

DIGITAL READINESS OF RURAL BANK IN ENHANCING MSMEs FINANCIAL INCLUSION: EVIDENCE FROM BPR SULAWESI MANDIRI

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Abstract

This study examines the digital readiness of BPR Sulawesi Mandiri in enhancing MSMEs financial inclusion through a qualitative single case study approach. Through triangulated data collection comprising in-depth interviews, direct observations, and document analysis. The research reveals three key findings. First, while the bank demonstrates strong strategic vision and financial commitment for digital transformation, operational implementation requires significant enhancement, particularly in technological infrastructure and process automation. Second, human resource readiness shows a balanced yet challenging landscape, with approximately half of the staff requiring additional digital competency development. Third, the bank's phased approach to digital transformation, prioritizing basic infrastructure before advancing to complex digital services, aligns with successful practices in banking digital transformation. The study contributes to understanding digital transformation challenges in rural banking contexts and provides practical frameworks for implementation monitoring. These findings offer valuable insights for rural banks undertaking digital transformation initiatives, particularly in supporting MSMEs financial inclusion within Eastern Indonesia's unique geographical and socio-economic context.

Keywords: *digital readiness, rural bank, financial inclusion, MSMEs, digital transformation*

Introduction

The digital transformation has fundamentally reshaped the banking industry, particularly in the aftermath of the COVID-19 pandemic, which has significantly altered financial service delivery patterns. This shift in customer behavior towards digital transactions has compelled financial institutions, including Rural Banks (BPR), to swiftly adapt their service delivery through technological integration (Nasir Tajul Aripin et al., 2022). In this digital era, financial inclusion has become increasingly intertwined with social inclusion, where access to digital financial services serves as a crucial indicator of public participation in formal financial systems (Cnaan et al., 2023).

Research has demonstrated that the digitalization of banking services positively impacts financial inclusion and banking stability over time, particularly in expanding financial access to previously underserved segments such as MSMEs (Banna & Alam, 2021; Thathsarani & Janguo, 2022). However, implementing digital transformation requires careful preparation to avoid widening the digital divide (Guerra-Leal et al., 2023). This presents a unique challenge for Rural Banks, which operate with more limited resources compared to commercial banks.

As financial institutions focused on serving MSMEs and rural communities, Rural Banks play a vital role in promoting regional financial inclusion. A study by (Supartoyo et al., 2018) confirms that Rural Bank sector development significantly contributes to regional economic growth, particularly in the Sulawesi region. However, the acceleration of Rural Bank digital transformation faces various challenges, from infrastructure readiness and human resource competency to risk management frameworks (Satrio Ronggo Buwono et al., 2022).

Current research reveals a significant gap in understanding Rural Bank digitalization readiness in Eastern Indonesia, particularly in Sulawesi. While previous studies have explored digital transformation in banking broadly (Elisabeth et al., 2023; Rasyad et al., 2022), comprehensive research analyzing Rural Banks' readiness to implement digital services for enhancing MSMEs financial inclusion in Sulawesi remains absent. The region's unique geographical and socio-economic characteristics create distinct challenges in implementing digital financial services that warrant careful examination.

This study aims to address this research gap by analyzing BPR Sulawesi Mandiri's digital readiness. The research's significance is reinforced by Al-Smadi's findings, which demonstrate that digital finance

substantially improves financial inclusion through enhanced access, availability, and service utilization (Al-Smadi, 2023). However, as (Syed et al., 2022) emphasize, maintaining balance between digital innovation and operational stability remains crucial, especially for financial institutions serving the micro segment.

This study seeks to contribute both theoretical insights and practical applications in developing appropriate Rural Bank digital transformation models for the Sulawesi region. Through examining strategic readiness, operational capabilities, and technological infrastructure, this study aims to provide stakeholders with valuable insights for enhancing MSMEs financial inclusion in Eastern Indonesia. The findings will help identify critical success factors and potential barriers in implementing digital transformation initiatives, ultimately supporting the development of more effective strategies for regional financial development.

Methods

This investigation employs a qualitative paradigm through a single case study design to conduct an in-depth examination of digital readiness at BPR Sulawesi Mandiri. The methodological choice aligns with (Yin, 2018) theoretical framework, which posits that case study research proves particularly efficacious when investigating contemporary phenomena within their natural context, especially in instances where the boundaries between phenomenon and context demonstrate considerable permeability.

The research design incorporates purposive sampling techniques for both case selection and informant identification, adhering to qualitative research principles that emphasize depth and richness of data (Yin, 2018). The selection of BPR Sulawesi Mandiri as the focal institution was predicated upon several strategic criteria: its substantial operational footprint across multiple districts in Sulawesi; its active engagement in digital transformation initiatives as evidenced by comprehensive strategic planning documentation; its specialized focus on the MSMEs sector; and management's commitment to facilitating comprehensive research access. This deliberate sampling approach extended to the selection of key informants, ensuring the capture of diverse perspectives critical to understanding the multifaceted nature of digital transformation.

Data collection employing a methodological triangulation framework comprising three primary instruments (Miles et al., 2014). The first involved intensive interviews with strategically selected informants, including a board member possessing extensive industry experience (minimum five years) and direct oversight of digital initiatives, an operational staff member with substantial customer service experience (minimum two years), and an active MSMEs client. This diverse participant selection enabled the capture of perspectives from both strategic and operational vantage points.

The second instrument encompassed systematic observational protocols of operational systems, technological infrastructure, and business processes during regular banking hours. These observations were guided by structured frameworks designed to capture both technical and operational dimensions of digital readiness. The third instrument involved comprehensive document analysis, encompassing strategic plans, operational procedures, and technical documentation.

To ensure methodological rigor and research validity, the study implemented a robust validation framework comprising three key elements: comprehensive data source triangulation, systematic member checking procedures involving key informant validation of interview transcripts and preliminary interpretations, and independent peer review by scholars with expertise in digital banking and qualitative methodologies.

The analytical framework adopted (Miles et al., 2014) systematic approach, executed through three distinct but interconnected phases. The initial phase involved meticulous data condensation through the development of a comprehensive analytical matrix utilizing Microsoft Excel, facilitating the systematic organization of interview codes, verbatim quotations, and emergent themes. The second phase employed advanced mind mapping techniques to visualize and analyze thematic interconnections. The final phase focused on pattern identification and validation through rigorous triangulation procedures, ensuring the robustness of research findings.

Result and Discussions

A comprehensive analysis of BPR Sulawesi Mandiri's digital readiness reveals complex dynamics reflected across three key dimensions: strategic readiness, operational capabilities, and human resource development. These findings emerge from systematic analysis of triangulated data from key informant interviews, direct observations, and document analysis, as presented in Table 1.

Table 1 Matrix of Themes-Subthemes of BPR Sulawesi Mandiri's Digital Readiness

Main Theme	Sub-theme	Key Findings	Supporting Quotations
Strategic Readiness	Vision & Commitment	<ul style="list-style-type: none"> - Clear and planned digitalization vision - Full support from top management - Adequate budget availability 	<ul style="list-style-type: none"> - “an imperative that banking must undertake... aimed at encouraging communities that have not yet accessed banking applications” (K_DIR_01) - “BPR Sulawesi Mandiri is affiliated with a company... therefore, the budget for digital implementation is highly capable and ready” (K DIR 09)
	Development Roadmap	<ul style="list-style-type: none"> - Phased implementation approach - Priority on basic infrastructure - Mobile banking development plan 	<ul style="list-style-type: none"> - “BPR Sulawesi Mandiri is now moving towards digitalization and is currently in the merger process...” (K_DIR_02) - “what will be developed first is the use of back data center” (K_DIR_04)
Operational Readiness	Technology Infrastructure	<ul style="list-style-type: none"> - Still hybrid system (manual-digital) - Limited backup system - Significant upgrade needs 	<ul style="list-style-type: none"> - “23 computers in working condition... Slow when many simultaneous users, No internet backup” (OBS_IF_01) - “for manual systems in operations still using manual slips” (K_IT_03)
	Business Process	<ul style="list-style-type: none"> - Dominance of manual processes - Multi-level validation system - Significant operational bottlenecks 	<ul style="list-style-type: none"> - “Computer input & manual register book, Daily backup at 15.00...” (OBS_SL_03) - “Identified Bottlenecks: Repetitive data input, Multi-level validation process, Manual queuing” (OBS SL 05)
HR Readiness	Digital Competency	<ul style="list-style-type: none"> - 50:50 competency gap - Urgent training needs - Resistance to change 	<ul style="list-style-type: none"> - “Human resources at BPR Sulawesi Mandiri are 50/50 with some already knowledgeable and some still lacking” (K_IT_02) - “staff concerns about not understanding the system, especially new systems still need guidance” (K IT 11)
	Development Program	<ul style="list-style-type: none"> - IT specialist recruitment plan - Continuous training program - Staff mentoring system 	<ul style="list-style-type: none"> - “first recruit capable IT personnel, then conduct digitalization development training” (K_DIR_08) - “for training needs that might be needed for the BPR Sulawesi Mandiri system, namely porbanking system” (K IT 09)
Customer Aspects	Readiness & Expectations	<ul style="list-style-type: none"> - Enthusiasm for digital services - Need for digital education - Data security concerns 	<ul style="list-style-type: none"> - “greatly facilitates transactions and can directly check incoming transfers without having to go to the ATM first” (K_NSB_08) - “concerns when using digital services like mobile banking include phone loss and data security breaches” (K NSB 13)

Source: Data Processing Result, 2024

Based on the thematic analysis presented in Table 1, BPR Sulawesi Mandiri demonstrates distinct positioning in its digital transformation journey. The bank exhibits strong strategic vision and commitment to digitalization, supported by top management and shareholders. This commitment is evidenced by the director’s statement emphasizing digitalization as “an imperative that banking must undertake... aimed at encouraging communities that have not yet accessed banking applications” (K_DIR_01).

This strategic commitment is reinforced by adequate financial support for technological investment, as highlighted by the director: “BPR Sulawesi Mandiri is affiliated with a company... therefore, the budget for digital implementation is highly capable and ready” (K_DIR_09). This phased approach aligns with (Banna & Alam, 2021) findings, which identify gradual implementation as an effective strategy for maintaining operational stability during digital transformation.

To provide a clear picture of the bank’s current position and development objectives, Table 2 maps out the status and targets across key operational areas.

Table 2 Status and Development Targets of BPR Sulawesi Mandiri

A. System & Technology Aspects	
Current Status	Development Direction
Non-Web Based ARB System	Web-Based ARB System
Manual & Digital Input (Hybrid)	Comprehensive Process Digitalization
Multi-level Validation	Automated Validation System
Limited System Backup	Redundant Backup System
B. Human Resources & Operational Aspects	
Current Status	Development Direction
50:50 Digital Competency	100% Digital Ready HR
Limited Training	Continuous Training Program
C. Service Aspects	
Current Status	Development Direction
Conventional Services Dominant	Mobile Banking
Manual Transactions	Digital Transactions
-	MSMEs Marketplace

Source: Data Processing Result, 2024

Notes:

Current Status: based on observation results and interviews

Development Direction: based on roadmap and BPR strategic plans

As shown in Table 2, significant gaps exist between current capabilities and desired outcomes, particularly in systems and technology infrastructure. The current service system operates in a hybrid mode with several significant bottlenecks: “Computer input & manual register books, Daily backup at 15.00... System validation 2x by section head & Operational Director” (OBS_SL_03). The existing technological infrastructure requires substantial enhancement, as noted in observations: “23 computers in working condition... Slow when many simultaneous users, No internet backup” (OBS_IF_01).

To address these gaps systematically, the bank has developed a prioritized implementation strategy, as detailed in Table 3.

Table 3 Analysis of Development Priorities

Priority	Development Area	Urgency	Complexity	Timeline
1	ARB Upgrade to Web-Based	High	High	Q2 2024
2	HR Development	High	Medium	Q2-Q3 2024
3	Process Digitalization	Medium	High	Q3-Q4 2024
4	Mobile Banking	Medium	High	Q4 2024

Source: Data Processing Result, 2024

The prioritization framework in Table 3 guides the bank’s transformation efforts while considering resource constraints and operational continuity. A critical aspect emerging from this analysis is the human

resource dimension, where staff digital literacy and readiness remain uneven. This condition emerged clearly from IT staff interviews: “Human resources at BPR Sulawesi Mandiri are 50/50, with some already knowledgeable and others still lacking understanding” (K_IT_02).

To ensure effective implementation and progress tracking, a comprehensive monitoring framework has been developed, as presented in Table 4.

Table 4 Framework for Monitoring Digitalization Implementation at BPR Sulawesi Mandiri

Monitoring Aspect	Indicators	Monitoring Mechanism
System & Technology	- Web-based ARB system readiness - Data backup - Internet connectivity	- Daily system monitoring - Double validation (Section Head & Director)
Operational	- Data input process - Transaction validation - Service queuing	- Operational bottleneck monitoring - Service SOP review
Human Resources Development	- Digital system understanding - Training implementation - New technology adaptation	- Staff competency evaluation - Training program monitoring

Source: Data Processing Result, 2024

Note: Monitoring framework developed based on business process observation results and key informant interviews.

The monitoring framework outlined in Table 4 provides structured mechanisms for tracking progress across systems, operations, and human resource development. This systematic approach supports the bank’s commitment to digital marketplace development, as reflected in the director’s statement: “digitalization will positively impact MSMEs customers... mobile banking will feature not only loans and savings but also a marketplace” (K_DIR_13).

The implementation strategy adopts a phased approach, prioritizing foundational infrastructure development before advancing to more complex digital services. To support this transition, the bank has developed comprehensive development plans including specialist recruitment and continuous training programs: “first recruit capable IT personnel, then conduct digitalization development training” (K_DIR_08).

Despite the challenges identified across these dimensions, BPR Sulawesi Mandiri demonstrates strong potential for successful digital transformation, particularly in enhancing MSMEs services. The clear strategic vision, structured implementation approach, and comprehensive monitoring framework provide a solid foundation for advancing digital capabilities while maintaining operational stability.

In-depth analysis reveals several critical gaps in BPR Sulawesi Mandiri’s digital implementation journey. The geographical and socio-economic characteristics of the Sulawesi region create unique challenges in digital service deployment. Infrastructure distribution varies significantly across regions, and telecommunication infrastructure presents distinct challenges. Based on this context, development priorities have been analyzed considering urgency and complexity factors, as illustrated in Table 3 above.

From an operational perspective, observational findings reveal greater complexity in the transformation process. The current hybrid service system exhibits significant bottlenecks, particularly in data processing and validation procedures. The existing technological infrastructure requires substantial enhancement, especially in system backup and data security aspects.

The urgency of this development becomes increasingly critical considering Sulawesi’s unique geographical and socio-economic characteristics. The uneven population distribution and varying telecommunications infrastructure create specific challenges in digital service implementation. Development priority analysis has been structured considering urgency and complexity factors, as previously shown in Table 3.

The success of BPR Sulawesi Mandiri’s digitalization implementation will be determined by the management of three critical factors: human resource capability development, technological infrastructure strengthening, and effective change management. In the human resource development aspect, the bank has formulated a comprehensive plan including specialist recruitment and continuous training programs: “first recruit capable IT personnel, then conduct digitalization development training” (K_DIR_08).

The change management process requires a careful approach considering existing resistance and concerns among staff: “staff concerns include system understanding, especially regarding new system familiarity, particularly for older employees who still need special guidance” (K_IT_11). The

implementation strategy and change monitoring require a structured and measurable approach, considering BPR's unique characteristics as a financial institution serving the MSME segment.

A comprehensive monitoring framework has been developed to ensure implementation effectiveness, as presented in Table 4. This approach aligns with (Ozili, 2018) findings on the importance of balanced approaches in banking digital transformation that consider both technological aspects and organizational readiness. The framework provides systematic mechanisms for tracking progress while maintaining operational stability and service quality.

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