

Impact of Servant Leadership and Digital Culture on Credit Union Performance in Indonesia: Mediating Role of Innovation Management

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Abstract

This study aims to understand how servant leadership and digital organisational culture influence the performance of Credit Unions (CU) in Indonesia, especially those that have undergone digital transformation especially those that have undergone digital transformation based on management policies. In addition, this study also examines whether innovation management acts as a link between leadership, digital organisational culture, and improved organisational performance. The study involved 236 managers from 10 Credit Unions that have implemented digital innovations. The data were analysed using a quantitative approach to examine the relationships between these variables. The results show that servant leadership does not have a direct effect on organisational performance, while digital organisational culture has a positive and significant effect on organisational performance. Servant leadership influences innovation management, while digital organisational culture encourages innovation. Innovation management was found to improve organisational performance and act as a full mediator in the relationship between servant leadership and organisational performance, as well as a partial mediator in the relationship between digital organisational culture and organisational performance. These findings emphasise the importance of strengthening digital-based organisational culture and integrating innovation management into CU operations. Such efforts can improve member services and overall organisational results. Further research is recommended to add variables.

Keywords: Servant Leadership; Digital Organizational Culture; Innovation Management; Organizational Performance; Credit Union.

1. Introduction

Competition between companies through the development of digital technology is a reality that organizations worldwide must face. The growth of the digital world over the past 20 years in business organizations has been rapid (Setyawan, 2022). Innovations related to digital growth are one strategy that management can implement to address global competition, especially as industrial digitalization becomes a primary choice. Companies are expected to embrace digital transformation to improve organizational performance (Khin & Ho, 2019). Organizational performance is influenced by the culture adopted by most organizations, which determines how they interact with internal and external stakeholders to seek solutions for organizational problems, including performance improvement. Since organizational performance is the responsibility of top management, leaders strive to develop a culture driven by performance outcomes (Joseph & Kibera, 2019).

The development of the digital world is inevitable and has been recognized in various organizations. The implications of digital innovation on organizational performance are critical for management, who need to consider a culture oriented toward digitalization. An organization's agility in utilizing digital technology is reflected in a digital organizational culture, where digital innovation is implemented holistically. The concept of organizational culture influencing organizational performance has been widely used in research related to digital innovation and information systems in organizations (Martínez-Caro et al., 2020).

Microfinance institutions in Indonesia are striving to survive amid fierce competition, as they provide alternative financial services for small communities. These institutions have a dual advantage: maximizing financial performance and achieving social impact (de Waal & Sivro, 2012). The performance of microfinance institutions is influenced by the size of their board of directors; a larger board generally leads to better performance (Shettima & Dzolkarnaini, 2018).

The Credit Union (CU) movement in Indonesia is a microfinance institution engaged in savings and loans, owned and managed by its members for their welfare. According to Cooperative Law No. 25, CUs are primary cooperatives, established by and consisting of individuals. The CU movement has been promoted through the Catholic Church and parishes under community socio-economic development units since the 1970s, although membership and management are open to all, regardless of religious background (Sumarwan et al., 2021).

Although CUs provide significant benefits to small communities unable to access large banks (Agrawal, 2017), they face challenges such as declining organizational performance (Rasyidi, 2015). This is paradoxical, as CUs are essential to communities and should maintain stable performance. Low-performing CUs are characterized by high levels of non-performing loans, financial performance measures that emphasize only monetary aspects, high loan ceilings with low member incomes, and limited member knowledge of financial literacy or management information systems (Rasyidi, 2015). Based on these criteria, this research is critical for helping CUs improve performance and achieve sustainable growth.

Although CUs have experienced rapid growth in Indonesia and worldwide (Sumarwan et al., 2022), performance decline in some CUs is associated with their size. Large CUs have more capital, allowing for higher lending and borrowing among members, whereas small CUs with limited capital face constraints (Shettima & Dzolkarnaini, 2018). Higher circulation of capital among members increases CU activity and impacts dividends (Glass et al., 2014).

In addition, declining performance is indicated by a decrease in the number of CUs, consolidation, closures, and problematic mergers. These issues often stem from mismanagement and a lack of understanding of CU characteristics by managers (Sumarwan et al., 2021). Poor governance including organizational governance, leadership, and supervision—is a key factor affecting financial performance, where trust plays a crucial role, particularly in microfinance institutions (Favalli et al., 2020).

The organizational culture variables in this study are based on Hofstede's organizational culture theory, which views culture as the cooperative design and programming of ideas, concepts, and thoughts that distinguish one group from another. Hofstede's theory is suitable for improving organizational performance in this study because culture is rooted in individuals with a shared understanding of organizational goals (Hofstede & McCrae, 2004). Organizational culture significantly influences performance (Evangeline, 2021), although previous findings are inconsistent (Nuryanto et al., 2020). The research findings in this study confirm that organizational performance is significantly affected by organizational culture. Digital innovation is also a factor that can influence performance.

The main theory of Innovation Diffusion (Everett Rogers, 1964) used in this study explains how new ideas, concepts, and technologies spread within a culture. Diffusion is the process by which innovations are communicated through various channels over time within a cultural system. Rogers argues that innovations spreading in a predictable pattern can be adopted through social processes within the organization.

Based on research by Alayed et al. (2023), Shah et al. (2024), and Ong et al. (2021), which analyzed the impact of digital innovation on organizational performance, well-implemented digital innovation positively affects performance. In contrast, Ho (2022) argues that digital innovation will not impact performance if an organization fails to respond effectively to new products, especially for innovations at lower levels, due to limited financial resources.

The Diffusion of Innovation Theory aligns with CU mechanisms, where innovations are communicated in advance to members through pre-designed policy patterns (poljak) and formalized during the Annual Members Meeting (RAT). However, organizations may fail if they do not respond effectively to productive ideas, particularly innovations that involve simple improvements or desired technological performance by CU members. Initial adoption by members is essential, but sustained improvements in organizational performance are necessary to remain competitive with other microfinance institutions (Ho, 2022).

While research on other microfinance institutions exists, studies specifically involving credit unions remain limited. This study explores the role of organizational culture and digital innovation in improving performance. The novelty of this research provides insights and directions for further research, particularly regarding CU management and the role of leadership in developing digital innovation for credit unions.

2. Method

2.1. Research design and sample

This research was conducted in Indonesia with respondents of CU managers at 10 CU : CU Bererod Gratia, CU Pangudiluhur Kasih, CU Cindelaras Tumangkar, CU Bina Karya Sejahtera, CU Remaung Kecubung, CU Angudi Laras, CU Merpati Sejahtera, CU Puspita Kencana, CU Jakarta, CU Kridha Raharja that have made digital innovations incorporated in the parent credit cooperative in Indonesia, namely Puskopdit and Puskopcuina, because this study will examine the effect of the implementation of policies carried out by the executive committee to carry out digital innovation that has an impact on CU performance. Quantitative approach because in this research is based on the reason that this research goes through several stages carried out and passed by relying on deductive reasoning from a theory and applying the theory to a specific case study. According to (Sekaran, 2019), quantitative research is research that relies on deductive reasoning. Deductive reasoning is a reasoning process based on one or more general statements to serve as the basis for logical inference. The population of this study consists of Credit Unions (CUs) that have implemented digital innovation and are members of two credit cooperative federations, namely Puskopcuina and Inkopdit. This study examines the effect of policy implementation carried out by the executive committee on digital innovation and its impact on CU performance.

A census sampling technique was employed, in which all members of the population were included as respondents, totaling 236 CU managers. The use of census sampling was considered appropriate because the population size is relatively limited and accessible, allowing the researcher to collect data from the entire population rather than selecting only a portion of it. This approach enables the study to provide a more accurate and comprehensive representation of the population.

Furthermore, CU managers were selected as respondents because they hold strategic authority in determining both technical and non-technical policies related to the implementation of digital innovation in their respective Credit Unions. Involving all CU managers who have adopted digital innovation helps minimize sampling bias and enhances the external validity and generalizability of the research findings to the population under study.

Therefore, the application of a census sampling technique is deemed most suitable to obtain a holistic understanding of the implementation of digital innovation policies and their impact on Credit Union performance within the federations of Puskopcuina and Inkopdit.

Data analysis using PLS-SEM was conducted to examine the proposed relationships among policy implementation, digital innovation, and Credit Union performance due to its suitability for predictive-oriented research and complex structural models. The results indicate that the structural model demonstrates acceptable explanatory and predictive capability. Nevertheless, it is important to acknowledge certain limitations of PLS-SEM, particularly with respect to the assessment of overall model fit compared to covariance-based SEM (CB-SEM). PLS-SEM places greater emphasis on variance explanation rather than theory confirmation and does not provide comprehensive global goodness-of-fit measures. Therefore, although the findings offer meaningful insights into the influence of policy implementation on digital innovation and CU performance, they should be interpreted with caution in terms of causal inference and model generalizability. Future

research is recommended to validate the proposed model using alternative analytical techniques, such as CB-SEM or longitudinal designs, to strengthen theoretical confirmation and robustness of the results.

2.2. Outer model evaluation

Construct validity (convergent validity and discriminant validity) and construct reliability test are part of the outer model evaluation. To measure the validity and capability of the constructing instrument, a validity test is used, while a reliability test is used to measure the consistency of the measuring instrument in measuring a concept.

2.3. Convergent validity

The outer loading value or loading factor is used for convergent validity testing. Indicators that meet the convergent validity value must have an outer loading value > 0.7. Table of outer loading values for each variable indicator:

Table 1: Outer Loading

Variable	Indicator	Outer Loading	Validity
Servant Leadership	Sympathize	0.752	Valid
	Create Value	0.718	Valid
	Conceptual Skills	0.728	Valid
	Empower Members	0.738	Valid
	Prioritize members	0.756	Valid
Digital Organizational Culture	Digital leadership that is not distant	0.792	Valid
	Managing uncertainty	0.760	Valid
	Consistency	0.767	Valid
	Adaptability skills	0.777	Valid
	Focus on the customer's digital experience	0.779	Valid
Management Innovation	Digital Product Innovation	0.883	Valid
	Innovation management strategy	0.782	Valid
	Implementation of innovation	0.769	Valid
	Digital Orientation	0.742	Valid
	Proceses for innovation management	0.786	Valid
Organizational Performance	New Product Introduction	0.790	Valid
	Marketing Effectiveness	0.782	Valid
	Protection	0.916	Valid
	Financial Structure	0.774	Valid
	Asset Growth	0.792	Valid

Source: own study.

Based on the calculations presented in table 1, it can be seen that each indicator in this study, which consists of 20 indicators, has an outer loading value >0.6, so that the outer loading value meets the requirements for convergent validity (the outer loading value is between 0.5-0.6) Therefore, each indicator is declared valid (Cheah et al., 2017).

2.4. Discriminant validity

Discriminant validity testing is done using the average variant extracted (AVE) value, which must be > 0.5 for each variable as a requirement for a good model. The results of the discriminant validity test can be seen below:

Table 2: Average Variance Extracted (AVE)

Variable	AVE	Validity
Servant Leadership	0.502	Valid
Digital Organizational Culture	0.501	Valid
Management Innovation	0.544	Valid
Organizational Performance	0.517	Valid

Source: own study.

Table 2 shows the AVE values > 0.5 for servant leadership, digital organizational culture, management innovation, and organizational performance. Consequently, it can be concluded that each variable meets the requirements for strong discriminant validity.

2.5. Composite reliability

Composite reliability is used to test each indication's reliability value on a variable. A variable may be considered qualified if its composite reliability value is greater than 0.6. The following table displays the composite reliability value for each research variable:

Table 3: Composite Reliability

Variable	Composite Reliability	Reliability
Servant Leadership	0.953	Reliable
Digital Organizational Culture	0.961	Reliable
Management Innovation	0.955	Reliable
Organizational Performance	0.955	Reliable

Source: own study.

All composite reliability values of the research variables are ≥ 0.7 , as shown in Table 3. Since all variables have met the composite reliability, this indicates that all of them are highly reliable.

2.6. Cronbach alpha

Cronbach alpha is used to strengthen the previous reliability submission. Variables that meet and qualify for cronbach alpha must have a cronbach alpha value > 0.7 . The table below is a breakdown of the cronbach alpha values of each variable:

Table 4: Cronbach Alpha

Variable	Cronbach Alpha	Reliability
Servant Leadership	0.952	Reliable
Digital Organizational Culture	0.968	Reliable
Management Innovation	0.947	Reliable
Organizational Performance	0.953	Reliable

Source: own study.

Based on table 4, the cronbach alpha value of each variable is ≥ 0.7 . Based on this evidence, each research variable has a high cronbach alpha value.

2.7. Inner model evaluation

In the Inner Model (structural model) test to test the hypothesis, the output r-square, parameter coefficients and t-statistics are used. To see whether a hypothesis is accepted or rejected, it can be seen from the significance value between constructs, the t-statistic value, and the p-value. These values can be seen from the bootstrapping results. In this study, a significant level of p-value of 0.05 (5%) was used.

2.8. Goodness of fit test

The following table shows the R Square values.

Table 5: Nilai R-Square

Variable	R Square
Servant Leadership	0,403
Digital Organizational Culture	0,422
Management Innovation	0,507
Organizational Performance	0,590

Source: own study.

Based on data tabel 5, it can be concluded that all variables have a fairly strong influence on organizational performance, as the R-square value is above 0.4. Management Innovation is the variable that individually contributes the largest amount (50.7%) to the variation in organizational performance. The overall model explains approximately 59% of organizational performance, meaning that there are still 41% other factors outside this model that influence organizational performance.

2.9. Hypothesis testing

Table 6: Direct Influence

Direct Effects	Path Coefficient	t-statistic	Description
Servant Leadership \rightarrow Organizational Performance	0.068	1.270	Rejected
Digital Organizational Culture \rightarrow Organizational Performance	0.427	4.888	Accepted
Servant Leadership \rightarrow Management Innovation	0.280	2.940	Accepted
Digital Organizational culture \rightarrow Management Innovation	0.667	12.418	Accepted
Management Innovation \rightarrow Organizational Performance	0.374	4.364	Accepted

Source: own study.

The results of the direct influence analysis indicate the level of significance of the relationship between variables in the structural model. The assessment is based on the path coefficient and t-statistic values, with the decision criterion that a relationship is considered significant (accepted) if the t-statistic value is > 1.96 at a 5% significance level.

The mediating role of digital innovation management in the influence of servant leadership on organizational performance is mediating. The t-statistic for the direct effect is 1.270 (not significant). The t-statistic for the indirect effect is 1.987 (significant), indicating that innovation management has a full mediating role.

The mediating role of digital innovation management in the influence of digital organizational culture on organizational performance is partially mediating, with a t-statistic for the direct effect of 4,888 (significant). The t-statistic value of the indirect effect of 3,749 (significant) indicates that management innovation has a partial mediating role.

Table 7: Results of the Hypothesis Test of the Mediating Role

Hypothesis	Mediation Path	Path of Influence	t-statistic	Mediation Effect
H6	Servant Leadership \rightarrow Management Innovation \rightarrow Organizational Performance	Not Directly	1.987	Full Mediation
H7	Digital Organizational Culture \rightarrow Management innovation \rightarrow Organizational Performance	Not Directly	3.749	Partial Mediation

Source: own study.

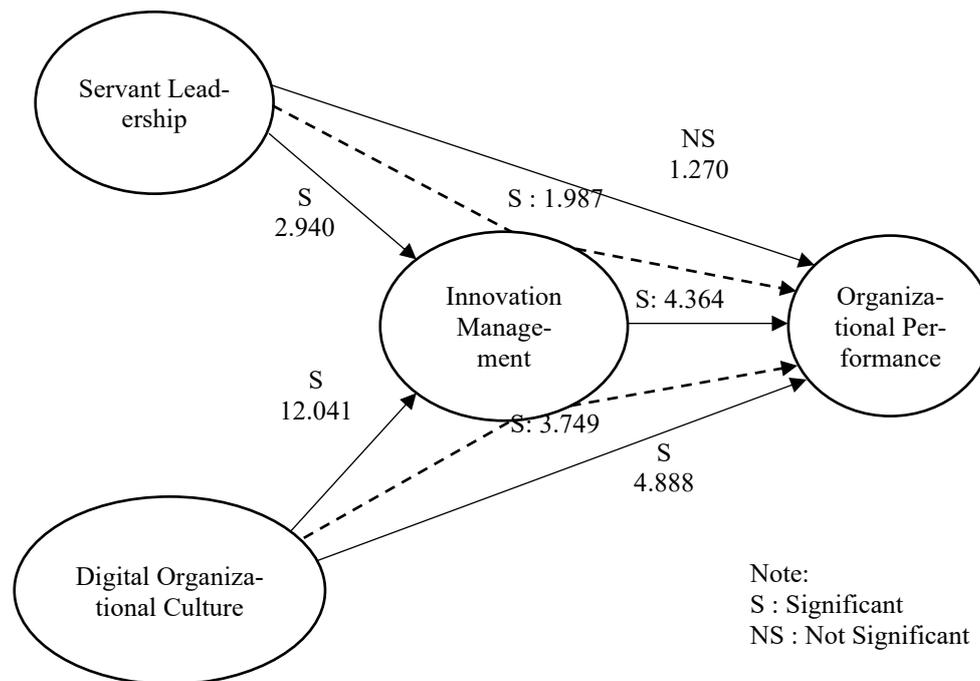


Fig. 1: Structural Model Test Result.

Source: own study.

3. Result and Discussion

3.1. The influence of servant leadership on organizational performance

The path coefficient of 0.068 and the t-statistic of 1.270 indicate that the effect of servant leadership on organizational performance is not statistically significant. This finding suggests that servant leadership does not directly influence organizational performance in the proposed model; therefore, the hypothesis is rejected.

In the context of Credit Unions (CUs), managers have attempted to implement servant leadership principles; however, the involvement and awareness of CU members have not reached an optimal level. Conceptually, servant leadership requires leaders to serve members and administrators through key principles such as listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment, and community building. This leadership approach may not generate a meaningful impact if members do not recognize or internalize the manager's service role (Guillaume et al., 2012).

The findings of this study are consistent with Guillaume et al. (2012), who reported that servant leadership has only a limited impact on business performance. Although servant leadership in CUs reflects a genuine service-oriented approach, not all members experience this leadership in practice. This condition is influenced by limited understanding of servant leadership principles among managers and members. For example, managerial actions such as reminding members to repay loan installments provide only short-term effects and do not prevent recurring arrears, which ultimately contributes to declining organizational performance.

Previous studies also indicate that servant leadership is not the sole determinant of organizational performance. Organizational culture plays a critical role in shaping how leadership practices are translated into outcomes. Cultural misalignment between employees, managers, and organizational values may weaken the effectiveness of servant leadership. Therefore, relying exclusively on a servant leadership style may be insufficient for improving CU performance. A combination of servant leadership and transformational leadership is more appropriate, enabling leaders to balance service orientation with vision, direction, and performance motivation (Bass et al., 2003).

Gregory Stone et al. (2004) argue that servant leadership can be strengthened through several mechanisms: orientation toward individual development, trust building, focus on organizational vision and change, delegation of responsibility, employee empowerment, active listening, and the ability to influence followers toward real organizational transformation. These elements suggest that servant leadership should not only emphasize service but also promote structural and behavioral change within the organization.

Empirical evidence regarding the relationship between servant leadership and organizational performance remains inconsistent. De Waal and Sivro (2012) and Suwanto (2022) found no significant effect of servant leadership on organizational performance, supporting the results of this study. These findings imply that servant leadership alone may lack the formal authority and strategic direction required to drive performance outcomes. Without complementary leadership approaches and strong organizational systems, high levels of service orientation may paradoxically result in weak performance. This highlights the importance of integrating empowerment, accountability, and performance management into leadership practices in CUs.

Based on in-depth analysis of CU managers, the insignificant relationship between servant leadership and organizational performance is influenced by variations in how servant leadership principles are implemented across CUs and how policies from parent organizations (Puskopcuina and Inkopdit) are interpreted. Differences in governance practices also contribute to this outcome, as not all institutions labeled as CUs fully adhere to cooperative governance principles. Effective CU leadership must be grounded in cooperative values that emphasize member growth and sustainability. This study extends servant leadership theory by demonstrating that its impact on organizational performance is contingent upon governance quality and innovation-oriented leadership integration. Future research should compare leadership models between Credit Unions and commercial banks and incorporate mediating variables such as innovation management, service quality, and member trust to strengthen theoretical and empirical contributions.

3.2. The influence of digital organizational culture on organizational performance

The results show that Digital Organizational Culture has a significant positive effect on Organizational Performance (path coefficient = 0.427; t -statistic = 4.888 > 1.96). This finding supports the hypothesis that an organizational culture aligned with digital transformation contributes meaningfully to improved performance.

Digital Organizational Culture represents shared values and norms that encourage knowledge creation, collaboration, and technology adoption. In line with Aidla and Vadi (2007), such a culture functions as a source of organizational knowledge that enables managers to acquire, share, and utilize information effectively. Performance emerges from interdependent behaviors such as cooperation, knowledge sharing, and mutual support among organizational members.

In the context of Credit Unions (CU), digital organizational culture is reflected in governance practices and member-oriented services. Managers apply digital-based governance principles in loan management, performance measurement, and innovation activities in accordance with international cooperative standards (WOCCU, ACCU, and INKOPDIT). For example, digital communication platforms facilitate interactions between managers and members regarding loan purposes, business development, and financial education. Annual member meetings that incorporate digital innovation strategies further strengthen a culture oriented toward collective growth.

Previous studies have emphasized the importance of organizational culture for performance, yet empirical research remains limited due to the difficulty of measuring cultural constructs (Kim Jean Lee & Yu, 2004). Two main theoretical approaches explain this relationship. Kotter and Heskett's perspective highlights shared values among stakeholders that sustain high performance, while Deal and Kennedy's framework emphasizes learning from success and failure through strong organizational norms. This study extends these perspectives by focusing specifically on digital organizational culture within cooperative financial institutions, an area that has received relatively little attention.

While Digital Organizational Culture and Innovation Management are conceptually related, they are theoretically distinct. Digital organizational culture refers to shared values and norms supporting digitalization, whereas innovation management concerns structured processes for developing and implementing new ideas and technologies. In this study, digital organizational culture provides the foundational environment that enables innovation management to function effectively, rather than replacing it.

This research contributes theoretically by demonstrating that digital organizational culture directly enhances organizational performance in credit unions and supports the extension of servant leadership theory through innovation-oriented cultural practices. It also provides empirical evidence from cooperative institutions, which are underrepresented in digital transformation research dominated by studies on commercial banks and corporations.

The findings provide new insights into how digital culture supports performance beyond traditional governance mechanisms. Future research is encouraged to conduct comparative studies between credit unions and commercial banks to determine whether the effects of digital organizational culture differ across financial institutions, to incorporate additional variables such as service quality, trust, and customer satisfaction as mediators or moderators, to employ longitudinal designs to capture the dynamic evolution of digital organizational culture over time, and to further explore the mediating role of innovation management in strengthening the culture–performance relationship.

3.3. The influence of servant leadership on innovation management

The results indicate that servant leadership has a significant positive effect on managerial innovation (path coefficient = 0.280; t -statistic = 2.940), supporting the hypothesis that servant leadership directly encourages innovation management. Credit Union (CU) managers who demonstrate empathy, empowerment, and a strong service orientation are more likely to support innovative decision-making processes that enhance organizational performance. This finding suggests that servant leadership creates an organizational climate conducive to managerial innovation by fostering collaboration and responsiveness to member needs.

However, the statistical analysis reveals that servant leadership does not have a significant direct effect on digital innovation. This result may be explained by limited managerial understanding and uneven implementation of digital transformation across credit unions. While servant leadership supports general innovation management, digital innovation requires specific technological capabilities, structured strategies, and shared understanding among managers and activists. Thus, servant leadership alone is insufficient to drive digital innovation without adequate digital literacy and organizational readiness.

Innovation management in credit unions is reflected in practices such as promoting services through social media, developing mobile CU applications, and offering online education programs for members. Although several credit unions have adopted mobile banking services and digital platforms, these innovations have not yet been implemented optimally or collaboratively. The lack of coordination between leaders and activists limits the impact of servant leadership on digital innovation outcomes.

This study contributes theoretically by extending servant leadership theory through its linkage with innovation management in cooperative financial institutions, a sector that has received limited attention in prior research. It highlights the distinction between innovation management as an organizational process and digital innovation as a technology-driven outcome, thereby clarifying their conceptual boundaries. The findings also emphasize that innovation management mediates the relationship between leadership and organizational performance, rather than digital innovation emerging directly from leadership behavior.

Future research should conduct comparative studies between credit unions and commercial banks to examine differences in the leadership–innovation relationship, incorporate additional variables such as service quality and trust as mediators or moderators, and apply longitudinal designs to capture the dynamic evolution of servant leadership and innovation management over time. Further investigation into the mediating role of innovation management will provide deeper insight into how leadership practices translate into sustainable digital transformation.

3.4. The influence of digital organizational culture on management innovation

The results indicate a strong and significant effect of digital organizational culture on innovation management (path coefficient = 0.667; t -statistic = 12.418), supporting the proposed hypothesis. This finding demonstrates that an organizational culture responsive to digital transformation fosters managerial innovation by encouraging openness to new ideas and technology-driven decision making.

Digital organizational culture reflects shared values and norms that support digitalization, whereas innovation management refers to structured processes for planning and implementing new initiatives. In the context of credit unions, innovation management operates effectively when managers integrate cooperative cultural values with digital development strategies. Decisions regarding digital innovation are formulated through management meetings, discussed with member representatives in work plan forums, and formally approved at the Annual

Members Meeting (RAT), which characterizes cooperative governance. This participatory mechanism ensures that digital innovation initiatives are aligned with organizational culture and member expectations.

Institutional support from Puskopcuina and Inkopdit further strengthens the implementation of digital innovation by providing monitoring, evaluation, and system management for applications used by credit unions (Albahri et al., 2023). These structures enable innovation management to function as an organized and continuous process rather than isolated technological adoption.

Consistent with Zhen et al. (2021), the findings confirm that organizational culture and managerial readiness are fundamental drivers of digital innovation through their influence on digital capabilities. This study extends prior research by demonstrating that digital organizational culture in microfinance institutions predicts future service effectiveness and organizational development. Without a culture oriented toward digital innovation, technological resources alone are insufficient to generate meaningful innovation outcomes.

3.5. The influence of management innovation on organizational performance

The results indicate that managerial innovation has a significant positive effect on organizational performance (path coefficient = 0.374; *t*-statistic = 4.364), supporting the proposed hypothesis. This finding confirms that effective innovation management contributes directly to improved organizational outcomes.

Innovation management in credit unions is reflected in the development of digital services that respond to members' life-cycle needs, from basic financial services to more advanced digital products. Through mobile CU applications, members can access services more easily without visiting branch offices, which increases service utilization and operational efficiency. This accessibility strengthens organizational performance by enhancing member satisfaction and engagement.

Consistent with Khin and Ho (2019), the findings demonstrate that innovation management enables organizations to leverage emerging digital technologies and adapt to ongoing digitalization trends. Digital innovation encourages institutions to design new products and services while maintaining service quality, which is a critical determinant of organizational performance. In the context of credit unions, managers emphasize the gradual transformation of services toward digital platforms, ranging from administrative processes to core financial products.

This study extends prior research by providing empirical evidence from cooperative financial institutions, which have been underrepresented in innovation and performance literature dominated by private firms and commercial banks. It highlights that innovation management serves as a key mechanism linking leadership practices and organizational culture to performance outcomes, rather than digital technology alone being the primary driver. Without structured innovation management, digital tools are unlikely to generate sustainable performance improvements.

3.6. The influence of innovation management in mediating the relationship between servant leadership and organizational performance

Statistical analysis demonstrates that digital innovation management fully mediates the relationship between servant leadership and organizational performance. Although the increase in the direct effect of servant leadership on performance is modest, these results indicate that servant leadership influences performance primarily through the implementation of structured innovation processes. While organizations prioritize digital innovation due to its tangible outcomes, effective implementation requires addressing organizational uncertainties and ensuring the sustainability of digital initiatives. This finding emphasizes the need for management to continuously focus on developing and optimizing innovation processes (Rönnbäck & Eriksson, 2012).

Empirical evidence shows that the mediating role of innovation management is maximized when both managers and members actively engage with digital services. For example, the use of mobile CU applications by members and managers can be improved through enhanced socialization and training, highlighting the importance of organizational communication in facilitating adoption. Additionally, the involvement of CU management activists in promoting digital services and delivering financial literacy to new members strengthens the effectiveness of innovation management. These results demonstrate that while digital innovation has the potential to enhance organizational performance, its impact is contingent on coordinated managerial efforts, member engagement, and supportive organizational processes. The findings contribute theoretically by extending servant leadership theory, showing that the effect of leadership on performance is mediated through structured digital innovation, and empirically by illustrating how cooperative financial institutions can leverage digital innovation for sustainable organizational improvement.

3.7. The role of innovation management in mediating the relationship between digital organizational culture and organizational performance

Statistical analysis demonstrates that digital innovation management partially mediates the relationship between digital organizational culture and organizational performance. Credit unions that actively utilize digital technologies to respond to member needs and transition services from manual to electronic platforms, such as mobile CU applications, strengthen organizational capabilities and member satisfaction. These digital services enhance transparency in financial reporting, allowing members to monitor balances, installments, and other organizational activities, including reporting at the Annual Members Meeting (RAT). Payment services and other digital offerings also provide convenient alternatives for members, contributing to increased engagement and overall organizational performance.

Innovation encompasses the design and implementation of new products, services, and processes, including product innovation, marketing innovation, location-based innovation, and research and development initiatives (Omwanza, 2019). In credit unions, innovation management enables managers to plan and coordinate digital initiatives at the start of each work year, involving member representatives to align on organizational goals and visions. These innovations are manifested through digital service delivery, marketing via social media, and the gradual shift of previously face-to-face services to digital platforms. By serving as a mediating variable, digital innovation management facilitates more effective service provision, thereby enhancing organizational performance. The findings highlight that while digital organizational culture provides the foundation for innovation, structured innovation management translates cultural readiness into tangible performance outcomes.

4. Conclusion

Based on the research findings, several conclusions can be drawn. First, digital organizational culture significantly contributes to organizational performance. The study demonstrates that when digital organizational culture is applied consistently, inclusive of members, and capable of managing uncertainty, organizational performance improves. In this study, the characteristic organizational culture is based on three pillars education, self-reliance, and solidarity which should be preserved and further strengthened as a core foundation for organizational effectiveness.

Second, innovation management has a significant positive impact on organizational performance. Effective innovation management is facilitated by managers who are oriented toward digital innovation and able to leverage technological opportunities. Consistent application of digital innovation, supported by reliable digital infrastructure such as CU mobile, ensures that members can access services anytime and anywhere, thereby enhancing organizational performance. The study also addresses a research gap by identifying digital innovation as a mediating variable, providing a unique contribution that bridges theoretical and practical aspects. Theoretically, the findings extend servant leadership theory by demonstrating that its effect on organizational performance is mediated through structured digital innovation. For future research, comparative studies between credit unions and commercial banks are recommended, including the exploration of service quality, trust, and member satisfaction as potential mediators or moderators.

4.1. Managerial and policy implications

Based on the research findings, several managerial and policy implications can be drawn. First, digital organizational culture has a significant impact on organizational performance. Therefore, credit union management should ensure that organizational culture is applied consistently, inclusive of members, and capable of managing uncertainty. The three pillars of organizational culture education, self-reliance, and solidarity should be maintained and continuously strengthened, as they serve as the foundation for improving organizational performance.

Second, innovation management has a significant positive effect on organizational performance. Credit union managers should adopt a digital innovation-oriented approach, actively leverage opportunities offered by digital technologies, and maintain consistent innovation strategies to enhance organizational performance. The quality and accessibility of digital platforms, such as mobile CU applications, should be ensured so that members can access services anytime and anywhere. Practically, this study addresses previous research gaps by highlighting digital innovation as a mediating variable, providing a unique contribution that bridges theoretical and practical aspects of leadership, digital organizational culture, and innovation management. These findings offer guidance for managerial decision-making and policy development to enhance the effectiveness and performance of credit unions.

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