

UNDERSTANDING DIGITAL INNOVATION IN BANK PAPUA: THE INFLUENCE OF DIGITAL ORGANIZATIONAL CULTURE THROUGH ORGANIZATIONAL READINESS

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Abstract

This study aims to analyze the effect of Digital Organizational Culture on Digital Innovation with Organizational Readiness as a mediating variable among employees of Bank Papua in Merauke City. This study uses a quantitative approach with a survey method. Primary data were collected through an online questionnaire using Google Form distributed to all employees of Bank Papua in Merauke City. The sampling technique used was saturated sampling (census) with a total of 140 employees as respondents. Data were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) with the assistance of SmartPLS 4, covering validity and reliability tests, structural model testing, and hypothesis testing. The results show that Digital Organizational Culture has a positive and significant effect on both Digital Innovation and Organizational Readiness. Organizational Readiness is also proven to have a positive and significant effect on Digital Innovation, and significantly mediates the effect of Digital Organizational Culture on Digital Innovation. The conclusion of this study indicates that the success of digital innovation is determined not only by digital organizational culture, but also strongly depends on the level of organizational readiness, both in terms of human resources, technology, and work processes. Therefore, banking organizations need to simultaneously strengthen digital culture and improve organizational readiness in order to drive sustainable digital innovation.

Keywords: Digital Organization Culture, Digital Innovation, Organizational Readiness, Digital Transformation, Banking

1. INTRODUCTION

Digital transformation requires organizations not only to adopt new technology, but also to build a work culture that supports this process (Vial, 2019). Digital Organizational Culture is a key element that determines an organization's ability to adapt and innovate, as a strong digital culture encourages openness to change, collaboration, and rapid response to market needs (Mihardjo, 2020).

Previous studies show mixed results regarding the relationship between Digital Organizational Culture and Digital Innovation. Mahayani & Darma (2025) and Kiefer et al. (2021) found a positive and significant effect, while Teguh et al. (2022) and Yılmaz et al. (2024) reported a negative effect, and Orero-Blat et al. (2024) found no significant effect. This inconsistency indicates a research gap that needs further clarification, particularly by considering the role of Organizational Readiness as a variable bridging digital culture and innovation outcomes (Gerçek & Özveren, 2024).

A pre-survey of Bank Papua employees in Merauke City shows that Digital Organizational Culture has not been fully embedded, while organizational readiness is also not yet optimal, as reflected in technical constraints such as recurring internet network disruptions that affect operations and the success of digital innovation implementation. This condition indicates that digital culture alone is not sufficient to drive digital innovation

without adequate support from Organizational Readiness, in terms of human resources, technology, and work processes.

This study is a partial replication and modification of the study by Zhen et al. (2021) entitled "Nexus of Digital Organizational Culture, Capabilities, Organizational Readiness, and Innovation: Investigation of SMEs Operating in the Digital Economy", with employees of Bank Papua in Merauke City as the research object. This study aims to analyze: (1) the effect of Digital Organizational Culture on Digital Innovation; (2) the effect of Digital Organizational Culture on Organizational Readiness; (3) the effect of Organizational Readiness on Digital Innovation; and (4) the mediating role of Organizational Readiness on the effect of Digital Organizational Culture on Digital Innovation.

Digital Organizational Culture is a pattern of values and organizational work practices in utilizing digital technology that fosters the formation of an innovative mindset within the organization (Müller et al., 2019; Taherdoost, 2018; Duerr et al., 2018). The better the Digital Organizational Culture an organization possesses, the higher its ability to create Digital Innovation (Khin & Ho, 2019; Cohen et al., 2020), so the following hypothesis is formulated:

H1: Digital Organizational Culture has a significant positive effect on Digital Innovation.

Digital Organizational Culture also serves as a key foundation in shaping Organizational Readiness, as a digital culture that fosters collaboration and openness to technology also shapes employees' adaptive attitudes and behavior (Isensee et al., 2020; Sanchez & Zuntini, 2018; Metwally et al., 2019; Pradana et al., 2022; Ly & Huong, 2024), so the following hypothesis is formulated:

H2: Digital Organizational Culture has a significant positive effect on Organizational Readiness.

High Organizational Readiness facilitates the adoption and development of digital ideas and technology within the organization (Harris et al., 2019; Lokuge et al., 2019; Xie et al., 2023), so the following hypothesis is formulated:

H3: Organizational Readiness has a significant positive effect on Digital Innovation.

Organizational Readiness is believed to act as a bridge between Digital Organizational Culture and Digital Innovation, as digital culture provides shared values and assumptions that are concretely realized through organizational readiness (Zhen et al., 2021; Mahayani & Darma, 2025; Mirza et al., 2024; Van Dinther, 2024; Raharjanti, 2024), so the following hypothesis is formulated:

H4: Organizational Readiness mediates the effect of Digital Organizational Culture on Digital Innovation.

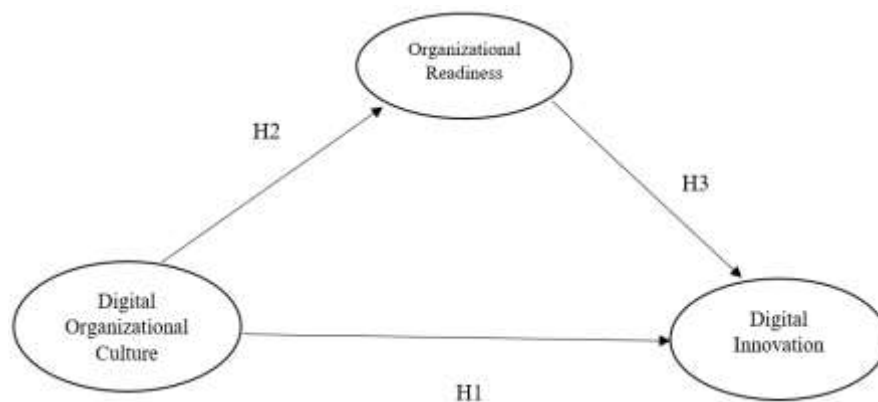


Figure 2.1 Research Model

Source: (Zhen et al., 2021)

2. RESEARCH METHOD

This study uses a quantitative approach with a survey method (Sekaran & Bougie, 2025; Sugiyono, 2023). Primary data were collected through an online Google Form-based questionnaire distributed to all employees of Bank Papua in Merauke City over six days (24–29 November 2025). The sampling technique used was non-probability sampling with a saturated sampling approach, so that the entire population of 140 employees was used as respondents, and all questionnaires (140, 100%) were successfully analyzed.

This study consists of three variables: Digital Organizational Culture as the independent variable, Digital Innovation as the dependent variable, and Organizational Readiness as the mediating variable. The instrument was measured using a 1–5 Likert scale. Indicators for Digital Organizational Culture refer to Seyma & Jan (2023), covering the dimensions of digital communication, digital skills and attitudes, entrepreneurial orientation and personal competence, and proactivity. Indicators for Digital Innovation refer to Benson (2019), covering innovation readiness, digital confidence, innovation adoption process, and behavior changes, while indicators for Organizational Readiness were adapted from studies on the readiness of human resources, technology, and organizational work processes.

Data were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) with the assistance of SmartPLS 4 (Ghozali & Kusumadewi, 2023). Convergent validity testing used a loading factor criterion of ≥ 0.70 and Average Variance Extracted (AVE) ≥ 0.50 , while discriminant validity was tested through cross loading. Reliability was assessed through Cronbach's Alpha and Composite Reliability ≥ 0.70 . Structural model testing included multicollinearity testing (VIF < 5), coefficient of determination (R^2), Goodness of Fit (GoF), Standardized Root Mean Square Residual (SRMR < 0.08), and Normed Fit Index (NFI) (Hair et al., 2022). Hypothesis testing was conducted through a bootstrapping procedure, with the criterion that relationships between variables were considered significant if the t-statistics value was > 1.96 and the p-value ≤ 0.05 (Ghozali & Kusumadewi, 2023).

3. RESULTS AND DISCUSSION

Results

The questionnaire was distributed to 140 employees of Bank Papua in Merauke City, and all of them (100%) were successfully collected and could be analyzed. The characteristics of respondents based on gender and position/job title are presented in Table 1.

Table 1. Respondent Characteristics

Category	Description	Count	Percentage (%)
Gender	Male	79	56,4
	Female	61	43,6
Position/Job Title	Leadership, Managerial	36	25,71
	Officer, Analyst, AO	27	19,29
	Staff, Assistant, Administration	55	39,29
	Frontliner (CS & Teller)	22	15,71
Total		140	100

Source: Primary data processed (2025)

The majority of respondents were male (56.4%) and held Staff, Assistant, Administration positions (39.29%), followed by Leadership/Managerial (25.71%), Officer/Analyst/AO (19.29%), and Frontliner (15.71%).

The results of the convergent validity test show that all indicators have a loading factor value above 0.70, with a range of 0.812–0.884 for Digital Organizational Culture, 0.797–0.857 for Digital Innovation, and 0.819–0.884 for Organizational Readiness. The Average Variance Extracted (AVE) values for all three variables are also above 0.50, so all indicators are declared valid. The cross loading test results show that the loading value of each indicator on the variable it measures is higher than on other variables, so discriminant validity is met. A summary of the validity and reliability test results is presented in Table 2.

Table 2. Summary of Validity and Reliability Tests

Variable	Loading Factor Range	AVE	Cronbach's Alpha	Composite Reliability	Description
Digital Organizational Culture	0,812–0,884	0,715	0,979	0,979	Valid & Reliable
Digital Innovation	0,797–0,857	0,688	0,967	0,968	Valid & Reliable
Organizational Readiness	0,819–0,884	0,720	0,970	0,970	Valid & Reliable

Source: SmartPLS 4 data processing (2025)

Structural model (inner model) testing shows that the VIF value for all paths is below 5 (DOC→DI = 1.833; DOC→OR = 1.000; OR→DI = 1.833), indicating no symptoms of multicollinearity. The R² value for Digital Innovation is 0.682 and for Organizational Readiness is 0.454, both falling into the moderate category. The Goodness of Fit (GoF) value of 0.634 falls into the large category, the SRMR value of 0.045 indicates the model has a good fit, and the NFI value of 0.773 indicates the model falls into the marginal fit category. A summary of the results is presented in Table 3.

Table 3. Structural Model Testing Results (Inner Model)

Criteria	Path/Variable	Value	Description
VIF	DOC → DI	1,833	No multicollinearity
VIF	DOC → OR	1,000	No multicollinearity
VIF	OR → DI	1,833	No multicollinearity
R ²	Digital Innovation	0,682	Moderate
R ²	Organizational Readiness	0,454	Moderate
GoF	-	0,634	Large
SRMR	-	0,045	Good fit
NFI	-	0,773	Marginal fit

Source: SmartPLS 4 data processing (2025)

The results of hypothesis testing through bootstrapping show that all four research hypotheses are accepted, as presented in Table 4.

Table 4. Hypothesis Testing Results

Hypothesis	Path	Original Sample	T-Statistics	P-Values	Description
H1	DOC → DI	0,483	6,020	0,000	Accepted
H2	DOC → OR	0,674	11,303	0,000	Accepted
H3	OR → DI	0,419	5,757	0,000	Accepted

Hypothesis	Path	Original Sample	T-Statistics	P-Values	Description
H4	DOC → OR → DI	0,282	4,871	0,000	Accepted

Source: SmartPLS 4 data processing (2025)

Discussion

Digital Organizational Culture is proven to have a positive and significant effect on Digital Innovation ($\beta = 0.483$; $t = 6.020$; $p = 0.000$), so H1 is accepted. This finding shows that organizational support for the use of digital technology, openness to change, and collaborative and adaptive work habits among Bank Papua employees are able to drive the creation of digital-based innovative ideas and improve the quality of banking services. This result is consistent with the studies of Müller et al. (2019), Taherdoost (2018), Duerr et al. (2018), Khin & Ho (2019), and Cohen et al. (2020).

Digital Organizational Culture is also proven to have a positive and significant effect on Organizational Readiness ($\beta = 0.674$; $t = 11.303$; $p = 0.000$), so H2 is accepted. A strong digital culture, reflected in the distribution of decision-making authority based on organizational structure and employees' readiness to adapt to digital system-based work methods, is able to improve organizational readiness in facing digital transformation. This finding is consistent with Isensee et al. (2020), Sanchez & Zuntini (2018), Metwally et al. (2019), Pradana et al. (2022), and Ly & Huong (2024).

Organizational Readiness has a positive and significant effect on Digital Innovation ($\beta = 0.419$; $t = 5.757$; $p = 0.000$), so H3 is accepted. Employees' readiness to accept change, their ability to adapt to new technology, and the perception that adopting digital technology is a solution for improving customer service drive increased digital innovation in the work environment. This result is consistent with Harris et al. (2019), Lokuge et al. (2019), Xie et al. (2023), and Wahyuni & Prihardianto (2024).

Testing of the indirect effect shows that Organizational Readiness significantly mediates the effect of Digital Organizational Culture on Digital Innovation ($\beta = 0.282$; $t = 4.871$; $p = 0.000$), so H4 is accepted. Thus, a strong digital organizational culture does not automatically increase digital innovation, but must first be actualized through organizational readiness—in terms of human resources, technology, and work processes—before it has an optimal impact on Digital Innovation. This finding reinforces the results of Zhen et al. (2021), Mahayani & Darma (2025), Mirza et al. (2024), Van Dinther (2024), and Raharjanti (2024).

4. CONCLUSION

This study shows that Digital Organizational Culture has a positive and significant effect on both Digital Innovation and Organizational Readiness, Organizational Readiness has a positive and significant effect on Digital Innovation, and Organizational Readiness is proven to mediate the effect of Digital Organizational Culture on Digital Innovation among employees of Bank Papua in Merauke City. This finding confirms that the success of digital innovation is determined not only by the strength of digital organizational culture, but also strongly depends on the level of organizational readiness in terms of human resources, technology, and work processes.

Practically, bank management needs to simultaneously strengthen digital culture — through clarity of digital-based decision-making authority, strengthening communication, and cross-functional collaboration — and improve organizational readiness, particularly in terms of innovation funding and the development of employees' digital competencies, in order to drive sustainable digital innovation. Future research is recommended to expand the

sample to the banking sector or other industries and to consider additional moderating variables to deepen understanding of the relationships between the variables studied.

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