

The Mediating Effect of Perceived Usefulness in the End-User Computing Satisfaction Model on Online Transportation User Satisfaction

*The Mediating Effect
of Perceived
Usefulness*

Nardina Salsabila^{1*}, Anang Muftiadi², Ria Arifianti³

^{1,2,3}*Department of Business Administration, Faculty of Social and Political Sciences,
Universitas Padjajaran; Bandung, Indonesia*

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*Corresponding Author E-Mail: nardina23001@mail.unpad.ac.id

ABSTRACT

The rapid growth of online transportation services in Indonesia has significantly reshaped urban mobility by offering greater convenience and efficiency. However, persistent issues such as system inaccuracies, usability problems, and information quality may affect user satisfaction. This study investigates the determinants of user satisfaction with an online transportation application by integrating the End-User Computing Satisfaction framework and the Technology Acceptance Model (TAM), with perceived usefulness serving as a mediating variable. A quantitative approach was applied using data collected from 390 active Maxim users in the Greater Jakarta area between January and March 2025. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS. The results indicate that perceived usefulness has a strong and significant effect on user satisfaction. Accuracy, ease of use, and content quality significantly influence perceived usefulness, while timeliness and format do not. Furthermore, accuracy, ease of use, timeliness, and format directly affect user satisfaction, whereas content does not show a significant direct effect. These findings imply that online transportation providers should prioritize system accuracy, usability, timely information delivery, and interface design to enhance perceived usefulness and user satisfaction, thereby strengthening their competitive position.

Submitted:
October 13, 2025

Revised:
October 17, 2025

Accepted:
January 28, 2026

Published Online:
January 31, 2026

Keywords: *End-User Computing Satisfaction, Online Transportation Services, Perceived Usefulness, Technology Acceptance Model, User Satisfaction.*

INTRODUCTION

The success of information system implementation in organizations is commonly assessed through user satisfaction, which is considered an indirect yet reliable indicator of information system performance (Gatian, 1994; Liu & Guo, 2008). User satisfaction reflects how well a system meets users' information needs and supports operational activities and decision-making processes. However, effective information system adoption is not limited to fulfilling technical or functional requirements. It must also improve service quality, strengthen user trust, and contribute to organizational reputation and value creation (Collie & Bienstock, 2006; Machmud, 2018). In institutional contexts, information plays a strategic role in decision-making; therefore, an information system can be considered effective when it consistently provides accurate and timely information while maintaining high user satisfaction (Rahayu, 2020; Chatterjee & Kumar, 2020).

Along with rapid digital transformation, the online transportation industry has emerged as one of the fastest-growing service sectors. This service model continues to expand due to its accessibility, flexibility, and relatively affordable pricing, especially in urban areas. In online transportation services, user satisfaction is strongly influenced by system-related technical and functional features, such as digital map accuracy, server stability, location-detection reliability, and the simplicity of application interface design (Aman & Smith-Colin, 2022). The technical quality of Mobility-as-a-Service (MaaS)

JIMKES

Jurnal Ilmiah Manajemen
Kesatuan
Vol. 14 No. 1, 2026
pp. 1069-1080
IBI Kesatuan
ISSN 2337 – 7860
E-ISSN 2721 – 169X
DOI: 10.37641/jimkes.v14i1.4382

platforms, including frequent system updates and reliable mapping features, has a significant relationship with user satisfaction. These findings indicate that technical system quality plays a critical role in shaping positive user perceptions toward digital transportation services.

Supporting this view, Agustina and Sahfitri (2022) reported that ride-hailing users in Palembang achieved a satisfaction index of 77.28 percent. Although this value indicates a relatively high level of satisfaction, the results of the Customer Satisfaction Index (CSI) and Importance-Performance Analysis (IPA) revealed that several service attributes still required improvement. This evidence suggests that rapid user growth does not always correspond with optimal improvements in system and service quality. Consequently, continuous evaluation of user satisfaction remains essential for online transportation service providers.

One of the online transportation platforms experiencing significant growth in Indonesia is Maxim. Founded in 2003 in Chardnisk, Russia, Maxim began operating in Indonesia in 2018 and has since expanded its services to more than 47 cities (IDNTimes, 2019; Setiadi, 2022). Company data show a sharp increase in the number of users, from approximately 10,000 users at the end of 2018 to 500,000 users in 2019, and further growth to 600,000 users by early 2020. Despite this rapid expansion, various forms of user feedback indicate recurring problems, including inconsistent fare calculations, system downtime, difficulties in determining pick-up points, unclear map displays, and an application interface that is not fully intuitive. These issues may reduce user satisfaction and negatively affect user experience for both passengers and drivers.

The persistence of these problems reflects a clear gap between users' expectations, which include an online transportation system that is accurate, reliable, and easy to use, and the actual conditions experienced by users, where technical and operational issues remain evident. This gap has the potential to weaken user satisfaction and reduce the perceived effectiveness of the system. Therefore, a comprehensive empirical study is required to better understand the determinants of user satisfaction within online transportation services. Based on the description, this study aims to analyze the system factors that influence user satisfaction of the Maxim application, placing perceived usefulness as the main mediating variable, and integrating the End-User Computing Satisfaction (EUCS) framework with perceived usefulness as a mediating variable in order to obtain a more comprehensive understanding of the success of information systems in digital transportation services.

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

The Effect of Perceived Usefulness on User Satisfaction

Figure 1 shows that perceived usefulness is a central construct in explaining user satisfaction with digital systems, including online transportation applications. It refers to the degree to which users believe that a system enhances task performance and delivers tangible functional benefits. In post-adoption contexts, perceived usefulness becomes a critical evaluative factor, as users continuously assess whether the system meets their evolving needs and expectations (Alalwan et al., 2020). Recent studies by Tam et al. (2020), grounded in technology acceptance and expectation-based frameworks, emphasize that satisfaction arises when perceived system performance aligns with or exceeds prior expectations, reinforcing continued usage intentions.

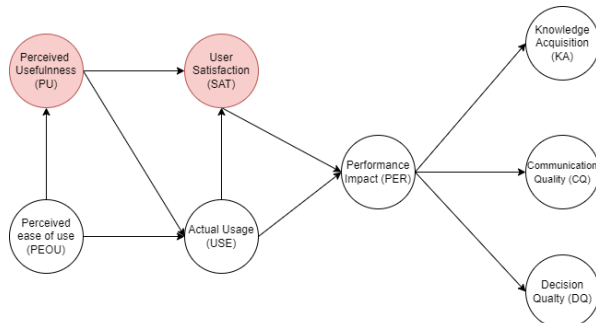


Figure 1. Linkage between Perceived Usefulness and User Satisfaction

In online transportation services, perceived usefulness is reflected in the ability of applications to improve travel efficiency, reduce waiting time, provide accurate fare information, and enhance accessibility. Empirical evidence from ride-hailing and mobile service platforms indicates that users who perceive higher functional value tend to report greater satisfaction, highlighting that utilitarian benefits outweigh aesthetic or hedonic features in shaping overall evaluations (Cheng et al., 2021). Moreover, perceived usefulness often functions as a mediating mechanism between system quality and satisfaction, allowing users to tolerate minor technical shortcomings when the application remains beneficial for daily mobility needs (Nguyen et al., 2022; Thamanda et al., 2024). Consequently, perceived usefulness represents a crucial psychological mechanism through which users form satisfaction judgments toward online transportation systems.

H1: Perceived usefulness has a positive effect on user satisfaction.

The Effect of System Quality Dimensions on Perceived Usefulness

Figure 2 shows that the End User Computing Satisfaction (EUCS) model defines user assessment based on five dimensions of system quality: content, accuracy, format, ease of use, and timeliness, all of which collectively affect perceived usefulness and user satisfaction in digital platforms, such as online transportation apps (Doll & Torkzadeh, 1998; Abdinnour-Helm et al., 2005). EUCS dimensions have been shown to be meaningful evaluators of system quality and user experience in recent satisfaction research (Handayani et al., 2025). Accuracy denotes the consistency and reliability of system-generated data such as fare estimates, route information, and arrival projections, which enhance trust and reinforce perceptions of utility. Ease of use, indicating how effortlessly users learn and navigate the interface, is directly related to perceived usefulness in TAM-based studies and positively impacts satisfaction outcomes (Haning, 2021; Sani & Putri, 2023; Raninda et al., 2023).

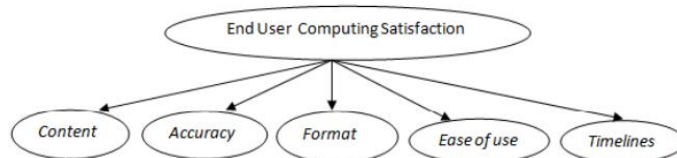


Figure 2. End-User Computing Satisfaction Framework

Content quality reflects the breadth and relevance of informational resources that users rely on to plan efficient travel. Meanwhile, timeliness and format serve supportive roles; timeliness pertains to real-time updates that prevent delays and frustration, while format refers to interface layout clarity that reduces cognitive load. Although these dimensions may not always have a direct and strong effect on perceived usefulness, they collectively contribute to the functional evaluation of system performance and user satisfaction (Sani & Putri, 2023; Dalimunthe, 2024). Therefore, system quality dimensions shape how users perceive and evaluate transportation applications beyond purely utilitarian functions.

- H2: Accuracy has a positive effect on perceived usefulness.
- H3: Ease of use has a positive effect on perceived usefulness.
- H4: Content has a positive effect on perceived usefulness.
- H5: Timeliness has a positive effect on perceived usefulness.
- H6: Format has a positive effect on perceived usefulness.

The Effect of System Quality Dimensions on User Satisfaction

Beyond their influence on perceived usefulness, system quality dimensions can also have direct and independent effects on user satisfaction. Information system success theories argue that satisfaction is not solely determined by perceived benefits, but also by users' immediate experiences during system interaction (DeLone & McLean, 2003; Hermawan & Hidayah, 2024). In the context of online transportation services, where applications are used frequently and often under time pressure, users become highly sensitive to system performance and reliability.

Accuracy plays a crucial role in shaping user satisfaction, as inaccurate fare estimates, incorrect location detection, or unreliable arrival times can lead to inconvenience and frustration. Recent studies confirm that information accuracy significantly enhances satisfaction in mobility and digital service platforms (Aman & Smith-Colin, 2022; Khan et al., 2025). Similarly, ease of use directly improves satisfaction by reducing cognitive effort, simplifying navigation, and minimizing user errors. Applications that are intuitive and user-friendly tend to generate more positive emotional responses, which contribute to overall satisfaction (Al-Fraihat et al., 2020).

Timeliness is particularly critical in online transportation services because delayed or outdated information can disrupt users' travel plans and reduce trust in the system. Empirical evidence suggests that real-time responsiveness and system speed significantly influence satisfaction in digital transportation and service applications (Agustina & Sahfitri, 2022). Format also affects satisfaction through interface clarity, visual consistency, and layout design, which enhance user comfort and interaction efficiency (Ahn et al., 2007). In contrast, content quality may not always exert a direct effect on satisfaction. Users often prioritize functional performance over informational richness, causing content to influence satisfaction indirectly through perceived usefulness rather than through immediate experience (She et al., 2024).

- H7: Accuracy has a positive effect on user satisfaction.
- H8: Ease of use has a positive effect on user satisfaction.
- H7: Content has a positive effect on user satisfaction.
- H8: Timeliness has a positive effect on user satisfaction.
- H9: Format has a positive effect on user satisfaction.

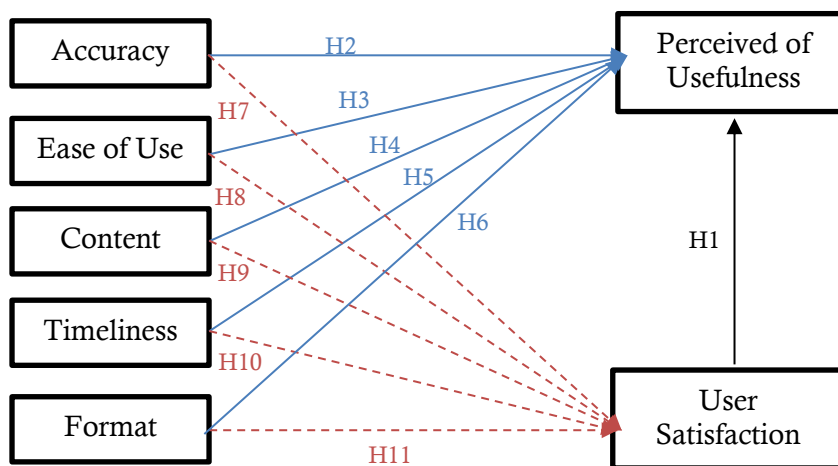


Figure 3. Conceptual Research

Figure 3 illustrates a conceptual research model that combines the End User Computing Satisfaction (EUCS) framework with the Technology Acceptance Model (TAM). The model demonstrates that five dimensions of system quality content, accuracy, format, ease of use, and timeliness are suggested to affect user satisfaction and perceived usefulness. All of these dimensions are believed to directly influence user satisfaction, representing users' instant assessment of the system derived from their interaction experience.

Moreover, the model indicates that the five dimensions of system quality also influence perceived usefulness, reflecting users' perceptions of the advantages obtained from utilizing the system. It is also proposed that perceived usefulness has a direct effect on user satisfaction, suggesting its function as a mediating variable. In summary, this model highlights that user satisfaction is influenced by both direct perceptions of system quality and users' views on the system's usefulness.

RESEARCH METHODS

This research employs a quantitative approach to analyze the connections between system-related elements and user contentment with the Maxim application. The quantitative method allows for an objective assessment of users' views and supports empirical examination of the relationships between the research variables. The research took place from January to March 2025.

The minimum sample size was determined based on the guideline proposed by Hair et al. (2018), which recommends a sample size of at least ten times the largest number of structural paths directed at any latent construct in the model. Given that the research model contains 11 structural paths, the minimum required sample size was 110 respondents. This requirement is also consistent with the recommendation by Yim (2019), who suggests that an appropriate sample size for PLS-SEM typically ranges between 100 and 250 respondents. Respondents in this study consisted of 390 participants, the sample was divided into two groups: male and female.

The population of this study consisted of active or loyal Maxim users residing in the Greater Jakarta Area, including Jakarta, Bogor, Depok, Tangerang, and Bekasi. According to official company data, Maxim had approximately 600,000 users in 2020, with application downloads exceeding 50 million by 2023. A purposive sampling technique was employed to ensure that respondents met specific inclusion criteria: (1) individuals who had used the Maxim application more than twice, individuals aged 17 years or older, in accordance with Indonesia's legal definition of adulthood, and individuals currently residing in the Jabodetabek area. Respondents under the age of 17 were excluded to ensure sufficient comprehension and accuracy in answering the questionnaire items.

Information was gathered through an online survey employing a structured questionnaire shared through Google Forms. The survey was created to gather users' views on the study variables, such as system performance, perceived utility, and overall user contentment. An online survey was deemed suitable because of its effectiveness in connecting with respondents in urban regions where digital technology is widely used, especially among online transportation service users.

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM). This analytical method was selected because it is suitable for models involving multiple latent constructs and does not require strict assumptions regarding data distribution. The analysis process consisted of two main stages: evaluation of the measurement model (outer model) to assess indicator validity and reliability, and evaluation of the structural model (inner model) to examine the relationships among latent variables and the strength of their effects. All statistical analyses were performed using SmartPLS version 3.2.9.

RESULTS

Based on Table 1, the responses from 390 participants, the sample was divided into two groups: male and female. Male respondents accounted for 163 individuals (42%), while female respondents comprised 227 individuals (58%). Regarding age composition, 127 participants (33%) fell within the 18–23 age group, the majority of respondents, 240 individuals (61%) were aged between 24 and 29 years, while 23 respondents (6%) were over 30 years old. Furthermore, the data show that out of the 390 respondents, users of the Maxim online transportation application were predominantly domiciled in Depok, with 139 respondents (36%). This was followed by 88 respondents (22%) in Jakarta, 59 respondents (15%) in Bogor, 58 respondents (15%) in Bekasi, and 46 respondents (12%) in Tangerang.

Table 1. Respondent Characteristics

Respondent Characteristics	Category	Frequency (n)	Percentage (%)
Gender	Male	163	42%
	Female	227	58%
Age	18–23 years	127	33%
	24–29 years	240	61%
	Over 30	23	6%
Residence (Domicile)	Depok	139	36%
	Jakarta	88	22%
	Bogor	59	15%
	Bekasi	58	15%
	Tangerang	46	12%

Figure 4 depicts the proposed measurement model, highlighting the relationships between different aspects of system quality, such as content, accuracy, format, usability, and timeliness concerning user satisfaction, with perceived usefulness serving as a mediating factor. Every indicator’s outer loading value exceeded 0.7, thus satisfying the requirements for convergent validity.

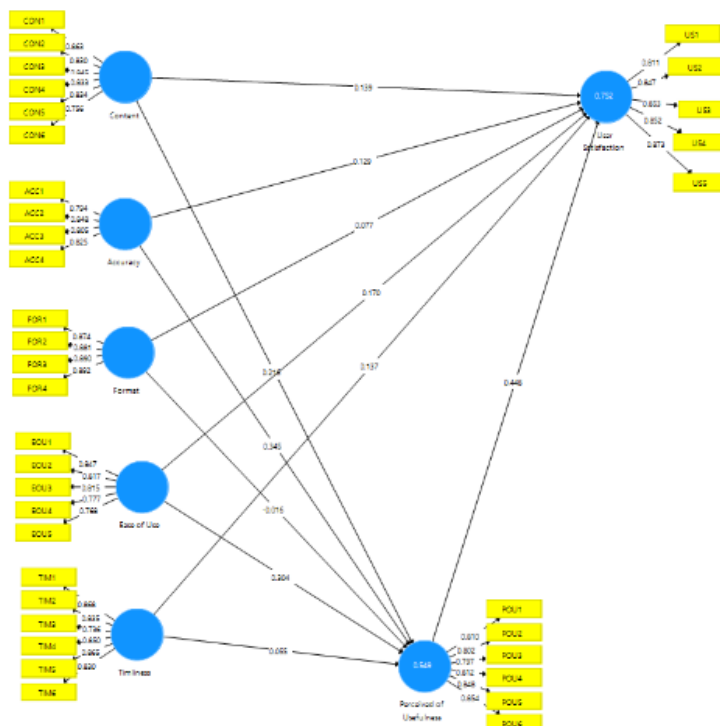


Figure 4. Measurement Model

Table 2. Validity Test

Variable	Item	ACC	CON	EOU	FOR	POU	TIM	US
Accuracy (ACC)	ACC1	0.794						
	ACC2	0.848						
	ACC3	0.805						
	ACC4	0.825						
Content (CON)	CON1		0.863					
	CON2		0.83					
	CON3		0.845					
	CON4		0.833					
	CON5		0.834					
	CON6		0.756					
Ease of Use (EOU)	EOU1			0.847				
	EOU2			0.817				
	EOU3			0.815				
	EOU4			0.777				
	EOU5			0.768				
Format (FOR)	FOR1				0.874			
	FOR2				0.881			
	FOR3				0.89			
	FOR4				0.892			
Perceived of Usefulness (POU)	POU1					0.81		
	POU2					0.802		
	POU3					0.797		
	POU4					0.812		
	POU5					0.848		
	POU6					0.854		
Timeliness (TIM)	TIM1						0.868	
	TIM2						0.835	
	TIM3						0.736	
	TIM4						0.85	
	TIM5						0.865	
	TIM6						0.83	
User Satisfaction (US)	US1							0.811
	US2							0.847
	US3							0.853
	US4							0.852
	US5							0.873

Table 2 displays the results of the validity test, highlighting the outer loading values of each indicator associated with its respective latent construct, including accuracy, content, ease of use, format, perceived usefulness, timeliness, and user satisfaction. In PLS-SEM, convergent validity is deemed sufficient when indicator loadings surpass the suggested minimum of 0.70. The findings indicate that all indicators across the examined constructs meet this criterion. For the accuracy construct, outer loading values range from 0.794 to 0.848, demonstrating that each indicator reliably represents the accuracy dimension of the system. The content construct shows strong indicator loadings between 0.756 and 0.863, confirming that the indicators effectively capture the quality and relevance of system content.

Indicators associated with ease-of-use exhibit loading values ranging from 0.768 to 0.847, indicating a consistent and valid measurement of perceived ease in using the application. The format construct records notably high loading values, between 0.874 and 0.892, suggesting that the presentation and layout of the system are very well reflected by the selected indicators. Furthermore, the perceived usefulness construct demonstrates satisfactory indicator loadings, all exceeding 0.79, with the highest value reaching 0.854. This confirms that users' perceptions of the application's usefulness are measured with sufficient accuracy. The timeliness construct also meets the convergent validity requirement, with loading values ranging from 0.736 to 0.868, indicating that the indicators appropriately represent the timeliness of information delivery. Finally, the user satisfaction construct shows strong outer loading values between 0.811 and 0.873,

reflecting a high degree of validity in measuring user satisfaction. Thus, these results confirm that all measurement indicators satisfy the convergent validity criteria and are suitable for subsequent structural model analysis.

Table 3. Reliability Test

Variable	Cronbach's Alpha	Composite Reliability
Accuracy	0.835	0.89
Ease of Use	0.865	0.902
Perceived of Usefulness	0.903	0.925
User Satisfaction	0.902	0.927
Content	0.908	0.929
Timeliness	0.911	0.931
Format	0.907	0.935

Table 3 displays the evaluation of the reliability of the research constructs utilizing Cronbach's alpha and composite reliability metrics. In PLS-SEM analysis, a construct is deemed reliable when both reliability coefficients surpass the suggested threshold of 0.70, signifying internal consistency among the indicators. The findings indicate that every construct within the model shows high reliability. The accuracy construct exhibits a Cronbach's alpha value of 0.835 and a composite reliability value of 0.890, demonstrating a strong level of consistency across its indicators. In the same manner, ease of use obtains Cronbach's alpha and composite reliability scores of 0.865 and 0.902, respectively, validating that the indicators effectively assess this construct.

The perceived usefulness construct shows a Cronbach's alpha of 0.903 and a composite reliability of 0.925, indicating outstanding internal consistency. Similarly, user satisfaction shows high reliability with Cronbach's alpha at 0.902 and composite reliability at 0.927. The constructs' content and timeliness demonstrate strong reliability as well, with Cronbach's alpha values of 0.908 and 0.911 and composite reliability values of 0.929 and 0.931, respectively. Ultimately, the format construct exhibits the highest composite reliability score (0.935), alongside a Cronbach's alpha of 0.907, signifying very strong consistency among its components. Consequently, these results verify that all constructs fulfill the reliability standards and are appropriate for additional examination in the structural model

Table 4. Hypothesis Test Result

Variable	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
Perceived of Usefulness → User Satisfaction	0.448	0.448	0.085	5.304	<0.001
Accuracy → Perceived of Usefulness	0.345	0.339	0.079	4.357	<0.001
Ease of Use → Perceived of Usefulness	0.304	0.306	0.076	4.004	<0.001
Content → Perceived of Usefulness	0.216	0.215	0.073	2.945	0.003
Timeliness → Perceived of Usefulness	0.055	0.057	0.085	0.644	0.52
Format → Perceived of Usefulness	-0.016	-0.017	0.04	0.394	0.694
Accuracy → User Satisfaction	0.129	0.129	0.056	2.317	0.021
Ease of Use → User Satisfaction	0.17	0.172	0.081	2.087	0.037
Content → User Satisfaction	0.139	0.142	0.079	1.758	0.079
Timeliness → User Satisfaction	0.137	0.131	0.059	2.297	0.022
Format → User Satisfaction	0.077	0.078	0.028	2.814	0.005

Table 4 displays the outcomes of hypothesis testing derived from Partial Least Squares Structural Equation Modeling (PLS-SEM). The importance of every relationship was assessed using path coefficients, t-statistics, and p-values. A relationship is deemed statistically significant if the t-value is greater than 1.96, and the p-value falls below 0.05. The results indicate that perceived usefulness has a positive and significant effect on user satisfaction ($\beta = 0.448; t = 5.304; p < 0.001$). This finding suggests that users who perceive the Maxim application as applicable tend to report higher levels of satisfaction. Furthermore, accuracy ($\beta = 0.345; t = 4.357; p < 0.001$), ease of use ($\beta = 0.304; t = 4.004; p < 0.001$), and content ($\beta = 0.216; t = 2.945; p = 0.003$) are found to have significant positive effects on perceived usefulness, indicating that accurate system performance, ease of interaction, and informative content contribute to users' perceptions of the application's usefulness.

In addition to indirect effects, several variables demonstrate significant direct effects on user satisfaction. Format ($\beta = 0.077; t = 2.814; p = 0.005$), accuracy ($\beta = 0.129; t = 2.317; p = 0.021$), timeliness ($\beta = 0.137; t = 2.297; p = 0.022$), and ease of use ($\beta = 0.170; t = 2.087; p = 0.037$) positively and significantly influence user satisfaction. These results indicate that system presentation, reliable information delivery, timely service, and ease of operation directly enhance users' satisfaction levels.

Conversely, content does not have a significant direct effect on user satisfaction ($\beta = 0.139; t = 1.758; p = 0.079$). In addition, timeliness ($\beta = 0.055; t = 0.644; p = 0.520$) and format ($\beta = -0.016; t = 0.394; p = 0.694$) do not significantly affect perceived usefulness. These findings highlight the central role of perceived usefulness in shaping user satisfaction and suggest that it serves as a key mechanism through which several system-related factors influence satisfaction with the Maxim application.

Table 5. R² Values

Variable	R ²
User Satisfaction	0.752
Perceived of Usefulness	0.549

Based on Table 5, the user satisfaction variable has an R² value of 0.752, indicating that 75.2% of the variance in user satisfaction is explained by the independent variables included in the research model. This value is classified as strong, suggesting that the model has a high explanatory power in predicting user satisfaction. The remaining 24.8% of the variance is influenced by other factors not included in the model. Meanwhile, the Perceived of usefulness variable shows an R² value of 0.549, which means that 54.9% of the variance in perceived of usefulness can be explained by the independent variables in the model. This value falls into the moderate category, indicating that the model has an adequate explanatory capability for this construct, while the remaining 45.1% is explained by other variables outside the model.

DISCUSSION

The results of the path analysis indicate that perceived usefulness has a positive and significant effect on user satisfaction ($\beta = 0.448; t = 5.304; p = 0.000$), reinforcing the role of usefulness perception as a key determinant of system success. This finding is consistent with the Expectation Confirmation Model (ECM) proposed by Bhattacharjee (2001), which emphasizes that perceived usefulness plays a crucial role in shaping user satisfaction and post-adoption behavior. Recent empirical studies in the digital service context also support this relationship. For example, Makbul et al. (2025) found that perceived usefulness significantly influences user satisfaction with the Gojek online transportation application, which subsequently contributes to user loyalty.

In another pathway, accuracy was found to have a positive and significant effect on both perceived usefulness ($\beta = 0.345; t = 4.357; p = 0.000$) and user satisfaction ($\beta = 0.129; t = 2.317; p = 0.021$). This result suggests that systems capable of delivering accurate and reliable information enhance users' perceptions of usefulness while

simultaneously strengthening trust and satisfaction. This finding aligns with the work of Pavlou and Fygenon (2006), who identified information accuracy as a critical factor influencing user satisfaction with information systems.

Furthermore, ease of use demonstrated a significant influence on perceived usefulness ($\beta = 0.304$; $t = 4.004$; $p = 0.000$) and user satisfaction ($\beta = 0.170$; $t = 2.087$; $p = 0.037$). According to the Technology Acceptance Model (TAM) developed by Davis (1989), ease of use is a fundamental driver of technology adoption and positive user perceptions. Recent studies by Tambunan and Edastama (2025), conducted in the context of Gojek and Grab applications, also revealed that perceived ease of use and perceived usefulness jointly contribute to user satisfaction, confirming the continued relevance of TAM in the modern digital transportation industry.

The content quality variable showed a significant relationship with perceived usefulness ($\beta = 0.216$; $t = 2.945$; $p = 0.003$), but it did not have a direct effect on user satisfaction ($\beta = 0.139$; $t = 1.758$; $p = 0.079$). This outcome is consistent with the Information Systems Success Model proposed by DeLone and McLean (2003), which suggests that information quality primarily influences satisfaction indirectly through perceived usefulness. Similar empirical patterns have been observed in studies of digital services, where content quality more strongly predicts usefulness perceptions than immediate satisfaction.

The format variable was found to have a positive and significant effect on user satisfaction ($\beta = 0.077$; $t = 2.814$; $p = 0.005$), while its effect on perceived usefulness was not significant ($\beta = -0.016$; $t = 0.394$; $p = 0.694$). This indicates that visual design and layout enhance user satisfaction without directly shaping perceptions of system usefulness. Similarly, timeliness significantly influenced user satisfaction ($\beta = 0.137$; $t = 2.297$; $p = 0.022$) but did not significantly affect perceived usefulness ($\beta = 0.055$; $t = 0.644$; $p = 0.520$). These findings suggest that system responsiveness and timely information delivery improve user experience and satisfaction, even if they do not directly alter perceptions of usefulness (Zhou, 2013; Handayani et al., 2025)

Thus, accuracy, ease of use, format, and timeliness emerge as key factors affecting user satisfaction with the Maxim application, either directly or indirectly through perceived usefulness. Among all variables, perceived usefulness serves as the primary mediating factor linking system quality to user satisfaction. These results emphasize that enhancing users' perceptions of system usefulness should be a central focus in the development of digital services, particularly in online transportation applications (Lu et al., 2019; Macedo et al., 2021).

CONCLUSION

This research demonstrates that perceived usefulness is the main factor influencing user satisfaction in online transportation services, reinforcing both the Expectation Confirmation Model (ECM) and the Technology Acceptance Model (TAM). The results show that precision and user-friendliness greatly affect perceived utility and user satisfaction, emphasizing the significance of dependable and easy-to-use systems in forming favorable user assessments. Furthermore, content quality was found to affect perceived usefulness but not user satisfaction directly, suggesting an indirect effect through users' perceptions of system benefits. In contrast, format and timeliness have a direct and significant impact on user satisfaction, even though they do not significantly influence perceived usefulness. This implies that clear visual presentation and timely system responses can immediately enhance the user experience.

From a practical standpoint, online transportation providers should focus on improving system accuracy, simplifying interfaces, and ensuring reliable real-time information delivery. Regular system monitoring and updates are also essential to minimize technical issues that may reduce user satisfaction. This study is limited by its geographic focus on the Jabodetabek area, its cross-sectional design, and the restricted range of variables examined. Future studies are encouraged to broaden the research scope,

apply longitudinal approaches, and include additional factors such as trust, service quality, and pricing fairness to gain deeper insights into user satisfaction and continued usage in online transportation services.

FUNDING STATEMENT: This research did not receive any specific grant from funding agencies in the public, commercial, or not - for - profit sectors.

CONFLICTS OF INTEREST: The author declares no conflict of interest.

DECLARATION OF GENERATIVE AI STATEMENT: During the preparation of this work the author(s) used ChatGPT, Grammarly, and Turnitin in order to assist with language refinement, grammar checking, and originality verification. After using this tool/service, the author(s) reviewed and edited the content as needed and take full responsibility for the content of the publication.

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