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Demand formation and competitive dynamics in digital platform markets: Evidence from online travel platforms

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Abstract. *Demand formation in digital platform markets reflects the interplay between competitive intensity, consumer behavior, and transaction efficiency, particularly in the online travel industry. This study examines how promotion and online transactions shape sales performance using firm-level survey data from platform users. The findings indicate that promotion and transaction efficiency significantly drive sales, while e-service quality shows no significant effect, suggesting its role as a baseline expectation rather than a differentiating factor. These results highlight shifting demand dynamics and emphasize the importance of strategic market instruments in increasingly competitive digital environments.*

Keywords: *digital platforms; demand formation; market competition; online transactions; promotion*

I. INTRODUCTION

The rapid expansion of the digital economy has fundamentally reshaped market structures, consumer behavior, and competitive dynamics across industries. In particular, the emergence of digital platforms has transformed how goods and services are exchanged, reducing transaction costs, increasing market transparency, and intensifying competition among firms. Within this context, online travel platforms represent a salient example of platform-based markets where multiple service providers and consumers interact in a highly dynamic and data-driven environment. These platforms not only facilitate transactions but also play a crucial role in shaping demand formation through pricing strategies, promotional activities, and digital transaction mechanisms.

From a macroeconomic perspective, digital platforms contribute to market efficiency by lowering information asymmetry and enabling real-time price discovery (Varian, 2019). At the same time, they introduce new forms of competition characterized by low switching costs,

network effects, and platform-based differentiation (Rochet & Tirole, 2003; Parker et al., 2016). In such markets, traditional determinants of firm performance such as service quality may no longer function as primary drivers of demand, particularly when they are perceived as standardized or expected by consumers. Instead, firms increasingly rely on strategic instruments such as promotion and transaction efficiency to influence consumer decisions and capture market share.

The online travel industry provides a compelling context to examine these dynamics. As one of the most digitally integrated sectors, it has experienced rapid growth alongside increased competition among platforms offering similar services, including flight bookings, hotel reservations, and travel packages. In Indonesia, the online travel market has evolved into a highly competitive ecosystem, with several major platforms competing for dominance. Despite the proliferation of competitors, certain platforms have maintained a leading position over time, although recent trends suggest increasing competitive pressure and potential shifts in consumer preferences.

Empirical evidence from market data illustrates these dynamics. The following table presents the Top Brand Index of major online travel platforms in Indonesia over the period 2021–2023.

Table 1. Market Share of Online Travel Platforms in Indonesia (2021–2023)

No	Platform	2021	2022	2023
1	Traveloka	38.30%	38.50%	35.90%
2	Tiket.com	11.10%	13.60%	12.20%
3	Agoda	7.20%	7.80%	9.40%
4	Trivago	6.60%	7.40%	6.60%
5	Pegipegi	5.00%	5.10%	4.30%

Source: Top Brand Index (2023)

Data indicate that while the leading platform consistently dominates the market, its share declined in 2023, signaling intensified competition and potential changes in demand patterns. From an economic standpoint, this trend reflects the increasing contestability of digital markets, where consumers can easily switch between platforms due to minimal transaction frictions. According to transaction cost theory (Williamson, 1985), reductions in search and switching costs empower consumers to make more flexible decisions, thereby intensifying competitive pressures on firms. Consequently, platforms must continuously innovate not only in terms of service quality but also in pricing, promotion, and transaction mechanisms to sustain their competitive advantage.

In parallel, the concept of demand formation in digital markets has evolved beyond traditional utility maximization frameworks. Consumers in platform environments are influenced by a combination of factors, including perceived value, convenience, trust, and promotional incentives (Kotler & Keller, 2016; Lemon & Verhoef, 2016). Promotion, for instance, plays a critical role in shaping short-term demand by altering price perceptions and stimulating purchase intentions (Blattberg & Neslin, 1990). In digital settings, promotional strategies such as discounts, flash sales, and personalized offers are amplified by data analytics, making them more targeted and effective.

Moreover, online transactions represent a key mechanism through which platforms reduce market frictions and enhance consumer experience. Efficient digital transaction systems not only facilitate faster and more secure payments but also contribute to perceived ease of use, which has been shown to significantly influence adoption and usage behavior (Davis, 1989; Venkatesh et al., 2003). From a broader economic perspective, improved transaction efficiency can enhance overall market performance by increasing the volume and frequency of exchanges.

While the importance of promotion and transaction efficiency is well established, the role of e-service quality in digital platforms remains subject to ongoing debate. E-service quality, often defined as the effectiveness and efficiency of online service delivery (Parasuraman et al., 2005), has traditionally been considered a key determinant of customer satisfaction and loyalty. However, in mature digital markets where baseline service quality is relatively uniform across platforms, its marginal impact on demand may diminish. This phenomenon aligns with the concept of "hygiene factors" in consumer behavior, where certain attributes are necessary but not sufficient to drive differentiation (Herzberg, 1966).

Existing empirical studies provide mixed evidence regarding these relationships. Some studies find that e-service quality significantly influences customer satisfaction and purchase decisions (Zeithaml et al., 2002; Blut et al., 2015), while others suggest that its effect becomes less pronounced in highly competitive digital environments (Huang & Benyoucef, 2013). In contrast, promotion and pricing strategies consistently emerge as strong predictors of consumer behavior and sales performance (Gupta & Cooper, 1992; Pauwels et al., 2004). Similarly, research on digital transactions highlights their critical role in enhancing user experience and driving platform adoption (Gefen et al., 2003; Kim et al., 2010).

Despite these advances, there remains a gap in the literature concerning the relative importance of these factors within the context of digital platform markets, particularly in emerging economies. Most existing studies focus on micro-level consumer behavior or firm-level marketing strategies, with limited integration into broader economic frameworks that consider market dynamics and competition. Furthermore, empirical evidence from the online travel industry especially in rapidly growing markets such as Indonesia remains relatively scarce.

Addressing this gap, the present study examines demand formation and competitive dynamics in online travel platforms by analyzing the roles of promotion, online transactions, and e-service quality in shaping sales performance. By adopting a macro-oriented perspective, this study moves beyond traditional marketing analysis to situate these variables within the broader context of digital market competition and efficiency. Specifically, it investigates whether e-service quality continues to serve as a significant driver of demand or whether its role has diminished relative to other factors in mature platform markets.

The contribution of this study is threefold. First, it provides empirical evidence on demand drivers in digital platform markets, contributing to the growing literature on the digital economy and platform competition. Second, it offers a nuanced understanding of the role of e-service quality, highlighting its potential transition from a differentiating factor to a baseline expectation. Third, it generates practical insights for platform managers regarding the strategic importance of promotion and transaction efficiency in sustaining competitive advantage. In summary, as digital platforms continue to redefine market structures and consumer behavior, understanding the mechanisms of demand formation becomes increasingly important. This study seeks to advance this understanding by integrating insights from microeconomic theory, marketing research, and digital platform literature, thereby offering a comprehensive analysis of sales dynamics in the online travel industry.

II. LITERATURE REVIEW

2.1 Digital Platform Markets and Demand Formation. Digital platform markets have become a central feature of the modern economy, enabling interactions between consumers and service providers within integrated ecosystems. Rochet and Tirole (2003) conceptualize platforms as two-sided markets that internalize cross-group externalities and influence pricing structures. Parker et al. (2016) further argue that platform competition is driven by network effects, data accumulation, and user engagement strategies. In such environments, demand formation is no longer determined solely by price but also by platform-mediated interactions and digital functionalities. Consequently, understanding sales performance in digital platforms requires

linking micro-level consumer behavior with macro-level market dynamics.

From a microeconomic perspective, demand formation reflects the process through which consumers translate preferences into purchasing decisions under constraints. Varian (2019) emphasizes that digital technologies reduce search costs and increase information availability, thereby enhancing consumer decision-making efficiency. This shift leads to more elastic demand, where consumers are highly responsive to changes in price, promotion, and convenience. As a result, traditional determinants such as service quality may exhibit diminishing marginal effects in highly competitive markets. Instead, firms must leverage dynamic instruments such as promotion and transaction efficiency to influence demand outcomes.

Empirical evidence suggests that digital markets are characterized by heightened competition and rapid shifts in consumer preferences. Brynjolfsson and McAfee (2014) note that digitalization expands consumer choice, increasing the importance of differentiation strategies. Einav et al. (2016) find that online markets exhibit stronger price sensitivity due to transparency and ease of comparison. In this context, promotional strategies and transaction mechanisms become critical tools for shaping consumer demand. These findings highlight the need to reassess traditional marketing variables within the broader framework of digital market competition.

In the online travel industry, demand formation is particularly complex due to the intangible and experience-based nature of services. Lemon and Verhoef (2016) argue that customer experience across digital touchpoints significantly influences purchase decisions. Platforms integrate search, booking, and payment processes, thereby affecting both perceived value and convenience. The presence of multiple competing platforms further intensifies switching behavior, reinforcing the role of short-term demand drivers. Therefore, examining how e-service quality, promotion, and online transactions jointly influence sales provides valuable insights into demand dynamics in digital platform markets.

2.2 E-Service Quality and Its Evolving Role in Digital Markets. E-service quality refers to the effectiveness and efficiency of online service delivery in facilitating customer interactions and transactions. Parasuraman et al. (2005) define e-service quality as the extent to which a website enables efficient and reliable shopping experiences. Zeithaml et al. (2002) emphasize its role in shaping customer satisfaction, trust, and loyalty in digital environments. Traditionally, high e-service quality has been associated with improved customer retention and increased sales performance. However, its role may evolve as digital markets mature and baseline service standards become more uniform.

From a theoretical standpoint, e-service quality can be linked to utility theory, where consumers derive value from both functional and experiential attributes of a service. Davis (1989), through the Technology Acceptance Model (TAM), highlights perceived ease of use and usefulness as key determinants of technology adoption. Venkatesh et al. (2003) extend this framework by incorporating additional factors such as social influence and facilitating conditions. In digital platforms, these dimensions are embedded within e-service quality, influencing how users interact with the system. Nevertheless, as platforms converge in terms of usability and reliability, the marginal utility derived from improvements in e-service quality may decline.

Empirical studies provide mixed findings regarding the impact of e-service quality on sales and consumer behavior. Blut et al. (2015) find that e-service quality significantly affects customer satisfaction and loyalty across e-commerce contexts. Similarly, Santos (2003) identifies efficiency, system availability, and privacy as key dimensions influencing online service evaluation. However, Huang and Benyoucef (2013) suggest that in highly competitive digital environments, social and promotional factors may outweigh service quality in driving purchase decisions. This indicates that the relative importance of e-service quality may depend on market maturity and competitive intensity.

In the context of online travel platforms, e-service quality remains a necessary but potentially insufficient condition for driving sales. Consumers expect platforms to provide reliable, fast, and secure services as a baseline requirement. As a result, improvements in e-service quality may not significantly differentiate one platform from another. This aligns with Herzberg's (1966) two-factor theory, where certain attributes function as hygiene factors rather than motivators. Therefore, while e-service quality is essential for maintaining user trust, its direct impact on sales performance may be limited compared to other strategic variables.

2.3 Promotion as a Strategic Driver of Demand and Sales. Promotion plays a central role in influencing consumer demand by altering perceptions of value and stimulating purchase intentions. Kotler and Keller (2016) define promotion as a set of activities designed to communicate product value and persuade customers to make purchases. Blattberg and Neslin (1990) emphasize that promotional strategies, such as discounts and special offers, can generate immediate increases in sales. In digital markets, promotion becomes even more powerful due to the availability of real-time data and targeted marketing techniques. As a result, promotion serves as a key instrument for shaping short-term demand dynamics.

From an economic perspective, promotion can be understood through the lens of price elasticity and demand stimulation. Gupta (1988) demonstrates that temporary price reductions can significantly increase sales by attracting price-sensitive consumers. Pauwels et al. (2004) further show that promotional activities have both short-term and long-term effects on brand performance. In digital platforms, these effects are amplified by algorithmic targeting and personalized recommendations. Consequently, promotion not only influences individual purchasing decisions but also affects overall market demand.

Empirical research consistently finds a positive relationship between promotion and sales performance. Neslin et al. (2006) highlight that promotional campaigns can increase both purchase frequency and transaction value. In the context of e-commerce, Chatterjee (2010) finds that online promotions significantly influence consumer purchase intentions. Similarly, Li et al. (2019) show that digital promotions enhance customer engagement and conversion rates. These findings underscore the importance of promotion as a primary driver of sales in competitive digital markets.

In online travel platforms, promotion is particularly important due to the high level of competition and price sensitivity among consumers. Discounts, cashback offers, and bundled packages are commonly used to attract users and increase bookings. The ease of comparing prices across platforms further intensifies the impact of promotional strategies. As a result, platforms must continuously innovate in their promotional approaches to maintain competitiveness. This highlights the critical role of promotion in shaping demand and driving sales performance in digital travel markets.

2.4 Online Transactions and Market Efficiency. Online transactions represent a fundamental component of digital platforms, enabling the exchange of goods and services through electronic systems. Gefen et al. (2003) argue that trust and perceived ease of use are key determinants of online transaction adoption. Kim et al. (2010) further emphasize the importance of security and reliability in influencing consumer willingness to engage in digital transactions. In platform markets, efficient transaction systems reduce frictions and enhance user experience. This, in turn, contributes to increased transaction frequency and overall sales performance.

From a theoretical perspective, online transactions can be analyzed through transaction cost economics. Williamson (1985) posits that reducing transaction costs enhances market efficiency and facilitates exchange. In digital environments, technologies such as online payment systems and automated processes significantly lower these costs. This leads to more efficient allocation of resources and higher levels of market activity. Consequently, transaction efficiency becomes a key determinant of demand and sales in digital platforms.

Empirical studies support the positive relationship between online transactions and economic performance. Pavlou (2003) finds that trust in electronic commerce systems significantly influences transaction intentions. Similarly, Chen and Barnes (2007) demonstrate that perceived security and usability affect online purchasing behavior. In the context of digital platforms, seamless transaction processes can enhance customer satisfaction and encourage repeat purchases. These findings highlight the critical role of transaction mechanisms in driving market outcomes.

In online travel platforms, the efficiency of online transactions directly impacts user experience and conversion rates. Features such as instant booking, multiple payment options, and secure payment gateways contribute to perceived convenience. As consumers increasingly prioritize speed and simplicity, platforms that offer superior transaction experiences gain a competitive advantage. This reinforces the importance of online transactions as a key driver of sales performance. Therefore, analyzing their role alongside promotion and e-service quality provides a comprehensive understanding of demand dynamics in digital markets.

III. METHODS

3.1 Research Design and Context. This study adopts a quantitative research design to examine the determinants of sales performance in digital platform markets, with a specific focus on online travel platforms. The empirical context is based on users of an online travel application in Medan, Indonesia, representing a rapidly growing digital market. Data collection was conducted over the period from April 2025 to April 2026. A structured survey approach was employed to capture user perceptions regarding platform-related factors. This design enables the analysis of relationships between key variables influencing demand formation and sales outcomes.

3.2 Population and Sample. The population of this study consists of users of online travel platforms in Medan. A purposive sampling technique was applied to ensure that respondents had prior experience using the platform and engaging in online transactions. The sample size was determined using the Slovin formula, resulting in a total of 100 respondents. This sample size is considered adequate for regression-based analysis in behavioral and digital market studies (Hair et al., 2019). Respondents were selected based on their active usage of the platform within a specified period. This approach ensures the relevance and reliability of the collected data.

3.3 Data Collection and Sources. This study utilizes both primary and secondary data sources. Primary data were collected through a structured questionnaire distributed to respondents, capturing perceptions of e-service quality, promotion, online transactions, and sales-related outcomes. The questionnaire was designed using Likert-scale measurements to ensure consistency and comparability of responses. Secondary data were obtained from relevant literature, industry reports, and prior empirical studies to support theoretical development. The combination of data sources enhances the robustness of the analysis. This approach is consistent with empirical research in digital platform studies (Gefen et al., 2003).

3.4 Measurement of Variables. The study examines four main variables: e-service quality, promotion, online transactions, and sales performance. E-service quality is measured using indicators such as efficiency, fulfillment, system availability, and privacy (Parasuraman et al., 2005). Promotion is assessed through dimensions including advertising, sales promotion, personal selling, public relations, and direct marketing (Kotler & Keller, 2016). Online transactions are measured based on accessibility, user capability, and transaction processes (Pavlou, 2003). Sales performance is captured through indicators such as sales volume, sales value, growth, and market share. All variables are measured using a five-point Likert scale. This

operationalization ensures alignment with established measurement frameworks in prior studies.

3.5 Data Quality Testing. To ensure the reliability and validity of the measurement instruments, several statistical tests were conducted. Validity was assessed using Pearson correlation, with a significance level of 0.05 to determine whether each item accurately measures its intended construct. Reliability was evaluated using Cronbach's Alpha, with a threshold value of 0.70 indicating acceptable internal consistency (Hair et al., 2019). These tests confirm that the data are suitable for further statistical analysis. Ensuring data quality is essential for producing reliable empirical findings. The results of these tests indicate that all variables meet the required standards.

3.6 Analytical Model. This study employs multiple linear regression analysis to examine the relationship between independent variables and sales performance. The model is specified as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

where Y represents sales performance, X_1 denotes e-service quality, X_2 represents promotion, and X_3 refers to online transactions. The constant term is represented by α, while β_1, β_2, and β_3 are regression coefficients. The error term is denoted by ε\varepsilonε. This model allows for the assessment of both partial and simultaneous effects of the independent variables.

3.7 Data Analysis Techniques. The analysis begins with descriptive statistics to summarize respondent characteristics and variable distributions. Classical assumption tests, including normality, multicollinearity, and heteroskedasticity tests, are conducted to ensure the validity of the regression model. The coefficient of determination (R^2) is used to assess the explanatory power of the model. Hypothesis testing is performed using t-tests for partial effects and F-tests for simultaneous effects, with a significance level of 5%. These techniques are consistent with standard econometric practices in social science research (Wooldridge, 2016). The results provide insights into the relative importance of each variable in shaping sales performance.

IV. RESULTS AND DISCUSSION

4.1 Respondent Characteristics. This study involves 100 respondents who are active users of online travel platforms. The demographic profile indicates that the majority of respondents are female, suggesting a relatively higher engagement of women in digital travel services. In terms of age distribution, most respondents fall within the 20–25 age group, reflecting the dominance of younger, digitally literate consumers. Regarding usage behavior, the majority reported using the platform approximately 2–3 times within the last six months. This indicates a moderate level of engagement with online travel services. Overall, the respondent profile is consistent with typical users in digital platform markets.

4.2 Descriptive Statistics. To provide an initial overview of the data, descriptive statistics were calculated for all variables, including minimum values, maximum values, mean scores, and standard deviations. These statistics help to capture the general pattern of respondent perceptions toward e-service quality, promotion, online transactions, and sales performance. The results also allow for the identification of variability and consistency across responses. A higher mean value indicates stronger agreement or more positive perceptions among respondents. The results are presented in Table 2.

Table 2. Descriptive Statistics of Variables

Variable	Minimum	Maximum	Mean	Std. Deviation
E-Service Quality	28	40	34.43	3.062
Promotion	27	50	41.76	4.553
Online Transactions	29	39	33.99	2.751
Sales Performance	24	40	33.30	3.407

Source: Processed data (2026)

The results indicate that all variables have relatively high mean values, suggesting that respondents generally perceive the platform positively. Promotion records the highest mean score, indicating its strong presence in user perception. The standard deviations are relatively low, reflecting consistent responses among participants. Sales performance also shows a stable distribution, indicating moderate variability. These findings provide a preliminary indication of the overall data structure before further analysis.

4.3 Normality Test. The normality test aims to determine whether the residuals of the regression model are normally distributed. This study employs both graphical and statistical approaches to assess normality. The graphical approach includes histogram and normal probability plot (P–P plot), while the statistical approach uses the Kolmogorov–Smirnov test. The graphical results are presented in Figure 1 and Figure 2.

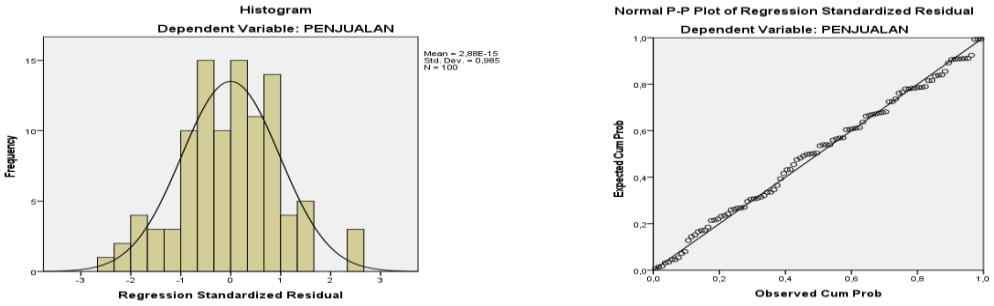

Fig 1. Histogram of Residual Distribution (left) and Normal P–P Plot of Regression Standardized Residual (right)

The histogram shows a bell-shaped distribution, indicating that the residuals are approximately normally distributed. Similarly, the P–P plot demonstrates that the residual points closely follow the diagonal line, confirming the normality assumption.

Table 3. Kolmogorov–Smirnov Normality Test

Test Statistic	Asymp. Sig. (2-tailed)
—	0.200

Source: Processed data (2026)

The Kolmogorov–Smirnov test yields a significance value of 0.200, which is greater than the 0.05 threshold. This indicates that the residuals are normally distributed. Therefore, the normality assumption is satisfied.

4.4 Multicollinearity Test. The multicollinearity test is conducted to examine whether there is a high correlation among independent variables. High multicollinearity can distort regression estimates and reduce model reliability. This study uses tolerance values and Variance Inflation Factor (VIF) to assess multicollinearity. The results are presented in Table 4.

Table 4. Multicollinearity Test Results

Variable	Tolerance	VIF
E-Service Quality	0.475	2.107
Promotion	0.529	1.889
Online Transactions	0.641	1.560

Source: Processed data (2026)

The results show that all tolerance values exceed 0.10 and all VIF values are below 10. This indicates that there is no multicollinearity among the independent variables. Therefore, the regression model is considered appropriate for further analysis.

4.5 Heteroskedasticity Test. The heteroskedasticity test aims to determine whether the variance of residuals is constant across observations. This study employs both the Glejser test and scatterplot analysis. The graphical result is presented in Figure 3.

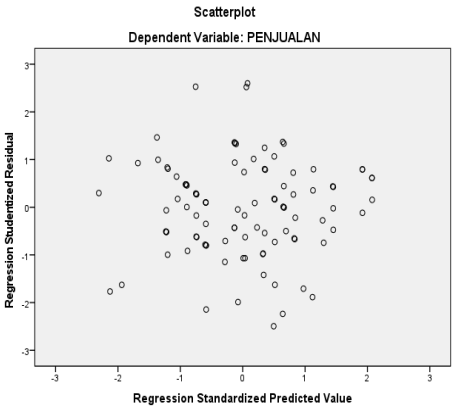

Fig 3. Scatterplot of Residuals

The scatterplot shows that residuals are randomly distributed without forming a specific pattern. This indicates that heteroskedasticity is not present in the model. Additionally, the Glejser test results indicate that all significance values are above 0.05. Therefore, it can be concluded that the model does not suffer from heteroskedasticity. This confirms that the regression assumptions are met.

4.6 Regression Analysis. To examine the relationships between the independent variables and sales performance, multiple linear regression analysis was employed. This method allows for the assessment of both individual (partial) and joint (simultaneous) effects of e-service quality, promotion, and online transactions on sales performance. The regression results provide insights into the magnitude and direction of each variable's influence. Before interpretation, all classical assumptions were confirmed to be satisfied. The estimated regression model is presented in Table 5.

Table 5. Multiple Linear Regression Results

Variable	Coefficient (β)	t-value	Sig.
Constant	2.598	—	—
E-Service Quality	-0.003	-0.024	0.981
Promotion	0.396	5.787	0.000
Online Transactions	0.419	4.063	0.000

Source: Processed data (2026)

The regression results indicate that promotion and online transactions have positive coefficients, suggesting a direct relationship with sales performance. In contrast, e-service quality shows a near-zero and negative coefficient, indicating a negligible relationship. The magnitude of the coefficients suggests that online transactions have the strongest effect, followed by promotion. The statistical significance of each variable is further examined through hypothesis testing. These findings provide the basis for evaluating the proposed relationships.

The estimated regression equation can be expressed as:

$$Y = 2.598 - 0.003X_1 + 0.396X_2 + 0.419X_3 + e$$

4.7 Coefficient of Determination. The coefficient of determination (R^2) is used to measure the explanatory power of the regression model in capturing variations in the dependent variable. It indicates the proportion of variance in sales performance that can be explained by the independent variables included in the model. A higher R^2 value suggests better model fit. The results are presented in Table 6.

Table 6. Model Summary

R	R Square	Adjusted R Square
—	0.574	0.561

Source: Processed data (2026)

The results show that the R Square value is 0.574, indicating that 57.4% of the variation in sales performance can be explained by e-service quality, promotion, and online transactions. The adjusted R Square value of 0.561 suggests that the model remains robust after adjusting for the number of predictors. The remaining 42.6% of the variance is explained by other factors not included in the model. This indicates that the model has moderate explanatory power. Overall, the model is considered adequate for analyzing sales performance in digital platforms.

4.7 Simultaneous Test (F-Test). The F-test is used to determine whether all independent variables jointly have a significant effect on the dependent variable. This test evaluates the overall significance of the regression model. A significance value below 0.05 indicates that the model is statistically significant. The results are presented in Table 7.

Table 7. ANOVA (F-Test Results)

F - value	Sig.
43.114	0.000

Source: Processed data (2026)

The F-test results show a significance value of 0.000, which is below the 0.05 threshold. This indicates that e-service quality, promotion, and online transactions simultaneously have a significant effect on sales performance. Therefore, the regression model is statistically valid. This confirms that the independent variables collectively explain variations in the dependent variable. The model is suitable for further interpretation.

4.8 Partial Test (t-Test). The t-test is used to examine the individual effect of each independent variable on sales performance. A significance value below 0.05 indicates a statistically significant effect. The results are summarized in Table 5 and interpreted as follows. E-service quality has a significance value of 0.981, which is greater than 0.05. This indicates that e-service quality does not have a significant effect on sales performance. The coefficient is also close to zero, suggesting minimal influence.

Promotion has a significance value of 0.000, which is below 0.05. This indicates that

promotion has a positive and significant effect on sales performance. The coefficient value shows that an increase in promotion leads to an increase in sales. Online transactions also show a significance value of 0.000, indicating a positive and significant effect on sales performance. The coefficient suggests that improvements in transaction processes contribute to higher sales outcomes. Among the variables, online transactions exhibit the strongest effect. These results confirm the varying roles of the independent variables in influencing sales performance.

Discussion

The Role of E-Service Quality in Digital Platform Markets. The empirical findings indicate that e-service quality does not have a significant effect on sales performance. This result suggests that improvements in service quality do not necessarily translate into increased demand or transaction outcomes in the context of online travel platforms. From a theoretical perspective, this finding can be explained by the concept of baseline standardization in digital markets, where core service features such as system reliability, efficiency, and security are already expected by users (Parasuraman et al., 2005). As a result, e-service quality functions more as a necessary condition rather than a differentiating factor in influencing consumer decisions.

This finding is consistent with Herzberg's (1966) two-factor theory, which distinguishes between hygiene factors and motivators. In the context of digital platforms, e-service quality can be categorized as a hygiene factor that prevents dissatisfaction but does not actively drive purchasing behavior. Similarly, Huang and Benyoucef (2013) argue that as e-commerce platforms mature, social and promotional elements tend to outweigh service quality in shaping consumer engagement. This shift reflects the evolution of consumer expectations in digital environments, where basic service performance is taken for granted. Consequently, the marginal utility derived from improvements in e-service quality becomes increasingly limited.

From a microeconomic standpoint, the insignificant effect of e-service quality can also be linked to diminishing marginal utility. As consumers repeatedly interact with digital platforms, additional improvements in service quality yield smaller increments in perceived value (Varian, 2019). This is particularly relevant in highly competitive markets where competing platforms offer similar levels of service. In such conditions, consumers are less likely to base their decisions solely on service quality. Instead, they respond more strongly to variables that directly affect perceived economic benefits.

Empirical studies provide supporting evidence for this phenomenon. Blut et al. (2015) find that while e-service quality influences satisfaction, its direct impact on behavioral outcomes weakens in competitive digital environments. Similarly, Santos (2003) notes that core service attributes tend to become standardized across platforms over time. The present findings reinforce this argument by showing that e-service quality does not significantly predict sales performance. This suggests that platform providers must look beyond service quality to achieve competitive differentiation.

Promotion as a Key Driver of Demand Formation. The results demonstrate that promotion has a positive and significant effect on sales performance. This finding highlights the central role of promotional strategies in influencing consumer demand within digital platform markets. Promotion directly affects perceived value by reducing effective prices and increasing purchase incentives. In highly competitive environments, such strategies become essential for attracting and retaining users.

From an economic perspective, the effectiveness of promotion can be explained ——— a (1988) shows that temporary price reductions can significantly increase sales by attracting price-sensitive consumers. In digital markets, where price comparisons are easily accessible, consumers are more responsive to promotional offers. This increases the elasticity of demand and amplifies the impact of promotional activities. As a result, promotion becomes a powerful

tool for stimulating short-term demand.

The findings are also consistent with the concept of behavioral economics, which suggests that consumers are influenced by psychological factors such as perceived savings and urgency (Thaler, 1985). Promotional strategies such as discounts, flash sales, and limited-time offers create a sense of urgency that encourages immediate purchases. In digital platforms, these effects are further enhanced by algorithmic targeting and personalized recommendations. Consequently, promotion not only influences rational decision-making but also triggers behavioral responses.

Empirical evidence strongly supports the positive relationship between promotion and sales. Pauwels et al. (2004) find that promotional activities significantly increase both short-term sales and long-term brand performance. Neslin et al. (2006) also highlight the effectiveness of promotions in increasing purchase frequency. In the context of online travel platforms, similar findings are reported by Sari and Pratiwi (2020), who demonstrate that promotion significantly influences purchase decisions. The present study confirms these findings, reinforcing the importance of promotion as a primary driver of demand in digital markets.

Online Transactions and Market Efficiency. The analysis reveals that online transactions have a positive and significant effect on sales performance, making them one of the strongest predictors in the model. This finding underscores the importance of transaction efficiency in shaping consumer behavior and market outcomes. Efficient transaction processes reduce friction, enhance convenience, and increase the likelihood of purchase completion. In digital platform markets, these factors play a critical role in determining sales performance.

From a theoretical standpoint, this result aligns with transaction cost economics, which posits that reducing transaction costs enhances market efficiency (Williamson, 1985). Online transaction systems minimize costs associated with time, effort, and uncertainty, thereby facilitating exchange. In digital environments, technologies such as secure payment gateways and instant booking systems significantly improve transaction efficiency. This leads to higher transaction volumes and increased market activity.

The findings are also consistent with the Technology Acceptance Model (TAM), which emphasizes perceived ease of use and usefulness as key determinants of technology adoption (Davis, 1989). Venkatesh et al. (2003) further extend this framework by highlighting the role of facilitating conditions in influencing user behavior. In the context of online travel platforms, seamless transaction processes enhance user experience and encourage repeat usage. This, in turn, contributes to higher sales performance.

Empirical studies provide strong support for the relationship between transaction efficiency and consumer behavior. Pavlou (2003) finds that trust and perceived ease of use significantly influence online transaction intentions. Kim et al. (2010) also show that perceived security and reliability enhance consumer willingness to engage in digital transactions. In the Indonesian context, Rahmawati (2022) reports that online transactions significantly affect sales performance in online travel platforms. The present study corroborates these findings, emphasizing the critical role of transaction systems in digital markets.

Joint Effects and Implications for Digital Market Competition. The simultaneous test results indicate that e-service quality, promotion, and online transactions collectively have a significant effect on sales performance. This finding suggests that demand formation in digital platform markets is influenced by the interaction of multiple factors rather than a single dominant variable. From a macro perspective, this reflects the complexity of digital market dynamics, where firms must manage multiple strategic dimensions simultaneously. The integration of service quality, promotion, and transaction efficiency forms the basis of competitive positioning.

However, the relative importance of these variables varies significantly. While

promotion and online transactions emerge as key drivers, e-service quality does not exhibit a significant effect. This indicates a shift in competitive dynamics, where differentiation is increasingly driven by economic and transactional factors rather than service attributes. Such a shift is consistent with the evolution of digital markets toward greater efficiency and standardization (Varian, 2019). Firms must therefore adapt their strategies to align with these changing dynamics.

From an industrial organization perspective, the findings highlight the role of competitive intensity and low switching costs in shaping market outcomes. Digital platforms reduce barriers to entry and enable consumers to switch easily between alternatives (Parker et al., 2016). As a result, firms must continuously innovate to retain users and sustain market share. Promotion and transaction efficiency become critical tools for achieving this objective. These factors directly influence consumer decisions and determine competitive advantage.

Empirical literature supports the importance of integrated strategies in digital markets. Brynjolfsson and McAfee (2014) emphasize that digital competition requires firms to leverage data, pricing, and user experience simultaneously. Einav et al. (2016) also highlight the role of platform design and transaction mechanisms in shaping market outcomes. The present study contributes to this literature by providing evidence from the online travel industry. It demonstrates that while service quality remains important, it is no longer sufficient to drive sales performance in highly competitive digital environments.

V. CONCLUSION

This study concludes that e-service quality does not have a significant effect on sales performance in online travel platforms, indicating that it is no longer a key differentiating factor but rather a baseline requirement in mature digital markets. In contrast, promotion and online transactions are found to have positive and significant effects on sales, highlighting their critical role in shaping demand and influencing consumer behavior. Simultaneously, all independent variables jointly exhibit a significant effect on sales performance, confirming that the model is statistically robust and capable of explaining the relationship between platform-related factors and market outcomes. These findings imply that firms operating in digital platform markets should prioritize strategic investments in promotional activities and transaction efficiency to enhance competitiveness and drive demand. From an academic perspective, future research is encouraged to explore additional variables, expand sample size, and incorporate broader contexts to improve generalizability, while from a managerial standpoint, companies should continuously optimize digital transaction systems and promotional strategies to sustain market performance in increasingly competitive environments.

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