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Competence, Work Environment, and Employee Performance: The Mediating Role of Organizational Commitment in a Public Revenue Agency

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Abstract

This study examines the effect of competence and work environment on organizational commitment and its implications for employee performance at the Regional Revenue Agency of West Java Province. A quantitative approach was applied using descriptive and verificative methods. Data were collected through questionnaires distributed to 66 employees in the Secretariat, Administration Subdivision, and Revenue Planning and Development Division. Since the population was relatively small, the study used saturated sampling. The data were analyzed through descriptive statistics and path analysis with SPSS. The findings indicate that competence and work environment have positive and significant effects on organizational commitment, with the work environment showing a stronger effect than competence. Organizational commitment also has a strong positive effect on employee performance, explaining 67.7% of its variance. These results suggest that employee performance in public organizations is shaped not only by individual capability but also by supportive workplace conditions and employees' psychological attachment to the organization. The study concludes that improving public-sector employee performance requires an integrated effort to strengthen competence, improve the work environment, and foster organizational commitment.

Keywords: competence; employee performance; organizational commitment; public sector; work environment

INTRODUCTION

Employee performance remains a central concern in public-sector human resource management. The success of government institutions depends not only on the availability of resources but also on the capacity of employees to deliver services that are effective, responsive, and accountable. In Indonesia, civil servants hold a strategic role as public policy implementers, public service providers, and agents of national unity, as stated in Law No. 20

of 2023 concerning the State Civil Apparatus. This regulation positions civil servants as professionals who are expected to demonstrate competence, integrity, and commitment in performing governmental duties. Accordingly, the quality of public-sector human resources becomes a key requirement for effective governance, particularly in agencies with strategic functions in supporting regional development financing.

One institution with a vital role in regional development is the Regional Revenue Agency of West Java Province. The agency is responsible for managing, developing, and optimizing regional revenue sources. This role is increasingly important because the ability of regional governments to finance development programs depends greatly on the effectiveness of revenue management. In this context, employee performance at the agency is not limited to administrative task completion. It is also related to the organization's ability to design revenue policies, manage data, develop information systems, and evaluate regional revenue outcomes. Employees are therefore expected to possess adequate competence, work in a supportive environment, and maintain strong organizational commitment to contribute effectively to institutional goals.

Normatively, the performance assessment of civil servants is regulated under Government Regulation No. 30 of 2019 concerning Civil Servant Performance Appraisal. The regulation emphasizes that performance appraisal is intended to ensure objectivity in employee development based on merit and career systems. Assessment considers targets, achievements, outputs, benefits, and work behavior. This indicates that public employee performance should not be understood merely as work output, but also as a process reflected in responsibility, discipline, initiative, and contribution to the organization. Thus, weak employee performance needs to be examined comprehensively through both individual and organizational factors.

The empirical background of this study shows that the performance of the Regional Revenue Agency of West Java Province has not fully reached the expected target. Preliminary data indicate that the agency's performance realization remained below target, which became one of the reasons for selecting this research site. In addition, a pre-survey of 30 employees in the Secretariat, Administration Subdivision, and Revenue Planning and Development Division showed that employee performance was still categorized as relatively low. The average score of employee performance was 2.94, with particular weaknesses in work quality and initiative. The work quality dimension scored 2.67, while initiative scored 2.73. These findings suggest that some employees have not yet produced optimal work quality and have not shown sufficient initiative in performing their duties.

This performance issue is closely related to employee organizational commitment. The pre-survey showed that organizational commitment had an average score of 2.77, also categorized as relatively low. Affective commitment was the weakest dimension, with a score of 2.63, followed by continuance commitment at 2.83 and normative commitment at 2.86. This condition indicates that some employees have not developed strong emotional attachment to the organization, do not fully perceive a moral obligation to remain, and have not viewed long-term organizational membership as highly valuable. Yet organizational commitment is important because it encourages employees to remain involved, loyal, and willing to contribute their best efforts to the organization. Prior studies have found that organizational commitment positively affects employee performance, although inconsistent findings still exist, making this relationship relevant for further examination in local public-sector institutions.

Competence is one of the factors assumed to influence organizational commitment and employee performance. It refers to the knowledge, skills, motives, traits, and self-concept that enable individuals to perform their work effectively. In public organizations, employee competence is increasingly important because government tasks require adaptability, technological capability, procedural understanding, and cross-functional collaboration. The pre-survey showed that employee competence at the Regional Revenue Agency of West Java Province had an average score of 2.86. The lowest dimensions were skills, with a score of 2.77, and knowledge, with a score of 2.80. These results indicate that some employees still face difficulties in mastering their work areas and in applying the technical and administrative skills required for their positions. Previous studies also show that competence may influence organizational commitment and employee performance, although its effect is not always consistent across organizational contexts (Jan & Hasan, 2020; Eriani et al., 2023).

The work environment is another important factor shaping employee attitudes and behavior. A comfortable, safe, and supportive work environment enables employees to work more effectively. Conversely, an inadequate work environment may reduce comfort, disrupt communication, and weaken employees' attachment to the organization. The pre-survey showed that the work environment had an average score of 2.77, with the physical work environment as the weakest dimension, scoring 2.67. The main issues were related to workspace comfort and the availability of work facilities. This is important because the work environment is not merely a physical setting where tasks are performed; it also shapes employees' psychological experience within the organization. Previous research indicates that the work environment can affect organizational commitment, although some studies report non-significant effects in particular contexts (Lase & Sahyar, 2022; Hartono & Islamuddin, 2024).

Based on these conditions, this study analyzes the effect of competence and work environment on organizational commitment and its implications for employee performance at the Regional Revenue Agency of West Java Province. The study focuses on employees in the Secretariat, Administration Subdivision, and Revenue Planning and Development Division because these units play essential roles in supporting administrative, planning, and revenue development functions. Theoretically, the study is expected to enrich public-sector human resource management literature, especially regarding the relationship between competence, work environment, organizational commitment, and employee performance. Practically, the findings may provide input for the agency in improving employee performance through competence development, workplace improvement, and stronger organizational commitment.

LITERATURE REVIEW

Competence, work environment, organizational commitment, and employee performance are interrelated concepts in public-sector human resource management. In government organizations, employee performance cannot be understood merely as an individual work outcome. It is also shaped by employee capability, organizational support, and employees' attachment to the institution. Therefore, this literature review explains how competence and work environment may shape organizational commitment, and how such commitment contributes to employee performance.

Employee Competence

Employee competence refers to a set of capabilities that enables employees to perform their duties effectively in accordance with job demands and organizational goals. Competence does not only include technical knowledge, but also skills, work motives, personal traits, and self-concept that shape employees' readiness to complete their work. In the public sector, competence has become increasingly important because public employees are expected not only to perform routine administrative tasks but also to adapt, follow procedures, use technology, and work across functions.

In the context of the Regional Revenue Agency of West Java Province, employee competence is crucial because the organization deals with planning, administration, data management, and regional revenue development. Employees with strong factual, conceptual, and procedural knowledge are better able to understand their work. Administrative, technical, managerial, and social skills are also needed to complete tasks accurately, on time, and in coordination with others. Thus, competence is not merely an individual asset; it is also a prerequisite for meaningful employee contribution to the organization.

Recent empirical studies show that competence is associated with organizational commitment and employee performance. Employees with adequate competence tend to be more confident in carrying out their work, more capable of contributing, and more likely to develop attachment to the organization. This is supported by findings showing that competence affects organizational commitment and employee performance in public institutions (Adam et al., 2020). Other studies also confirm that competence helps shape organizational commitment and, in turn, contributes to employee performance (Eriani et al., 2023). In other government contexts, competence has also been found to strengthen employee performance (Sartika et al., 2022; Sugiono et al., 2021). Based on these findings, competence can be positioned as an individual factor that supports stronger employee attachment to the organization.

Work Environment

The work environment refers to the physical and non-physical conditions that shape employees' experience in performing their duties. The physical work environment includes workspace, facilities, work equipment, lighting, comfort, and other workplace conditions. The non-physical work environment includes relationships with supervisors, relationships with colleagues, communication, teamwork, and the psychological climate of the organization. From a human resource management perspective, a supportive work environment does more than help employees complete tasks; it also shapes their perception of organizational care and support.

In public organizations, the work environment is particularly important because employees' tasks often depend on coordination, information flow, and adequate facilities. At the Regional Revenue Agency of West Java Province, employees in the Secretariat, Administration Subdivision, and Revenue Planning and Development Division require a workplace that enables them to work carefully, comfortably, and collaboratively. When workspaces are uncomfortable, facilities are inadequate, or workplace relationships are weak, employees may face obstacles in completing their tasks. Such conditions may reduce productivity and weaken employees' attachment to the organization.

Recent studies show that the work environment is related to organizational commitment and employee performance. A conducive work environment may strengthen employees' positive perceptions of the organization, making them more willing to stay, work seriously, and support organizational goals. Research in educational institutions found that the work environment positively affects organizational commitment (Alfian, 2025). Similar findings show that the work environment influences organizational commitment among village government employees (Hartono & Islamuddin, 2024). In another context, the work environment, together with competence, was found to affect employee performance (Mulyono, 2021). Based on this synthesis, the work environment can be understood as an organizational factor that shapes employee comfort, support, and loyalty.

Organizational Commitment

Organizational commitment refers to employees' attachment to the organization, reflected in loyalty, acceptance of organizational values and goals, and willingness to contribute their best efforts. It can be viewed through three main dimensions: emotional attachment to the organization, consideration of remaining because of perceived benefits or consequences, and a moral obligation to stay. These dimensions show that commitment is not merely a matter of staying in an organization; it concerns the quality of the psychological relationship between employees and the organization.

In this study, organizational commitment is positioned as an intervening variable. This position is based on the argument that competence and work environment do not automatically produce high performance if employees lack attachment to the organization. Competent employees may have the ability to work, but such ability needs to be accompanied by willingness and loyalty to generate optimal performance. Similarly, a good work environment may create comfort, but such comfort needs to develop into commitment so that employees are encouraged to give their best effort.

Recent studies confirm the importance of organizational commitment in improving employee performance. Organizational commitment has been shown to affect employee performance and may operate through other work-related mechanisms, such as work discipline (Manalu et al., 2024). Other research also shows that organizational commitment positively affects employee performance in modern organizational settings that require employee involvement (Donna & Soehari, 2024). Moreover, organizational commitment has been found to mediate the relationship between the physical work environment and employee performance (Kurnianingsih et al., 2024). These findings suggest that organizational commitment functions as a psychological mechanism linking individual and organizational factors to employee performance.

Employee Performance

Employee performance refers to the work outcomes achieved by employees in carrying out their duties according to responsibilities, standards, and organizational goals. In public organizations, performance is not measured only by the amount of work completed, but also by work quality, responsibility, teamwork, and initiative. Employee performance is important because the success of government organizations depends on employees' ability to translate policies and work programs into concrete actions.

At the Regional Revenue Agency of West Java Province, employee performance has a strategic role because it supports regional revenue management. Work quality is needed to ensure that tasks are completed neatly, accurately, and according to standards. Work quantity is required to meet deadlines and targets. Responsibility reflects employees' willingness to complete assigned tasks. Teamwork is essential because public-sector tasks cannot be performed in isolation. Initiative reflects employees' ability to take necessary action without always waiting for instructions.

Empirical studies show that employee performance is influenced by competence, work environment, and organizational commitment. Competence provides employees with the capability to complete tasks effectively (Sartika et al., 2022; Sugiono et al., 2021). The work environment provides physical and social support that enables employees to work comfortably and productively (Mulyono, 2021). Organizational commitment encourages employees to use their capabilities and available support more fully for organizational interests (Donna & Soehari, 2024; Manalu et al., 2024). Thus, employee performance can be understood as the result of interaction between individual capability, organizational conditions, and employees' psychological attachment to the organization.

Based on the literature, the relationship between competence and organizational commitment can be explained through employees' sense of capability and work meaningfulness. Employees with adequate competence tend to be more confident in their abilities, more capable of completing their tasks, and more able to see their contribution to the organization. These conditions may strengthen their attachment to the institution. Competence can therefore be understood as an individual factor that supports organizational commitment.

The relationship between work environment and organizational commitment can be explained through employees' daily work experience. A comfortable workplace, adequate facilities, positive relationships, and supervisor support may create the perception that the organization cares about employee needs. This perception can strengthen loyalty and willingness to remain part of the organization. In contrast, an unsupportive work environment may reduce comfort and weaken commitment.

Organizational commitment, in turn, contributes to employee performance. Employees with strong commitment do not work merely to meet formal obligations. They are more likely to maintain work quality, show responsibility, cooperate with others, and take initiative. In this sense, organizational commitment explains how competence and work environment may translate into better employee performance.

Based on this synthesis, this study positions competence and work environment as independent variables, organizational commitment as an intervening variable, and employee performance as the dependent variable. The model suggests that improving employee performance at the Regional Revenue Agency of West Java Province requires an integrated effort to strengthen competence, improve the work environment, and build organizational commitment.

METHODOLOGY

This study used a quantitative approach with descriptive and verificative methods. The descriptive method was applied to describe the condition of competence, work environment, organizational commitment, and employee performance at the Regional Revenue Agency of West Java Province. The verificative method was used to test the causal relationships among variables, namely the effects of competence and work environment on organizational commitment and the effect of organizational commitment on employee performance. Thus, the study not only describes each variable but also tests a relationship model developed from theoretical and empirical foundations.

The research object was employees of the Regional Revenue Agency of West Java Province working in three units: the Secretariat, Administration Subdivision, and Revenue Planning and Development Division. These units were selected because of their roles in supporting administration, planning, and regional revenue development. The population consisted of 66 employees: 17 from the Secretariat, 29 from the Administration Subdivision, and 20 from the Revenue Planning and Development Division. Since the population was relatively small, all members were included as respondents using saturated sampling. The final sample therefore consisted of 66 employees.

Data were collected through questionnaires distributed to the respondents. The questionnaire was developed based on the indicators of each research variable and used a five-point Likert scale, ranging from strongly disagree to strongly agree. The study was also supported by observation and secondary data. Observation was used to obtain a direct picture of employee working conditions, while secondary data were collected from organizational documents, books, journal articles, prior studies, and other sources relevant to competence, work environment, organizational commitment, and employee performance.

The study involved two independent variables, one intervening variable, and one dependent variable. The independent variables were competence and work environment. Competence was measured through knowledge, skills, motives, traits, and self-concept. Work environment was measured through physical and non-physical work environment. The intervening variable was organizational commitment, measured through affective, continuance, and normative commitment. The dependent variable was employee performance, measured through work quality, work quantity, responsibility, teamwork, and initiative.

Before analysis, the research instrument was tested for validity and reliability. The validity test was conducted to ensure that each statement item measured the intended indicator. An item was considered valid when its item-total correlation met the required threshold. The reliability test was used to assess the consistency of respondents' answers across items within each variable. These tests were carried out using SPSS.

Since the questionnaire data were ordinal, they were transformed into interval data using the Method of Successive Interval (MSI). This transformation was necessary to meet the requirements of the parametric statistical analysis used in the study. After transformation, the data were analyzed using descriptive and verificative analysis. Descriptive analysis was used to describe the pattern of respondents' answers for each variable, while verificative analysis was conducted through path analysis to examine the direct and indirect effects among competence, work environment, organizational commitment, and employee performance.

The path analysis model consisted of two substructures. The first substructure tested the effects of competence and work environment on organizational commitment. The second substructure tested the effect of organizational commitment on employee performance. Through this model, the study examined whether competence and work environment helped shape organizational commitment, and whether organizational commitment served as a mechanism for improving employee performance. Hypothesis testing was conducted through partial and simultaneous tests using SPSS.

RESULT

This study involved 66 employees of the Regional Revenue Agency of West Java Province from three units: the Secretariat, Administration Subdivision, and Revenue Planning and Development Division. Since all members of the population were included, the study used saturated sampling. The questionnaire data were first tested for validity and reliability. The results showed that all statement items for competence, work environment, organizational commitment, and employee performance were appropriate for further analysis. The results are presented through instrument testing, descriptive analysis, path analysis, and the examination of direct and indirect effects.

Descriptive Results

The descriptive analysis indicates that employee competence was not yet fully optimal. Several competence indicators remained in the low category, particularly those related to procedural knowledge, administrative skills, and employees' confidence in carrying out their work. The indicator of self-confidence had an average score of 3.33, while personal values had an average score of 3.35. These findings suggest that some employees were not fully confident in their work ability and did not yet feel that their personal values were strongly aligned with their daily tasks.

The work environment also required improvement, especially in terms of physical workplace conditions and cooperation among employees. The workplace building indicator had an average score of 3.06, adequate work equipment scored 3.18, facilities scored 3.09, and work atmosphere scored 3.27. Meanwhile, cooperation among employees scored 3.36 and was dominated by "less agree" responses. These results indicate that some employees still perceived limitations in work facilities and coordination.

Organizational commitment was also not yet strong. The average score for organizational commitment was 3.20, placing it in the low category. Indicators below the average included strong belief in organizational values and goals, loyalty to the organization, and willingness to exert effort for organizational interests. The loyalty indicator scored 2.86, suggesting that employees' emotional attachment to the organization still needs to be strengthened.

Employee performance also remained below expectation. In the pre-survey, the average score of employee performance was 2.94. Work quality was the lowest dimension, with a score of 2.67, followed by initiative at 2.73. This indicates that the main performance problems were related to the quality of work output and employees' ability to take initiative in performing their duties.

Table 1. The Descriptive Findings

Variable	Main Finding	General Implication
Competence	Several indicators of knowledge, skills, and self-concept were not yet optimal	Competence development and stronger employee confidence are needed
Work environment	Facilities, physical conditions, and cooperation were not fully supportive	Workplace improvement and better coordination are needed
Organizational commitment	Loyalty and emotional attachment remained weak	A stronger sense of belonging should be built
Employee performance	Work quality and initiative were the weakest aspects	Work standards and proactive behavior need to be improved

Source: Analysis Result, 2026

Path Analysis Results

The path analysis shows that competence and work environment had positive effects on organizational commitment. The standardized coefficient of competence on organizational commitment was 0.404, while the coefficient of work environment on organizational commitment was 0.476. This means that the work environment had a stronger path coefficient than competence in explaining employee organizational commitment.

The coefficient of determination in the first structure showed an R value of 0.807 and an R Square of 0.652. This indicates that competence and work environment jointly explained 65.2% of the variation in organizational commitment, while the remaining 34.8% was explained by factors outside the model. The simultaneous relationship was therefore categorized as very strong.

The simultaneous test also confirmed that competence and work environment significantly affected organizational commitment. The calculated F value was 59.029, which was higher than the F table value of 3.142. Thus, the first structural model was accepted, indicating that competence and work environment are important predictors of organizational commitment.

In the second structure, organizational commitment had a positive effect on employee performance. The standardized coefficient of organizational commitment on employee performance was 0.823, with a t value of 11.585 and a significance value of 0.000. This result indicates that stronger organizational commitment is associated with higher employee performance.

The coefficient of determination in the second structure showed an R value of 0.823 and an R Square of 0.677. This means that organizational commitment explained 67.7% of the variation in employee performance, while the remaining 32.3% was explained by other factors outside the model.

Table 2. Path Analysis Results

Relationship	Path Coefficient	Statistic	Interpretation
Competence → Organizational commitment	0.404	Sig. 0.000	Positive and significant

Relationship	Path Coefficient	Statistic	Interpretation
Work environment → Organizational commitment	0.476	Sig. 0.000	Positive and significant
Competence and work environment → Organizational commitment	$R^2 = 0.652$	$F = 59.029$	Simultaneously significant
Organizational commitment → Employee performance	0.823	t = 11.585; Sig. 0.000	Positive and significant
Organizational commitment → Employee performance	$R^2 = 0.677$	—	Explains 67.7% of variance

Source: Analysis Result, 2026

Overall, the results show that competence and work environment are important factors in shaping employee organizational commitment. Organizational commitment, in turn, strongly explains employee performance. These findings support the research model that places organizational commitment as the linking mechanism between competence, work environment, and employee performance at the Regional Revenue Agency of West Java Province.

DISCUSSION

The findings show that competence and work environment are two important factors shaping organizational commitment among employees of the Regional Revenue Agency of West Java Province. Together, these variables explained 65.1% of the variation in organizational commitment. This suggests that employee commitment cannot be separated from two basic conditions: the ability to perform work and the experience of working in a supportive environment. Employees who feel capable and work in a supportive workplace are more likely to develop stronger attachment to the organization.

The effect of competence on organizational commitment indicates that employees' ability to understand their work, complete tasks, and adapt to organizational demands contributes to loyalty and institutional attachment. The path coefficient of 0.404 shows that stronger competence is followed by stronger organizational commitment. This finding supports the view that competence is not limited to technical ability. It also builds self-confidence and a sense of meaning at work. When employees feel that their knowledge and skills are relevant, they are more likely to feel valued and needed by the organization. This condition strengthens emotional attachment and loyalty to the workplace. The result is consistent with previous studies showing that competence positively affects organizational commitment (Adam et al., 2020; Anugrahadi et al., 2023; Eriani et al., 2023). The statistical test also showed that competence had a significant effect on organizational commitment, with a contribution of 29.4%.

This finding is important for the Regional Revenue Agency of West Java Province because the descriptive results showed that some employees still faced problems in knowledge, skills, and self-confidence. Improving organizational commitment therefore cannot rely only on moral appeals or disciplinary pressure. It should begin with strengthening employee capacity. Employees who do not fully understand their tasks, lack procedural mastery, or are not confident in taking action tend to have weaker organizational involvement. Competence development should therefore be directed toward real work needs, such as procedural understanding, information system mastery, administrative skills, data analysis, and cross-unit coordination.

The work environment also had a positive effect on organizational commitment. The path coefficient of 0.476 shows that the work environment had a stronger effect than competence in shaping commitment. This finding suggests that employees of the Regional Revenue Agency of West Java Province need not only individual capability but also workplace support that enables them to work comfortably, collaboratively, and productively. A supportive work environment may create the perception that the organization pays attention to employee needs. This perception can strengthen loyalty, sense of belonging, and willingness to contribute to the organization.

Empirically, this finding is consistent with previous studies showing that the work environment affects organizational commitment (Alfian, 2025; Hartono & Islamuddin, 2024). In this study, the effect is particularly relevant because the descriptive results showed problems in facilities, workplace buildings, work atmosphere, and cooperation among employees. This means that employee commitment is not built only through organizational values, but also through everyday work experience. When employees perceive that facilities are inadequate, the workspace is uncomfortable, or coordination is weak, their attachment to the organization may decline. Conversely, a more comfortable, organized, and cooperative workplace can strengthen employees' positive experience of the organization.

The results also show that competence and work environment jointly had a significant effect on organizational commitment. The calculated F value of 59.029 exceeded the F table value of 3.142, indicating that the model positioning competence and work environment as predictors of organizational commitment was accepted. This finding shows that organizational commitment is shaped by both individual and organizational factors. Competence provides employees with the ability to work, while the work environment provides the conditions that allow such ability to be used effectively. The model also confirms that competence and work environment simultaneously contributed 65.1% to organizational commitment among employees in the three work units studied.

Conceptually, this finding suggests that organizational commitment should not be treated as an isolated attitude. It emerges from the interaction between employee capacity and organizational support. Competent employees may lose motivation and attachment when they work in an unsupportive environment. Conversely, a good work environment may not produce strong performance if employees do not have adequate competence. Therefore, strengthening organizational commitment requires two simultaneous efforts: developing employee capability and improving workplace conditions.

The strongest finding in this study is the effect of organizational commitment on employee performance. The path coefficient of 0.823 indicates a very strong effect. The R Square value of 0.677 shows that organizational commitment explained 67.7% of the variation in employee performance. This means that employees with stronger attachment, loyalty, and responsibility toward the organization tend to demonstrate better performance. The statistical test also showed that organizational commitment significantly affected employee performance, with a t value of 11.585, higher than the t table value of 1.998.

The implication is that improving employee performance at the Regional Revenue Agency cannot rely solely on supervision or work targets. Performance becomes stronger when employees have high organizational commitment. Committed employees tend to work not merely because of formal obligations, but because they feel responsible for the institution's success. This commitment encourages them to maintain work quality, complete tasks more seriously, collaborate with colleagues, and show initiative. This finding is in line with previous studies showing that organizational commitment affects employee performance (Donna & Soehari, 2024; Manalu et al., 2024; Rizal et al., 2023).

In the context of the Regional Revenue Agency of West Java Province, this finding has clear practical implications. Performance problems related to work quality and initiative do not merely reflect limited technical capability. They also indicate the need to strengthen organizational commitment. Employees with weak emotional attachment to the organization tend to work only at a minimum level, follow instructions passively, show limited initiative, and give less attention to the quality of their work. The study also found that some employees still found it difficult to act independently or complete tasks without direct instruction from supervisors. This condition highlights the need for employee empowerment, skills development, and a more supportive human resource management system.

The indirect effects further confirm the role of organizational commitment as an intervening variable. The indirect effect of competence on employee performance through organizational commitment was 0.332, while the indirect effect of work environment on employee performance through organizational commitment was 0.391. These values indicate that the work environment had a slightly stronger indirect effect than competence in improving performance through commitment. In other words, workplace improvement may generate stronger performance gains when it successfully strengthens employee commitment. The path model also shows that competence and work environment influence organizational commitment, and organizational commitment subsequently influences employee performance.

Theoretically, this study strengthens the view that public-sector employee performance is shaped by the combination of capability, workplace conditions, and psychological attachment to the organization. Competence provides the basis for employees' ability to perform their duties. The work environment provides organizational support. Organizational commitment functions as the psychological mechanism that encourages employees to use their capabilities and available support to produce better performance. Thus, organizational commitment is not merely a statistical intervening variable. It is a central concept that explains why competence and work environment can lead to improved employee performance.

Practically, the findings suggest that the Regional Revenue Agency of West Java Province needs an integrated strategy for improving employee performance. Competence development may be carried out through job-based training, technical mentoring, digital literacy improvement, and work-based learning. Workplace improvement may include redesigning office space, providing adequate facilities, strengthening internal communication, and improving cooperation among employees. Organizational commitment can be strengthened through clearer organizational goals, employee involvement in work processes, recognition of employee contributions, and efforts to build a stronger sense of belonging.

Overall, the study shows that improving employee performance in the Regional Revenue Agency of West Java Province cannot depend only on formal instruction and supervision. Better performance requires competent employees, a supportive work environment, and strong organizational commitment. These three elements complement one another and form an important foundation for strengthening public-sector employee performance.

CONCLUSION

This study examined the effect of competence and work environment on organizational commitment and its implications for employee performance at the Regional Revenue Agency of West Java Province. The findings show that competence and work environment positively influence organizational commitment. This indicates that employee commitment is not shaped only by individual willingness to remain loyal to the organization, but also by employees' ability to perform their duties and by the workplace conditions that support their daily work.

Employee competence plays an important role in building organizational commitment. Employees with adequate knowledge, skills, work motives, traits, and self-concept tend to be more confident in completing their tasks and more likely to feel that they are an important part of the organization. In the context of the Regional Revenue Agency of West Java Province, competence development is essential because employees' work requires procedural understanding, administrative skills, technical capability, and coordination in supporting regional revenue management.

The work environment also influences organizational commitment. The findings show that the work environment had a stronger coefficient than competence in shaping commitment. This suggests that workspace comfort, facility availability, relationships with supervisors and colleagues, and cooperation among employees are important factors in determining how strongly employees feel attached to the organization. Therefore, improving the work environment should be treated not only as a matter of physical facilities, but also as part of a broader strategy to build loyalty and employee involvement.

Organizational commitment was also found to have a strong positive effect on employee performance. Employees with strong commitment tend to show better work quality, stronger responsibility, better teamwork, and greater initiative. Thus, organizational commitment serves as an important mechanism linking competence and work environment to employee performance. This finding confirms that improving employee performance requires more than strengthening work ability or improving facilities; it also requires a stronger sense of belonging, loyalty, and responsibility toward the organization.

Theoretically, this study contributes to public-sector human resource management by showing that employee performance is shaped by individual, organizational, and psychological factors. Competence represents the individual factor, the work environment represents the organizational factor, and organizational commitment serves as the psychological factor connecting both to employee performance. The study therefore supports the view that public employee performance depends not only on technical ability, but also on workplace quality and employees' attachment to the organization.

Practically, the findings suggest three main agendas for the Regional Revenue Agency of West Java Province. First, competence should be strengthened through job-based training, technical skill development, mentoring in work systems, and the development of administrative and analytical abilities. Second, the work environment should be improved through better workspace comfort, adequate facilities, stronger internal communication, and closer cooperation among employees. Third, organizational commitment should be developed by involving employees in the achievement of organizational goals, recognizing their contributions, clarifying work direction, and building a work culture that encourages a sense of belonging.

This study is limited to three work units at the Regional Revenue Agency of West Java Province: the Secretariat, Administration Subdivision, and Revenue Planning and Development Division. Therefore, the findings cannot yet be fully generalized to all units within the agency or to other government institutions. Future studies may expand the respondent coverage, compare several local government agencies, or include other variables such as leadership, organizational culture, work discipline, job satisfaction, and work motivation to provide a broader understanding of the determinants of public-sector employee performance.

In conclusion, improving employee performance at the Regional Revenue Agency of West Java Province requires an integrated effort to strengthen competence, improve the work environment, and build organizational commitment. Employees who are competent, supported by a conducive workplace, and strongly committed to the organization are more likely to deliver performance that meets the needs of public-sector institutions.

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Credit Risk and Banking Performance in Indonesia: The Moderating Role of Bank Size

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Abstract

This study examines the effect of credit risk on banking performance and tests the moderating role of bank size among banking firms listed on the Indonesia Stock Exchange during 2021–2024. Credit risk is measured by non-performing loans (NPL), bank performance by return on assets (ROA), and bank size by the natural logarithm of total assets. Using a quantitative approach based on secondary data from financial and annual reports, the study analyzes 27 banks with 108 observations. The analysis employs a moderation model involving the interaction between NPL and bank size, supported by robustness tests using several control variables. The results show that credit risk has no significant direct effect on bank performance in the main model. However, bank size significantly moderates this relationship by strengthening the negative effect of credit risk on ROA. Conditional effect analysis indicates that the effect of NPL on ROA becomes negative and significant among medium-sized and large banks. These findings suggest that bank size reflects not only asset capacity but also the complexity of risk exposure. The study implies that credit risk management and banking supervision should account for differences in institutional scale.

Keywords: bank performance, bank size, credit risk, non-performing loans, return on assets.

INTRODUCTION

The banking sector plays a strategic role in maintaining economic stability and growth through its financial intermediation function, namely collecting public funds and redistributing them in the form of credit. In Indonesia's financial market, banking is also a major sector on the Indonesia Stock Exchange because it supports financing, liquidity, and investor confidence in the financial system. For this reason, banking performance is important not only for bank management, but also for regulators, investors, debtors, and the broader economy. This study focuses on the effect of credit risk on bank performance, with bank size as a moderating variable, among banking firms listed on the Indonesia Stock Exchange during 2021–2024.

Bank performance is generally understood as the ability of a bank to generate profit, maintain operational efficiency, manage risk, and create value for stakeholders. One widely used indicator of bank performance is return on assets, or ROA. ROA reflects how effectively a bank uses its assets to generate earnings. A higher ROA indicates stronger managerial ability to utilize assets productively. In banking, ROA is particularly relevant because most bank assets originate from public funds and must be managed prudently to generate optimal income. Previous studies have also used ROA as a key measure of bank profitability because it captures managerial efficiency in transforming assets into earnings (Abdelaziz et al., 2022; Boussaada et al., 2023; Ekinci & Poyraz, 2019; Siddique et al., 2022).

In recent years, Indonesian banking performance has improved after the pressure of the COVID-19 pandemic. However, this recovery has continued to face challenges in credit risk management. The Financial Services Authority reported that, in the fourth quarter of 2024, Indonesia's banking credit risk improved, with gross NPL declining to 2.08% and net NPL remaining relatively stable at 0.74%; at the same time, bank capital remained solid, with the capital adequacy ratio reaching 26.69% (Otoritas Jasa Keuangan, 2025a). The Indonesian Banking Statistics for December 2024 also indicate that the national banking industry remained relatively resilient (Otoritas Jasa Keuangan, 2025b). Nevertheless, stronger industry-level indicators do not imply that all banks have equal capacity to manage credit risk and generate profitability.

Credit risk is one of the central risks in banking activity. It arises when borrowers fail to meet their obligations to repay principal or interest according to the credit agreement. In banking research, credit risk is commonly proxied by non-performing loans, or NPL. NPL shows the proportion of problematic loans to total loans. A higher NPL ratio indicates greater potential losses because interest income declines, provisioning needs increase, and asset quality deteriorates. Theoretically, rising credit risk should reduce bank profitability because non-performing loans weaken the intermediation function and reduce the bank's ability to generate income (Abdelaziz et al., 2022; Arhinful et al., 2025; Ekinci & Poyraz, 2019; Saleh & Abu Afifa, 2020).

However, the relationship between NPL and bank performance is not always straightforward. Some studies find a significant negative effect of NPL on bank performance. Boussaada et al. (2023), for example, show that NPL is negatively associated with European bank performance measured by ROA and Tobin's Q. Abdelaziz et al. (2022) also find that bank profitability in the MENA region is sensitive to credit and liquidity risks. Other studies report different findings. In the Indonesian context, NPL does not always significantly affect ROA, especially when models include other internal bank factors such as the loan-to-deposit ratio, bank size, and other institutional characteristics (Al Zafir & Satria, 2025; Irawan & Kusuma, 2020; Mafaza & Zulfikar, 2025; Rusli & Fitriana, 2023). These mixed findings suggest that the effect of credit risk on bank performance may depend on contingency factors.

One important contingency factor is bank size. Bank size is commonly measured using the natural logarithm of total assets. Larger banks generally have stronger resources, broader portfolio diversification, better funding access, more established risk management systems, and greater technological and compliance capacity. These advantages may allow large banks to absorb credit risk pressure more effectively than smaller banks. At the same time, large size can also generate organizational complexity, higher monitoring costs, and wider credit exposure. Thus, bank size may not only influence profitability directly, but also alter the direction and strength of the relationship between credit risk and bank performance (Asrori et al., 2024; Ozili, 2025; Saleh & Abu Afifa, 2020; Utari & Widiastuti, 2024).

The moderating role of bank size is relevant because previous findings remain inconclusive. Asrori et al. (2024) found that bank size can moderate the relationship between financial risk and the performance of Indonesian Islamic commercial banks. This suggests that institutional scale may reshape the impact of risk on financial outcomes. However, other studies show that bank size does not always moderate the relationship between financial ratios and ROA. Therefore, the moderating effect of bank size remains open for further testing, especially among commercial banks listed on the Indonesia Stock Exchange (Agung Prayogi, 2024; Asrori et al., 2024; Herlina & Wilujeng, 2025).

This research gap is important because the period 2021–2024 represents a post-pandemic transition. During this period, banks faced two simultaneous pressures: maintaining credit quality after pandemic-related restructuring and improving profitability amid economic recovery. In Indonesia, credit restructuring policies helped limit the deterioration of loan quality during the pandemic. Yet, as policy relaxation gradually ended, credit risk again became a key concern. The Financial Services Authority reported that banking NPL remained under control at the end of 2024, but credit risk continued to be strategic because banks had to balance credit growth, capital adequacy, and profitability (Otoritas Jasa Keuangan, 2025a). Recent evidence on Indonesian conventional banks also confirms that the relationship between credit risk and profitability should be understood within the post-pandemic context and the dynamics of bank-specific characteristics (Al Zafir & Satria, 2025).

Based on this background, the present study analyzes the effect of credit risk on Indonesian banking performance and examines whether bank size moderates this relationship. NPL is used as a proxy for credit risk, ROA as a proxy for bank performance, and the natural logarithm of total assets as a proxy for bank size. The object of the study is banking firms listed on the Indonesia Stock Exchange during 2021–2024. Accordingly, the study does not only test the direct relationship between credit risk and bank performance, but also examines whether bank size strengthens, weakens, or changes that relationship.

This study contributes in three ways. First, it provides empirical evidence on the relationship between credit risk and bank performance in the post-pandemic Indonesian banking context. Second, it extends the credit risk literature by incorporating bank size as a moderating variable, so the analysis goes beyond the direct effect of NPL on ROA. Third, it offers practical implications by showing that credit risk management and banking supervision should consider bank scale, since the capacity, complexity, and risk exposure of each bank are not identical.

Thus, the central question of this article is whether credit risk affects bank performance and whether bank size moderates the relationship between credit risk and bank performance among banking firms listed on the Indonesia Stock Exchange. Addressing this question is expected to strengthen understanding of the dynamics of credit risk, profitability, and bank size in the Indonesian banking industry, while also providing empirical insights for managerial decisions and supervisory policy.

LITERATURE REVIEW

This literature review explains the main concepts underlying the research model: credit risk, bank performance, bank size, and the conceptual relationship between credit risk and bank performance. The discussion focuses on literature relevant to credit risk and bank profitability, particularly in the context of banking firms listed on the Indonesia Stock Exchange during 2021–2024.

Credit Risk in the Banking Industry

Credit risk is one of the most important risks in banking because the core function of banks is to distribute funds to the public through credit. It occurs when borrowers fail to meet principal or interest payment obligations according to agreed terms. In banking practice, credit risk affects not only asset quality but also profitability, liquidity, capital adequacy, and overall bank stability. For this reason, credit risk remains a central concern, especially in the post-pandemic period when banks must simultaneously support credit growth and maintain portfolio quality (Boussaada et al., 2023; Fadun & Silwimba, 2023; Saleh & Abu Afifa, 2020).

One of the most widely used indicators of credit risk is non-performing loans, or NPL. NPL reflects the proportion of problem loans to total loans. A higher NPL ratio indicates greater potential losses from declining interest income, higher loss provisions, and deteriorating asset quality. Therefore, NPL is a key indicator for assessing asset quality and the effectiveness of bank credit risk management (Abdelaziz et al., 2022; Ekinci & Poyraz, 2019; Utari & Widiastuti, 2024). Recent studies in Indonesia also use NPL as a primary measure of credit risk when examining ROA-based bank profitability (Al Zafir & Satria, 2025).

From a financial literature perspective, credit risk is closely linked to the effectiveness of the intermediation function. Banks that can distribute credit productively while maintaining loan quality have greater potential to generate stable income. Conversely, banks with high NPL face profit pressure because a portion of productive assets fails to produce expected cash flows. Boussaada et al. (2023) show that NPL is negatively related to bank performance because it increases provisioning and lowers profitability. Similar findings are reported by Abdelaziz et al. (2022), Ekinci and Poyraz (2019), and Utari and Widiastuti (2024), who argue that credit risk can weaken banks' ability to generate profit.

In developing economies, credit risk becomes more complex because banks operate in environments shaped by changing interest rates, inflation, exchange rates, and institutional conditions. Saleh and Abu Afifa (2020) argue that credit risk, liquidity risk, and bank capital are important factors associated with bank profitability in emerging markets. Siddique et al. (2022) also show that bank-specific factors and credit risk management are related to the performance of commercial banks in South Asia. Thus, credit risk management cannot be separated from macroeconomic stability and the internal capacity of banks to manage credit exposure.

In Indonesia, credit risk became particularly important during 2021–2024 because this period represented the recovery phase after the COVID-19 pandemic. Credit restructuring policies helped prevent a sharp increase in non-performing loans during the pandemic. However, as policy relaxation was gradually withdrawn, loan quality again became a central concern. The Financial Services Authority reported that Indonesia's gross banking NPL in the fourth quarter of 2024 reached 2.08%, while net NPL stood at 0.74% (Otoritas Jasa Keuangan, 2025a). These figures indicate that industry-level credit risk remained manageable, although bank-level conditions may vary substantially.

Bank Performance and Return on Assets

Bank performance reflects the ability of a bank to perform its intermediation function, manage assets, generate profit, and maintain stakeholder trust. In banking literature, performance is commonly associated with profitability, operational efficiency, asset quality, liquidity, and capital adequacy. Profitability is especially important because it indicates the bank's ability to generate earnings from its operational activities.

One widely used profitability indicator is return on assets, or ROA. ROA measures how effectively a bank generates profit from its total assets. This indicator is highly relevant because most bank assets are sourced from public funds and must therefore be managed productively. A higher ROA indicates stronger managerial capacity to use assets for profit generation. Conversely, a lower ROA suggests that the bank may face inefficiency, rising costs, weak asset quality, or risk-related pressure.

Siddique et al. (2022) use ROA as a main measure of bank performance because it captures managerial efficiency in asset utilization. ROA is also widely used in cross-country banking studies because it allows comparison across banks and periods. Abdelaziz et al. (2022) employ ROA to analyze the relationship between credit risk, liquidity risk, and bank profitability. Boussaada et al. (2023) also use ROA as a key indicator in examining the effect of NPL on bank performance. In Indonesia, ROA has been used in recent studies on credit risk and conventional bank profitability (Al Zafir & Satria, 2025).

Bank performance is not only determined by income generation but also by risk control. High credit growth does not necessarily indicate strong performance if it is not supported by sound loan quality. A bank may record asset and credit expansion, yet profitability may decline when a portion of loans becomes non-performing. Therefore, bank performance assessment should also consider asset quality, particularly credit risk as proxied by NPL (Ekinci & Poyraz, 2019; Saleh & Abu Afifa, 2020; Utari & Widiastuti, 2024).

During 2021–2024, Indonesian banking performance was in a recovery phase after the pandemic. The Financial Services Authority shows that key banking indicators, including assets, credit, third-party funds, capital adequacy, and non-performing loan ratios, continued to improve (Otoritas Jasa Keuangan, 2025b). Nevertheless, although industry indicators suggest recovery, profitability may still differ across banks due to variations in asset structure, credit quality, operational efficiency, and bank size.

Relationship between Credit Risk and Bank Performance

The relationship between credit risk and bank performance is a central topic in banking studies. Conceptually, higher credit risk is expected to reduce bank performance because non-performing loans require larger provisions and reduce interest income. This condition lowers net income and weakens the productivity of bank assets. Therefore, NPL is often positioned as an important indicator explaining asset quality and profitability (Abdelaziz et al., 2022; Boussaada et al., 2023; Ekinci & Poyraz, 2019; Saleh & Abu Afifa, 2020).

Empirical literature generally shows that credit risk is negatively associated with bank performance. Boussaada et al. (2023) find that NPL negatively affects European bank performance, while Abdelaziz et al. (2022) show that credit risk reduces bank profitability in the MENA region. Fadun and Silwimba (2023) also emphasize that credit risk management plays an important role in shaping the financial performance of commercial banks. Evidence from South Asia by Siddique et al. (2022) indicates that bank-specific factors, including credit risk management, are associated with bank performance. Similar findings have been reported in recent studies on credit risk and bank profitability in Indonesia and other developing economies (Al Zafir & Satria, 2025; Febrianti et al., 2026; Utari & Widiastuti, 2024).

However, findings on the NPL–performance relationship are not always consistent. Some studies find that NPL has no significant effect on bank profitability. Rusli and Fitriana (2023), for instance, report that NPL does not always significantly affect the profitability of certain Indonesian banks during the COVID-19 pandemic. Such differences may arise from variations in research period, bank characteristics, macroeconomic conditions, credit restructuring policies, and analytical methods. Therefore, the relationship between credit risk and bank performance should not be treated as a simple direct relationship.

In Indonesia, the relationship between NPL and ROA is especially relevant because 2021–2024 was a post-pandemic recovery period. During this period, banks had to maintain credit quality after restructuring policies while also improving profitability as economic activity recovered. This condition requires a better understanding of contingency factors that may strengthen or weaken the relationship between credit risk and bank performance.

Bank Size as a Contingency Factor

Bank size is an important characteristic that may influence a bank's ability to manage risk and generate profit. It is commonly measured by the natural logarithm of total assets to represent operational scale and reduce extreme differences across banks. Large banks generally have stronger operational capacity, technology, human resources, and capital than smaller banks. In banking literature, bank size is often associated with economies of scale, funding access, reputation, and the capacity to invest in risk management systems (Asrori et al., 2024; Herlina & Wilujeng, 2025; Ozili, 2025).

However, large size does not always create unlimited advantages. Large banks may also face greater organizational complexity, wider credit exposure, and higher compliance and monitoring costs. This complexity may make risk management more difficult. Thus, bank size can be both a source of strength and a source of complexity in the relationship between credit risk and bank performance (Boussaada et al., 2023; Saleh & Abu Afifa, 2020).

In the credit risk–performance relationship, bank size may function as a contingency factor. Large banks may be better able to absorb the negative effect of NPL because they have broader portfolio diversification, stronger capital buffers, and more developed risk management systems. Yet, large banks may also suffer stronger effects when NPL increases because their credit exposure is broader and more complex. Therefore, bank size may change the strength or even the direction of the relationship between credit risk and bank performance.

Asrori et al. (2024) show that bank size can moderate the relationship between financial risk and the performance of Islamic commercial banks. Agung Prayogi (2024) also positions bank size as a moderating variable in the relationship between NPL, LDR, CAR, and bank profitability. Other studies in Indonesian banking suggest that bank size may moderate the relationship between credit risk and profitability, although the direction and significance may differ across bank types and research periods (Ayunda, 2026; Dewi, 2026; Herlina & Wilujeng, 2025). Therefore, bank size is relevant in analyzing banking risk and profitability.

In this study, bank size is understood as an institutional characteristic that explains differences in banks' ability to deal with credit risk. Banks of different sizes may not respond similarly to rising NPL. Including bank size in the research model therefore provides a more comprehensive understanding of the relationship between credit risk and bank performance.

Previous studies have widely examined the relationship between credit risk and bank performance. Most of them find that NPL negatively affects bank profitability, although some report insignificant or mixed results. These differences indicate that the relationship between credit risk and bank performance still requires further investigation, particularly by considering contingency factors.

This study is positioned within that gap by examining the relationship between credit risk and bank performance while incorporating bank size as a moderating variable in the Indonesian banking sector during 2021–2024. This context is relevant because the period reflects the post-COVID-19 recovery phase, in which banks faced the simultaneous challenge of maintaining credit quality, profitability, and financial stability. By considering bank size, this study seeks to explain whether the effect of credit risk on performance differs across banks with different asset scales.

The study also focuses on banking firms listed on the Indonesia Stock Exchange. This context is important because listed banks face dual pressure: maintaining operational performance while meeting investor and regulatory expectations. Therefore, examining the interaction among credit risk, bank size, and bank performance is relevant both academically and practically.

METHODOLOGY

This study uses a quantitative approach with an explanatory design. This approach is appropriate because the research examines relationships among variables using numerical data obtained from financial statements and annual reports of banking firms. The explanatory design is used not only to describe credit risk, bank size, and bank performance, but also to test the effect of credit risk on bank performance and the moderating role of bank size.

The object of the study is banking firms listed on the Indonesia Stock Exchange during 2021–2024. This period was selected because it represents the recovery phase of Indonesian banking after the pressure of the COVID-19 pandemic, when credit quality and profitability again became central concerns. The study uses panel data, combining a four-year time dimension with firm-level observations.

The population consists of banking firms listed on the Indonesia Stock Exchange. The sample was selected using purposive sampling with the following criteria: banking firms listed during 2021–2024, firms publishing annual or financial reports throughout the observation period, and firms with complete data for measuring credit risk, bank performance, and bank size. Based on these criteria, 27 banks were selected, resulting in 108 observations.

The data were obtained from secondary sources, including annual reports, financial statements, Indonesia Stock Exchange publications, Financial Services Authority publications, and official company sources. Secondary data were used because the variables analyzed in this study are financial indicators that are officially published and verifiable.

This study consists of three main variables: credit risk as the independent variable, bank performance as the dependent variable, and bank size as the moderating variable. Credit risk is measured by non-performing loans, or NPL, calculated as the ratio of problem loans to total loans. Bank performance is measured by return on assets, or ROA, which indicates the ability of a bank to generate profit from total assets. Bank size is measured using the natural logarithm of total assets to reduce extreme scale differences across banks. The interaction variable is formed by multiplying NPL and bank size.

Table 1. The operationalization of the variables is presented below.

Variable	Proxy	Measurement Formula	Scale
Credit Risk	Non-Performing Loan / NPL	Problem Loans / Total Loans × 100%	Ratio
Bank Performance	Return on Assets / ROA	Net Income / Total Assets × 100%	Ratio
Bank Size	Bank Size	Ln Total Assets	Ratio
Moderating Interaction	NPL × Bank Size	NPL × Ln Total Assets	Ratio

Data analysis was conducted through descriptive and verificative analysis. Descriptive analysis was used to present the minimum, maximum, mean, and standard deviation of each variable. Verificative analysis was used to test the relationships among variables through a moderation model involving the interaction between credit risk and bank size.

The main research model is formulated as follows:

$$\boldsymbol{ROA} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1\boldsymbol{NPL} + \boldsymbol{\beta}_2\boldsymbol{SIZE} + \boldsymbol{\beta}_3(\boldsymbol{NPL} \times \boldsymbol{SIZE}) + \boldsymbol{\varepsilon}\ldots\ldots\ldots\ldots\ldots\ldots\mathbf{(1)}$$

In this model, ROA represents bank performance, NPL represents credit risk, SIZE represents bank size, NPL × SIZE represents the interaction variable, β_0 is the constant, β_1 to β_3 are regression coefficients, and ε is the error term. The coefficient β_1 is used to identify the direct effect of credit risk on bank performance, β_2 shows the effect of bank size on bank performance, while β_3 is the main focus of the moderation test. If the interaction coefficient is significant, bank size is considered to function as a moderating variable.

Model testing was conducted by examining the significance of regression coefficients, the coefficient of determination, and model feasibility. The partial significance test was used to assess the effect of each variable on bank performance, while the coefficient of determination was used to evaluate the model's ability to explain variations in ROA.

In addition to the main model, this study conducts a robustness test by including relevant control variables: interest rate, exchange rate, inflation, good corporate governance, BOPO, and capital adequacy ratio. These controls are included to ensure that the relationship among credit risk, bank size, and bank performance is not merely driven by external conditions or other internal bank characteristics.

The robustness model is formulated as follows:

$$\boldsymbol{ROA} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1\boldsymbol{NPL} + \boldsymbol{\beta}_2\boldsymbol{SIZE} + \boldsymbol{\beta}_3(\boldsymbol{NPL} \times \boldsymbol{SIZE}) + \boldsymbol{\beta}_4\boldsymbol{IR} + \boldsymbol{\beta}_5\boldsymbol{EXR} + \boldsymbol{\beta}_6\boldsymbol{INF} + \boldsymbol{\beta}_7\boldsymbol{GCG} + \boldsymbol{\beta}_8\boldsymbol{BOPO} + \boldsymbol{\beta}_9\boldsymbol{CAR} + \boldsymbol{\varepsilon}\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\mathbf{(2)}$$

In this model, IR represents the interest rate, EXR the exchange rate, INF inflation, GCG good corporate governance, BOPO operating expenses to operating income, and CAR the capital adequacy ratio. The robustness test evaluates whether the main findings remain consistent after controlling for macroeconomic factors, governance, operational efficiency, and capital adequacy. If the interaction between NPL and bank size remains significant, the moderating role of bank size can be considered more robust.

RESULT

This section presents the findings based on data from banking firms listed on the Indonesia Stock Exchange during 2021–2024. The sample consists of 27 banks with 108 observations. The analysis begins with descriptive statistics for credit risk, bank performance, and bank size, followed by tests of the effect of credit risk on bank performance and the moderating role of bank size.

Descriptive Analysis

The descriptive analysis shows that bank performance, measured by ROA, has a minimum value of -6.8789 and a maximum value of 3.7171. The mean ROA is 0.4916, with a standard deviation of 1.4692. This indicates that the banks in the sample generally recorded positive profitability, although performance varied considerably across banks. The negative minimum value suggests that some banks experienced losses or were unable to generate positive returns from their assets during the observation period.

Credit risk, measured by NPL, has a minimum value of 0.0100 and a maximum value of 14.0900. The mean NPL is 2.9907, with a standard deviation of 2.4434. This average indicates that credit risk in the sample was relatively controlled, as it remained below the common 5% threshold. However, the maximum NPL of 14.0900 shows that some banks faced substantial credit risk pressure.

Bank size has a minimum value of 7.3709 and a maximum value of 14.6588, with a mean of 11.2533 and a standard deviation of 1.8448. These figures indicate that the sample includes banks with diverse asset scales. This variation is important because the study positions bank size as a moderating variable..

Table 2. Descriptive Analysis of Research Variables

Variable	Minimum	Maximum	Mean	Standard Deviation
ROA	-6.8789	3.7171	0.4916	1.4692
NPL	0.0100	14.0900	2.9907	2.4434
Bank Size	7.3709	14.6588	11.2533	1.8448

Source: Analysis Result, 2026

Overall, the descriptive results show that average NPL remained manageable, while ROA displayed substantial variation across banks. The variation in bank size also supports the moderation test, as it allows the analysis to examine whether the effect of credit risk on performance differs across banks with different asset scales.

Main Model Testing

The main model was tested by including NPL, bank size, and the interaction between NPL and bank size. The estimation results are presented below.

Table 3. Main Model Testing

Variable	Coefficient	Standard Error	p-value	Interpretation
Constant	-3.2590	1.3229	0.0154	Significant
NPL	0.6910	0.3882	0.0780	Not significant at 5%
Bank Size	0.3925	0.1186	0.0013	Significant
NPL × Bank Size	-0.0811	0.0351	0.0229	Significant

Source: Analysis Result, 2026

The results show that credit risk, measured by NPL, does not significantly affect ROA at the 5% level. The NPL coefficient of 0.6910 with a p-value of 0.0780 indicates that the direct effect of credit risk on bank performance is not statistically confirmed in the main model. This suggests that an increase in credit risk does not automatically reduce or improve bank performance when only the direct effect is considered.

Bank size has a positive and significant effect on ROA. The coefficient of 0.3925 with a p-value of 0.0013 indicates that larger banks tend to achieve higher ROA. This suggests that banks with greater asset scale may have stronger capacity to generate profitability.

The key finding lies in the interaction between NPL and bank size. The interaction coefficient is -0.0811 with a p-value of 0.0229, indicating that bank size significantly moderates the relationship between credit risk and bank performance. The negative coefficient means that as bank size increases, the effect of NPL on ROA becomes more negative. Thus, bank size not only directly influences bank performance but also changes the strength of the relationship between credit risk and bank performance.

Conditional Effect of Moderation

To clarify the moderation pattern, the conditional effect of NPL on ROA was examined at different levels of bank size. The results are presented below.

Table 4. Conditional Effect of Moderation

Bank Size Level	Effect of NPL on ROA	p-value	Interpretation
9.4085	-0.0723	0.3409	Not significant
11.2534	-0.2220	0.0001	Negative and significant
13.0982	-0.3717	0.0001	Negative and significant

Source: Analysis Result, 2026

The conditional effect results show that, among small banks, the effect of NPL on ROA is not significant. However, among medium-sized banks, the effect becomes negative and significant. This negative effect becomes even stronger among large banks. These results indicate that bank size strengthens the negative effect of credit risk on bank performance, particularly for medium-sized and large banks.

This finding suggests that large banks are more sensitive to increases in NPL than small banks. This may occur because large banks have greater credit volume, more complex asset structures, and broader risk exposure. Consequently, an increase in NPL may exert stronger pressure on profitability. Therefore, bank size should not be viewed merely as an indicator of capacity, but also as an indicator of risk complexity.

Coefficient of Determination

The R-square value of the main model is 0.1942. This means that credit risk, bank size, and the interaction between credit risk and bank size explain 19.42% of the variation in bank performance. The remaining 80.58% is explained by other factors outside the model.

This value indicates that bank performance is not determined only by credit risk and bank size. Profitability may also be influenced by operational efficiency, capital adequacy, liquidity, governance, funding structure, interest rates, inflation, exchange rates, and other macroeconomic conditions. Therefore, a robustness test is needed to examine whether the main findings remain consistent after including additional control variables.

Robustness Test

The robustness test includes several control variables: interest rate, exchange rate, inflation, good corporate governance, BOPO, and CAR. The results are presented below.

Table 5. Robustness Test

Variable	Coefficient	p-value	Interpretation
NPL	1.7319	0.0223	Significant
Bank Size	1.4193	0.0001	Significant
NPL × Bank Size	-0.3150	0.0030	Negative and significant
Interest Rate	294.1784	0.0000	Significant
Exchange Rate	-29.5977	0.0105	Significant
Inflation	-101.8886	0.0000	Significant
GCG	-0.5292	0.1009	Not significant
BOPO	-0.0578	0.0002	Significant
CAR	-0.8510	0.2707	Not significant

Source: Analysis Result, 2026

The robustness test shows that the interaction between NPL and bank size remains negative and significant in explaining ROA. The interaction coefficient of -0.3150 with a p-value of 0.0030 strengthens the main model result that bank size moderates the relationship between credit risk and bank performance. Thus, the moderating role of bank size remains consistent even after controlling for macroeconomic factors and internal bank characteristics.

In the robustness model, NPL has a significant effect on ROA. The NPL coefficient of 1.7319 with a p-value of 0.0223 indicates that the direct relationship between credit risk and bank performance becomes visible after control variables are included. This change suggests that the relationship between NPL and ROA is sensitive to other factors in the model. Bank size also remains significant, confirming its role in explaining profitability differences across banks.

Macroeconomic control variables also show relevant results. Interest rate, exchange rate, and inflation significantly affect ROA. This indicates that bank performance is closely related to external economic conditions. Among internal bank characteristics, BOPO has a negative and significant effect on ROA, showing that higher operating expenses relative to operating income reduce profitability. Meanwhile, GCG and CAR are not significant in the robustness model.

Overall, the robustness test supports the main findings. The interaction between credit risk and bank size remains negative and significant, indicating that the moderating role of bank size is relatively stable. These results strengthen the argument that the impact of credit risk on bank performance differs according to bank size.

Summary of Results

The findings can be summarized into six points. First, the average NPL of the sampled banks remained relatively controlled, while ROA varied considerably across banks. Second, in the main model, credit risk does not have a significant direct effect on bank performance at the 5% level. Third, bank size has a positive and significant effect on ROA. Fourth, the interaction between NPL and bank size has a negative and significant effect on ROA, indicating that bank size moderates the relationship between credit risk and bank performance. Fifth, the conditional effect analysis shows that the effect of NPL on ROA becomes negative and significant among medium-sized and large banks. Sixth, the robustness test confirms the main findings because the interaction between NPL and bank size remains negative and significant after including control variables.

DISCUSSION

The results show that the relationship between credit risk and bank performance cannot be understood merely as a direct relationship between NPL and ROA. In the main model, credit risk, measured by NPL, does not significantly affect ROA at the 5% level. However, when bank size is included as a moderating variable, the interaction between NPL and bank size becomes negative and significant. This finding indicates that the effect of credit risk on bank profitability differs according to the scale of bank assets.

The insignificant direct effect of NPL on ROA in the main model can be explained in several ways. First, during 2021–2024, credit risk in Indonesian banking was relatively controlled. The average NPL in the sample was 2.9907%, still below the common 5% threshold. When NPL variation is not too extreme for most banks, its direct effect on ROA may not be strong enough to appear statistically significant. Second, the study period reflects a post-pandemic recovery phase, during which many banks were still adjusting after credit restructuring policies. These policies may have delayed or softened the effect of credit risk on profit through provisioning, restructuring, and portfolio adjustment.

Third, bank performance is not determined only by credit risk. ROA may also be affected by operational efficiency, cost of funds, asset structure, non-interest income, governance, capital adequacy, and macroeconomic conditions. The robustness test supports this explanation, since the effect of NPL on ROA becomes significant after control variables are included. This means that the relationship between credit risk and bank performance becomes clearer once macroeconomic and internal bank factors are controlled.

This result is consistent with studies showing that NPL does not always significantly affect bank profitability, particularly during pandemic and post-pandemic periods (Al Zafir & Satria, 2025; Mafaza & Zulfikar, 2025; Rusli & Fitriana, 2023). At the same time, the finding remains aligned with the broader literature arguing that credit risk can reduce bank performance. Boussaada et al. (2023) show that NPL negatively affects European bank performance because problem loans increase provisioning costs and reduce income. Abdelaziz et al. (2022), Ekinci and Poyraz (2019), and Arhinful et al. (2025) similarly emphasize that rising problem loans can weaken profitability and bank growth.

The most important finding of this study is the significant interaction between credit risk and bank size. The negative interaction coefficient indicates that the larger the bank, the more negative the effect of NPL on ROA. This finding suggests that bank size is not only an institutional characteristic but also a contingency factor that shapes how credit risk translates into financial performance. Bank size therefore helps explain why the effect of NPL on ROA is not identical across banks.

Conceptually, this finding shows that large banks are not always better protected from credit risk. In much of the literature, large banks are often assumed to have stronger risk absorption capacity because they possess greater capital, broader diversification, more advanced risk management systems, and better access to funding. However, the present study shows that as bank size increases, the negative effect of NPL on ROA becomes stronger. In other words, bank size represents not only capacity but also complexity. Large banks have broader loan portfolios, more complex business networks, and wider exposure to economic sectors. When non-performing loans increase, the impact on profitability may therefore become more severe.

The conditional effect results strengthen this interpretation. Among small banks, the effect of NPL on ROA is not significant. Among medium-sized and large banks, however, the effect becomes negative and significant, with the strongest negative effect appearing among large banks. This indicates that bank size changes the sensitivity of profitability to credit risk. Put differently, large banks are more sensitive to increasing NPL in relation to ROA.

Several explanations may account for this result. First, large banks have much larger credit volume. With a large credit portfolio, even a small increase in the NPL ratio may represent a substantial nominal amount of problem loans. This increases provisioning needs and reduces profit. Second, portfolio diversification in large banks does not necessarily eliminate risk, especially when economic pressure affects many sectors at once. Third, large banks face stronger performance expectations from investors and regulators. A deterioration in loan quality among large banks may trigger closer market and supervisory attention because large banks are often viewed as indicators of banking sector stability.

This finding extends the work of Asrori et al. (2024), who show that bank size can moderate the relationship between financial risk and bank performance. The present study provides additional evidence from banking firms listed on the Indonesia Stock Exchange, showing that bank size matters in explaining the relationship between credit risk and profitability. Other studies that position bank size as a moderator also suggest that asset scale may change the effect of risk or financial ratios on bank profitability, although the direction and significance may differ across contexts, periods, and bank types (Agung Prayogi, 2024; Ayunda, 2026; Dewi, 2026; Fitriana, 2025; Herlina & Wilujeng, 2025).

The robustness test further supports this conclusion. After including interest rate, exchange rate, inflation, GCG, BOPO, and CAR as control variables, the interaction between NPL and bank size remains negative and significant. This means that the moderating role of bank size does not disappear after controlling for macroeconomic factors and internal bank characteristics. Therefore, the evidence on bank size as a moderator can be considered relatively stable.

The robustness test also shows that BOPO has a negative and significant effect on ROA. This confirms that operational efficiency remains a key determinant of bank performance. The higher the operating expenses relative to operating income, the lower the bank's profitability. Macroeconomic variables also produce relevant results. Interest rate, exchange rate, and inflation significantly affect ROA, showing that bank performance is closely linked to external economic conditions, as emphasized in banking literature on emerging markets (Saleh & Abu Afifa, 2020; Siddique et al., 2022).

Meanwhile, GCG and CAR are not significant in the robustness model. This does not mean that governance and capital adequacy are unimportant. Rather, it may indicate that, in this period and sample, variations in GCG and CAR were not strong enough to explain differences in ROA after other variables were included. In Indonesian banking, CAR is generally maintained at a relatively strong level due to strict capital requirements, so its variation may be insufficient to explain profitability differences across banks.

Theoretically, this study contributes to the literature on credit risk and bank performance by showing that bank size functions as a contingency factor. The relationship between NPL and ROA cannot be understood only through a direct-effect perspective. Bank-specific characteristics, particularly asset size, should be considered because they can change the effect of credit risk on performance. Thus, this study strengthens the argument that bank performance analysis needs to account for heterogeneity across banks.

Practically, the findings have implications for bank management. Large banks need to manage credit risk more carefully because an increase in NPL may have a stronger effect on

ROA. Large banks cannot rely solely on asset scale and portfolio diversification. They need to strengthen credit quality monitoring, conduct regular stress testing, improve provisioning accuracy, and enhance loan restructuring mechanisms. For smaller banks, the findings do not imply that credit risk can be ignored. Small banks still need to maintain loan quality because their portfolios tend to be more concentrated and their capital capacity is often more limited.

For regulators, the findings suggest that credit risk supervision should consider bank size. Supervision of large banks should pay closer attention to the complexity of credit portfolios and the potential systemic impact of rising NPL. Supervision of smaller banks, meanwhile, should focus on risk concentration, credit governance quality, and capital capacity to absorb losses. Hence, supervisory policy should not rely entirely on a one-size-fits-all approach.

For investors, the results imply that banking stock analysis should consider the interaction between NPL and bank size. Investors should not interpret NPL as a stand-alone indicator. Instead, NPL needs to be read together with asset size, operational efficiency, capital adequacy, and macroeconomic conditions. In large banks, even a small increase in NPL may carry greater profitability consequences because the nominal credit exposure is also larger.

Overall, the discussion confirms that bank size plays an important role in explaining the dynamics between credit risk and bank performance. In this study, bank size strengthens the negative effect of credit risk on ROA. This finding indicates that large scale in banking reflects not only strength, but also complexity and greater risk sensitivity. Therefore, credit risk management in Indonesian banking should not only aim to reduce NPL ratios, but also understand how NPL affects profitability across banks with different size characteristics.

CONCLUSION

This study examined the effect of credit risk on bank performance and tested the moderating role of bank size among banking firms listed on the Indonesia Stock Exchange during 2021–2024. Credit risk was measured by non-performing loans, bank performance by return on assets, and bank size by the natural logarithm of total assets. Based on 108 observations from 27 banks, the findings show that the relationship between credit risk and bank performance is not straightforward, but depends on bank size.

The results indicate that credit risk does not have a significant direct effect on bank performance in the main model. This suggests that an increase in NPL does not automatically reduce ROA when contingency factors are not considered. This condition may be explained by the relatively controlled average NPL in the sample, the presence of credit restructuring policies during the post-pandemic recovery period, and the influence of other factors on bank profitability, such as operational efficiency, capital adequacy, macroeconomic conditions, and asset structure.

The main finding of this study lies in the moderating role of bank size. The interaction between NPL and bank size has a negative and significant effect on ROA. This means that bank size changes the strength of the relationship between credit risk and bank performance. The larger the bank, the stronger the negative effect of credit risk on profitability. The conditional effect analysis also shows that the effect of NPL on ROA is not significant among small banks, but becomes negative and significant among medium-sized and large banks. Therefore, large banks are not necessarily better protected from credit risk, because greater asset scale may also indicate more complex portfolios and broader risk exposure.

The robustness test strengthens this finding. After including interest rate, exchange rate, inflation, good corporate governance, BOPO, and capital adequacy ratio as control variables, the interaction between NPL and bank size remains negative and significant. This confirms that the moderating role of bank size is relatively stable and does not disappear after controlling for macroeconomic factors and internal bank characteristics. In addition, the robustness test shows that operational efficiency and macroeconomic conditions are important in explaining bank performance. BOPO negatively affects ROA, while interest rate, exchange rate, and inflation are relevant in explaining variations in bank profitability.

Practically, the findings provide implications for bank management, regulators, and investors. For bank management, credit risk management should be adjusted to bank scale. Large banks need to pay closer attention to credit quality because an increase in NPL may have a stronger effect on ROA. Credit expansion strategies should be balanced with risk monitoring, adequate provisioning, stress testing, and early warning systems for potential problem loans. Small banks must also maintain loan quality and avoid risk concentration in specific debtor segments, even though the effect of NPL on ROA among small banks is not significant in this study.

For regulators, the findings indicate that banking supervision should consider differences in bank size. Supervision of large banks should not focus only on capital adequacy and aggregate NPL ratios, but also on credit portfolio complexity, sectoral exposure, and the possible systemic impact of declining credit quality. For investors, the results suggest that banking stock assessment should not rely on NPL as an isolated indicator. NPL needs to be interpreted together with bank size, ROA, BOPO, CAR, and macroeconomic conditions..

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Online Transportation User Loyalty: Empirical Evidence from Service Quality and Digital Satisfaction

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Abstract

This study examines the effect of E-Service Quality on E-Loyalty, with E-Satisfaction positioned as a mediating variable among Grab users in Bandung City. A quantitative approach was applied using descriptive and explanatory methods. Data were obtained through questionnaires distributed to 100 Grab users residing in Bandung and were analyzed using Structural Equation Modeling–Partial Least Squares with SmartPLS 4.1. The findings indicate that E-Service Quality has a positive and significant effect on E-Satisfaction. E-Service Quality also exerts a positive and significant influence on E-Loyalty. In addition, E-Satisfaction has a positive and significant effect on E-Loyalty and mediates the relationship between E-Service Quality and E-Loyalty. Descriptive results show that users' perceptions of electronic service quality, digital satisfaction, and loyalty remain below an optimal level. These findings suggest that loyalty toward online transportation services is shaped not merely by the availability of an application or promotional offers, but by the quality of the digital experience perceived by users. Accordingly, online transportation providers need to strengthen application reliability, service responsiveness, information clarity, transaction security, ease of use, and complaint resolution so that user satisfaction and loyalty can be sustained over time.

Keywords: digital satisfaction; electronic service quality; online transportation; SEM-PLS; user loyalty.

INTRODUCTION

Digital services have reshaped the way consumers access, assess, and maintain relationships with service providers. In online transportation, mobile applications no longer serve only as tools for booking rides; they have become the primary interface through which consumers judge service quality, experience satisfaction, and develop loyalty toward a platform. This shift places electronic service quality at the center of digital marketing management, particularly because consumer experience is shaped not only by physical interaction with drivers, but also by system reliability, application responsiveness, information clarity, transaction security, ease of use, and interface design (Zeithaml et al., 2019; Kotler & Keller, 2022).

In application-based services, user loyalty carries strategic importance because competition among platforms is intense and consumer switching costs are relatively low. Online transportation users can easily move from one application to another when they find better prices, larger promotions, faster service responses, or a more satisfying user experience. For this reason, digital loyalty cannot be built solely through short-term promotional incentives. It requires a consistent and satisfying service experience. E-Loyalty reflects users' tendency to continue using, revisit, recommend, and maintain their preference for a particular digital platform even when competing alternatives are available (Li et al., 2021; Waruwu & Sahir, 2022; Rezeki et al., 2023).

Grab is one of the online transportation platforms that has operated in Indonesia for many years and has expanded into a digital service ecosystem offering transportation, food delivery, parcel delivery, and digital payment features. Yet, being a major market player does not automatically secure user loyalty. In a competitive online transportation market, users have become increasingly attentive to the quality of experience they receive. Several issues frequently reported in online transportation services include driver delays, unilateral cancellations, difficulty accessing complaint channels, slow customer service responses, and concerns over transaction safety. These issues indicate that digital service quality is not merely a technical matter; it also concerns a company's ability to build trust, satisfaction, and user attachment.

E-Service Quality is an important concept for explaining how users evaluate services delivered through digital platforms. Electronic service quality refers to an application's ability to facilitate information search, booking, transactions, communication, and problem resolution in an effective and efficient manner (Salmah et al., 2021). In online transportation services, service quality is not measured only by the platform's ability to connect users with drivers. It is also reflected in the platform's capacity to provide accurate information, protect privacy, present an understandable interface, and respond promptly when users encounter service problems. Prior studies have shown that E-Service Quality plays an important role in shaping customer satisfaction and loyalty in digital services, although the strength and pattern of this influence may vary depending on the sector, user characteristics, and type of platform examined (Rodríguez et al., 2020; Khan et al., 2023; Purba et al., 2024).

Beyond service quality, E-Satisfaction is another factor that cannot be overlooked in explaining digital loyalty. Digital satisfaction emerges when users' experience with an application meets, or even exceeds, their expectations. Such satisfaction may be shaped by ease of access, time efficiency, convenience in navigating the application, transaction security, service variety, and the company's ability to resolve user problems. Across several studies, E-Satisfaction has been shown to be an important predictor of E-Loyalty, as satisfied users tend to show a stronger intention to reuse a service and recommend it to others (Rodríguez et al., 2020; Dhruba & Gunja, 2023; Khan et al., 2023).

Nevertheless, the relationship among E-Service Quality, E-Satisfaction, and E-Loyalty has not always been consistent. Some studies report that E-Service Quality has a positive and significant effect on E-Loyalty, either directly or through E-Satisfaction (Khan et al., 2023; Purba et al., 2024; Maola & Dewi, 2024). Other studies, however, suggest that electronic service quality does not always exert a direct influence on loyalty. In several contexts, E-Satisfaction has also failed to mediate this relationship (Roisah et al., 2022; Dewi & Ramli, 2023). These mixed findings indicate that the mechanism through which digital loyalty is formed still requires further examination, particularly in online transportation, whose service characteristics differ from e-commerce, e-wallet, or online banking platforms.

Drawing on this gap, the present study aims to analyze the effect of E-Service Quality on E-Loyalty, with E-Satisfaction serving as an intervening variable among Grab users in Bandung City. This study is relevant because Bandung represents an urban market with a relatively high level of online transportation use, while also facing mobility challenges, traffic congestion, and increasing public dependence on application-based services. Theoretically, this study is expected to enrich the digital marketing literature, particularly by explaining the role of satisfaction in linking electronic service quality and digital loyalty. Practically, the findings are expected to offer insights for online transportation providers in strengthening user loyalty through digital service improvements that are more reliable, responsive, secure, user-friendly, and oriented toward problem resolution..

LITERATURE REVIEW

Service quality, satisfaction, and loyalty are central concepts in digital service marketing. In online transportation, the relationship among these three concepts becomes increasingly important because user experience is shaped not only by the physical service delivered by drivers, but also by the quality of user interaction with the application. The application functions as the initial access point and the main service space through which consumers search for information, place orders, monitor trips, choose payment methods, submit complaints, and evaluate their overall service experience. Therefore, user loyalty in online transportation should be understood as an outcome of both digital service quality and user satisfaction formed throughout the application-use process.

E-Service Quality refers to the ability of an electronic-based service to facilitate users' needs effectively and efficiently. In digital services, quality is not only associated with the final service outcome, but also with the process experienced by users from the moment they open the application until the service is completed. Zeithaml et al. (2019) explain that service quality reflects customers' perceptions of the service components they receive and becomes one of the key determinants of customer satisfaction. Meanwhile, Chase et al., as cited in Salmah et al. (2021), define E-Service Quality as the ability of a website or application to facilitate search, transaction, purchase, and distribution activities effectively and efficiently. Kotler and Keller (2022) also emphasize that service quality concerns the extent to which a service is able to meet or surpass customer expectations. In the context of Grab, this concept is relevant because users evaluate the service through various aspects, including application reliability, response speed, information accuracy, data security, ease of use, and application interface.

The dimensions of E-Service Quality in this study include reliability, responsiveness, information quality, privacy, ease of use, and web design. These six dimensions reflect the nature of digital services used in the source manuscript, referring to Chase's model as cited in Salmah et al. (2021). Reliability refers to the ability of the application to provide services accurately and consistently. Responsiveness describes the speed of the application and customer service in responding to users' requests or complaints. Information quality concerns the clarity, completeness, and accuracy of information presented in the application. Privacy refers to the protection of users' personal data and transaction security. Ease of use reflects the extent to which users can operate the application without difficulty, while web design concerns the quality of the application's visual display and interface structure. These dimensions are used to operationalize the research variable among Grab users in Bandung City.

Across digital service studies, E-Service Quality has been found to influence both satisfaction and loyalty. Rodríguez et al. (2020), for instance, found that electronic service quality affects user satisfaction in the context of e-retailers, with satisfaction becoming an important pathway through which loyalty is developed. Khan et al. (2023) also reported that E-Service Quality positively affects E-Loyalty in online banking services, with E-Satisfaction functioning as a mediating variable. A similar finding was presented by Purba et al. (2024), who showed that electronic service quality has a significant effect on both satisfaction and loyalty among QRIS users.

However, the empirical pattern is not entirely uniform. Pratama et al. (2023) and Dewi et al. (2023) indicated that E-Service Quality does not always have a strong effect on satisfaction or loyalty, particularly when other factors such as trust, promotion, usage habits, or perceived value become more dominant. These differences suggest that the effect of digital service quality on loyalty is highly context-dependent. It may vary according to the platform's characteristics, the nature of the service, and the way users evaluate the benefits and risks of continued use.

E-Satisfaction refers to the degree of satisfaction users experience after interacting with a digital service. This satisfaction is formed when users' actual experience is consistent with, or better than, their prior expectations. Rodríguez et al. (2020) define E-Satisfaction as customers' evaluation of online shopping experiences based on the comparison between pre-purchase expectations and post-purchase perceptions. Roisah et al. (2022) describe E-Satisfaction as customers' sense of fulfilment and pleasure during online experiences, including information search and transaction processes. They also position E-Satisfaction as an emotional state formed through repeated interactions with an online service provider.

In online transportation services, digital satisfaction arises when users perceive the application as easy to use, the service as available when needed, the information as clear, the transaction as secure, and complaints as handled properly. Satisfaction in this context is therefore not confined to the completion of a ride. It involves the entire digital journey, from opening the application, searching for a service, placing an order, communicating with the driver, completing payment, to receiving assistance when service problems occur.

The dimensions of E-Satisfaction in this study consist of convenience, merchandising, site design, security, and service ability. Convenience reflects how easily users can find and use the service. Merchandising refers to the variety of services, available features, and offers provided through the application. Site design concerns whether the application display is comfortable, understandable, and easy to navigate. Security describes users' sense of safety regarding their account, transaction, and personal data. Service ability refers to the platform's capacity to provide assistance and resolve service-related problems.

These dimensions are important because Grab users' satisfaction is not shaped only by whether they successfully obtain transportation services. It is also formed through their broader experience within the application ecosystem. A user may complete a trip, but still feel dissatisfied if the fare information is unclear, the complaint feature is difficult to access, the menu structure is confusing, or the platform response is slow. For this reason, E-Satisfaction in online transportation must be understood as a cumulative evaluation of digital convenience, service reliability, safety, and problem-handling capacity.

E-Satisfaction is often positioned as an intervening variable that explains how digital service quality is transformed into loyalty. Satisfied users tend to have a stronger intention to reuse a service, recommend it to others, and remain with the same platform despite the availability of alternatives. Dhruba and Gunja (2023) showed that digital customer satisfaction has a significant effect on loyalty in online banking services. Khan et al. (2023) also found that E-Satisfaction fully mediates the relationship between E-Service Quality and E-Loyalty. In the e-commerce context, Melawati et al. (2023) reported that E-Satisfaction mediates the relationship between electronic service quality and user loyalty.

Even so, the mediating role of satisfaction cannot be assumed to work identically across all digital services. Ashiq and Hussain (2024), for example, found that E-Service Quality may directly affect E-Loyalty, but not always through satisfaction. This finding implies that satisfaction is indeed important, but its mediating strength may differ depending on the sector, user expectations, switching barriers, and the functional value users derive from a digital platform. In online transportation, this issue becomes particularly relevant because users can compare platforms rapidly and shift their choices with relatively little effort.

E-Loyalty represents customer loyalty in a digital environment. It is not expressed only through repeat purchases or repeated service use, but also through users' tendency to remain with a particular platform, recommend it to others, and resist switching to competitors. Li et al. (2021) define E-Loyalty as customers' commitment in a digital setting to continue using or interacting with a specific platform. Waruwu and Sahir (2022) explain that E-Loyalty reflects consumers' inclination to keep using, revisiting, or interacting with a digital platform, with or without an immediate transaction. Rezeki et al. (2023) further argue that E-Loyalty is marked by user attachment to digital services, repeated visits, recurring transactions, and willingness to recommend the service to others.

In this study, E-Loyalty is measured through four dimensions: cognitive, affective, conative, and action loyalty. Cognitive loyalty refers to users' rational belief that Grab is a better service option than its competitors. Affective loyalty reflects users' emotional attachment to the application after receiving positive service experiences. Conative loyalty indicates users' intention to continue using Grab in the future. Action loyalty represents the most concrete form of loyalty, shown through repeated use, recommendations to others, and resistance to competitors' offers. These four dimensions suggest that digital loyalty does not arise instantly. It develops progressively from rational evaluation, positive feelings, repeated intention, and finally actual loyal behavior.

The relationship among E-Service Quality, E-Satisfaction, and E-Loyalty can be understood through the logic of digital customer experience. When users receive an application service that is reliable, responsive, secure, informative, easy to operate, and supported by a well-designed interface, they are more likely to feel satisfied. This satisfaction then strengthens their belief, attachment, intention, and loyal behavior toward the platform. However, because online transportation users can move between applications with little difficulty, service quality alone may not be sufficient to create strong loyalty. Loyalty is more likely to emerge when service quality is translated into a satisfying user experience. In this sense, E-Satisfaction occupies an important psychological position in linking electronic service quality with digital loyalty.

Based on this literature review, the present study positions E-Service Quality as the independent variable, E-Satisfaction as the intervening variable, and E-Loyalty as the dependent variable. This structure is consistent with the study's aim to explain online transportation user loyalty through service quality and digital satisfaction. In the context of Grab users in Bandung City, the model is relevant because competition in online transportation requires firms not only to offer fast and affordable services, but also to provide a digital experience that is consistent, secure, simple, responsive, and satisfying. Thus, the literature review confirms that online transportation user loyalty is shaped by sound electronic service quality and digital satisfaction developed through users' overall experience with the application.

METHODOLOGY

This study employed a quantitative approach using descriptive and explanatory methods. The quantitative approach was selected because the study aimed to examine causal relationships among variables using numerical data collected from respondents. The descriptive method was used to portray users' responses to electronic service quality, digital satisfaction, and online transportation user loyalty. Meanwhile, the explanatory method was applied to test the direct and indirect effects among E-Service Quality, E-Satisfaction, and E-Loyalty. This approach is appropriate for digital marketing research, as relationships among consumer behavior variables can be empirically assessed through statistical models involving latent constructs (Hair et al., 2022; Iba & Wardhana, 2024).

The object of this study was Grab application users in Bandung City. Grab was selected because it is an online transportation service that has reached a relatively mature market stage, making user loyalty a critical issue for sustaining application use. Bandung City was chosen because it is one of Indonesia's major urban areas with a high level of online transportation use and complex mobility dynamics. This context is therefore relevant for examining how digital service quality shapes user satisfaction and loyalty in online transportation. In the source manuscript, the study was directed toward Grab users in Bandung City, focusing on the relationship among E-Service Quality, E-Satisfaction, and E-Loyalty.

The population consisted of Grab users residing in Bandung City. Since the exact number of active Grab users in Bandung is not publicly available, the population was treated as infinite. The sample size was determined using the Lemeshow formula with a 95% confidence level, a maximum proportion of 0.5, and a 10% margin of error. This calculation produced a minimum sample size of 96.4 respondents, which was then rounded to 100 respondents. The sampling technique used was non-probability sampling with a purposive sampling approach. Respondents were required to have used Grab at least once and to reside in Bandung City. This technique is suitable when the researcher requires respondents who have direct experience with the service being examined (Sugiyono, 2020; Etikan & Bala, 2017).

Primary data were collected through an online questionnaire prepared in Google Forms and distributed to Grab users in Bandung City. The questionnaire was developed based on the indicators of each research variable and used a five-point Likert scale, ranging from strongly disagree to strongly agree. A Likert scale was considered appropriate because it allows respondents' perceptions, attitudes, and evaluations of digital service experience to be captured in a structured manner (Taherdoost, 2019; Sugiyono, 2020). In addition to primary data, this study also used secondary data drawn from scholarly literature, industry-related information, and supporting materials on online transportation services to strengthen the research argument.

This study consisted of three main variables. The independent variable was E-Service Quality, defined as Grab's ability to deliver digital services effectively, efficiently, securely, and in a user-friendly manner. This variable was measured through six dimensions: reliability, responsiveness, information quality, privacy, ease of use, and web design. The intervening variable was E-Satisfaction, referring to users' level of satisfaction with their digital experience while using the Grab application. It was measured through five dimensions: convenience, merchandising, site design, security, and service ability. The dependent variable was E-Loyalty, defined as users' commitment to continue using, reselecting, and recommending Grab. This variable was measured through four dimensions: cognitive, affective, conative, and action loyalty. The operational structure in the source manuscript consisted of 30 statement items, comprising 12 items for E-Service Quality, 10 items for E-Satisfaction, and 8 items for E-Loyalty.

Data were analyzed using Structural Equation Modeling–Partial Least Squares with SmartPLS. SEM-PLS was selected because it is suitable for research models involving latent constructs, reflective indicators, relatively small to moderate samples, and data that do not have to meet strict normality assumptions (Hair et al., 2022; Sarstedt et al., 2022). The analysis was carried out in two stages: assessment of the measurement model, or outer model, and assessment of the structural model, or inner model.

The outer model was evaluated to ensure that the research instrument met validity and reliability criteria. Convergent validity was assessed through outer loading and Average Variance Extracted values. An indicator is considered valid when its loading ideally exceeds 0.70 and the AVE value is above 0.50. Construct reliability was examined using Cronbach's Alpha and Composite Reliability, with a minimum recommended value of 0.70 (Hair et al., 2022; Garson, 2022). Once the measurement model met these requirements, the analysis proceeded to the inner model.

The inner model was evaluated to test relationships among latent variables through path coefficients, t-statistics, p-values, and R-square values. Hypothesis testing was performed using the bootstrapping procedure in SmartPLS. A hypothesis was considered significant when the t-statistic exceeded 1.96 and the p-value was below 0.05. The mediating effect of E-Satisfaction was examined through the specific indirect effect, namely the path from E-Service Quality to E-Loyalty through E-Satisfaction. Through this procedure, the study was able to determine whether digital satisfaction merely functions as an outcome of service quality, or whether it also serves as a mechanism linking electronic service quality to online transportation user loyalty (Hair et al., 2022; Sarstedt et al., 2022; Iba & Wardhana, 2024)..

RESULT

This study involved 100 Grab users in Bandung City as respondents. The data were analyzed using SmartPLS 4.1 through two main stages: evaluation of the measurement model and evaluation of the structural model. In PLS-SEM, empirical findings should first be examined through the validity and reliability of the constructs before structural relationships are interpreted. This step is necessary because structural estimates are meaningful only when the indicators consistently represent the constructs being measured (Hair et al., 2022; Sarstedt et al., 2022). The research model consisted of three main constructs: E-Service Quality, E-Satisfaction, and E-Loyalty.

The descriptive analysis indicates that the three variables had not reached an optimal condition. Users' responses to E-Service Quality fell into the less satisfactory quality category. This suggests that users perceived Grab's electronic service quality as not yet fully meeting their expectations. Several aspects still require improvement, including service reliability, application and customer service responsiveness, information clarity, privacy protection, ease of use, and application design. In application-based services, these elements of digital experience provide the foundation for building user satisfaction and loyalty (Rodríguez et al., 2020; Khan et al., 2023).

Table 1. Summary of Descriptive Results of Research Variables

Variable	Main Dimensions	Result Tendency	Empirical Implication
E-Service Quality	Reliability, responsiveness, information quality, privacy, ease of use, web design	Less satisfactory service quality	Grab's digital service was not yet perceived as fully reliable, responsive, secure, easy to use, and informative
E-Satisfaction	Convenience, merchandising, site design, security, service ability	Less satisfied	Users' digital experience had not fully met expectations, particularly in service convenience, application design, customer service, and problem resolution
E-Loyalty	Cognitive, affective, conative, action	Less loyal	Users had not yet developed strong emotional attachment, reuse intention, or recommendation behavior

Source: Processed from research findings.

For E-Satisfaction, the results show that users were in the less satisfied category. This finding indicates that the digital experience delivered by Grab had not yet generated optimal satisfaction. The source manuscript emphasizes that lower satisfaction was mainly reflected in indicators related to ease of finding services, time efficiency, satisfaction with the application's visual design, ease of menu navigation, availability of customer service, and satisfaction with solutions to service problems. Thus, user satisfaction is shaped not only by the successful completion of transportation services, but also by the broader digital process experienced by users from opening the application to resolving service-related issues.

For the E-Loyalty variable, the findings indicate that users were still in the less loyal category. This means that users had not yet developed a strong attachment to Grab. The source manuscript shows that this condition was related to indicators such as emotional attachment, emotional satisfaction after using Grab, intention to reuse the service, intention to recommend the application, routine usage frequency, and the habit of recommending Grab to others. This finding can be understood within the competitive nature of online transportation, where users can easily move to another application when they encounter lower prices, more attractive promotions, or a better service experience. Digital loyalty, therefore, needs to be nurtured through a service experience that is consistent, secure, responsive, and satisfying (Li et al., 2021; Waruwu & Sahir, 2022; Rezeki et al., 2023).

Before testing the structural relationships, this study assessed construct reliability. The results show that all variables had Cronbach's Alpha and Composite Reliability values above 0.70. Thus, all constructs were considered reliable. E-Service Quality had a Cronbach's Alpha value of 0.919 and a Composite Reliability value of 0.923. E-Satisfaction obtained a Cronbach's Alpha value of 0.905 and a Composite Reliability value of 0.908. Meanwhile, E-Loyalty recorded a Cronbach's Alpha value of 0.866 and a Composite Reliability value of 0.868. These values indicate that the measurement items had strong internal consistency. The source manuscript also confirms that all latent variables met the reliability criteria, as their values exceeded the recommended threshold of 0.70.

Table 2. Construct Reliability

Variable	Cronbach's Alpha	Composite Reliability	Description
E-Service Quality	0.919	0.923	Reliable
E-Satisfaction	0.905	0.908	Reliable
E-Loyalty	0.866	0.868	Reliable

Source: Processed from SmartPLS 4.1 output.

These results suggest that the research instrument was appropriate for structural model testing. In PLS-SEM, reliability values above 0.70 indicate that the indicators within a construct have sufficient internal consistency in measuring the same underlying concept (Hair et al., 2022; Garson, 2022). In addition, the discriminant validity test showed that each indicator had a stronger correlation with its own construct than with other constructs. This means that the indicators were able to distinguish the construct they were intended to measure from other constructs in the model. The source manuscript concludes that the measurement model satisfied the discriminant validity criteria and that the questionnaire was suitable for further statistical testing.

The structural model evaluation shows that the research model had strong explanatory power. The R-square value for E-Satisfaction was 0.785, while the R-square value for E-Loyalty was 0.861. In PLS-SEM, a high R-square value indicates that the exogenous constructs have a strong ability to explain variance in the endogenous constructs (Hair et al., 2022; Iba & Wardhana, 2024). In this study, E-Service Quality was able to explain a large proportion of variance in E-Satisfaction. At the same time, E-Service Quality and E-Satisfaction jointly explained a substantial proportion of variance in E-Loyalty.

The hypothesis testing results indicate that all relationships among variables were significant. First, E-Service Quality had a positive and significant effect on E-Satisfaction, with an effect contribution of 43.1%. This means that better electronic service quality leads to higher user satisfaction with Grab's digital service. In online transportation, users are more likely to feel satisfied when the application is perceived as reliable, responsive, informative, secure, easy to use, and visually convenient. This finding is consistent with Rodríguez et al. (2020), Khan et al. (2023), and Purba et al. (2024), who demonstrated that electronic service quality is an important antecedent of digital customer satisfaction.

Second, E-Service Quality had a positive and significant effect on E-Loyalty, with an effect contribution of 35.5%. This finding indicates that digital service quality does not only shape user satisfaction, but can also directly encourage user loyalty. Users who experience better digital service are more likely to continue using the application, maintain their preference for the platform, and recommend it to others. This result supports the findings of Khan et al. (2023) and Maola and Dewi (2024), who showed that E-Service Quality can serve as a foundation for digital loyalty formation.

Third, E-Satisfaction had a positive and significant effect on E-Loyalty, with an effect contribution of 22.7%. The source manuscript explains that user satisfaction plays a role in shaping loyalty toward the Grab application. In other words, when users are satisfied with the digital experience provided, they tend to show stronger intentions to reuse the service, recommend it, and remain with the same platform. This finding supports Dhruba and Gunja (2023), Melawati et al. (2023), and Rezeki et al. (2023), who positioned satisfaction as an important predictor of digital customer loyalty.

Fourth, E-Satisfaction was found to mediate the effect of E-Service Quality on E-Loyalty. The mediating effect contributed 16.4%. The abstract of the source manuscript also states that E-Satisfaction mediates the relationship between E-Service Quality and E-Loyalty among Grab users in Bandung City. Since the direct effect of E-Service Quality on E-Loyalty was also significant, the mediation can be interpreted as partial mediation. This means that electronic service quality can enhance loyalty directly, while part of its influence also works through users' digital satisfaction.

Table 3. Summary of Hypothesis Testing Results

Hypothesis	Relationship	Effect Size	Description
H1	E-Service Quality → E-Satisfaction	43.1%	Positive and significant
H2	E-Service Quality → E-Loyalty	35.5%	Positive and significant
H3	E-Satisfaction → E-Loyalty	22.7%	Positive and significant
H4	E-Service Quality → E-Satisfaction → E-Loyalty	16.4%	Significant mediation

Source: Processed from SmartPLS 4.1 output

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Overall, the findings indicate that user loyalty in online transportation is shaped simultaneously by digital service quality and digital satisfaction. Electronic service quality functions as the initial driver of both satisfaction and loyalty, while digital satisfaction becomes the psychological mechanism that reinforces this relationship. These results suggest that strengthening Grab users' loyalty cannot rely solely on promotions or the expansion of service features. Instead, it requires a broader improvement in digital experience. Application reliability, service responsiveness, transaction security, information clarity, ease of use, interface design, and complaint handling are therefore crucial elements in enhancing satisfaction and loyalty among online transportation users.

DISCUSSION

The results of this study show that loyalty among online transportation users cannot be understood merely as a matter of habitual application use. Rather, it is shaped by users' repeated experience with digital service encounters. In the case of Grab users in Bandung City, the descriptive findings show that E-Service Quality was perceived as less satisfactory, E-Satisfaction remained at a low level, and E-Loyalty was also not yet strong. This finding is important because it reveals a gap between Grab's position as one of the major online transportation platforms and the actual experience perceived by some of its users. In other words, a strong brand presence does not automatically generate loyalty when the digital experience has not fully met user expectations.

This condition is consistent with the perspective in digital marketing that platform loyalty is built through service experiences that are reliable, secure, easy to use, responsive, and capable of delivering value over time (Rodríguez et al., 2020; Li et al., 2021; Khan et al., 2023). In a market where users can easily compare applications, brand familiarity alone is insufficient. Users continue to evaluate whether the application can reduce uncertainty, save time, provide accurate information, ensure transaction safety, and respond properly when problems occur. When these aspects are not consistently perceived, loyalty becomes fragile.

The first finding shows that E-Service Quality has a positive and significant effect on E-Satisfaction. In the source manuscript, the effect of E-Service Quality on E-Satisfaction is reported at 43.1%, meaning that nearly half of the variation in user satisfaction can be explained by the electronic service quality perceived by Grab users in Bandung City. This finding indicates that user satisfaction is strongly influenced by how the application performs, how information is presented, how complaints are handled, and how secure users feel when using the service. A good digital service experience makes users feel that the application is dependable and able to respond to their practical needs. Conversely, when the application is perceived as slow, the information is unclear, customer service is difficult to reach, or problem resolution is inadequate, user satisfaction tends to decline.

Theoretically, this finding strengthens the view that E-Service Quality is an important antecedent of satisfaction in digital services. Satisfaction does not emerge separately from service experience. It is formed through users' evaluation of the quality they receive. In online transportation, the user experience begins when the application is opened, continues when the service is searched and booked, develops further during driver confirmation and the trip itself, and ends with payment, rating, or complaint submission. Each stage contributes to users' perception of service quality. When the process runs smoothly, quickly, safely, and informatively, users are more likely to feel satisfied. This finding is in line with Rodríguez et al.

(2020), Khan et al. (2023), and Purba et al. (2024), who found that electronic service quality has a positive effect on digital customer satisfaction.

In the context of Grab, this finding also shows that user satisfaction cannot be sustained merely through promotions or service variety. Discounts, bonuses, or multiple service features may attract users, but more stable satisfaction is formed when the application's basic service functions work properly. Therefore, system reliability, response speed, fare and location accuracy, personal data protection, ease of navigation, and interface design should be managed seriously. When these elements are inconsistent, the user experience becomes fragmented and satisfaction becomes difficult to maintain. In a competitive platform industry, this type of experience becomes even more important because users have other applications that can be accessed with little effort (Dhruba & Gunja, 2023; Ashiq & Hussain, 2024).

The second finding indicates that E-Service Quality has a positive and significant effect on E-Loyalty. In the source manuscript, the effect of E-Service Quality on E-Loyalty is reported at 35.5%, suggesting that electronic service quality plays a substantial role in shaping loyalty among Grab users in Bandung City. This means that users who perceive Grab's digital service quality more favorably are more likely to continue using the service, choose Grab over competitors, and recommend it to others. Thus, digital service quality is not only a determinant of satisfaction, but also a direct driver of user loyalty.

The key implication of this finding is that digital loyalty has a rational foundation. Users may become loyal because they perceive an application as more reliable, easier to use, more informative, and safer than alternative platforms. At this level, loyalty does not necessarily emerge from deep emotional attachment. It may begin with a functional evaluation of service quality. When an application helps users move more efficiently, saves time, provides clear information, and reduces transaction risks, users have practical reasons to continue using it. This logic is consistent with the concepts of cognitive and conative loyalty, in which users remain with a platform because they hold a favorable evaluation and have an intention to reuse it (Li et al., 2021; Waruwu & Sahir, 2022; Rezeki et al., 2023).

However, the descriptive finding that user loyalty remains in the less loyal category should not be overlooked. Although E-Service Quality statistically affects loyalty, the quality currently perceived by users is not yet strong enough to produce optimal loyalty. This explains why statistical results and descriptive conditions need to be read together. Causally, service quality is important for loyalty. Factually, however, the quality of Grab's digital service as perceived by respondents still leaves room for improvement, and the resulting loyalty has not yet become robust. This condition points to a clear managerial agenda. Grab needs to improve its digital service quality not only to make users satisfied, but also to give them stronger reasons to stay despite competitors' offers.

The third finding shows that E-Satisfaction has a positive and significant effect on E-Loyalty. The source manuscript reports that the path coefficient from E-Satisfaction to E-Loyalty is 0.354, with a t-statistic of 3.370 and a p-value of 0.001, indicating a statistically significant relationship. This finding means that the higher users' satisfaction with Grab's digital experience, the greater their likelihood of becoming loyal to the application. Satisfied users do not merely feel that the service has met their expectations. They are also more likely to reuse the service, recommend it to others, and maintain their preference for the same platform. This result is consistent with the SmartPLS testing in the source manuscript, which concludes that E-Satisfaction has a positive and significant effect on E-Loyalty.

Conceptually, digital satisfaction functions as a psychological bridge between service experience and the decision to continue using a platform. Loyalty depends not only on what the application provides, but also on how users evaluate the experience. Two users may receive a similar service, but their loyalty may differ if their satisfaction levels differ. Users who feel satisfied tend to form more positive perceptions, show a lower intention to switch, and become more tolerant of minor service disruptions. By contrast, dissatisfied users are more likely to move to another platform, particularly in an online transportation market where several alternatives are readily available. This finding is in line with Dhruba and Gunja (2023), Melawati et al. (2023), and Rezeki et al. (2023), who showed that digital customer satisfaction is an important predictor of loyalty.

Nevertheless, the reported effect of E-Satisfaction on E-Loyalty, at 22.7%, also suggests that satisfaction is not the only determinant of loyalty. Loyalty in online transportation may also be shaped by price, promotions, driver availability, perceived travel safety, usage habits, the quality of interaction with drivers, and users' comparison of competing platforms. This helps explain why some previous studies found that satisfaction does not always operate as the dominant mediator in every digital service context. Pratama et al. (2023) and Dewi et al. (2023), for example, indicated that E-Satisfaction does not always strongly mediate the relationship between service quality and loyalty, especially when other factors such as e-trust, promotion, and usage routines become more influential.

The fourth and most central finding of this study is that E-Satisfaction mediates the effect of E-Service Quality on E-Loyalty. The source manuscript reports that the indirect effect of E-Service Quality on E-Loyalty through E-Satisfaction has a coefficient of 0.314, with a t-statistic of 3.342 and a p-value of 0.001. Since the t-statistic exceeds the required threshold and the p-value is below 0.05, the mediating role of E-Satisfaction is statistically supported. This means that electronic service quality does not only influence loyalty directly, but also strengthens loyalty by first improving user satisfaction. The source manuscript further confirms that the direct effect of E-Service Quality on E-Loyalty remains significant; therefore, the mediation can be understood as partial mediation.

This partial mediation carries an important meaning. First, users may become loyal because they directly evaluate Grab's service quality, for example when the application is easy to operate, the information is clear, or transactions feel secure. Second, users may also become loyal because service quality creates satisfaction before loyalty develops. In other words, loyalty is formed through two routes: a direct functional route and an experiential route through satisfaction. The functional route suggests that good service quality immediately gives users a practical reason to keep using the application. The satisfaction route suggests that good service quality creates a positive experience, and this positive experience strengthens user loyalty. This pattern is consistent with Maola and Dewi (2024) as well as Purba et al. (2024), who positioned E-Satisfaction as an important mediator in the relationship between electronic service quality and customer loyalty.

From a managerial standpoint, the partial mediation finding implies that improving loyalty should not be treated as a single-step process. Grab cannot rely only on technical application improvements, nor can it depend only on customer satisfaction campaigns. Both aspects need to be managed together. Technical improvements are needed to make the application more reliable, responsive, secure, informative, and easier to use. At the same time, these improvements must be translated into a satisfying user experience. A technically improved application may not automatically increase loyalty if users do not feel that their service problems are resolved, their time is saved, and their interaction with the platform becomes more convenient.

The findings also show that loyalty in online transportation is more complex than loyalty in many other digital services. In online transportation, users interact not only with the application, but also with drivers, pricing systems, location accuracy, payment channels, customer service, and real-time service conditions. A weakness in one part of the service may reduce satisfaction even when other parts work well. For example, users may find the application easy to use but still feel dissatisfied if customer service is slow, if the driver cancels the order, or if information about fares and locations is inaccurate. Therefore, the development of E-Loyalty requires an integrated service strategy that connects application quality, operational reliability, complaint handling, and user trust.

The descriptive results of this study strengthen this interpretation. E-Service Quality, E-Satisfaction, and E-Loyalty were all found to be below the optimal category. This means that the statistical relationships are significant, but the actual condition of users' perceptions still requires improvement. The findings should therefore not be read only as evidence that service quality and satisfaction influence loyalty. They should also be read as a warning that the present level of digital service experience has not yet created strong loyalty among users. For Grab, this indicates that user loyalty in Bandung City still needs to be reinforced through improvements in both digital infrastructure and user-oriented service management.

Theoretically, this study contributes to digital marketing literature by confirming that E-Service Quality, E-Satisfaction, and E-Loyalty are closely connected in the context of online transportation. The study supports the view that digital loyalty is not only the result of promotional attraction or platform familiarity. It is also shaped by users' evaluation of service reliability, application responsiveness, perceived security, interface convenience, and problem-solving capacity. In addition, the finding of partial mediation enriches the understanding that E-Satisfaction is not the only pathway through which service quality affects loyalty, but it remains a meaningful mechanism in strengthening the relationship.

Practically, the findings suggest that Grab and similar online transportation providers should prioritize improvements that directly affect users' day-to-day experience. Application reliability needs to be strengthened so that users do not experience service interruptions during booking, payment, or trip monitoring. Service responsiveness should be improved, especially in customer service and complaint handling. Information quality must be maintained so that users receive accurate details regarding fares, driver location, estimated arrival time, payment status, and service procedures. Privacy and transaction security should also remain central concerns, since users increasingly expect digital platforms to protect their personal and financial data.

In addition, ease of use and interface design should not be treated merely as technical or aesthetic matters. A simple, clear, and well-organized interface can reduce user effort and make the service experience more comfortable. This is particularly important in online transportation, where users often need quick decisions in real-time situations. When the application is difficult to navigate, the menu is unclear, or the complaint feature is hidden, users may feel frustrated even if the core transportation service is available. Thus, user-centered design becomes part of the broader strategy for building satisfaction and loyalty.

Overall, the discussion confirms that user loyalty in online transportation is built through a combination of service quality and digital satisfaction. Electronic service quality creates the functional basis for loyalty, while E-Satisfaction converts service experience into a stronger psychological attachment to the platform. In a competitive market where users can easily switch applications, loyalty must be earned through consistent, secure, responsive, and satisfying digital experiences.

CONCLUSION

This study concludes that user loyalty toward Grab's online transportation service in Bandung City is shaped by electronic service quality and digital satisfaction. The findings show that E-Service Quality has a positive and significant effect on E-Satisfaction, E-Service Quality also has a positive and significant effect on E-Loyalty, and E-Satisfaction positively and significantly affects E-Loyalty. In addition, E-Satisfaction is proven to mediate the effect of E-Service Quality on E-Loyalty. These results indicate that digital service quality is not merely a technical aspect of application use. It also forms the basis of a satisfying user experience, which in turn encourages loyalty.

Empirically, the study shows that Grab's electronic service quality is still perceived as less than optimal by users. This is reflected in respondents' assessments, where E-Service Quality was categorized as less satisfactory, E-Satisfaction as relatively low, and E-Loyalty as not yet strong. Thus, although Grab is one of the major online transportation platforms, the digital experience perceived by users in Bandung City still requires improvement, particularly in service reliability, response speed, information clarity, data security, ease of use, application design, and complaint resolution.

A key finding of this study is that E-Satisfaction serves as a partial mediator in the relationship between E-Service Quality and E-Loyalty. This means that electronic service quality can increase user loyalty directly, while part of its effect also works through digital satisfaction. Users who experience an application that is more reliable, responsive, secure, easy to use, and informative are more likely to feel satisfied. This satisfaction then strengthens their intention to continue using Grab, recommend it to others, and maintain their preference for the platform. Therefore, user loyalty cannot be built merely through the existence of an application or promotional strategies; it must be developed through a consistent and satisfying digital service experience.

Theoretically, this study contributes to digital marketing literature by confirming the importance of E-Satisfaction as a mechanism linking E-Service Quality and E-Loyalty in online transportation services. The findings also reinforce the view that digital loyalty is formed through a combination of functional evaluation and psychological experience. Users may remain loyal because the application is practically useful, but stronger loyalty emerges when the service experience also produces satisfaction.

Practically, the findings suggest that online transportation providers need to focus on improving the quality of digital service encounters. Application reliability should be strengthened to reduce service disruption during booking, payment, and trip monitoring. Customer service responsiveness must be improved so that user complaints are addressed quickly and properly. Information provided in the application should be accurate, complete, and easy to understand. At the same time, transaction security, privacy protection, ease of navigation, and user-centered interface design should remain central priorities in service development.

This study has several limitations. First, the research was conducted only among Grab users in Bandung City, so the findings may not fully represent online transportation users in other cities with different mobility patterns, competitive conditions, or user characteristics. Second, the study focused only on E-Service Quality, E-Satisfaction, and E-Loyalty. Future studies may include other relevant variables, such as e-trust, perceived value, price fairness, promotion attractiveness, driver service quality, perceived safety, and switching intention. Third, future research may compare several online transportation platforms to obtain a broader understanding of digital loyalty in a competitive platform-based service market.

Overall, this study concludes that strengthening user loyalty in online transportation requires more than service availability and promotional incentives. Loyalty is more likely to emerge when users repeatedly experience a digital service that is reliable, responsive, secure, clear, easy to use, and capable of resolving their problems. In this sense, E-Service Quality and E-Satisfaction are not separate managerial concerns, but two connected elements that jointly determine whether users will remain with a digital transportation platform over time.

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Transformational Leadership, Work Discipline, and Employee Performance: The Moderating Role of Work Motivation in a Regional Revenue Agency

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Abstract

This study examines the effects of transformational leadership and work discipline on employee performance and investigates the moderating role of work motivation at the Regional Revenue Agency of West Java Province. The study is motivated by suboptimal employee performance, particularly in work quality, accuracy, cooperation, and task completion according to organizational standards. A quantitative approach with descriptive and verificative methods was employed. The population consisted of 63 employees from three divisions: Revenue Information System Management, Revenue Control and Evaluation, and Revenue Management. Because the population was relatively small, all members were included through a census technique. Data were collected using questionnaires and analyzed through multiple linear regression and Moderated Regression Analysis using SPSS version 26.The findings show that transformational leadership and work discipline have positive and significant effects on employee performance. The baseline model explains 85.1% of the variance in employee performance. When work motivation is included as a moderating variable, the explanatory power increases to 89.4%. Work motivation strengthens the effects of both transformational leadership and work discipline on employee performance. These findings indicate that improving public-sector employee performance requires not only stronger leadership and discipline, but also the reinforcement of work motivation as a psychological driver of effective work behavior.

Keywords: employee performance, public sector, transformational leadership, work discipline, work motivation.

INTRODUCTION

Employee performance in the public sector remains a central issue in strengthening government governance, as the quality of public service depends heavily on the capacity of civil servants to work effectively, responsibly, and with clear performance orientation (Suriyanti, 2020; Sentoso et al., 2025). In government organizations, employee performance reflects not only individual achievement but also the institution's ability to translate strategic targets into public service outputs. Therefore, improving employee performance is a key agenda in public-sector human resource management, particularly in agencies with a strategic role in supporting regional fiscal capacity.

The Regional Revenue Agency of West Java Province plays an important role in managing and optimizing regional revenue. In this context, employee performance is not limited to administrative task completion but is also linked to revenue management effectiveness, data accuracy, revenue evaluation, and support for regional fiscal independence. However, preliminary data indicate that the performance of the agency remains relatively low compared with several other regional government agencies. Initial survey results also show that employee performance is not yet optimal, especially in work quality, accuracy, teamwork, and task completion according to standards. These conditions suggest that employee performance should be examined through deeper organizational behavior and human resource management factors.

One factor often associated with employee performance is transformational leadership. Transformational leadership encourages employees to go beyond personal interests through inspiration, role modeling, intellectual stimulation, and individual consideration. In public organizations, this leadership style is important because employees are expected not only to follow procedures but also to adapt to change, improve service quality, and support organizational targets (Suriyanti, 2020; Sidik et al., 2024). Recent studies show that transformational leadership is positively related to employee performance because it enhances engagement, voluntary work behavior, and achievement orientation (Qalati et al., 2022). In the public-sector context, Tran and Hoang also emphasize that transformational leadership improves employee performance through employee participation and public service motivation.

Work discipline is another important determinant of employee performance. It reflects employees' willingness to follow rules, maintain punctuality, comply with procedures, and take responsibility for work according to organizational standards. In public organizations, discipline is strategic because minor administrative negligence, document disorder, delays, or low work vigilance can affect service effectiveness and organizational achievement. Several studies have shown that work discipline positively affects employee performance in both government and non-government organizations (Chrisnanto & Riyanto, 2020; Bahasoan et al., 2023; Harsono, 2024). Chrisnanto and Riyanto found that work discipline, organizational commitment, and work motivation significantly influence employee performance in an Indonesian central government institution. Similar findings were reported by Suryantini et al., who showed that work discipline and transformational leadership positively affect employee performance.

Although transformational leadership and work discipline have often been examined as predictors of performance, their effects are not always direct or uniform. In practice, the effectiveness of leadership and discipline depends strongly on employees' psychological condition, particularly work motivation. Highly motivated employees tend to be more receptive to leadership direction, more willing to comply with organizational rules, and more driven to achieve strong work outcomes. Conversely, even effective leadership and strict discipline may have limited impact when employees lack internal drive to perform. Syarifuddin (2023) showed that transformational leadership, work discipline, and work motivation positively affect employee performance in public institutions. Oladimeji and Abdulkareem also emphasized the importance of employee motivation in explaining the relationship between leadership and public-sector performance.

Based on this background, the present study is important because it examines not only the effects of transformational leadership and work discipline on employee performance, but also the role of work motivation as a moderating variable. In this position, work motivation is understood as a condition that may strengthen or weaken the effects of transformational leadership and work discipline on employee performance (Tobing et al., 2024; Pantih et al., 2025). The study is expected to contribute to public-sector human resource management literature by showing that performance improvement cannot rely solely on leadership development and discipline enforcement, but also requires the strengthening of employee motivation. Practically, the findings may help the Regional Revenue Agency of West Java Province design performance-improvement strategies based on leadership, discipline, and motivation.

LITERATURE REVIEW

Transformational Leadership

Transformational leadership is a major concept in organizational behavior and human resource management because it emphasizes the leader's ability to create change, inspire subordinates, and encourage employees to work beyond personal interest. In public organizations, transformational leadership is not merely an instruction-oriented leadership style. It involves the capacity to build a vision, demonstrate role-model behavior, encourage innovation, and support employee development (Qalati et al., 2022; Syarifuddin, 2023; Pantih et al., 2025).

Conceptually, transformational leadership consists of four main dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Idealized influence refers to the leader's ability to become a role model and build trust. Inspirational motivation reflects the ability to create optimism and work enthusiasm. Intellectual stimulation refers to the encouragement of creative, critical, and innovative thinking in solving work problems. Individualized consideration reflects the leader's attention to employees' needs, potential, and development.

In this study, transformational leadership is important because the Regional Revenue Agency of West Java Province faces performance targets, revenue management demands, and the need to adapt to data-based work and service systems. Preliminary survey results indicate that transformational leadership remains suboptimal, especially in idealized influence, as reflected in weak employee trust and respect toward leaders in addressing work-related problems.

Recent literature confirms that transformational leadership improves employee performance by increasing engagement, commitment, and productive work behavior. Qalati et al. (2022) found that transformational leadership enhances employee performance through organizational citizenship behavior. This suggests that employees led in an inspiring and supportive manner tend to contribute more actively to the organization (Fadillah et al., 2023).

In public-sector organizations, transformational leadership is especially relevant because bureaucracy cannot rely solely on formal rules. Public organizations need leaders who can mobilize employees psychologically, foster a sense of belonging, and strengthen service orientation. Recent studies on public-sector performance indicate that transformational leadership and public service motivation are important in building organizational performance, particularly when employees face performance targets, accountability pressures, and changes in the work environment (Rahardja et al., 2024).

Work Discipline

Work discipline refers to employees' attitudes, behavior, and willingness to obey organizational rules, follow procedures, maintain punctuality, and take responsibility for assigned tasks. In public organizations, work discipline is essential because bureaucratic work depends on order, procedural compliance, administrative accuracy, and service consistency. Discipline is not limited to attendance; it also includes vigilance, accuracy, compliance with work standards and regulations, and work ethics.

In this study, work discipline is measured through five dimensions: attendance frequency, employee vigilance, compliance with work standards, compliance with work regulations, and work ethics. Preliminary survey results show that the main discipline problem lies in low employee vigilance, particularly in neatness, accuracy, and workplace order. Thus, work discipline in this study is not understood merely as formal compliance with working hours, but as orderly, careful, and responsible behavior that supports work quality.

Work discipline is closely related to employee performance because disciplined employees are more likely to complete tasks according to standards, reduce errors, maintain productivity, and support organizational targets. In public organizations, discipline is a prerequisite for service effectiveness, since weak discipline may lead to delayed processes, inaccurate data, poor administrative quality, and declining public trust.

Studies from the past decade consistently show that work discipline is associated with employee performance. Bahasoan et al. (2023), for example, found that work discipline and work motivation have positive effects on employee performance. This finding supports the view that discipline is not merely a matter of compliance, but a behavioral mechanism that helps employees work in a more directed and productive manner (Harsono, 2024; Hasnakamilah et al., 2023).

Work Motivation

Work motivation refers to internal and external drives that influence employees' willingness, intensity, direction, and persistence in performing their duties. Motivation determines how strongly employees strive to achieve goals, how consistently they maintain work behavior, and how much energy they invest in completing tasks. In public organizations, work motivation is important because employees are expected not only to fulfill administrative obligations but also to meet service targets and contribute to the public interest (Faizi, 2024).

This study adopts the dimensions of need for achievement, need for affiliation, and need for power. The need for achievement refers to employees' drive to achieve the best results, develop creativity, and demonstrate high work performance. The need for affiliation reflects the desire to be accepted, appreciated, and connected through positive work relationships. The need for power refers to the drive to gain influence, authority, or the ability to direct resources in the workplace.

Preliminary survey results indicate that employee motivation remains suboptimal, particularly in the need for achievement. Some employees appear relatively passive in completing tasks, suggesting that the drive to achieve superior performance has not been fully developed. This condition is important because low work motivation may reduce the effectiveness of leadership policies and discipline enforcement in improving employee performance.

Recent literature shows that work motivation plays a central role in explaining employee behavior and performance. Motivation serves as psychological energy that makes employees more responsive to leadership direction, more willing to follow rules, and more committed to producing quality work. Several studies also position work motivation as a variable that strengthens the relationship between organizational factors and employee performance. Tobing et al. (2024), for instance, treated work motivation as a moderating variable in employee performance research, indicating that motivation can shape the strength of relationships among organizational variables.

Employee Performance

Employee performance refers to the work results achieved by employees in carrying out assigned responsibilities. It reflects work quality, work quantity, timeliness, responsibility, cooperation, and initiative in supporting organizational goals. In public organizations, employee performance should not be seen only as individual output, but also as a contribution to organizational effectiveness, service quality, and institutional target achievement (Faizi, 2024; Hasnakamilah et al., 2023).

In this study, employee performance is measured through five dimensions: work quality, work quantity, responsibility, cooperation, and initiative. Preliminary survey results show that employee performance at the Regional Revenue Agency of West Java Province has not met expectations. The work quality dimension obtained a low score, indicating problems in accuracy, neatness, and the ability to produce work according to standards. Initial interviews also suggest that some employees struggle to maintain accuracy because of heavy workloads and limited completion time.

From a human resource management perspective, employee performance is shaped by individual factors, leadership, work systems, discipline, motivation, and the organizational environment (Irfan et al., 2022; Suprapti et al., 2020). In public organizations, performance depends on the combination of compliance with formal systems and psychological willingness to work optimally. Therefore, employee performance should be analyzed not only through outcomes, but also through the behavioral and managerial factors that produce those outcomes.

Recent studies indicate that employee performance can be improved through the combined effects of leadership, motivation, and work discipline (Irfan et al., 2022). In the public sector, leadership and motivation are important because they influence work direction, commitment, and employees' willingness to contribute to the organization.

Conceptual Relationship among Variables

Conceptually, transformational leadership, work discipline, work motivation, and employee performance are interconnected in shaping public-sector work behavior. Transformational leadership provides direction, inspiration, and support. Work discipline creates a behavioral framework that ensures employees work according to rules, standards, and responsibilities. Work motivation provides the internal drive that enables employees to use their abilities and energy optimally. These three elements ultimately relate to employee performance, as reflected in work quality, quantity, responsibility, cooperation, and initiative (Suprapti et al., 2020; Irfan et al., 2022).

In the context of the Regional Revenue Agency of West Java Province, these relationships are relevant because employee performance problems do not stand alone. Low work quality may be associated with insufficient transformational leadership, weak work discipline, and limited motivation to achieve high performance. Accordingly, this literature review positions employee performance as the outcome of leadership, discipline, and motivation within a public organization.

METHODOLOGY

This study used a quantitative approach with descriptive and verificative methods. The descriptive method was applied to portray the conditions of transformational leadership, work discipline, work motivation, and employee performance at the Regional Revenue Agency of West Java Province. The verificative method was used to test relationships among variables, particularly the effects of transformational leadership and work discipline on employee performance and the moderating role of work motivation.

The research object was employees of the Regional Revenue Agency of West Java Province, specifically those working in three divisions: Revenue Information System Management, Revenue Control and Evaluation, and Revenue Management. These divisions were selected because they are directly involved in managing, controlling, evaluating, and optimizing regional revenue. The population consisted of 63 employees: 19 from the Revenue Information System Management Division, 21 from the Revenue Control and Evaluation Division, and 23 from the Revenue Management Division. Since the population was relatively small, all employees were included as respondents through a saturated sampling or census technique.

Data were collected using a closed-ended questionnaire developed from the indicators of each variable. A five-point Likert scale was used, ranging from 1 for “strongly disagree” to 5 for “strongly agree.” In addition to questionnaires, observation, preliminary interviews, and relevant secondary data were used to strengthen the understanding of the research phenomenon.

The study involved four main variables. The first independent variable was transformational leadership (X1), measured through idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. The second independent variable was work discipline (X2), measured through attendance frequency, employee vigilance, compliance with work standards, compliance with work regulations, and work ethics. The moderating variable was work motivation (M), measured through the need for achievement, affiliation, and power. The dependent variable was employee performance (Y), measured through work quality, work quantity, responsibility, cooperation, and initiative.

Before the main analysis, the research instrument was tested for validity and reliability. The validity test ensured that each statement item properly measured its intended construct. An item was considered valid when its item-total correlation exceeded the minimum required value. The reliability test assessed the internal consistency of the instrument using reliability coefficients for each variable. The test results showed that all items met validity and reliability criteria and were therefore suitable for further analysis.

Data analysis was conducted in two stages. First, descriptive analysis was used to calculate the mean score of each variable and determine its category based on scale intervals. This analysis described respondents’ perceptions of transformational leadership, work discipline, work motivation, and employee performance. Second, verificative analysis was conducted using multiple linear regression and Moderated Regression Analysis (MRA) (Hayes, 2018; Igartua & Hayes, 2021).

The baseline regression model tested the effects of transformational leadership and work discipline on employee performance. The MRA model then examined whether work motivation strengthened or weakened the effects of transformational leadership and work discipline on employee performance. This model included interaction terms between transformational leadership and work motivation, and between work discipline and work motivation (Hayes, 2018; Saputra & Prasetyo, 2024).

In general, the analysis model can be formulated as follows:

$$\mathbf{Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3M + \beta 4(X1 \times M) + \beta 5(X2 \times M) + \varepsilon}$$

where:
Y = Employee performance
X1 = Transformational leadership
X2 = Work discipline
M = Work motivation
X1 × M = Interaction between transformational leadership and work motivation
X2 × M = Interaction between work discipline and work motivation
α = Constant
β = Regression coefficient
ε = Error term

Hypothesis testing was conducted using the t-test to examine partial effects, the F-test to examine the simultaneous effect of the model, and the coefficient of determination to assess the extent to which the model explained variation in employee performance.

RESULT

Respondent Characteristics

This study involved 63 employees of the Regional Revenue Agency of West Java Province from three divisions: Revenue Information System Management, Revenue Control and Evaluation, and Revenue Management. Since the number of employees was limited, the study used a census technique by including the entire population. Thus, the findings represent the perceptions of all employees in the selected work units.

Descriptive Analysis

The descriptive analysis shows that transformational leadership, work discipline, work motivation, and employee performance were generally in the poor category. This indicates that employee performance problems are closely related to leadership, discipline, and motivation.

Table 1. Descriptive Analysis of Research Variables

Variable	Mean Score	Category	Weak Indicators
Transformational Leadership	3.00	Poor	Noble values, respect, pride, vision and mission
Work Discipline	3.16	Poor	Work vigilance and carefulness
Work Motivation	2.96	Poor	Creativity and achievement enthusiasm
Employee Performance	2.93	Poor	Work quality, neatness, ability, and work cleanliness

Source: Analysis Result, 2026

The results indicate that transformational leadership has not fully built employee trust, respect, and pride toward leaders. In work discipline, the main weakness lies in employee vigilance and accuracy. Work motivation is also not yet optimal, particularly in creativity and achievement drive. Employee performance remains weak in work quality, especially neatness, ability, and cleanliness in task completion. Overall, the descriptive results show that transformational leadership reached an average score of 3.00, work discipline 3.16, and work motivation 2.96, all categorized as poor.

Validity and Reliability Tests

Before conducting regression analysis, the research instrument was tested for validity and reliability. The validity test showed that all statement items for transformational leadership, work discipline, work motivation, and employee performance met the required criteria. Therefore, all indicators were considered appropriate for measuring the research constructs (Hair et al., 2022).

The reliability test also showed that all variables met the reliability criteria. This means that the research instrument had adequate internal consistency and was suitable for further analysis (Hair et al., 2022).

Table 2. Reliability Test Results

Variable	Cronbach's Alpha	Description
Transformational Leadership	0.915	Reliable
Work Discipline	0.884	Reliable
Work Motivation	0.795	Reliable
Employee Performance	0.778	Reliable

Source: Analysis Result, 2026

These reliability values indicate that the instrument had good consistency. Transformational leadership had the highest reliability score, while employee performance remained within the reliable category.

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Effects of Transformational Leadership and Work Discipline on Employee Performance

The multiple linear regression results show that transformational leadership and work discipline positively affect employee performance. This means that stronger transformational leadership is associated with higher employee performance. Likewise, better work discipline leads to stronger employee performance.

Table 4. Multiple Linear Regression Results

Variable	Regression Coefficient	t-value	Sig.	Description
Transformational Leadership	0.335	5.839	0.000	Significant
Work Discipline	0.311	3.351	0.000	Significant

Source: Analysis Result, 2026

The partial test shows that transformational leadership had a t-value of 5.839 with a significance value of 0.000. Since the significance value was below 0.05, transformational leadership had a positive and significant effect on employee performance. Work discipline had a t-value of 3.351 with a significance value of 0.000, indicating that it also had a positive and significant effect on employee performance.

These findings confirm that employee performance at the Regional Revenue Agency of West Java Province can be improved through stronger transformational leadership and work discipline. Leaders who demonstrate role modeling, inspiration, intellectual encouragement, and individual attention can encourage employees to perform better. At the same time, strong work discipline helps employees work more orderly, accurately, and responsibly.

Coefficient of Determination in the Baseline Regression Model

The coefficient of determination shows that transformational leadership and work discipline jointly explain a large proportion of employee performance. The R Square value of 0.851 indicates that 85.1% of the variance in employee performance is explained by transformational leadership and work discipline, while the remaining 14.9% is explained by other factors outside the model.

This finding suggests that both independent variables make a strong contribution to employee performance. In the context of the Regional Revenue Agency of West Java Province, improving employee performance cannot be separated from leadership quality and employees' discipline in carrying out their duties.

Moderated Regression Analysis

The moderation test was conducted to determine whether work motivation strengthens or weakens the effects of transformational leadership and work discipline on employee performance. The Moderated Regression Analysis results show that work motivation acts as a moderating variable in both relationships (Hayes, 2018; Igartua & Hayes, 2021).

Table 5. Moderated Regression Analysis Results

Variable	Regression Coefficient	t-value	Sig.	Description
Transformational Leadership	0.176	—	—	Positive
Work Discipline	0.194	—	—	Positive
Work Motivation	0.013	—	—	Positive
Transformational Leadership × Work Motivation	0.003	2.085	0.042	Significant
Work Discipline × Work Motivation	0.005	2.098	0.040	Significant

Source: Analysis Result, 2026

The interaction between transformational leadership and work motivation has a positive coefficient of 0.003. Its t-value of 2.085 and significance value of 0.042 indicate that work motivation moderates the effect of transformational leadership on employee performance. In other words, the effect of transformational leadership on employee performance becomes stronger when employees have higher work motivation (Hayes, 2018; Syarifuddin, 2023).

The interaction between work discipline and work motivation also has a positive coefficient of 0.005. Its t-value of 2.098 and significance value of 0.040 show that work motivation moderates the effect of work discipline on employee performance. This means that work discipline becomes more effective in improving performance when employees have strong work motivation (Tobing et al., 2024; Igartua & Hayes, 2021).

The moderation regression equation can be written as follows:

$$\mathbf{Y = \alpha + 0.176X1 + 0.194X2 + 0.013M + 0.003(X1 \times M) + 0.005(X2 \times M) + \varepsilon}$$

All coefficients show a positive direction. This means that transformational leadership, work discipline, work motivation, and the two interaction terms are positively associated with employee performance. In the MRA model, transformational leadership has a coefficient of 0.176, work discipline 0.194, work motivation 0.013, the transformational leadership–motivation interaction 0.003, and the work discipline–motivation interaction 0.005.

Coefficient of Determination in the Moderation Model

The moderation model shows an R value of 0.945 and an R Square value of 0.894. These values indicate a very strong relationship among the independent variables, moderating variable, and dependent variable. The R Square value of 0.894 means that 89.4% of the variance in employee performance is explained by transformational leadership, work discipline, work motivation, and the moderation interactions. The remaining 10.6% is explained by other factors outside the research model.

Compared with the baseline regression model, which had an R Square value of 0.851, the moderation model improves the explanatory power to 0.894. This increase indicates that including work motivation as a moderating variable strengthens the model in explaining employee performance (Hayes, 2018; Saputra & Prasetyo, 2024).

Overall, the results show that:

1. Transformational leadership has a positive and significant effect on employee performance.
2. Work discipline has a positive and significant effect on employee performance.
3. Work motivation moderates the effect of transformational leadership on employee performance.
4. Work motivation moderates the effect of work discipline on employee performance.
5. The moderation model has stronger explanatory power than the baseline regression model.

These findings indicate that improving employee performance at the Regional Revenue Agency of West Java Province cannot rely only on transformational leadership and work discipline. Both factors become more effective when supported by strong employee motivation. Thus, work motivation functions as a psychological factor that strengthens the effectiveness of leadership and discipline in producing better employee performance (Tobing et al., 2024; Syarifuddin, 2023).

DISCUSSION

The findings show that transformational leadership and work discipline play important roles in explaining employee performance at the Regional Revenue Agency of West Java Province. The baseline model produced an R Square value of 0.851, meaning that transformational leadership and work discipline explain 85.1% of the variance in employee performance. This indicates that both variables are strong determinants in the present research context. After work motivation was included as a moderating variable, the model became stronger because the interaction between transformational leadership and work motivation, as well as the interaction between work discipline and work motivation, were significant. In the MRA model, the interaction coefficient between transformational leadership and work motivation was 0.003 with a significance value of 0.042, while the interaction coefficient between work discipline and work motivation was 0.005 with a significance value of 0.040. These results confirm that work motivation strengthens the effects of transformational leadership and work discipline on employee performance (Hayes, 2018; Igartua & Hayes, 2021).

The Effect of Transformational Leadership on Employee Performance

The results indicate that transformational leadership has a positive effect on employee performance. This means that stronger transformational leadership is associated with better employee performance. In the context of the Regional Revenue Agency of West Java Province, transformational leadership is crucial because employees work in a public organization that requires administrative accuracy, revenue target achievement, data management, and public service delivery. Leaders who provide direction, build trust, inspire employees, and encourage creative problem-solving can help employees perform more effectively (Qalati et al., 2022; Tran & Hoang, 2024).

This finding is consistent with Qalati et al. (2022), who found that transformational leadership improves employee performance by encouraging positive work behavior and employee engagement. In their study, transformational leadership was not only directly related to performance but also promoted organizational citizenship behavior, which strengthened employee contribution to the organization.

In the public sector, this result is also in line with Tran and Hoang (2024), who showed that transformational leadership enhances public employee performance through employee participation and public service motivation. This is relevant to the Regional Revenue Agency because performance achievement cannot depend solely on structural instructions; it also requires employees' involvement in understanding targets, improving work processes, and supporting organizational goals.

Thus, transformational leadership in this study can be understood as a managerial mechanism that improves performance through role modeling, inspiration, intellectual stimulation, and individualized consideration (Qalati et al., 2022; Sentoso et al., 2025). However, the descriptive results showing that transformational leadership remains in the poor category provide an important note: its positive effect has not been fully optimized. The agency still needs to strengthen leadership quality, especially idealized influence, employee trust in leaders, and leaders' ability to build organizational pride.

The Effect of Work Discipline on Employee Performance

The results also show that work discipline has a positive effect on employee performance. Employees with stronger discipline tend to perform better. In public organizations, work discipline does not only refer to punctuality; it also includes accuracy, compliance with work standards, adherence to procedures, responsibility, and work ethics. This is important because work in a regional revenue agency involves information management, data validation, revenue administration, and revenue evaluation, all of which require order and precision (Bahasoan et al., 2023; Chrisnanto & Riyanto, 2020; Harsono, 2024).

This finding supports Bahasoan et al. (2023), who found that work discipline and work motivation positively affect employee performance. Their study confirms that discipline is a behavioral factor that helps employees work in a more directed, consistent, and productive manner.

In this study, the weakest aspect of work discipline relates to employee vigilance and neatness. This means that discipline at the Regional Revenue Agency should not be understood merely as attendance compliance, but also as process discipline, administrative discipline, and quality discipline. Employees may be punctual, yet still produce suboptimal performance if they are not careful, organized, or consistent in following work standards. Therefore, strengthening work discipline should focus on building work habits that are orderly, accurate, and accountable.

Theoretically, this finding reinforces the view that employee performance is shaped by structured work behavior. Discipline provides the behavioral framework that enables employees to complete tasks according to organizational standards. Without discipline, leadership direction and employee motivation may not translate into optimal performance because work processes are not carried out consistently (Irfan et al., 2022; Suprapti et al., 2020).

The Moderating Role of Work Motivation in the Relationship between Transformational Leadership and Employee Performance

The Moderated Regression Analysis shows that work motivation positively moderates the effect of transformational leadership on employee performance. This means that transformational leadership has a stronger effect on performance when employees have higher work motivation. In other words, motivation functions as a psychological condition that makes employees more responsive to leadership inspiration, direction, and support. The interaction between transformational leadership and work motivation produced a coefficient of 0.003 with a significance value of 0.042, confirming the moderating role of work motivation in this relationship (Hayes, 2018; Igartua & Hayes, 2021).

This finding is important because transformational leadership does not operate automatically. Leaders may provide vision, direction, inspiration, and individualized attention, but these efforts will have a stronger impact when employees have an internal drive to achieve, grow, and complete their work responsibly. Conversely, when work motivation is weak, leadership influence may become less effective because employees lack the psychological energy needed to respond productively.

This result is consistent with studies that position motivation as an important factor in the relationship between leadership and performance. Recent research on transformational leadership and work motivation suggests that motivation can serve as a psychological mechanism explaining why certain leadership styles improve employee performance (Fadillah et al., 2023; Pantih et al., 2025). In the public-sector context, Tran and Hoang (2024) also highlighted the importance of public service motivation in linking transformational leadership with public employee performance.

In the context of the Regional Revenue Agency of West Java Province, this finding implies that leadership improvement should be accompanied by stronger employee motivation. Leaders should not only provide direction or set performance targets, but also cultivate achievement motivation, provide recognition, create opportunities for self-development, and build a work climate in which employees feel valued and see meaning in their work.

The Moderating Role of Work Motivation in the Relationship between Work Discipline and Employee Performance

The findings also show that work motivation positively moderates the effect of work discipline on employee performance. The interaction between work discipline and work motivation produced a coefficient of 0.005 with a significance value of 0.040, indicating that motivation strengthens the effect of discipline on performance (Tobing et al., 2024; Saputra & Prasetyo, 2024).

This result suggests that work discipline becomes more effective when employees have strong motivation. Motivated employees comply with rules not merely because of formal obligations, but because they are driven to produce good work. In this condition, discipline is no longer perceived as bureaucratic pressure, but as part of professional responsibility. Employees with high motivation are more likely to maintain punctuality, accuracy, order, and responsibility in their work.

This finding is in line with Bahasoan et al. (2023), who emphasized that work discipline and work motivation are important factors in improving employee performance. Tobing et al. (2024) also specifically showed that work motivation may function as a moderating variable in explaining employee performance. Thus, work motivation can be understood as a factor that strengthens the effectiveness of work behavior and organizational factors in producing performance.

In the Regional Revenue Agency context, the implication is clear: strengthening discipline should not rely only on rules, supervision, or sanctions. Discipline becomes more productive when accompanied by stronger work motivation. Employees who understand the importance of their work for regional revenue achievement are more likely to maintain discipline not because they fear punishment, but because they recognize the value of their contribution to the organization and the public.

Theoretical and Practical Meaning of the Findings

Theoretically, this study strengthens the literature on public-sector human resource management by showing that employee performance is shaped by a combination of leadership, discipline, and motivation. The main contribution is not only that transformational leadership and work discipline affect performance, but also that work motivation strengthens both effects. Thus, work motivation functions as a psychological condition that determines how effectively leadership and discipline are translated into performance (Hayes, 2018; Tobing et al., 2024).

Practically, the findings suggest that improving employee performance at the Regional Revenue Agency of West Java Province requires an integrated approach. First, transformational leadership should be strengthened, especially in role modeling, communication of vision, support for employees, and attention to employee development. Second, work discipline should not be limited to attendance control, but should also include quality discipline, process discipline, and administrative discipline. Third, work motivation should be reinforced through performance recognition, opportunities for self-development, challenging responsibilities, and a stronger sense of meaning in supporting regional fiscal independence.

Accordingly, employee performance in the public sector cannot be improved through a single intervention. Strong leadership needs to be supported by consistent work discipline, and both will become more effective when employees have high motivation. This is the central contribution of the study: work motivation is not merely an additional factor, but a strengthening condition that determines the effectiveness of transformational leadership and work discipline in improving employee performance (Syarifuddin, 2023; Pantih et al., 2025).

CONCLUSION

This study shows that employee performance at the Regional Revenue Agency of West Java Province is positively influenced by transformational leadership and work discipline. Transformational leadership provides direction, inspiration, role modeling, and individualized attention that encourage employees to work more effectively. This finding is consistent with Qalati et al. (2022), who found that transformational leadership improves employee performance through positive work behavior and voluntary contribution to the organization. In the public-sector context, the result is also consistent with Tran and Hoang (2024), who emphasized that transformational leadership is related to public employee performance through employee participation and public service motivation.

Work discipline also has a positive effect on employee performance. Employees with stronger discipline in punctuality, vigilance, compliance with work standards and regulations, and work ethics tend to produce better performance. This confirms that work discipline is a key foundation in public organizations because civil servants' work requires accuracy, order, responsibility, and procedural consistency. The finding supports Bahasoan and Baharuddin (2023), who found that work discipline and work motivation affect employee performance.

The main finding of this study lies in the moderating role of work motivation. Work motivation strengthens the effect of transformational leadership on employee performance and also strengthens the effect of work discipline on employee performance. Therefore, inspirational leadership and strong discipline become more effective when employees have the internal drive to achieve, develop, and complete their work responsibly. In the context of the Regional Revenue Agency of West Java Province, work motivation functions as a psychological factor that makes employees more responsive to leadership direction and more willing to translate discipline into better performance.

Theoretically, this study contributes to public-sector human resource management by showing that employee performance is not determined only by leadership and discipline, but also by employees' motivational condition. Work motivation is not merely an additional variable; it is a strengthening factor that determines how effectively transformational leadership and work discipline produce performance outcomes. The model therefore extends the understanding of public employee performance as the result of interaction between managerial factors, work behavior, and psychological drive (Hayes, 2018; Tran & Hoang, 2024).

Practically, the findings imply that the Regional Revenue Agency of West Java Province should improve employee performance through an integrated strategy. First, transformational leadership should be strengthened through stronger leader role modeling, clearer communication of organizational vision, greater employee support, and more attention to individual development needs. Second, work discipline should be directed not only toward attendance, but also toward process discipline, administrative discipline, work neatness, accuracy, and responsibility for work results. Third, employee motivation should be reinforced through recognition of contributions, opportunities for development, employee involvement in achieving organizational targets, and the creation of a work climate that encourages achievement.

This study is limited to respondents from only three divisions of the Regional Revenue Agency of West Java Province. Therefore, the findings cannot yet be generalized broadly to all regional government agencies or public organizations. Future studies may expand the research object to several local government institutions, compare different public-sector organizations, or include other variables such as organizational culture, organizational commitment, work environment, job satisfaction, and employee competence. Further research may also use a mixed-method approach so that quantitative findings can be enriched with qualitative explanations of leadership, discipline, motivation, and employee performance dynamics in public organizations..

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From Key Opinion Leaders to Online Purchase Intention: The Mediating Role of Brand Awareness in Creative Services

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Abstract

Digital transformation has encouraged creative service businesses to use social media as a strategic channel for strengthening brand awareness and stimulating online purchase intention. In this context, Key Opinion Leaders have become an increasingly prominent digital marketing instrument because they are able to connect brands and consumers through visibility, credibility, attractiveness, and persuasive influence. This study aims to examine the effect of Key Opinion Leaders on online purchase intention, with brand awareness positioned as a mediating variable among consumers of The Portrait Place Bandung. The study employed a quantitative approach using descriptive and verificative methods. Data were collected through questionnaires distributed to 100 respondents consisting of consumers and individuals familiar with The Portrait Place. The data were analyzed using descriptive analysis and path analysis with the assistance of SPSS. The findings indicate that Key Opinion Leaders, brand awareness, and online purchase intention are all perceived to be in the less favorable category. The verificative results show that Key Opinion Leaders have a positive and significant effect on brand awareness. Key Opinion Leaders also have a positive and significant effect on online purchase intention. In addition, brand awareness is found to have a positive and significant effect on online purchase intention. The mediation analysis further reveals that brand awareness partially mediates the relationship between Key Opinion Leaders and online purchase intention. These findings suggest that the effectiveness of Key Opinion Leaders in creative service businesses is not determined solely by digital exposure, but also by their ability to build brand recognition and brand recall, which subsequently encourage consumers to make reservations or complete transactions online..

Keywords: brand awareness, creative services, digital marketing, Key Opinion Leader, online purchase intention.

INTRODUCTION

Digital transformation has reshaped the way business actors establish relationships with consumers, particularly through social media, which now functions not merely as a communication channel but also as a space where brand perceptions and purchase-related intentions are formed. In Indonesia, the expansion of digital connectivity continues to create new opportunities for creative service businesses to reach broader consumer segments. DataReportal reported that, as of January 2025, Indonesia had approximately 143 million active social media user identities, representing 50.2% of the national population (DataReportal, 2025). This condition indicates that social media has become a crucial infrastructure for marketing activities, especially for businesses that rely heavily on visual appeal, consumer experience, and digital interaction.

One sector strongly affected by this shift is photography services. Photo studios no longer depend solely on physical locations, conventional promotion, or word-of-mouth recommendations. They increasingly rely on digital visibility, visual content, consumer reviews, and promotional activities involving social media figures. In this context, The Portrait Place Bandung represents a creative service business that uses social media to introduce its services, display visual portfolios, and facilitate online reservations. The Portrait Place offers services such as self-photo sessions, porta booth, and Portrait Go, while also providing an online booking facility through a link available on its official Instagram account. Thus, online purchase intention is influenced not only by consumers' need for photography services, but also by how the brand appears, is recognized, and gains trust within the digital environment.

Competition among photo studios in Bandung shows that digital visibility has become a strategic concern. The initial research data indicate that the number of Instagram followers of The Portrait Place is lower than several of its main competitors, including Jonas Photo, Gembira Studio, Papyrus Photo, and Shukakala. In addition, the Key Opinion Leader used by The Portrait Place has fewer followers and lower view counts than the KOLs used by competing photo studios. This condition is important because, in social media marketing, message effectiveness is shaped not only by the promotional content itself, but also by the figure delivering the message, the perceived credibility of that figure, and the extent to which audiences feel socially or emotionally connected to them.

Key Opinion Leaders, or influencers, have become important actors in digital marketing because they are able to build trust, present experiential narratives, and bridge the relationship between brands and consumers. Lou and Yuan (2019) explain that influencer credibility and the value of the message delivered can foster consumer trust in branded content. In a similar vein, Sokolova and Kefi (2020), Saima and Khan (2021), and Ki et al. (2020) show that influencer credibility, parasocial relationships, and audience attachment to digital figures contribute to purchase intention. A recent meta-analysis also indicates that influencer characteristics such as credibility, trustworthiness, attractiveness, expertise, informativeness, and homophily are associated with customer engagement and purchase intention (Ao et al., 2023). Therefore, in the context of photography services, KOLs should not be understood merely as promotional media, but also as sources of social influence that can shape consumers' perceptions of service quality, visual style, and brand appeal.

Nevertheless, the effect of KOLs on online purchase intention does not always occur directly. Consumers often need to recognize, remember, and position a brand in their minds before forming an intention to make a transaction. This is where brand awareness becomes an important mechanism. Dabbous and Barakat (2020) demonstrate that the quality of social media content and brand interactivity can enhance brand awareness and purchase intention. In other words, social media does not work only by generating an immediate desire to buy; it also operates through the development of stronger brand awareness. In the case of The Portrait Place, KOL-based promotion is more likely to be effective when it enables consumers to recognize the brand, remember the distinctive features of its services, and consider it as an option when they need photography services.

The empirical problem in the initial manuscript shows that The Portrait Place experienced a decline in service users, from 667 in June 2024 to 186 in December 2024. The preliminary survey also indicates that online purchase intention remains relatively low, while KOL and brand awareness are not yet perceived as optimal. These findings suggest that the main issue lies not merely in the availability of online services, but also in the effectiveness of digital influence in transforming consumer attention into brand awareness and transaction intention.

Based on this background, the study aims to analyze the effect of Key Opinion Leaders on online purchase intention, with brand awareness as a mediating variable among consumers of The Portrait Place Bandung. This study is important because it provides insight into how promotion through digital figures operates in the context of creative service businesses, particularly photo studios that rely on visual experience and online reservation systems. Theoretically, this study enriches the digital marketing literature by positioning brand awareness as a mechanism that connects KOL influence with online purchase intention. Practically, the findings may help creative service businesses design more appropriate KOL selection strategies, build brand awareness more consistently, and improve the conversion of social media exposure into online transactions.

LITERATURE REVIEW

Digital marketing has broadened the way firms cultivate consumer attention, trust, and purchase intention. In the social media environment, marketing messages are no longer produced exclusively by companies; they are also conveyed by digital figures who maintain close relationships with their audiences. These figures are commonly referred to as Key Opinion Leaders or influencers, namely individuals who are able to shape followers' perceptions, preferences, and behavioral tendencies through the content they publish on social media. In this study, Key Opinion Leader is positioned as the independent variable, measured through visibility, credibility, attraction, and power. Brand Awareness is positioned as the mediating variable, measured through brand recognition, brand recall, and top of mind. Online Purchase Intention serves as the dependent variable, measured through interest, desire, confidence, and action. This framework is relevant because, in creative service businesses such as photo studios, consumer decisions are often shaped by visual exposure, experiences displayed by others, and the ability of a brand to remain salient in consumers' memory.

Key Opinion Leaders occupy an important position in digital marketing because they are able to deliver promotional messages in a more personal manner than conventional advertising. Consumers tend to be more receptive to messages delivered by figures perceived as credible, lifestyle-compatible, and emotionally close to their audiences. Lou and Yuan

(2019) show that influencer credibility and message value can affect consumer trust in branded content. This is important because trust in the message source becomes an initial gateway through which consumers begin to pay attention to the promoted brand. Sokolova and Kefi (2020) also emphasize that credibility and parasocial relationships between influencers and followers can encourage purchase intention. Thus, KOL effectiveness is not determined merely by the number of followers, but also by the quality of social relationships, credibility, and value congruence among the influencer, the brand, and the audience developed through digital content (Ki et al., 2020; Vrontis et al., 2021).

The visibility dimension refers to the extent to which a KOL is seen and able to reach audiences. In social media contexts, visibility is related to the frequency of content exposure, follower size, view counts, and the figure's ability to bring a brand into consumers' field of attention. However, visibility alone is insufficient. A KOL with a large following may not necessarily be effective if the audience does not trust the figure or if the figure does not fit the character of the brand. For this reason, credibility becomes a crucial dimension. Credibility reflects the extent to which a KOL is perceived as possessing expertise, integrity, and honesty in communicating information. Weismueller et al. (2020) emphasize that source credibility and transparency in endorsement can influence consumers' purchase intention on social media. In the context of photography services, KOL credibility is particularly important because consumers are not purchasing a physical product; they are purchasing an experience, visual quality, studio atmosphere, and confidence that the service booked will meet their expectations.

The attraction dimension explains the appeal of a KOL, including physical appearance, communication style, personality, and perceived social similarity with the audience. This appeal can strengthen consumer identification with the figure promoting the brand. Schouten et al. (2020), Bu et al. (2022), and Kim and Kim (2021) show that product–endorser fit, identification, homophily, and credibility can shape consumer responses to endorsement. In the photo studio business, KOL attractiveness is highly relevant because the service offered is visual and closely connected to consumer self-expression. A KOL whose visual style aligns with the target market can help consumers imagine the experience of using the service. Meanwhile, the power dimension refers to the KOL's ability to encourage audiences to take action, such as seeking further information, visiting the brand account, making a reservation, or sharing information with others. Ao et al. (2023), through a meta-analysis, found that influencer characteristics such as homophily, expertise, trustworthiness, credibility, congruence, entertainment value, informative value, and attractiveness are associated with customer engagement and purchase intention

Although KOLs can attract consumer attention, their influence needs to be understood through the mechanism of brand awareness. Brand awareness refers to consumers' ability to recognize and recall a brand within a particular product or service category. In marketing, brand awareness represents an important early stage because consumers are generally more likely to consider brands with which they are already familiar. Brand awareness may appear through brand recognition, brand recall, and top-of-mind awareness. In the context of The Portrait Place, brand awareness does not simply mean that consumers have heard the studio's name. It also means that they can recognize the distinctive characteristics of its services, remember the visual experience presented by the brand, and associate the brand with their need for a photo session.

Brand awareness plays a strategic role in connecting promotional exposure with purchase intention. Dabbous and Barakat (2020) show that content quality and brand interactivity on social media can enhance brand awareness and purchase intention. This finding suggests that digital content does not merely work by capturing momentary attention; it also builds brand memory that may shape consumer decision-making. When a KOL presents a brand consistently, consumers may find it easier to recognize the brand name, remember the characteristics of the service, and place the brand within their set of alternatives. Thus, KOLs may act as an initial trigger, while brand awareness functions as a cognitive mechanism that converts promotional exposure into purchase consideration.

Online purchase intention refers to consumers' tendency or readiness to buy through digital platforms. In a service context, online purchase intention may be reflected in consumers' willingness to search for information, compare service options, select packages, make reservations, and complete payments online. Trivedi and Sama (2020), Saima and Khan (2021), and Leung et al. (2022) show that influencer marketing can affect online purchase intention, particularly when influencers are perceived as credible, original in their content, and congruent with the brand being promoted. This indicates that influencers become more influential when consumers rely on social media as an information source before making purchase decisions. In the photo studio business, online purchase intention is closely related to consumers' confidence that the reservation process is convenient, the service is reliable, the photo results will meet expectations, and digital transactions are secure.

The relationship between KOLs and online purchase intention can be explained through social influence and trust in the information source. When consumers see a KOL using or recommending a service, they receive a social signal that the service is worth considering. Such a signal can reduce uncertainty, particularly for services whose quality can only be fully assessed after consumption. However, the influence of a KOL becomes stronger when the promotion is able to generate brand awareness. Patmawati and Miswanto (2022) found that social media influencers affect purchase intention through brand awareness as a mediating variable. This finding reinforces the view that influencers do not only stimulate purchase intention directly; they may also work through the enhancement of consumers' awareness of the brand.

In this study, brand awareness is positioned as a mediating variable because consumers do not necessarily make a purchase merely because they see a KOL. Consumers first need to recognize the brand, understand the services offered, and feel sufficiently assured that the brand is relevant to their needs. The initial manuscript also states that brand awareness acts as a bridge that strengthens the influence of KOLs on online purchase intention. Without brand awareness, KOL-based promotion may not be sufficiently effective in encouraging consumers to make online purchases. Accordingly, the research model does not treat KOLs simply as promotional instruments, but as sources of digital stimulus that shape brand awareness and subsequently influence online transaction intention.

Based on this literature, the present study is located at the intersection of influencer marketing, brand awareness, and online purchasing behavior in creative services. Its contribution lies in explaining how the influence of digital figures on online reservation intention does not arise only from direct promotional power, but also from their capacity to build brand awareness. In creative service businesses such as photo studios, brand awareness is particularly important because consumers need visual memory, experiential associations, and confidence in the expected service outcome before making a reservation. Therefore, strengthening KOL strategy should not be limited to selecting figures with large followings. It should also consider the alignment between the KOL's character and the brand identity, message credibility, content quality, and consistency in building brand awareness.

METHODOLOGY

This study employed a quantitative approach using descriptive and verificative methods. The quantitative approach was selected because the study aimed to measure relationships among variables objectively through numerical data obtained from respondents. The descriptive method was used to portray the conditions of Key Opinion Leaders, Brand Awareness, and Online Purchase Intention among consumers of The Portrait Place Bandung. Meanwhile, the verificative method was used to examine both direct and indirect effects among variables in the research model, namely the effect of Key Opinion Leaders on Online Purchase Intention with Brand Awareness as a mediating variable. The initial manuscript was designed to test causal relationships among Key Opinion Leaders, Brand Awareness, and Online Purchase Intention using path analysis.

The research object was consumers of The Portrait Place Bandung, a photography service business that offers photo studio services and facilitates reservations through online media. The population referred to the total consumers of The Portrait Place during 2023 and 2024. Based on company data, the number of consumers reached 14,009 in 2023 and 9,863 in 2024; therefore, the total population used as the basis for this study was 23,872 consumers. This figure indicates that The Portrait Place has a relatively large consumer base, although it continues to face a decline in the number of service users from year to year. Accordingly, this population was considered relevant for examining how Key Opinion Leader-based promotion and brand awareness relate to online purchase intention.

The sample size was determined using the Slovin formula with a 10% margin of error. Based on the calculation in the initial manuscript, the required sample size was 99.58 and was rounded to 100 respondents. The sampling technique used was non-probability sampling with an incidental sampling approach. This technique was chosen because respondents were selected based on accessibility and their relevance to the research criteria, namely consumers or prospective consumers who were familiar with The Portrait Place and were able to assess its Key Opinion Leader promotion, brand awareness, and online purchase intention. Through this approach, the researcher was able to obtain data more practically from respondents who were relevant to the digital marketing context of The Portrait Place.

Primary data were collected through questionnaires distributed to respondents. The questionnaire was developed based on indicators of each research variable and used a five-point Likert scale, ranging from "strongly disagree" to "strongly agree." In addition to primary data, the study also used secondary data derived from company documents, consumer records, scientific references, and other relevant sources that supported the understanding of digital marketing and photo studio competition in Bandung. In the initial manuscript, the main data collection technique was the distribution of questionnaires to consumers of The Portrait Place, while secondary data served as supporting material for the analysis.

The study consisted of one independent variable, one mediating variable, and one dependent variable. The independent variable was Key Opinion Leader, measured through four dimensions: visibility, credibility, attraction, and power. Visibility reflects the extent to which a KOL is seen and reaches audiences in the digital space. Credibility refers to the level of trust, integrity, and reputation attributed to the KOL as an information source. Attraction captures the KOL's personal appeal, communication style, and social fit with the audience. Power reflects the KOL's ability to influence consumers' choices, attention, and behavior.

The mediating variable was Brand Awareness, measured through three dimensions: brand recognition, brand recall, and top of mind. Brand recognition refers to consumers' ability to identify the distinguishing features of The Portrait Place brand. Brand recall reflects consumers' ability to remember the brand when thinking about the photo studio service category. Top of mind indicates the extent to which The Portrait Place emerges as a primary option in consumers' minds. The dependent variable was Online Purchase Intention, measured through four dimensions: interest, desire, confidence, and action. These four dimensions describe a gradual process, beginning with consumers' interest in online services, followed by their desire to use the service, confidence in digital transactions, and tendency to make reservations or purchases online. The operationalization of variables in the initial manuscript consisted of 22 statement items representing the three research variables.

Before the main analysis was conducted, the research instrument was tested for validity and reliability. The validity test was used to ensure that each statement item was able to measure the intended indicator. The reliability test was used to assess the consistency of respondents' answers across items within each variable. The instrument was considered appropriate when the items met the established validity and reliability criteria. The testing process was carried out using SPSS version 26, which was also used for the main data analysis.

Data analysis was conducted in two stages. First, descriptive analysis was used to describe the tendency of respondents' responses toward each variable. The average scores were then classified into five assessment categories, ranging from very poor to very good. Second, verificative analysis was conducted using path analysis. Since the questionnaire data were measured on an ordinal scale, the data were first transformed into an interval scale using the Method of Successive Interval before further analysis was performed. Path analysis was used to examine the direct effect of Key Opinion Leaders on Brand Awareness, the direct effect of Key Opinion Leaders on Online Purchase Intention, the direct effect of Brand Awareness on Online Purchase Intention, and the indirect effect of Key Opinion Leaders on Online Purchase Intention through Brand Awareness.

The path analysis model consisted of two substructures. The first substructure examined the effect of Key Opinion Leaders on Brand Awareness. The second substructure examined the effects of Key Opinion Leaders and Brand Awareness on Online Purchase Intention. The mediating effect was calculated by multiplying the path coefficient from Key Opinion Leaders to Brand Awareness by the path coefficient from Brand Awareness to Online Purchase Intention. Thus, the model allowed the study to explain whether Brand Awareness functioned only as a variable influenced by KOLs, or also as a mechanism that connected KOL influence with consumers' online purchase intention. Hypothesis testing was conducted using the t-test for partial effects and the F-test for simultaneous effects, with a significance level of 5%.

RESULT

This study involved 100 respondents consisting of consumers or individuals familiar with The Portrait Place Bandung. Respondents were selected because they were considered to have relevant experience or knowledge regarding The Portrait Place's social media promotion, the use of Key Opinion Leaders, and the possibility of making reservations or purchasing services online. The findings are presented in several parts, namely respondent characteristics, instrument testing results, descriptive analysis, path analysis, and direct and indirect effects among variables.

The respondent profile indicates that consumers of The Portrait Place were dominated by young and female respondents. Based on gender, most respondents were female, totaling 67 individuals or 67%, while male respondents accounted for 33 individuals or 33%. In terms of age, the largest group was respondents aged 20–30 years, totaling 76 respondents or 76%. This suggests that The Portrait Place is widely known among young consumers who are relatively familiar with social media use and digital transactions. Based on occupation or status, respondents were dominated by students, accounting for 54%, followed by employees at 41% and entrepreneurs at 4%. This composition indicates that the market of The Portrait Place is closely associated with young, digitally active consumers who tend to use social media as a reference when selecting creative services such as photo studios.

Table 1. Respondent Characteristics

Characteristic	Category	Frequency	Percentage
Gender	Male	33	33%
	Female	67	67%
Age	< 20 years	9	9%
	20–30 years	76	76%
	31–40 years	14	14%
	> 40 years	1	1%
Occupation/status	Student	54	54%
	Employee	41	41%
	Entrepreneur	4	4%

Source: Processed research data from the undergraduate thesis manuscript, 2025.

Before the main analysis was performed, the research instrument was examined through validity and reliability testing. The validity test showed that the statement items for Key Opinion Leader, Brand Awareness, and Online Purchase Intention met the validity criteria because the calculated r-values exceeded the r-table value of 0.300. For example, all items measuring Online Purchase Intention had calculated r-values ranging from 0.770 to 0.913, indicating that all items were valid and suitable for further analysis. The reliability test also showed that all variables had Cronbach's Alpha values above 0.700, namely 0.960 for Key Opinion Leader, 0.974 for Brand Awareness, and 0.947 for Online Purchase Intention. Therefore, the research instrument can be considered reliable because it produced consistent measurements across the variables.

Table 2. Reliability Test Results of the Research Instrument

Variable	Cronbach's Alpha	Minimum Threshold	Interpretation
Key Opinion Leader	0.960	0.700	Reliable
Brand Awareness	0.974	0.700	Reliable
Online Purchase Intention	0.947	0.700	Reliable

Source: SPSS data processing results, 2025.

The descriptive analysis indicates that the three research variables were all in the less favorable category. Key Opinion Leader obtained an average score of 3.04. This score suggests that consumers' perceptions of the KOL used by The Portrait Place were not yet sufficiently strong. Several indicators remained weak, including audience interaction with KOL posts, the KOL's physical attractiveness and perceived social similarity, social media users' positive perceptions of the KOL, and the KOL's ability to influence public choices or behavior. The lowest indicator was found in the aspect of attractiveness and social similarity, with a score of 2.92. This implies that the KOL used by The Portrait Place was not yet perceived as having a strong character fit, visual appeal, or social proximity to the target consumers of The Portrait Place.

Brand Awareness obtained an average score of 3.11 and was also categorized as less favorable. The weaker indicators were mainly related to consumers' ability to recognize the distinctive features of the product and brand, the frequency with which consumers heard about The Portrait Place, and the frequency with which they mentioned the brand. This condition suggests that The Portrait Place has not yet developed a sufficiently strong brand identity in consumers' memory. Consumers may be aware of the brand's existence, but they do not necessarily recognize its distinctive service characteristics or position it as their primary option when they need photo studio services.

Online Purchase Intention obtained an average score of 3.17, which also falls within the less favorable category. The indicators that remained weak included the intention to use the service in the future, trust in the security and convenience of digital payment methods, actual behavior in completing transactions through online platforms, and the realization of intention into online transaction behavior. The lowest indicator was found in the action dimension, particularly the actual act of completing a transaction through an online platform. This finding indicates that consumers' interest in The Portrait Place has not yet fully developed into online reservation or purchase behavior.

Table 3. Summary of Descriptive Analysis of Research Variables

Variable	Average Score	Category	Indicator Requiring Attention
Key Opinion Leader	3.04	Less favorable	Physical attractiveness and social similarity of the KOL
Brand Awareness	3.11	Less favorable	Recognition of product and brand distinctiveness

Variable	Average Score	Category	Indicator Requiring Attention
Online Purchase Intention	3.17	Less favorable	Actual completion of online transactions

Source: Processed research data from the undergraduate thesis manuscript, 2025.

The path analysis for the first substructure shows that Key Opinion Leader has a positive and significant effect on Brand Awareness. The standardized beta coefficient is 0.868, with a t-value of 17.326 and a significance value of 0.000. This result indicates that the stronger consumers' perceptions of the Key Opinion Leader, the higher their brand awareness of The Portrait Place. The correlation between Key Opinion Leader and Brand Awareness is also 0.868, which falls into the very strong category. The coefficient of determination for the first substructure shows an R Square value of 0.754. This means that Key Opinion Leader explains 75.4% of the variance in Brand Awareness, while the remaining 24.6% is explained by factors outside the research model.

In the second substructure, Key Opinion Leader and Brand Awareness were simultaneously tested in relation to Online Purchase Intention. The analysis shows that Key Opinion Leader has a path coefficient of 0.322, with a t-value of 2.534 and a significance value of 0.013. Meanwhile, Brand Awareness has a path coefficient of 0.489, with a t-value of 3.854 and a significance value of 0.000. These results indicate that both variables have positive and significant effects on Online Purchase Intention. However, the coefficient of Brand Awareness is higher than that of Key Opinion Leader, suggesting that Brand Awareness is the stronger predictor of consumers' online purchase intention.

Table 4. Path Analysis Results among Variables

Relationship among Variables	Path Coefficient	t-value	Sig.	Interpretation
Key Opinion Leader → Brand Awareness	0.868	17.326	0.000	Positive and significant
Key Opinion Leader → Online Purchase Intention	0.322	2.534	0.013	Positive and significant
Brand Awareness → Online Purchase Intention	0.489	3.854	0.000	Positive and significant

Source: SPSS data processing results, 2025.

The coefficient of determination for the second substructure shows an R value of 0.785 and an R Square value of 0.616. This means that Key Opinion Leader and Brand Awareness jointly explain 61.6% of the variance in Online Purchase Intention. The remaining 38.4% is influenced by other variables outside the model, such as price, service quality, digital trust, ease of reservation, consumer reviews, promotions, and customer experience. The partial contribution analysis shows that Key Opinion Leader contributes 24.02% to Online Purchase Intention, while Brand Awareness contributes 37.55%. These findings indicate that Brand Awareness plays a more dominant role than the direct effect of KOL in explaining online purchase intention.

The simultaneous test also confirms that the second substructure model is significant. The F-value is 77.682 with a significance value of 0.000, indicating that Key Opinion Leader and Brand Awareness jointly have a significant effect on Online Purchase Intention. This result reinforces the view that consumers' intention to make online reservations or purchases is influenced not only by the presence of KOLs, but also by the extent to which such promotion is able to build brand awareness.

The indirect effect of Key Opinion Leader on Online Purchase Intention through Brand Awareness was calculated by multiplying the path coefficient from Key Opinion Leader to Brand Awareness by the path coefficient from Brand Awareness to Online Purchase Intention, namely 0.868 × 0.489 = 0.424. Thus, the indirect effect is 0.424, or 42.4%. At the same time, the direct effect of Key Opinion Leader on Online Purchase Intention remains significant, with a coefficient of 0.322. This indicates that Brand Awareness functions as a partial mediator. In other words, KOLs can directly influence Online Purchase Intention, but the effect becomes stronger when KOLs first increase consumers' awareness of The Portrait Place brand.

Table 5. Summary of Direct, Indirect, and Total Effects

Type of Effect	Calculation	Value
Direct effect of KOL → Online Purchase Intention	0.322	0.322
Indirect effect of KOL → Brand Awareness → Online Purchase Intention	0.868 × 0.489	0.424
Total effect of KOL on Online Purchase Intention	0.322 + 0.424	0.746
Simultaneous contribution of KOL and Brand Awareness to Online Purchase Intention	R Square	0.616 or 61.6%
Remaining effect of other variables	1 − 0.616	0.384 or 38.4%

Source: Processed research data from path analysis results, 2025.

Overall, the study reveals three main findings. First, Key Opinion Leader, Brand Awareness, and Online Purchase Intention at The Portrait Place are all in the less favorable category, indicating that its digital marketing strategy still requires strengthening. Second, Key Opinion Leader has a very strong effect on Brand Awareness. Third, Brand Awareness serves as an important mechanism linking Key Opinion Leader to Online Purchase Intention. These findings suggest that the use of KOLs in creative service businesses should not be directed merely toward increasing exposure. It should also be designed to build brand recognition, strengthen consumer memory, and encourage actual online reservation behavior.

DISCUSSION

The findings show that the Key Opinion Leader-based marketing strategy adopted by The Portrait Place has not yet reached an optimal level, although statistically it has been shown to play an important role in shaping Brand Awareness and Online Purchase Intention. Descriptively, Key Opinion Leader, Brand Awareness, and Online Purchase Intention were all categorized as less favorable. In the Key Opinion Leader variable, the main issues were reflected in the low intensity of content exposure, the limited relevance of content to consumer needs, the weak encouragement to seek further information, and respondents' limited confidence in following KOL recommendations. These findings suggest that the mere presence of a KOL is not sufficient to generate strong digital influence. In the context of creative service marketing, KOLs need to demonstrate stylistic proximity, credibility, and visual fit with the brand character so that promotional messages are not only seen, but also trusted and remembered by consumers.

This finding is consistent with Lou and Yuan (2019), who argue that the effectiveness of influencer marketing is not determined merely by exposure, but also by source credibility and the value of the message delivered. A KOL with a certain number of followers or views is not necessarily effective if the message is not perceived as relevant, authentic, or aligned with audience needs. In the case of The Portrait Place, the KOL may function as an entry point for attracting consumer attention, yet that attention has not fully developed into strong trust. This is important because photo studio services are experience-based. Consumers do not only consider price or service availability; they also imagine photo quality, studio atmosphere, visual style, and the convenience of the reservation process.

The effect of Key Opinion Leader on Brand Awareness was found to be very strong. The path coefficient of 0.868 indicates that the stronger consumers' perceptions of the KOL, the higher their awareness of The Portrait Place. The t-value of 17.326 and the significance value of 0.000 indicate that the relationship is statistically significant. This finding reinforces the argument that KOLs act as intermediaries between brands and digital audiences. Through the content they share, KOLs can introduce the brand name, display the experience of using the service, and help consumers recognize the distinctive characteristics of The Portrait Place. In creative service marketing, this effect is particularly important because consumers often become familiar with a brand through visual representations displayed by others, not only through formal information provided by the company.

Theoretically, this result supports the view that influencers or KOLs may operate as social cues that enhance brand recognition. Schouten et al. (2020) emphasize that endorsement effectiveness is shaped by identification, credibility, and fit between the endorser and the product. When a KOL's image is consistent with the character of the service, consumers can more easily associate the figure with the promoted brand. In the case of The Portrait Place, this means that KOL selection should not rely solely on popularity, but should also consider visual style compatibility with the target market, especially young consumers who treat photo studio services as part of self-expression and social media content creation.

Brand Awareness was also found to have a positive and significant effect on Online Purchase Intention. The path coefficient of Brand Awareness on Online Purchase Intention was 0.489, which is higher than the direct coefficient of Key Opinion Leader on Online Purchase Intention, which was 0.322. This means that, in the model, Brand Awareness has a stronger role in shaping online purchase intention than the direct effect of KOLs. The finding suggests that consumers are more prepared to make online reservations or transactions when they already recognize, remember, and position The Portrait Place as one of the options in the photo studio category. In other words, brand awareness becomes an important prerequisite before consumers move toward the purchase action stage.

This finding is consistent with Dabbous and Barakat (2020), who show that social media content quality can strengthen Brand Awareness and subsequently encourage Purchase Intention. In the context of The Portrait Place, Brand Awareness does not merely mean that consumers have seen the brand name. It also means that they understand the distinctive features of the service, remember the visual experience offered, and perceive the brand as relevant to their needs. The descriptive findings indicate that Brand Awareness remains in the less favorable category, particularly in terms of recognizing the distinctiveness of the product or service, the frequency with which consumers hear the brand name on social media, and the extent to which The Portrait Place appears in conversations related to photo studios. This suggests that the brand is not yet strong enough to become a spontaneous choice in consumers' minds.

Online Purchase Intention, which was also categorized as less favorable, indicates a gap between digital attention and transaction behavior. Consumers may have seen the promotion, known the studio's existence, or felt interested in the services offered, but they are not necessarily willing to make reservations through an online platform. The problems are reflected in consumers' willingness to make The Portrait Place their main choice, willingness to pay through digital methods, intention to reserve through an online link, and willingness to complete online reservation transactions. This suggests that online purchase intention is not shaped only by promotion, but also by security perceptions, process convenience, information clarity, and consumers' confidence in the service.

From a digital consumer behavior perspective, this finding is in line with Trivedi and Sama (2020), who argue that influencer marketing can affect online purchase intention, but its effect depends strongly on how consumers develop perceptions of the brand. In experience-based services such as photo studios, perceived risk tends to be higher than in simple product purchases. Consumers need assurance that the photo results will meet expectations, the reservation schedule will be easy to arrange, the payment process will be secure, and the studio experience will be consistent with what is promoted. Therefore, strengthening purchase intention should not rely only on KOLs, but also on clear service package information, customer testimonials, portfolio displays, price transparency, and a simple booking process.

The mediating role of Brand Awareness is the most important finding of this study. The indirect effect of Key Opinion Leader on Online Purchase Intention through Brand Awareness is calculated as $0.868 \times 0.489 = 0.424$. Thus, Brand Awareness becomes the mechanism explaining how KOLs can encourage online purchase intention. Since the direct effect of KOLs on Online Purchase Intention remains significant, the mediation can be understood as partial mediation. This means that KOLs may directly influence purchase intention, but their effect becomes more meaningful when they first strengthen consumers' awareness of the brand. Academically, the value of 61.6% should be interpreted as the simultaneous contribution of Key Opinion Leader and Brand Awareness to Online Purchase Intention, rather than as the value of the indirect effect.

This mediation finding supports Patmawati and Miswanto (2022), who found that Brand Awareness can mediate the relationship between social media influencers and purchase intention. In other words, KOLs do not always operate by directly persuading consumers to buy. They may also work through the formation of brand memory and brand recognition. In the context of The Portrait Place, an effective KOL is not merely one who shows themselves using the service. Rather, an effective KOL is one who can make audiences recognize the brand name, understand the studio's uniqueness, imagine the service experience, and relate the brand to their personal needs. Brand Awareness therefore becomes the bridge between digital exposure and transaction intention.

The practical implications of these findings are clear. The Portrait Place needs to be more selective in choosing KOLs. The selected KOLs should not only have a large number of followers, but should also demonstrate active engagement, a positive reputation, a visual style consistent with the studio's identity, content originality, and proximity to young consumer segments (Bu et al., 2022; Kim & Kim, 2021; Leung et al., 2022). In addition, KOL content should be designed more consistently so that it does not function merely as short-term promotion. Content may be directed toward real service experiences, the reservation process, before-and-after photo results, studio atmosphere, service packages, and customer stories. In this way, KOLs do not function only as message carriers, but also as agents who help construct the brand experience.

Theoretically, this study contributes to digital marketing literature by showing that the relationship between KOLs and Online Purchase Intention in creative services cannot be understood simply as a direct relationship between promotion and purchase. A cognitive process lies between the two, namely Brand Awareness. For consumers, brands that are more familiar, easier to remember, and clearer in identity are more likely to be considered in online purchase decisions. Thus, the main contribution of this study lies in emphasizing that the effectiveness of KOLs in creative service businesses depends on their ability to build strong brand awareness before stimulating digital transactions.

CONCLUSION

This study concludes that Key Opinion Leader, Brand Awareness, and Online Purchase Intention at The Portrait Place Bandung are all in the less favorable category. This condition indicates that the digital marketing strategy implemented by the business has not yet generated a strong influence in consumers' minds. The KOL used by The Portrait Place has not fully succeeded in developing appeal, social proximity, and behavioral influence among consumers. At the same time, Brand Awareness of The Portrait Place remains insufficiently strong, particularly in terms of recognizing the distinctive characteristics of the brand and recalling the brand as a primary option in the photo studio service category.

From the verificative analysis, Key Opinion Leader has a positive and significant effect on Brand Awareness. This finding indicates that digital figures with visibility, credibility, attractiveness, and persuasive power can help consumers recognize and remember a brand. Key Opinion Leader also has a positive effect on Online Purchase Intention, although its direct effect is smaller than the effect of Brand Awareness. This suggests that KOL-based promotion can attract consumer attention, but online purchase intention becomes stronger when consumers first develop adequate brand awareness.

Brand Awareness has a positive and significant effect on Online Purchase Intention. Consumers who are more familiar with, more capable of recalling, and more likely to position The Portrait Place as an option in the photography service category tend to show stronger intention to make reservations or complete transactions online. In addition, Brand Awareness acts as a partial mediator in the relationship between Key Opinion Leader and Online Purchase Intention. Therefore, the influence of KOLs on online purchase intention does not occur only through a direct path, but also through the process of building brand awareness.

Theoretically, this study strengthens digital marketing literature by demonstrating that the effectiveness of Key Opinion Leaders in creative service businesses cannot be separated from their ability to build Brand Awareness. Practically, The Portrait Place needs to select KOLs who are not only popular, but also credible, relevant to the brand character, and close to the target consumers. KOL content should also be directed toward strengthening brand identity, presenting service experiences, explaining the ease of online reservation, and building consumer confidence in digital transactions. Future studies may include other variables such as trust, perceived value, service quality, customer experience, or electronic word of mouth to provide a more comprehensive understanding of Online Purchase Intention in creative services.

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