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The Effect of Technology Acceptance Model (TAM) on Trust toward GrabFood Dine-Out Deals Feature from Generation Z Perspective in Indonesia

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Abstract
Digital transformation has significantly reshaped consumer behavior, particularly among Generation Z, a cohort that is highly adaptive to technology yet strongly concerned with issues of security and data privacy. One innovation within the digital food service sector is the GrabFood Dine-Out Deals (DOD) feature, which integrates online voucher purchases with offline dining experiences at partner restaurants. This study aims to analyze the effect of Technology Acceptance Model (TAM) variables—Perceived Usefulness, Perceived Ease of Use, Perceived Security Risk, and Perceived Privacy Risk—on Trust toward the GrabFood Dine-Out Deals feature from the perspective of Generation Z in Indonesia. This research employed a quantitative approach using a survey method involving 300 Generation Z respondents aged 17–28 years. Data were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with SmartPLS software. The results indicate that Perceived Ease of Use, Perceived Security Risk, and Perceived Privacy Risk have significant effects on Trust, while Perceived Usefulness shows a relatively weaker influence. These findings suggest that Generation Z prioritizes ease of use, security, and privacy protection over functional benefits when developing trust in digital dine-in promotional technologies.
Keywords: Technology Acceptance Model, Trust, Generation Z, GrabFood Dine-Out Deals

Introduction

Digital transformation has altered how consumers interact with service platforms, particularly within the online-to- offline (O2O) ecosystem. In Indonesia, the rapid growth of food service applications has encouraged companies such as Grab to continuously innovate in order to enhance user experience. One such innovation is the GrabFood Dine-Out Deals (DOD) feature, which allows users to purchase dining vouchers digitally and redeem them directly at partner restaurants.

Despite the functional benefits offered by this feature, its adoption rate remains relatively limited. This phenomenon becomes particularly relevant when examined from the perspective of Generation Z, a demographic group characterized by high digital literacy, intensive mobile usage, and heightened awareness of security and privacy issues. Unlike previous generations, Generation Z evaluates digital technology not only based on its usefulness but also on trustworthiness, transparency, and ease of use.

Accordingly, this study seeks to investigate the factors influencing Trust toward the GrabFood Dine-Out Deals feature by applying an extended Technology Acceptance Model (TAM) framework that incorporates perceived security and privacy risks from a Generation Z perspective.

Literature Review

This study is grounded in the Technology Acceptance Model (TAM), originally proposed by Davis (1989), which explains user acceptance of technology through cognitive evaluations of usefulness and ease of use. In the context of digital platforms that involve online transactions and personal data exchange, TAM is frequently extended with perceived risk and trust constructs to better capture user behavior. Within this study, the GrabFood Dine-Out Deals (DOD) feature is examined as a digital service innovation whose acceptance is reflected primarily through users' trust rather than behavioral intention.

From a Generation Z perspective, trust represents a critical psychological outcome when interacting with digital services. Generation Z consumers are characterized by high digital exposure, strong reliance on mobile applications, and heightened sensitivity toward data security and privacy. As a result, their evaluation of digital platforms extends beyond functional benefits and places substantial emphasis on perceived safety, transparency, and usability.

Perceived Usefulness (PU) refers to the extent to which users believe that a system enhances their performance or provides meaningful benefits. In the context of GrabFood DOD, perceived usefulness may include cost savings, convenience in accessing dine-in promotions, and efficiency in dining decision-making. However, prior studies suggest that among younger digital-native users, perceived usefulness alone may be insufficient to establish trust when concerns regarding data protection and system reliability persist.

Perceived Ease of Use (PEOU) reflects the degree to which a system is perceived as effortless to use. An intuitive interface, clear navigation, and a seamless voucher redemption process are particularly important for Generation Z users, as usability directly influences their confidence in the platform. Systems that are perceived as easy to use tend to reduce cognitive burden and uncertainty, thereby strengthening user trust.

In addition to core TAM variables, perceived risk plays a crucial role in shaping trust within digital service environments. Perceived Security Risk relates to users' concerns regarding transaction safety, system vulnerability, and the potential for financial loss. Meanwhile, Perceived Privacy Risk refers to apprehensions about the collection, storage, and potential misuse of personal data. For Generation Z, who are highly aware of digital surveillance and data misuse issues, these risks significantly influence their trust judgments toward digital platforms.

Trust, in this study, is conceptualized as the belief in the reliability, integrity, and security of the GrabFood Dine- Out Deals feature. Trust functions as the central dependent construct that captures Generation Z's overall evaluation of the platform. When users perceive the system as easy to use, secure, and respectful of their privacy, trust is more likely to be established, facilitating positive perceptions toward the digital service.

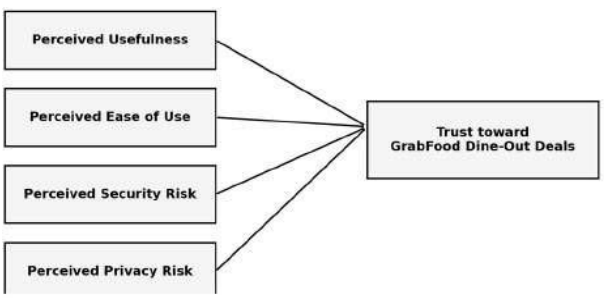

Figure 1. Conceptual Framework

Hypotheses

H1: Perceived Usefulness has a significant effect on Trust toward the GrabFood Dine-Out Deals feature.

H2: Perceived Ease of Use has a significant effect on Trust toward the GrabFood Dine-Out Deals feature.

H3: Perceived Security Risk has a significant effect on Trust toward the GrabFood Dine-Out Deals feature.

H4: Perceived Privacy Risk has a significant effect on Trust toward the GrabFood Dine-Out Deals feature.

Materials and Methods

This study employed a quantitative research design with a causal approach. The population consisted of Generation Z individuals in Indonesia who have access to the Grab application. A purposive sampling technique was applied, resulting in 300 valid respondents. Data were collected through an online questionnaire using a five-point Likert scale. The data analysis technique used was Partial Least Squares–Structural Equation Modeling (PLS-SEM) with SmartPLS software.

Results

Measurement Model Assessment: Construct Validity and Reliability

The measurement model was evaluated to assess construct validity and reliability before testing the structural relationships. Construct validity was examined through convergent validity using indicator loadings and Average Variance Extracted (AVE), while reliability was assessed using Cronbach's Alpha and Composite Reliability (CR). Following established guidelines, indicator loadings above 0.70, AVE values above 0.50, and reliability coefficients exceeding 0.70 indicate satisfactory measurement quality.

The results show that all constructs meet the required thresholds for validity and reliability. Cronbach's Alpha values range from 0.718 to 0.778, indicating acceptable internal consistency. Composite Reliability values exceed

0.75 for all constructs, confirming the stability and consistency of the measurement instruments. Furthermore, all AVE values are above 0.50, demonstrating adequate convergent validity.

Table 1. Construct Validity and Reliability Results

No	Variable	Cronbach's Alpha	Composite Reliability	AVE
1.	Perceived Usefulness	0.778	0.806	0.509
2.	Perceived Ease of Use	0.758	0.846	0.579
3.	Perceived Security Risk	0.718	0.790	0.533
4.	Perceived Privacy Risk	0.773	0.765	0.561
5.	Trust	0.771	0.803	0.508

Source: Proceed data by SmartPLS 4.0 (2026)

Structural Model Analysis and Hypothesis Test

The structural model was evaluated to examine the hypothesized relationships between the Technology Acceptance Model (TAM) variables and Trust toward the GrabFood Dine-Out Deals feature among Generation Z users. Hypothesis testing was conducted using a bootstrapping procedure with 5,000 resamples in SmartPLS to assess the significance of the path coefficients. The evaluation focused on the magnitude of the path coefficients (β), t-statistics, and p-values.

The results indicate that Perceived Ease of Use, Perceived Security Risk, and Perceived Privacy Risk have positive and statistically significant effects on Trust. Perceived Ease of Use demonstrates a strong influence on Trust, suggesting that systems perceived as easy to understand and operate enhance Generation Z users' confidence in digital services. In addition, Perceived Security Risk and Perceived Privacy Risk signifi-

cantly affect Trust, indicating that lower perceived risks related to transaction safety and personal data protection strengthen trust toward the platform.

Conversely, Perceived Usefulness shows a weaker effect on Trust compared to the other variables. Although statistically significant, its lower path coefficient suggests that functional benefits alone are not the primary driver of trust formation among Generation Z users when interacting with digital dine-in promotional features.

Table 2. Structural Model Analysis and Hypothesis Testing Results

Hypothesis	Construct Relationship	Original sample (O)	T statistics (|O/STDEV|)	P values	Remark
H1	Perceived Usefulness -> Trust	0,064	3.001	0.000	Valid
H2	Perceived Ease of Use -> Trust	0,310	4.406	0.000	Valid
H3	Perceived Security Risk -> Trust	0,337	3.676	0.000	Valid
H4	Perceived Privacy Risk -> Trust	0,278	4.657	0.000	Valid

Source: Proceed data by SmartPLS 4.0 (2026)

Path Diagram

The figure 2 presents the bootstrapping result (path diagram) of the structural model in a SmartPLS-style visualization. The diagram illustrates the direction and magnitude of the relationships between the exogenous variables—Perceived Usefulness, Perceived Ease of Use, Perceived Security Risk, and Perceived Privacy Risk— and Trust as the sole endogenous construct. The standardized path coefficients (β) are displayed on each arrow, while the R^2 value is reported within the Trust construct.

The diagram confirms that Perceived Ease of Use (β = 0.310), Perceived Security Risk (β = 0.337), and Perceived Privacy Risk (β = 0.278) exert stronger influences on Trust than Perceived Usefulness (β = 0.064). This pattern indicates that Generation Z users develop trust primarily through perceptions of usability and risk protection rather than functional benefits alone. In addition, the R^2 value for Trust (0.526) indicates that the proposed antecedents explain a moderate proportion of variance in trust formation within the GrabFood Dine-Out Deals context.

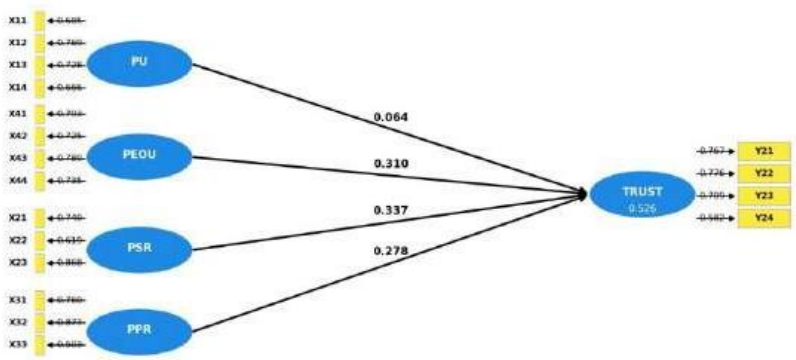

Figure 2. Bootstrapping Result or Path Diagram from SmartPLS 4.0

Predictive Power and Model Relevance

The predictive power of the structural model was evaluated using the coefficient of determination (R^2) and predictive relevance (Q^2). The R^2 value indicates the proportion of variance in the endogenous construct explained by the exogenous variables, while Q^2 assesses the model's predictive relevance through a blindfolding procedure. According to established criteria, R^2 values of 0.25, 0.50, and 0.75 indicate weak, moderate, and substantial explanatory power, respectively, whereas Q^2 values greater than zero indicate adequate predictive relevance.

The results demonstrate that the model exhibits moderate explanatory power in predicting Trust among Generation Z users. The R^2 value indicates that a substantial proportion of variance in Trust is explained by the Technology Acceptance Model variables and perceived risk factors included in the model. In addition, the Q^2 value is greater than zero, confirming that the model possesses sufficient predictive relevance for explaining trust formation in the context of digital dine-in promotional services.

Discussion

The findings of this study provide important insights into how Generation Z users develop trust toward the GrabFood Dine-Out Deals feature within a digital dine-in promotional context. Consistent with the extended Technology Acceptance Model (TAM), trust formation among Generation Z is not driven solely by perceptions of functional benefits, but is strongly influenced by usability and risk-related considerations.

The significant effect of Perceived Ease of Use on Trust highlights the critical role of system simplicity and user- friendly design in shaping confidence among Generation Z users. As a digitally native generation, Generation Z expects seamless interaction with mobile applications. An intuitive interface, clear navigation, and an uncomplicated voucher redemption process reduce cognitive effort and uncertainty, thereby strengthening trust. This finding aligns with prior studies suggesting that ease of use functions as a psychological assurance mechanism that enhances users' confidence in digital platforms.

Perceived Security Risk also demonstrates a strong and significant influence on Trust, underscoring the importance of transaction safety and system reliability. For Generation Z, concerns related to payment security, potential fraud, and system errors remain central when engaging with digital services involving financial transactions. When users perceive lower levels of security risk, their trust in the platform increases substantially. This result supports existing literature emphasizing that perceived security is a foundational element in trust-building within digital service environments.

Similarly, the significant impact of Perceived Privacy Risk on Trust reflects Generation Z's heightened awareness of personal data protection. Generation Z users are particularly sensitive to how their personal information is collected, stored, and used by digital platforms. Transparent privacy policies and responsible data management practices therefore play a vital role in strengthening trust. The findings suggest that privacy assurance is not merely a complementary factor, but a core determinant of trust for younger consumers in the digital ecosystem.

In contrast, Perceived Usefulness exhibits a comparatively weaker effect on Trust. Although the functional benefits of GrabFood Dine-Out Deals—such as cost savings and promotional convenience—remain relevant, they are insufficient to independently establish trust among Generation Z users. This indicates a shift in evaluation priorities, where experiential and risk-related factors outweigh utilitarian considerations. Such a pattern suggests that for Generation Z, trust is constructed more through perceived safety and comfort rather than through efficiency or economic value alone.

From a theoretical perspective, these findings extend the Technology Acceptance Model by demonstrating that trust can serve as a central outcome variable, particularly in contexts involving online-to-offline transactions and digital promotions. By focusing exclusively on Trust, this study highlights the evolving na-

ture of technology acceptance among Generation Z, where trust formation precedes and potentially conditions subsequent behavioral outcomes.

From a managerial perspective, the results imply that service providers such as Grab should prioritize system usability, security assurance, and privacy protection to strengthen trust among Generation Z users. Investments in intuitive design, secure payment infrastructure, and transparent data policies are likely to be more effective in building trust than emphasizing functional benefits alone. By aligning platform design and communication strategies with the trust expectations of Generation Z, digital service providers can enhance user confidence and long-term platform credibility.

Conclusion, Limitation, And Future Research

Conclusion and Contributions

This study concludes that Trust toward the GrabFood Dine-Out Deals feature among Generation Z users is primarily shaped by perceptions related to system usability, security, and privacy. The empirical results demonstrate that Perceived Ease of Use, Perceived Security Risk, and Perceived Privacy Risk exert significant influences on Trust, whereas Perceived Usefulness plays a comparatively weaker role. These findings indicate that for Generation Z, trust formation in digital service environments is driven more by feelings of safety, control, and ease rather than by functional or economic benefits alone.

From a theoretical perspective, this study contributes to the Technology Acceptance Model (TAM) literature by repositioning Trust as the central outcome variable rather than as a mediating or secondary construct. By focusing exclusively on Trust, this research highlights the evolving nature of technology acceptance among Generation Z, particularly in online-to-offline (O2O) promotional contexts. The findings extend prior TAM-based studies by demonstrating that risk-related perceptions are critical determinants of trust for younger, digitally native consumers.

Practical Implications

From a managerial standpoint, the results suggest that service providers such as Grab should prioritize ease of use, transaction security, and data privacy protection when developing and promoting digital dine-in features. Rather than emphasizing promotional benefits alone, platform strategies should focus on creating seamless user experiences, ensuring robust payment security systems, and communicating transparent data protection policies. Such efforts are essential for strengthening trust and enhancing platform credibility among Generation Z users.

Limitations and Future Research

Despite its contributions, this study has several limitations. First, the research relies on cross-sectional survey data, which captures user perceptions at a single point in time and may be subject to response bias. Second, the sample is limited to Generation Z users in Indonesia, which may restrict the generalizability of the findings to other demographic groups or cultural contexts. Third, this study focuses solely on trust as the outcome variable and does not examine subsequent behavioral responses such as continued usage or loyalty.

Future research is encouraged to address these limitations by employing longitudinal or experimental research designs to better capture changes in trust over time. Comparative studies across different generational cohorts could also provide deeper insights into how trust formation differs among users. Additionally, future studies may incorporate other relevant variables such as platform reputation, transparency, social

influence, or perceived value to further enrich the understanding of trust development in digital service innovations.

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