

Collaboration and Employee Performance: The Mediating Role of Innovation among Public Sector Employees in East Kalimantan

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Abstract: This study examines the impact of collaboration on employee performance, with innovation as a mediating variable among public sector employees in East Kalimantan, Indonesia. This study employs a quantitative methodology involving 172 respondents from various government institutions. Data analysis was conducted using Partial Least Squares structural equation modeling (PLS-SEM) via SmartPLS 4. The findings indicate that collaboration exerts a positive and significant influence on employee performance both directly and indirectly through innovation. Moreover, innovation plays a crucial mediating role, suggesting that collaborative work environments promote creative problem-solving and knowledge exchange, ultimately enhancing individual performance. These results contribute to the integration of Social Exchange Theory, Knowledge-Based View, and Dynamic Capability Theory in elucidating performance improvement within the public sector. Practically, this study highlights the importance of fostering collaborative cultures and innovation-driven management practices to improve bureaucratic efficiency and public service delivery in developing regions.

Keywords: Collaboration, Innovation, Employee Performance, Public Sector

I. Introduction

Employee performance is a critical determinant of the efficacy of public organizations, particularly in the contemporary era of governance, which necessitates adaptability, transparency, and innovation. Within the context of local government in Indonesia, including East Kalimantan Province, enhancing the performance of state civil servants presents a strategic challenge amid a dynamic work environment and increasingly complex public-service demands. Numerous public agencies continue to encounter issues such as inadequate cross-unit collaboration, limited communication, and insufficient creativity in addressing operational challenges, which consequently affect the productivity and effectiveness of both individual and organizational performances.

In public organizations, collaboration extends beyond mere cooperation among employees. It involves the exchange of knowledge, mutual support in decision-making processes, and the establishment of working relationships based on trust and shared objectives. Prior research indicates that collaboration is significantly associated with enhanced employee performance, as it facilitates social learning, fosters synergy among individuals, and promotes the development of innovative solutions for task completion (Stefan et al., 2024). Nonetheless, the efficacy of collaboration is often contingent on an organization's ability to cultivate a culture of innovation that encourages the generation of novel ideas and the adoption of creative work practices.

Innovation in the public sector is increasingly acknowledged as a crucial catalyst for enhancing efficiency, productivity, and service quality. Organizations that cultivate a collaborative environment are generally more adaptable to change, as employees actively engage in identifying problems and creating innovations (Sun et al., 2023). In East Kalimantan, initiatives aimed at bureaucratic reform through digital transformation and the reinforcement of a collaborative work culture encounter several challenges, including suboptimal cross-sectoral coordination, a scarcity of creative human resources, and resistance to change. This scenario necessitates an empirical investigation into how employee collaboration fosters innovation, ultimately yielding a positive impact on performance.

While numerous studies have explored the relationship between collaboration and employee performance, a research gap persists in understanding the role of innovation as a mediating mechanism, particularly within the context of public organizations in developing countries. Most prior research has been conducted within the private sector or large, profit-oriented corporations (Tuan et al., 2024), whereas investigations within the public sector, especially in Indonesia, remain limited. Nevertheless, the dynamics of collaboration in government agencies exhibit unique characteristics—rooted in bureaucratic hierarchies, characterized by formal procedures, and reliant on strategic policies—that can influence innovation effectiveness and employee performance.

This study empirically examines the impact of collaboration on employee performance, with innovation serving as a mediating variable, within government agencies in East Kalimantan Province. The conceptual framework is grounded in the Social Exchange and Knowledge-Based View theories, which posit that collaboration facilitates the exchange of information and knowledge, thereby fostering the generation of new ideas and enhancing both individual and organizational performance. This study is anticipated to contribute theoretically by expanding the understanding of innovation's role in reinforcing the relationship between collaboration and employee performance in the public sector. Additionally, it aims to offer practical implications for local government human resource management to bolster productive and innovative collaborations.

Consequently, this study advances the theoretical frameworks of public management and organizational behavior and offers practical insights for policymakers aiming to foster an innovation-driven collaborative work culture within bureaucratic settings. A comprehensive understanding of the interplay between collaboration, innovation, and performance is anticipated to underpin the formulation of strategic policies that enhance the competitiveness of government officials in East Kalimantan, particularly in the context of digital transformation and globalization of public administration.

II. Literature Review and Hypothesis Development

Collaboration and Employee Performance

Collaboration is a fundamental component of fostering organizational excellence in both the public and private sectors. Theoretically, Social Exchange Theory (SET) posits that interactions among employees, characterized by mutual trust, positive feedback, and professional support, enhance individual commitment and productivity (Cropanzano & Mitchell, 2005). In the realm of organizational cooperation, collaboration denotes the capacity of individuals to work across functions, share information, and integrate diverse competencies to achieve shared objectives (Kundu and Mor, 2021). This process generates synergy, thereby augmenting effectiveness, creativity, and work efficiency.

Empirical research indicates that collaboration significantly enhances employee performance. According to Ștefan et al. (2024), well-structured collaboration can enhance employee involvement in decision-making and increase their sense of responsibility for work outcomes. In the public sector, collaboration is a crucial foundation for establishing cross-unit coordination, particularly in delivering complex public services involving multiple stakeholders (Lee & Kim, 2023). Collaboration not only enhances productivity but also fosters a sense of unity that bolsters work morale.

In the governmental context of East Kalimantan, enhancing collaboration among employees is a pivotal strategy for implementing performance-oriented bureaucratic reform. A collaborative work environment facilitates the exchange of ideas and experiences, reduces interdepartmental conflict, and expedites task completion. Drawing on consistent empirical evidence from various cross-sectoral studies, the positive correlation between collaboration and employee performance can be articulated in the following hypothesis:

H1: Collaboration has a positive and significant effect on employee performance.

Collaboration and Innovation

Innovation emerges from social interactions and effective knowledge exchange within organizations. According to the Knowledge-Based View (KBV), knowledge is regarded as a crucial strategic resource for achieving competitive advantage (Grant, 1996). Within this theoretical framework, collaboration functions as a fundamental mechanism for the transfer and integration of knowledge among individuals, thereby fostering the generation of new ideas and innovations (Nonaka & Takeuchi, 1995).

Recent studies underscore the pivotal importance of collaboration in promoting innovation. Sun et al. (2023) assert that elevated levels of collaboration facilitate the acceleration of collective learning processes, expand employee perspectives, and foster the development of innovative solutions to complex challenges. Similarly, research conducted by Tuan et al. (2024) indicate that collaboration enhances individual creativity by promoting open communication and active team participation.

Within the framework of Indonesian government agencies, collaboration assumes strategic significance as it facilitates bureaucratic adaptation to shifts in public policy and advancements in digital technology. Inter-bureau or inter-unit collaboration serves as a platform for identifying innovative opportunities in public service delivery, such as digitizing administrative processes, automating work procedures, and enhancing resource governance. In the absence of effective collaboration, innovation in the public sector is frequently impeded by organizational silos and resistance to change. Drawing on these theoretical foundations and empirical findings, the second hypothesis is articulated as follows:

H2: Collaboration has a positive and significant effect on innovation.

Innovation and Employee Performance

Innovation serves as a catalyst for enhancing employee performance by facilitating the development of more efficient work processes, adopting new technologies, and enhancing public services. According to the Resource-Based View (RBV), innovation is perceived as an organization's capacity to uniquely configure resources to achieve a sustainable competitive advantage (Barney, 1991). At the individual level, the capacity for innovation is closely associated with initiative, creativity, and willingness to learn, all of which contribute to improved work performance (Prieto & Pérez-Santana, 2022).

Empirical research has substantiated a positive correlation between innovation and employee performance. Mireles et al. (2024) assert that innovative employees exhibit enhanced efficiency in task completion and contribute improvement ideas that significantly impact organizational effectiveness. Similarly, Hoxha et al. (2024) identified that innovation fosters emotional engagement among employees, thereby augmenting loyalty and the quality of work output. Within public organizations, innovation is pivotal as it is directly associated with heightened public service effectiveness, reduced operational costs, and increased public satisfaction.

In East Kalimantan, the local government is endeavoring to advance digital-based service innovations, including employee information systems, electronic offices, and application-based performance management systems. The success of these innovations

is contingent on employees actively serving as agents of change by implementing creative ideas. Based on this theoretical framework and empirical evidence, the following hypothesis is proposed.

H3: Innovation has a positive and significant effect on employee performance.

The Mediating Role of Innovation

The relationship between collaboration and employee performance is not solely direct; it can also be enhanced by the presence of innovation as a mediator. According to Dynamic Capability theory, organizations that can foster innovation through collaboration possess a greater adaptive capacity to respond to external environmental changes (Teece, 2018). In this context, collaboration offers a social and structural framework that facilitates the emergence of innovation through the exchange of ideas, open discussion, and collective reflection, which subsequently enhances employee performance.

Empirical evidence indicates that innovation mediates the relationship between collaboration and performance. Ștefan et al. (2024) demonstrated that employee collaboration enhances an organization's capacity to generate innovation, which in turn positively influences productivity and work outcomes. Similarly, research conducted by Sun et al. (2023) found that public organizations characterized by high levels of collaboration exhibited notable improvements in procedural innovation and public service performance.

Within the framework of government agencies in East Kalimantan, innovation is a crucial indicator of the success of bureaucratic reform. Employees who operate in a collaborative environment are generally more receptive to novel ideas and are capable of implementing operational innovations that enhance both individual and work unit performance. Drawing on these theoretical arguments and empirical evidence, the final hypothesis is articulated as follows:

H4: Innovation mediates the relationship between collaboration and employee performance.

III. Research Methodology

Research Design

This study utilized a quantitative methodology to investigate the causal relationships among variables through structural model analysis, specifically employing structural equation modeling-partial least squares (SEM-PLS). This quantitative approach was chosen because of its ability to empirically test both direct and indirect relationships among variables and to evaluate the mediating effect of innovation on the relationship between collaboration and employee performance. The PLS-SEM model is considered appropriate for this study because it can accommodate complex models with a relatively moderate sample size and latent variables measured through multiple indicators (Hair et al., 2021).

The SEM-PLS method is particularly suitable for analyzing data that do not adhere to a normal distribution and emphasizes the predictive relevance of variables. This approach aims to enhance the understanding of empirical phenomena through the interpretation of path coefficients, effect sizes (f), and predictive accuracy (Q). Conceptually, this study is structured as an explanatory investigation designed to elucidate how collaboration influences employee performance directly and through innovation as a mediating mechanism.

Population and Sample

The study population comprised all employees within the East Kalimantan Provincial Government agencies who were directly engaged in coordination and public service activities. This location was chosen because of the provincial government's implementation of various bureaucratic reform initiatives that prioritize a collaborative and innovative work culture, including the digitalization of public services and the enhancement of information technology-based performance systems.

The *purposive sampling method* was used with the following criteria:

- (1) Permanent employees who have worked for at least two years.
- (2) involved in cross-field or work unit activities; and
- (3) Have experience in innovative projects or activities of the agency.

Based on these criteria, 172 respondents were deemed eligible for the analysis. This sample size is considered adequate for PLS-SEM analysis, as per the recommendation by Hair et al. (2021), who suggested that the minimum sample size should be ten times the number of indicators for the independent variable with the most outgoing arrows in the research model.

Data Collection Procedures

Data were collected via a questionnaire survey administered both online and offline to participants employed in diverse sectors, including administration, human resources, planning, and public service. Prior to the comprehensive distribution, a pilot test was conducted with 20 respondents to assess the clarity of the questions and ensure that all indicators were comprehensible.

The questionnaire employed a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), to measure respondents' perceptions regarding statements on collaboration, innovation, and employee performance. Data collection was

conducted over a two-month period, achieving a response rate of 94 percent, which reflects a high level of participant engagement in the study.

Measurement of Variables

All research constructs were derived from prior studies that have been validated and contextualized for public organizations in Indonesia. Collaboration (X) is assessed using six indicators adapted from Kundu and Mor (2021): cross-unit collaboration, open communication, team participation, information sharing, trust between employees, and coordination in decision-making. Innovation (M) is evaluated using five indicators adapted from Prieto and Pérez-Santana (2022): the ability to generate new ideas, implement creative solutions, adopt new technologies, enhance work process efficiency, and adapt to change. Employee Performance (Y) is measured using seven indicators adapted from Motowidlo (2023), addressing the dimensions of effectiveness, work quality, responsibility, timeliness, problem-solving ability, commitment to the organization, and contribution to agency goals. Each indicator was formulated as a positive statement to ensure that respondents offered a more consistent perception.

Data Analysis Technique

Data analysis was conducted using SmartPLS 4.0, following two primary stages: (1) the evaluation of the measurement model (outer model) and (2) the evaluation of the structural model (inner model).

a. Outer Model Evaluation

The measurement model was evaluated to ensure the validity and reliability of the constructs. Convergent validity was assessed using the outer loading value (> 0.70) and the Average Variance Extracted (AVE) (> 0.50). Construct reliability was evaluated based on the Composite Reliability (CR) and Cronbach's alpha values (> 0.70). Discriminant validity was examined using the Fornell–Larcker criteria and the Heterotrait–Monotrait Ratio (HTMT) (< 0.90).

b. Inner Model Evaluation

The structural model was evaluated to investigate the interrelationships among the variables and assess the model's predictive capacity. The coefficient of determination (R^2) was used to evaluate the extent to which the independent variable accounts for the variance in the dependent variable. The f^2 value was used to measure the magnitude of the influence of each construct. The Q^2 value was used to indicate the predictive relevance of the model, with values greater than 0 signifying a good predictive ability. Significance testing was conducted using the bootstrapping method (5000 resampling) to obtain t-statistics and p-values at the 0.05 significance level.

Research Model

The conceptual framework of this study delineates the causal relationships among three primary constructs: collaboration as the independent variable, innovation as the mediating variable, and Employee Performance as the dependent variable. The model posits that collaboration enhances employee performance, both directly and indirectly, via innovation. The interconnections among these variables are as follows:

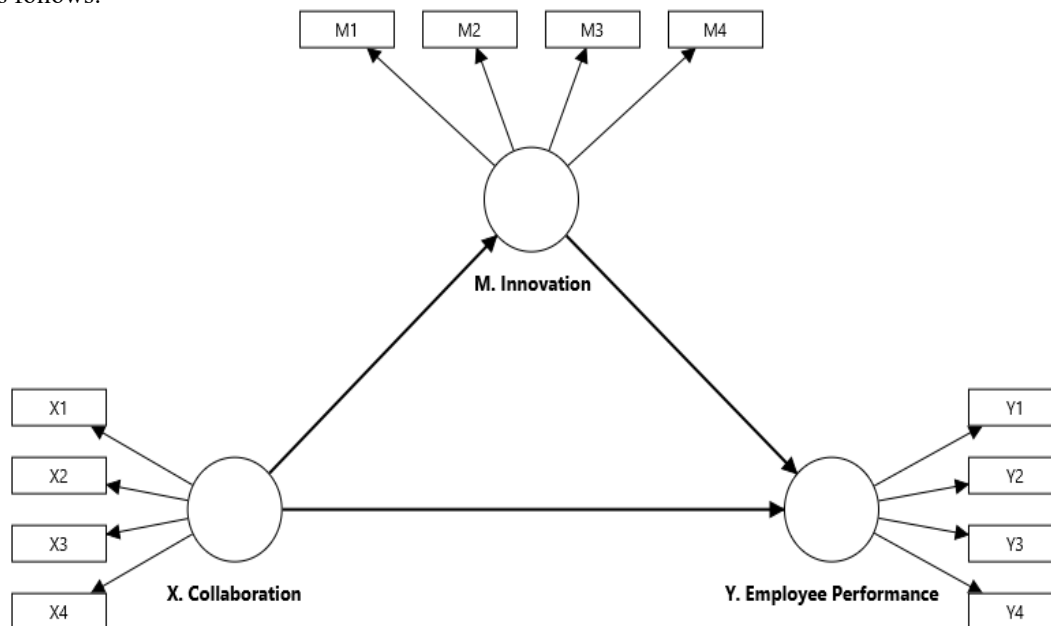


Figure 1: Research Model

This model embodies a theoretical framework that synthesizes the principles of Social Exchange Theory and Dynamic Capability Theory. Within this framework, collaborative processes in public organizations are anticipated to generate innovations that

positively influence the performance of individuals.

Ethical Considerations

This study adhered to ethical principles governing social research. Participants were thoroughly informed about the study's objectives, confidentiality of their data, and their right to withdraw from the study at any point without repercussions. Informed consent was obtained via a consent form before completing the questionnaire. Participant data were processed anonymously and used exclusively for academic purposes.

IV. Results

Descriptive Analysis of Respondents

A total of 172 employees from East Kalimantan Provincial Government agencies participated in this study. The demographic analysis of the respondents revealed that the majority were aged between 30 and 45 years, with a gender distribution of 58 percent male and 42 percent female. Most respondents had between five and ten years of service, indicating substantial involvement in bureaucratic processes and experience with inter-unit collaboration.

The educational background of the respondents predominantly comprised undergraduate (65 percent) and postgraduate (25 percent) degrees, with the remaining individuals holding diplomas. This composition indicates that employees possess a robust academic foundation, enabling them to comprehend the innovation process within public organizations. These data suggest that the research context is characterized by a bureaucratic work environment with adequate cognitive and professional capacity to foster a collaborative and innovative culture within the organization.

Evaluation of Measurement Model (Outer Model)

The outer model was evaluated to verify that the indicators accurately represented the latent constructs. The results indicated that all items exhibited outer loading values exceeding 0.70, demonstrating excellent convergent validity. Furthermore, the Average Variance Extracted (AVE) for each construct surpassed the 0.50 threshold, with specific values as follows: collaboration (AVE = 0.68), innovation (AVE = 0.71), and employee performance (AVE = 0.69). This suggests that more than 68 percent of the variance in the indicators is accounted for by the constructs they represent.

Construct reliability was assessed using Composite Reliability (CR) and Cronbach's alpha, both of which yielded values exceeding 0.80, thereby confirming the construct's reliability. Discriminant validity was evaluated using the Fornell–Larcker criterion, which revealed that the square root of the AVE for each construct surpassed the correlations with other variables, indicating no conceptual overlap among the research constructs. Furthermore, the Heterotrait–Monotrait Ratio (HTMT) test results also demonstrated values below 0.90, reinforcing the conclusion that the research constructs exhibited adequate discriminant validity. This result substantiates the validity and reliability of the research instrument employed, thereby affirming its suitability for examining the structural relationships between variables.

Evaluation of Structural Model (Inner Model)

Once the measurement model satisfies the criteria for validity and reliability, the subsequent step involves assessing the structural model. This evaluation was conducted by analyzing the path coefficient, coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2) using a bootstrapping procedure with 5,000 resamplings.

a. Coefficient of Determination (R^2)

The R^2 value represents the proportion of variance in the endogenous construct accounted for by the exogenous construct. The analysis results indicate the following: Innovation exhibits an R^2 of 0.595, signifying that 59.5 percent of the variance in innovation is attributable to collaboration. Employee Performance demonstrates an R^2 of 0.690, suggesting that 69 percent of the variance in employee performance is explained by both collaboration and innovation concurrently. According to the criteria established by Hair et al. (2021), this value is categorized as strong, indicating that the research model possesses substantial predictive power in elucidating employee performance phenomena within the public sector.

b. Effect Size (f^2)

The f^2 values indicate that collaboration exerts a substantial influence on innovation ($f^2 = 0.53$) and a moderate influence on employee performance ($f^2 = 0.27$). Furthermore, innovation has a significant impact on employee performance ($f^2 = 0.46$). This finding underscores the pivotal role of innovation as a crucial intermediary between collaboration and employee performance.

c. Predictive Relevance (Q^2)

The Q^2 values derived from the blindfolding procedure yielded positive outcomes: Q^2 innovation = 0.39 and Q^2 performance = 0.41. These values exceed zero, signifying that the model possesses commendable predictive capability for endogenous variables. Consequently, the structural model is deemed to have a strong predictive relevance.

Hypothesis Testing

The hypothesis testing results were obtained using the bootstrapping method at a 5 percent significance level ($p < 0.05$). The table below presents a summary of the results concerning the inter-variable relationship testing:

Hypothesis	Path Relationship	Coefficient (β)	t-statistic	p-value	Result
H1	Collaboration - Employee Performance	0,315	3,550	0.000	Supported
H2	Collaboration – Innovation	0,772	21,932	0.000	Supported
H3	Innovation - Employee Performance	0,563	6,498	0.000	Supported
H4	Collaboration - Innovation - Employee Performance (Mediation)	0,243	3,347	0.000	Supported

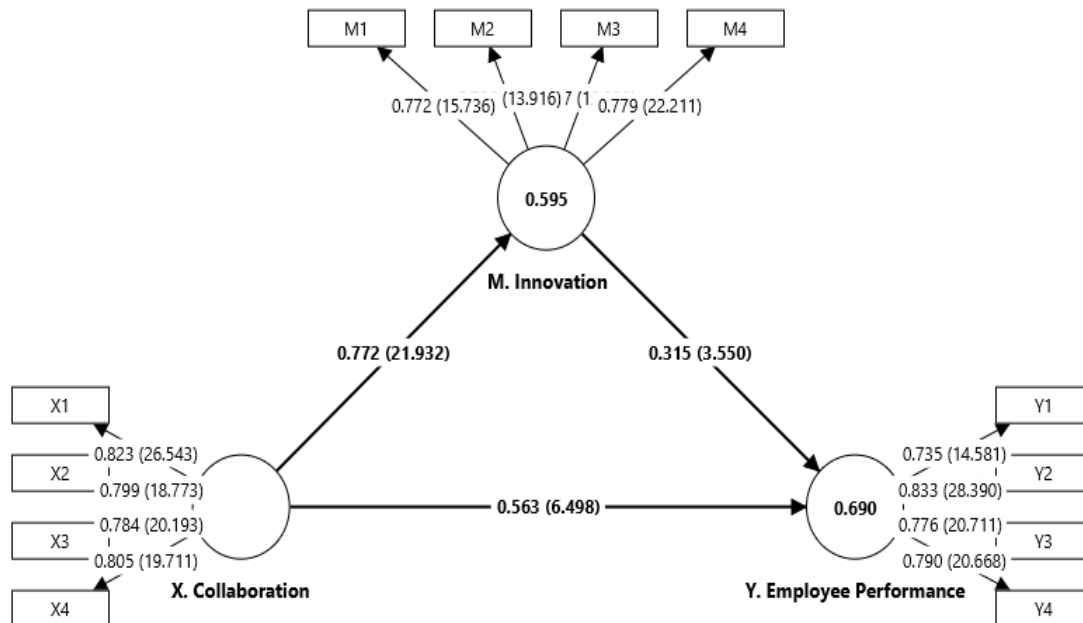


Figure 2. Output smartpls

The findings demonstrate that all hypotheses are supported with high statistical significance. Empirical evidence suggests that collaboration exerts a direct positive impact on employee performance ($\beta = 0.315$, $p < 0.001$) and significantly influences innovation ($\beta = 0.772$, $p < 0.001$). Furthermore, innovation substantially enhances employee performance ($\beta = 0.563$, $p < 0.001$).

Furthermore, the results pertaining to the indirect effect indicate that innovation serves as a significant mediator in the relationship between collaboration and employee performance ($\beta = 0.243$, $p < 0.001$). The mediation effect is characterized as partial because the direct impact of collaboration on performance remains significant even when innovation is incorporated into the model. This suggests that collaboration not only exerts a direct influence on employee performance but also enhances it indirectly by augmenting both individual and team's innovative capacities.

Model Fit Assessment

Model fit testing was conducted to evaluate the degree to which the theoretical model aligned with the empirical data. The test results indicate a Standardized Root Mean Square Residual (SRMR) value of 0.063, which is below the 0.08 threshold recommended by Henseler et al. (2015). The Normed Fit Index (NFI) value of 0.927 suggests an excellent model fit. Furthermore, the d_ULS and d_G values are also below the critical limit of the 95 percent confidence interval, corroborating that the model exhibits a strong data fit and high estimation stability.

Summary of Empirical Findings

The research findings underscore the pivotal role of collaboration in enhancing employee performance within the public sector, both directly and indirectly through the facilitation of increased innovation. Innovation is a critical driver that amplifies the impact of collaboration on work outcomes. This suggests that employees working in collaborative environments are more likely to exhibit creativity, adaptability, and productivity.

The findings further substantiate that cultivating a collaborative work environment within bureaucratic structures enhances administrative coordination and promotes innovative behavior, thereby augmenting the efficacy of public services. This empirical model may serve as a foundation for formulating human resource management policies that emphasize collaboration and innovation in government agencies.

IV. Discussion

The findings of this study corroborate the assertion that collaboration has a significant positive impact on employee performance. This outcome aligns with the Social Exchange theoretical framework, which posits that working relationships founded on trust, open communication, and mutually beneficial reciprocity can enhance individual motivation and productivity (Cropanzano & Mitchell, 2005). Within the context of public organizations in East Kalimantan, collaboration facilitates an interactive environment that encourages employees to assist each other, share experiences, and collectively address administrative challenges. Consequently, collaboration serves as a source of social energy that bolsters employee engagement with the organization's objectives.

These findings align with those of Ștefan et al. (2024), who demonstrated that collaboration among employees enhances work effectiveness through improved coordination and expedited decision-making processes. Within a bureaucratic context, collaboration mitigates the formation of silos between units, reduces work duplication, and promotes shared accountability for outcomes. This phenomenon is observable in government agencies in East Kalimantan Province, where cross-sectoral, team-based work mechanisms have been adopted to enhance program synergy.

From a public management perspective, collaboration can be conceptualized as a strategic instrument that enhances employee performance through trust and emotional engagement. When employees perceive that their contributions are acknowledged and valued by their colleagues, they are more likely to demonstrate proactive behavior, work with greater efficiency, and assume greater responsibility for their tasks. This supports the assertion that collaboration is not merely a structural activity but also a psychological phenomenon that cultivates a spirit of collective work.

The study further indicates that collaboration exerts a significant influence on innovation. This finding corroborates the Knowledge-Based View (KBV) theory, which posits that knowledge and experience derived from social interactions are the primary sources of organizational innovation (Grant, 1996). In East Kalimantan, collaborative processes facilitate the establishment of informal forums where employees exchange ideas and suggestions to enhance work procedures, such as improving the efficiency of service processes and digitizing public administration.

Research conducted by Sun et al. (2023) found that organizations exhibiting high levels of collaboration tend to be more innovative, as employees gain extensive access to knowledge resources. The findings of this study align with these observations, demonstrating that a collaborative work culture within public agencies facilitates the exploration of novel ideas that can be implemented to enhance the effectiveness of public services. In this context, collaboration is a crucial conduit for tacit knowledge transfer among employees.

The relationship between collaboration and innovation can be elucidated through the lens of Dynamic Capability Theory (Teece, 2018), which posits that organizations adept at managing internal social interactions are better positioned to adapt to external changes. In East Kalimantan, the capacity of government agencies to innovate in public service delivery is significantly influenced by the degree to which cross-sector collaboration is facilitated by leadership that is receptive to new ideas.

The observation that innovation exerts a positive influence on employee performance corroborates the findings of Prieto and Pérez-Santana (2022), who highlighted the critical role of generating and implementing novel ideas to enhance individual work effectiveness. Within the public sector, innovation is not necessarily characterized by major inventions but rather by the adoption of new methods that enhance service quality or the efficiency of administrative processes. Employees who engage in innovative practices tend to resolve work-related challenges more swiftly and contribute significantly to attaining organizational objectives.

Innovation also enhances employees' professional commitment to their work. These findings are consistent with those of Hoxha et al. (2024), who asserted that a work environment fostering innovation elevates employee satisfaction and engagement. In government agencies in East Kalimantan, various digitalization initiatives, such as the implementation of e-office applications and online attendance systems, exemplify innovations originating from employee ideas and have improved work efficiency.

Theoretically, innovation serves as a conduit between collaboration and employee performance. This relationship was substantiated through a mediation analysis, which demonstrated that innovation significantly mediates the impact of collaboration on performance. This finding corroborates the perspective of Ștefan et al. (2024), who assert that collaboration facilitates knowledge exchange, thereby enhancing innovation, which, in turn, acts as a catalyst for improving organizational performance.

In an empirical framework, the concept of innovation mediation posits that collaboration does not invariably lead to direct-performance enhancement. Instead, it establishes conditions conducive to innovation. In essence, collaboration lays the social groundwork that fosters the generation of novel ideas, whereas innovation serves as a mechanism that converts collaboration into quantifiable performance outcomes. This dynamic is particularly pertinent within public bureaucracies, which are traditionally characterized by rigidity and procedural constraints, and where innovation serves as a crucial catalyst for transforming work behavior.

The results of this study further demonstrate that collaboration exerts a direct and significant influence on performance, with innovation as a mediating factor. This suggests that collaboration within the public sector not only enhances performance through innovation but also directly facilitates improved coordination and communication among the employees. These findings are consistent with those of Lee and Kim (2023), who highlighted that teamwork directly enhances task effectiveness and decision-making efficiency in government organizations.

The findings of this study have significant implications for human resource management in government contexts. A collaborative work culture should be regarded not merely as an option but as a strategic imperative to effectively navigate the complexities inherent in modern bureaucratic systems. The implementation of collaborative mechanisms, such as cross-disciplinary teams, forums for innovative ideas, and inter-unit learning initiatives, has the potential to enhance productivity while fostering sustainable innovation.

This study expands our understanding of the mechanisms of innovation in Indonesian public organizations. While a substantial body of research has concentrated on the role of innovation in the competitive private sector (Tuan et al., 2024), the public sector is frequently perceived as less amenable to it. Nevertheless, findings from East Kalimantan reveal that a collaborative bureaucratic framework can foster social innovation, thereby enhancing the quality of public services.

Innovation within the public sector frequently manifests as incremental advancements characterized by small yet consistent modifications to work processes. This phenomenon reflects the operational reality of government organizations, which function under constrained regulatory and resource conditions. Despite these limitations, such innovations exert a substantial influence on administrative efficiency and employee motivation. Employees engaged in the innovation process often experience a heightened sense of value and assume greater responsibility for their work tasks.

This study highlights the critical role of leadership in fostering collaboration and innovation from a managerial perspective. Leaders who facilitate active participation and exchange of ideas enhance employee engagement. Within the East Kalimantan bureaucracy, an inclusive and adaptive leadership approach expedites the implementation of innovation at the operational level.

From a public policy perspective, this study offers an empirical foundation for illustrating that bureaucratic reforms focused on collaboration and innovation can enhance civil service performance. It is recommended that training programs, team-based evaluations, and acknowledgment of innovative ideas be reinforced as integral components of public sector human resource development strategies.

Theoretically, this research contributes to the integration of Social Exchange Theory, the Knowledge-Based View, and Dynamic Capability Theory. Collaboration serves as the social context for knowledge exchange, innovation emerges as the outcome of this exchange process, and performance reflects an organization's capacity to dynamically configure resources. This model enhances the understanding of public organizational behavior in developing nations.

This study demonstrates that social values, such as trust and solidarity at work, are crucial for fostering innovation in the public sector. While digital technology has emerged as a pivotal instrument in the modernization of bureaucratic processes, the findings of this study suggest that social factors continue to be the primary determinants of successful innovation and performance.

In the context of the globalization of public administration, these findings are pertinent to the increasing trend of collaborative governance, wherein innovation and performance are perceived as outcomes of collective interaction among individuals, work units, and stakeholders. The model observed in East Kalimantan may serve as a reference for other regions in Indonesia that aim to balance bureaucratic stability with the need for continuous innovation.

This study substantiates the premise that collaboration is the foundation for fostering innovation and enhancing employee performance in public organizations. Innovation functions as both a conceptual and empirical link, bridging collaborative social processes and quantifiable work outcomes. The findings indicate that a collaborative and innovative bureaucratic structure not only possesses the capacity to adapt to change but also plays a significant role in augmenting local governance effectiveness.

V. Conclusion and Implications

This study presents robust empirical evidence indicating that collaboration exerts a significant positive impact on employee performance, both directly and indirectly through innovation as a mediating variable. These findings illustrate that collaboration transcends its role as a mere social component within organizations, functioning as a strategic mechanism that propels innovation processes and ultimately enhances work performance. Collaboration fosters an environment conducive to open communication, knowledge exchange, and cross-disciplinary teamwork, collectively bolstering the competitiveness of public organizations in Kalimantan.

From a theoretical perspective, the findings of this study advance our understanding of the interrelationship among Social Exchange Theory, Knowledge-Based View, and Dynamic Capability Theory within the context of public organizations. Collaboration serves as a platform for social exchange, promoting trust and commitment; innovation arises from the interaction of knowledge within collaborative processes; and employee performance reflects the organization's ability to adaptively configure its resources. The integration of these three theories strengthens the argument that public sector performance can be enhanced through the systematic management of social and knowledge mechanisms.

The empirical results from the PLS-SEM testing revealed that innovation partially mediates the relationship between collaboration and employee performance. This finding suggests that collaboration not only directly enhances work effectiveness but also fosters an environment conducive to developing and implementing new ideas. Consequently, this innovative process amplifies the impact of collaboration on productivity and efficiency of the organization. Therefore, innovation functions as a conduit that translates the social energy of collaboration into tangible results.

The theoretical implications of this study underscore the significance of perceiving collaboration as a dynamic resource within the public sector. Traditionally, innovation has been linked to technological advancement or structural policies. However, the findings of this study reveal that social factors, including trust, communication, and team support, have a more substantial impact on the success of innovation. This indicates that contemporary public management strategies should incorporate an organizational behavior perspective in the formulation of innovation policies.

The managerial implications of this study are particularly pertinent for government agencies in East Kalimantan that are currently engaged in bureaucratic reform and the digitalization of public services. Public managers and leaders of work units must foster an environment conducive to cross-sector collaboration by implementing team-based work mechanisms, establishing forums for the exchange of creative ideas, and instituting reward systems that recognize collective contributions. Enhancing employees' innovative capacity can be accomplished by reinforcing collaboration-based training and providing opportunities for experimentation with new ideas without the apprehension of failure.

This study affirms that for local governments, enhancing civil service performance necessitates more than stringent oversight and the imposition of work targets. It also requires cultivating a collaborative and innovative work culture. Bureaucratic reform oriented towards collaboration can foster social innovations that address public needs, such as simplifying procedures, accelerating digital services, and enhancing transparency in public administration. This approach is consistent with the national policy, which prioritizes the development of a civil service that is both performance- and value-based.

This study also offers practical insights into the development of employee-performance evaluation systems. The findings suggest that collaboration and innovation should be integral dimensions of performance assessments rather than merely supplementary indicators. This approach allows for the evaluation of employee performance based not only on individual outcomes but also on contributions to teamwork and the generation of new value within the organization.

The findings of this study underscore the significance of training programs in the public sector that prioritize developing collaborative innovation skills. Such programs should focus on enhancing cross-unit communication, facilitating knowledge sharing, and promoting collective problem-solving. Consequently, innovation is not solely dependent on top-down policies but also emerges from employee initiatives and interactions at the operational level.

These findings underscore that collaboration and innovation extend beyond mere internal organizational factors and serve as strategic elements that significantly impact governance effectiveness. A collaborative bureaucratic environment can enhance accountability through a deliberative decision-making process, whereas innovation bolsters public legitimacy by providing more responsive and efficient services.

This research presents opportunities for scholars to enhance the theoretical model by incorporating moderating variables such as transformational leadership, organizational culture and digital technology. Future studies could undertake comparative analyses of this model with public sectors in other regions or countries to evaluate the consistency of the relationships between variables across diverse social and political contexts.

Limitations and Future Research Directions

Although the findings of this study offer significant theoretical and practical insights, several limitations must be acknowledged. First, the research was conducted within a government agency in East Kalimantan Province, necessitating caution when generalizing the results to other contexts. Variations in bureaucratic structures, organizational cultures, and leadership characteristics across regions may affect the dynamics of collaboration and innovation in distinct ways.

The second limitation pertains to the methodological approach used in this study. This study utilized a quantitative framework, with data gathered through a perception questionnaire. Although this method allows for the empirical examination of relationships between variables, it does not adequately capture the complexity of collaborative social processes, which are often dynamic and context dependent. Employing qualitative or mixed-methods research could yield a more comprehensive understanding of the social interaction mechanisms underpinning collaboration and innovation.

Third, external variables, such as leadership style, organizational support, and government policies, which may influence the relationships between variables within the model, were not considered. Future research could incorporate moderating variables, such as transformational leadership or an organizational learning climate, to provide a more comprehensive understanding of the determinants of employee performance in the public sector.

Moreover, this study was conducted within a defined temporal framework; thus, the findings represent the state of collaboration and innovation at a specific point in time. Longitudinal research is necessary to comprehend the evolution of the relationships between these variables over time, particularly in the context of policy changes and digital transformation in the Indonesian public sector.

Future research could investigate cross-national or cross-sectoral models, such as by comparing the public and private sectors, to determine whether collaboration and innovation mechanisms demonstrate similar patterns in influencing performance. This comparative approach could enhance external validity and contribute to the literature on organizational behavior in developing

nations. Despite the limitations inherent in this study, the findings offer a robust foundation for subsequent research and provide policymakers with insights to develop a collaborative, innovative, and sustainable performance-oriented bureaucracy.

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Author Contributions Statement

All authors contributed substantially to the conception, design, analysis, and interpretation of this research.

- **Conceptualization:** Irsan Tricahyadinata
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Conflict of Interest Declaration

The authors declare that there are no conflicts of interest regarding the publication of this article. All analyses, interpretations, and conclusions were made independently and without any external influence.

Ethical Considerations Statement

All participants in this study were informed about the research purpose, confidentiality of responses, and voluntary participation. Ethical approval for the study was obtained from the Research Ethics Committee of Mulawarman University, in accordance with national ethical standards for research involving human participants. Respondents provided informed consent prior to participation, and all data were anonymized to protect individual privacy.

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