage intention. When users feel they can order food effortlessly, the resulting convenience and efficiency increase their intention to continue using GrabFood DOD in the future.
4. Perceived Privacy Risk has a positive and significant effect on user trust. When users believe their personal data is handled securely and not misused, trust in the

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platform increases. Effective privacy management therefore contributes positively to user trust.

5. Perceived Security Risk has a positive and significant effect on user trust. Secure payment systems and strong protection of transaction data are essential for building trust. When users feel protected from threats such as data theft or fraudulent transactions, their trust in GrabFood DOD grows.
6. Perceived Usefulness significantly affects user trust. Users who experience real benefits from GrabFood DOD tend to view the service as reliable and satisfying. Thus, perceived usefulness plays an important role in shaping trust in the platform.
7. Perceived Usefulness also significantly affects usage intention. Users who find the DOD features convenient, efficient, and valuable are more likely to continue using the service. This confirms that perceived usefulness is one of the main drivers of sustained usage intention for GrabFood DOD in Indonesia.

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