

The Influence of Learning Culture and Digital Transformation on Business Performance in Rural Bank Industry: Mediating Role of Absorptive Capacity

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Abstract: As a part of the financial industry, Bank Perkonomian Rakyat (BPR) needs to navigate competition that is derived from technology enhancement using its internal capability and resources. This study aims to analyze the business performance of BPR's industries, which is directly influenced by learning culture and digital transformation and also by absorptive capacity as a mediator. This quantitative study uses a purposive sampling method by delivering questionnaire to 230 respondents with the criteria of executive officers and BPRs located in Kegiatan Usaha 1 area. This study uses hypothesis testing using Structural Equation Modeling (SEM)—SmartPLS 4.0. This study found that for direct effects, there is no positive impact from learning culture on business performance, but there is a positive influence on absorptive capacity; there is no positive influence of digital transformation on business performance, but there is a positive influence of digital transformation on absorptive capacity; and there is a positive influence of absorptive capacity on business performance. Meanwhile, for indirect effects, this study concludes that absorptive capacity mediates the positive influence of learning culture and digital transformation on business performance. The originality of this study reveal from the elaboration of the research model which contributes to existing literature about digital transformation measurements of technological advancements application especially in BPR industry. Given the result, this study provides practical managerial implications and practices for rural banks to improve absorptive capacity as it mediates learning culture and digital transformation.

Keywords: *learning culture, absorptive capacity, business performance, BPR, digital transformation*

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INTRODUCTION

The banking industry plays a pivotal role in maintaining national economic stability through its intermediation function. In Indonesia, rural banks (Bank Perkonomian Rakyat – BPR) serve as a critical financial backbone for rural communities and underserved medium and small enterprises (Komara, 2025). Despite their strategic importance, BPR operate within a rapidly evolving competitive landscape characterized by accelerated digitalization and the proliferation of non-bank financial institutions (OJK, 2023). These dynamics place increasing pressure on BPRs to sustain business performance while adapting to structural and technological disruptions. This is reflected in the drop of BPR units from 1,468 in 2021 to 1,402 in 2023 (Komara, 2025). The declining performance of

the industry needs to be addressed better so that people can still get financial services according to the government's goals.

According to OJK (2024), the intensity of competition in Indonesia's financial sector has risen substantially with the emergence of fintech-based financial services, particularly peer-to-peer (p2p) lending platforms. Unlike traditional microfinance institutions that tend to complement BPR operations, fintech lending has demonstrated a substitutive and disruptive effect on rural banking, particularly in credit markets. It can be implied that alternative lending platform has a negative relation to performance in BPR industry (Fajri, 2022). The superior speed, accessibility, and cost efficiency of digital lending platforms have altered customer behavior and eroded traditional banking market shares. Consequently, BPRs face mounting challenges in preserving competitiveness and profitability, especially in their core lending activities. Moreover Aziz *et al.*, (2024) demonstrate that digital financial inclusion has a significant impact on financial institutions' profitability, as reflected in return on assets as well as the utilization of ATMs, number of transaction and volume number mobile banking, and internet banking.

Industry level evidence further indicates structural pressure on BPR performance. Data published by OJK (Otoritas Jasa Keuangan, 2024) reveal declining numbers of BPR branches alongside fluctuating asset growth, weakening operational efficiency, and persistently high credit risk indicators. Here we can set those competitive pressures among financial institutions have had a measurable impact on the performance of BPR industry during the 2022–2025 period (Otoritas Jasa Keuangan, 2025). As of the end of April 2026, 57 BPRs and BPRSs had received approval for consolidation into 18 BPRs and BPRSs, while more than 200 BPRs and BPRSs remained in the process of obtaining OJK approval for mergers or consolidations (Firmansyah, 2026). The number of BPR branch offices declined 282 unit in 3 years before 2025, indicating increasing structural pressure on physical distribution networks. In terms of scale, total assets fluctuated from Rp 220.460 billion in 2022 to Rp 210.111 billion in 2025. Distributed loan exhibited a dynamic pattern, from Rp 145.170 billion to Rp 159,340 billion and Rp 163.108 billion, before declining to Rp 154.570 billion over the same period. Third-party funds (DPK) dynamically changing from Rp 140.390 billion in 2022 to Rp 147.970 billion in 2025. Despite these relatively stable aggregate indicators, financial performance ratios deteriorated, with ROA varied between 1.00% and 1.81%, while BOPO remained relatively high, ranging from 83.66% to 89.37%. NPL also remained elevated, reaching 10.99% in 2024 before declining to 9.04% in 2025. These industry-level indicators suggest persistent challenges in maintaining profitability, controlling credit risk, and improving operational efficiency amid intensifying competition.

Digital transformation has therefore become a strategic imperative for improving banking performance. The adoption of digital banking platforms, mobile applications, and integrated transaction systems has been widely recognized as a driver of efficiency, customer value, and competitive advantage in the financial sector (Sherani *et al.*, 2024). However, most empirical studies on digital transformation have focused on large commercial banks or multinational financial institutions (Chao *et al.*, 2024). Research addressing BPR remains scarce, despite their distinct characteristics in terms of organizational scale, regulatory constraints, technological readiness, and market orientation (Siswanti *et al.*, 2024). This limitation indicates an unresolved gap because overwhelming concentration of digital transformation studies in large commercial banks or multinational enterprises, leaving rural bank contexts highly under-researched. Sherani *et al.* (2024) show that digital transformation improves efficiency and competitive

advantage, and Chao et al. (2024) find the same effect among large commercial and multinational banks. Both studies assume conditions which rarely present in BPR where abundant capital, technical staff, and formal reporting systems are limited. Siswanti et al. (2024) confirm that BPRs differ in scale, regulatory constraints, and technological readiness. None of these studies test whether the latest enhancement in digital transformation going to improves business performance in learning orientation atmosphere. This study targets that specific gap by examines whether absorptive capacity, built through organizational learning culture, and whether this mechanism explains business performance outcomes that resource-based accounts alone cannot.

Beyond technological adoption, according to (Manalu et al., 2025) organizational learning capabilities are also essential for sustaining competitive advantage in digitally turbulent environments. Learning culture and technologies are critical building block of value in business performance chain (Alerasoul, 2022). Empirical work on digital transformation reports a fairly consistent finding: firms that digitize see better financial and operational results. Zou et al. (2024) trace this to production digitalization among Chinese technology firms, (António Porfírio et al., 2024) to efficiency and financial gains among Portuguese banks, and Rakovic et al. (2024) to transformational leadership specifically. Yet nearly all of this evidence comes from large commercial banks and established multinational firms (Chao et al., 2024; Sherani et al., 2024), where capital, technical staff, and formal reporting structures already exist.

A strong learning culture enables organizations to continuously acquire, disseminate, and internalize new knowledge, thereby enhancing their capacity to respond effectively to environmental change. In this context, absorptive capacity plays a critical mediating role by translating learning culture and digital transformation initiatives into superior business performance (Nabella *et al.*, 2022). Learning culture drives performance through absorptive capacity because a learning-oriented organization does not automatically convert shared knowledge into outcomes; it must first build routines that recognize, digest, and redeploy that knowledge across the firm (Alerasoul, 2022). Also digital transformation improves performance through absorptive capacity because adopting new platforms only creates value once the firm can sense, interpret, and embed them into daily operations (Sherani et al., 2024). A company's ability to identify potential new technology and apply it throughout all parts so that it realized as a learning culture is one of indicators of a company's learning culture (Tallarico *et al.*, 2024). Here, we can conclude that absorptive capacity captures precisely both mediating role, turning learning norms and digital transformation steps into concrete operational routine. Somehow it also concluded that learning organization need learning person as prerequisite in order to business performance can be achieved.

Therefore, this study try to resolve the need to elaborate more about learning culture in the digital transformation context. While prior studies have examined learning culture and absorptive capacity independently, empirical models integrating learning culture, digital transformation, absorptive capacity, and business performance—particularly within rural banking contexts—remain limited and fragmented. These gaps leave open a basic question about how to thoroughly integrate the mechanism of digital transformation and learning cultures to business performance in rural banks. Even further, this study will explore the most fit measurement of organizational absorptive capacity to adapt to a highly competitive external environment with its internal resources and ability.

This study grounds its hypotheses in Dynamic Capability Theory, explaining how the research model is going to be proposed. Dynamic Capability Theory, originally formulated by Teece, Pisano, and Shuen (1997), constitutes the theoretical foundation that firms sustain their competitive advantage through the capacity to integrate, build, and reconfigure internal and external resources and competencies in response to rapidly changing environments, which then become absorptive capacity itself (Knoppen et al., 2022). This theory extends the Resource-Based View articulated by Barney et al. (2001), which emphasized specific resource ownership to adapt under conditions of continuous environmental turbulence (Teece, 2020). From there, we can see learning culture and digital transformation represent the internal and external resource-configuration mechanisms theorized by dynamic capability, functioning respectively as the firm's organizational learning routine and technological sensing-and-seizing capacity, both of which Octasyilva et al. (2023) argue must be strategically aligned with environmental conditions. Absorptive capacity operationalizes the theory's core transformative mechanism, empirically capturing the process through which firms identify, assimilate, and apply newly acquired resources into actionable organizational routines, consistent with Nabella et al. (2022), who position such capacity as the critical bridge translating internal culture and technological initiatives into performance outcomes. Business performance as the outcome thus serves as the empirical proxy for the theorized outcome of successful dynamic capability deployment, namely superior competitiveness and profitability. Consequently, Dynamic Capability Theory provides the predictive logic justifying that learning culture and digital transformation alone are insufficient determinants of performance unless channeled through absorptive capacity, which reconfigures acquired resources into performance-generating routines, thereby framing absorptive capacity's mediating role as theoretically indispensable rather than incidental.

Build on Dynamic Capability Theory, our next theoretical development shows that learning culture constitutes its relationship with business performance and absorptive capacity. A study conducted by (Yuan & Chayanuvat, 2022) found that organizations with a strong learning culture are better at adapting to market dynamics and changes in the business environment. This capability allows companies to continuously develop new and relevant products and services. Furthermore, (Manalu et al., 2025) in their research on SMEs in West Java, Indonesia, also confirmed the positive influence between organizational learning, innovation, and company performance, both financially and non-financially. Thus, a learning culture creates a foundation that enables companies to innovate and respond to challenges, ultimately enhancing performance. Research by Gonzalez (2024) indicates that a strong learning culture improves company performance by successfully applying new knowledge. This generates short-term financial profits and overall business performance from a financial perspective. Furthermore, a study conducted by (Bait et al., 2023) in the healthcare industry in Oman found that a learning culture enhances company performance through workforce agility. Hence we can see that learning culture enhances business performance by fostering innovation, knowledge application, and workforce agility, thereby in the short and long term directly strengthening organizations' financial and non-financial outcomes.

The dimension of dialogue and inquiry in learning culture, which refers to the practice of open communication and follow-up after communication, directly supports the acquisition and assimilation phases of absorptive capacity. This was conveyed by the study of Ding et al. (2023) on 189 SMEs in mainland China. Through dialogue, employees can

share existing knowledge (knowledge dissemination) and actively seek new information from the external environment. Meanwhile, another similar research in rural banking industry in Jabodetabek area ensures a deep understanding of the obtained information (inquiry) is crucial for the assimilation process so that new knowledge can be internalized and collectively understood within the organization (Komara *et al.*, 2025). Furthermore, research in China on the automotive manufacturing industry conducted by Song *et al.* (2020) stated that the system connection dimension within learning culture, which promotes interconnections among individuals, teams, and work units, has a significant positive effect on the transformation and application phases of absorptive capacity. The study by Arias-Perez *et al.* (2022), which was conducted in Colombia with 600 manufacturing and service industry practitioners, found that strong system connections enable newly assimilated knowledge to be transformed into new capabilities and routines more effectively. It concludes that learning culture enhances absorptive capacity by fostering dialogue, inquiry, and system connections that facilitate knowledge acquisition, assimilation, transformation, and application. Based on the explanation, these are our proposed hypotheses:

H₁ : Learning culture has a positive impact on business performance.

H₂ : Learning culture has a positive impact on absorptive capacity.

Further explanation will show how digital transformation impacts business performance and absorptive capacity based on some previous relevant research. Zou *et al.* (2024) in their research in China involving 331 respondents from 18 companies in the information technology sector, stated that there is a positive influence of the production digitalization process on increasing company profits. The study conducted by (António Porfirio *et al.*, 2024) on 50 banks in Portugal demonstrated that digital transformation can enhance companies' operational and financial performance, especially amid environmental uncertainty. By adopting digital technology, companies can automate repetitive tasks, streamline business processes, and reduce operational costs. Although conventional banks differ from BPRs in several character, size and market, their core funding and lending functions remain highly exposed to technological developments and offer substantial potential for automation (Abdul Aziz *et al.*, 2024) . The above research is supported by a literature study conducted by Rakovic *et al.* (2024), which examined the dimensions of digital transformation, indicating that digital transformational leadership has the greatest impact on a company's financial performance.

In addition to improving efficiency, digital transformation also plays an important role in enhancing business performance through the improvement of strategic capabilities. A study conducted by Siswanti *et al.* (2024) in the BPR industry in East Java highlighted that digital capabilities positively affect company performance and growth. Based on research conducted by Chao *et al.* (2024) on 45 rural banks in China, with interviews conducted with 685 of their managers, it was shown that digital transformation processes influence business performance related to innovation. This study resulted in five valid dimensions for measuring digital transformation in rural banks, namely technology, products, strategy, input, and collaboration.

Research conducted by Arias-Perez *et al.* (2022) states that the dimension of digital transformation of a company, in competing through digital products and services, has a positive effect on the company's ability to innovate. Meanwhile, another study conducted by (Wang *et al.*, 2022) on 153 traditional manufacturing companies in China states that there is a direct positive influence of digital transformation on absorptive capacity. Another

study conducted by Chang *et al.* (2022) indicates a positive effect of digital transformation on the absorptive capacity for acquiring and assimilating new knowledge in 167 SMEs in the electronic distribution sector in China. Based on the explanation above, we bring the next hypotheses, which are:

H₃ : Digital transformation has a positive impact on business performance.

H₄ : Digital transformation has a positive impact on absorptive capacity.

Since we found the importance of absorptive capacity as it stands alone or become mediating and or moderating variables, our elaboration then comes to how it entangled learning culture and digital transformation to business performance. According to Wu *et al.* (2021), absorptive capacity has a direct influence on open innovation performance. Another study by (Ding *et al.*, 2023) states that absorptive capacity has a positive and significant impact on survival performance and growth performance in companies. A review article conducted by Vaghef & Dornberger (2020) states that absorptive capacity plays a role in the success of SMEs, both in the context of economics, research and development, and technology. This article also explains several mediating roles of the capability dimensions. From this, it can be concluded that absorptive capacity plays an important role in enhancing business performance related to innovation.

Regarding the influence of absorptive capacity as a mediating variable, the research findings presented by Alshahrani & Salam (2024) state that absorptive capacity fully mediates the relationship between innovation and business performance in studies of small and medium enterprises in Saudi Arabia. The roles of the assimilation and acquisition dimensions have been proven to enhance business performance. This is reinforced by research findings indicating that absorptive capacity effectively reduces uncertainty and risk in entrepreneurial behaviour in improving business performance. Other research supporting this argument was conducted by Mata *et al.* (2024), which states that absorptive capacity mediates the effect of innovation collaboration on business performance in 300 small and medium enterprises in the information technology sector in Portugal.

A recent study conducted by Gonzalez (2024) analysed antecedent of performance at 128 automotive companies in Brazil, which are affected by learning capacity through the mediation of absorptive capacity. The study concludes that potential and realized dimensions demonstrate a fully mediating role. Study conducted by Alerosoul *et al.* (2022) shows that in learning organization, potential and realized new knowledge have been shown to significantly mediate the influence of learning culture on business performance through projects and business processes that require innovation. This research emphasizes the importance of utilizing all available aspects, such as business processes, technology, and patents, as well as acquiring new aspects, such as establishing partnerships and using different business models in the learning process, to improve business performance (Ding *et al.*, 2023). Thus, we examine our next hypothesis are:

H₅ : Absorptive capacity has a positive impact on business performance

H₆ : Positive learning culture impact on business performance mediates by absorptive capacity

H₇ : Positive digital transformation impact on business performance mediates by absorptive capacity

Here are research model in figure 1 that is been proposed in the article

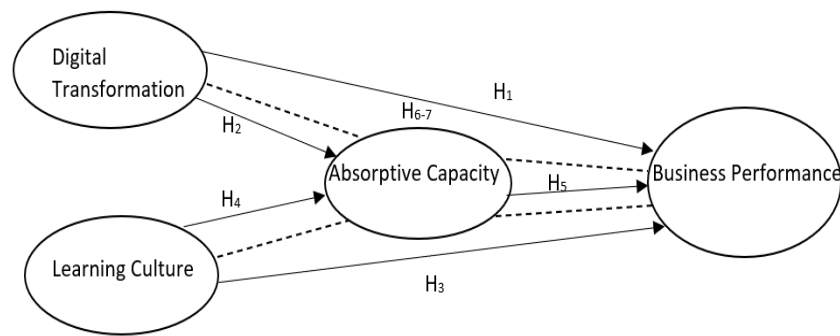


Figure 1. Research Model

RESEARCH METHODS

This study employs a quantitative approach. Started with distributing online questionnaires to registered BPR in Java. Purposive sampling was used to select 230 respondents. Some criterion that employed to the respondent is that they should be a minimum manager, the bank should be located in Java, has to be run at minimum 2 years and be represent by decision maker at minimum managerial level with 2 years tenure. Data analysis was conducted using structural equation modelling to test the formulated hypotheses, with SEM PLS 4 to analyze the data.

The measurement instrument employed in this study uses a five-point Likert scale. Learning culture is defined as members' perceptions of the extent to which an organization actively acquires and transfers knowledge, as well as modifies its behavior to reflect newly acquired knowledge. In this study, learning culture is measured using two dimensions, namely system connection and dialogue (Elbawab, 2024). Digital transformation is defined as the utilization of digital technologies in business processes related to strategy, products, services, processes, and organizational resources in order to achieve corporate objectives. In this research, digital transformation is measured through five dimensions: product, strategy, technology, input, and collaboration (Chao *et al.*, 2024). Absorptive capacity refers to an organization's ability to identify, acquire, assimilate, transform, and effectively exploit external knowledge to achieve organizational goals. In this study, absorptive capacity is measured using four dimensions: potential acquisition, potential assimilation, realization transformation, and realization application (Ding *et al.*, 2024). Business performance represents both financial and non-financial outcomes, measured using indicators that refer to customer satisfaction, competitive position, customer loyalty, third party fund and return on investment (Kampilong, 2025). Although has different characteristic of financial and non financial performance, both indicators measure the perception of decision maker about how financial and non financial result of the bank itself.

RESULTS AND DISCUSSION

Here are the discussion and analysis of the result from the study. From table 1, we can see per BPR represent by respondents executive person in charge with managerial level, where the profile characteristic indicates that it is dominated by individuals with a strong educational background and substantial banking experience. Most respondents hold a bachelor's degree (S1), for 50,9%, followed by those with a master's degree (S2) at 33,9% (78 respondents), while the remaining 15,2% (35 respondents) have other educational qualifications. In terms of organizational position, respondents are primarily in managerial

roles (38.7%), followed by directors (26,1%) and commissioners (20%), suggesting that the data were collected from decision-makers with strategic responsibilities, while the rest (15,2%) have equal managerial level such as division head, senior supervisor and unit head. Regarding tenure, a substantial proportion of respondents have more than ten years of work experience (42,6%), while 32,6% have worked for more than five to ten years, indicating a high level of organizational familiarity and experiential knowledge of BPR industry among the respondents. From an organizational perspective, the respondents are predominantly affiliated with institutions located in Central Java (47,8%), followed by West Java (30.0%), with smaller representations from East Java (13,9%) and the Jabodetabek area (8,3%). This result is in accordance to (Otoritas Jasa Keuangan, 2024) that listed unbanked target markets, the majority of which are located in Central Java. This demographic distribution also support (Amegayibor, 2021) with asserting that business location determines individual and corporate performance. Most organizations have been operating for more than ten years (57,4%), reflecting the industrial maturity of the BPR. In terms of ownership structure, local government-owned entities represent the largest proportion (53,9%), followed by privately owned organizations (38,3%), while mixed ownership accounts for a relatively small share (7,8%). Notably, all sampled organizations report total assets exceeding IDR 15 billion. These last three character indicating that the respondents are drawn from relatively well-established and financially substantial institutions.

Statistic Descriptive Respondent

Table 1. Respondent Characteristic

	Character	Number	Percent
Education level			
1.	S1	117	50,9%
2.	S2	78	33,9%
3.	Other	35	15,2 %
	Total	230	100%
Position			
1.	Manager	89	38,7%
2.	Director	60	26,1%
3.	Commissioner	46	20,0%
4.	Other	35	15,2%
	Total	230	100%
Person Tenure			
1.	2-5 years	57	24,8 %
2.	>5-10 years	75	32,6 %
3.	>10 years	98	42,6 %
	Total	230	100 %
Area located			
1.	Jabodetabek	19	8,3 %
2.	West Java	69	30 %
3.	Central Java	110	47,8 %
4.	East Java	32	13,9 %
	Total	230	100 %
BPR Operating			
1.	2-5 years	17	7,4 %
2.	>5-10 years	81	35,2 %
3.	>10 years	132	57,4 %
	Total	230	100 %

Character	Number	Percent
Ownership		
1. Local government	124	53,9 %
2. Private	88	38,3 %
3. Mix	18	7,8 %
Total	230	100 %
Asset >Rp15Milyar	230	100 %

Source: Processed primary data, 2026

Statistic Descriptive Variables, Outer Model and Inner Model Testing

Learning culture recorded a mean of 3.92, digital transformation 3.81, absorptive capacity 3.92, and business performance 3.63, the lowest of the four constructs; respondents rated internal employee collaboration highest at 4.12 and return on investment lowest at 3.54. All indicators at all variables' loadings far exceeded 0.70 confirming convergent validity. Cronbach's alpha stayed above 0.93 and composite reliability above 0.94 for every construct, confirming internal consistency. All four constructs exhibited AVE exceeding the 0.50 threshold—0.729, 0.674, 0.754, and 0.781 for learning culture, digital transformation, absorptive capacity, and business performance, respectively. Self-reported data collected from the same respondents may potentially introduce common method bias. However, this potential bias can be assessed using the VIF test, as presented later in the table. The indicators demonstrate high reliability while still representing distinct aspects of the construct rather than merely reflecting redundant items.

Absorptive capacity produced an R-squared of 0.791, a strong result; business performance produced an R^2 of 0.599, a moderate result. From theoretical perspective, the gap between the two R^2 of absorptive capacity at 0.791 and business performance at 0.599 traces back to dynamic capability theory, which treats absorptive capacity as the mechanism through which a firm senses new knowledge and reconfigures it into usable routines (Teece et al., 1997; Teece, 2020), while business performance sits one step further down that chain, contingent on whatever the firm has already absorbed. As practical interpretation from this, BPR manager sees the effect of a briefing session or a new credit-committee agenda item on absorptive capacity almost immediately; converting that same knowledge into a change in ROI demands product redesign, staff retraining, and often OJK clearance before a new process reaches customers.

Several studies confirm the same asymmetry. Sherani et al. (2024) found that IT-enabled capabilities strengthen absorptive capacity more directly than they strengthen innovation outcomes among software SMEs. Tallarico et al. (2024) showed that digital technologies boost absorptive capacity before that capacity translates into any broader organizational gain. Kastelli et al. (2024) reported that digital capacity affects innovation outcomes primarily through absorptive capacity rather than through a direct path, a structure H6 and H7 reproduce here. (Ding et al., 2023) likewise found that absorptive capacity carries the explanatory weight for performance once organizational learning is accounted for. Read together, these four studies place absorptive capacity, not learning culture or digital transformation alone, closest to firm outcomes in a dynamic capability framework, the same ordering this study's R^2 values reproduce..

Other studies report a more direct route from digital transformation to performance, and the contrast deserves scrutiny rather than dismissal. António-Porfírio et al. (2024) found that digital transformation directly strengthens the financial and operational performance of fifty Portuguese banks even under environmental uncertainty. Zou et al.

(2024) reported a direct positive effect of production digitalization on profit among 331 respondents from Chinese information-technology firms, and. None of these settings resembles the regulatory and resource environment of an Indonesian BPR. Portuguese and Chinese commercial banks already carry the capital base, technical staff, and reporting infrastructure that let a digital initiative reach the income statement within a single cycle. Indonesian BPRs operate under capital-intensive, slow-clearing OJK licensing requirements, and OJK's 2024 assessment notes that BPRs still lack the human resources and cost base to run digital systems at commercial-bank scale. The consolidation of 57 into 18 BPR by April 2026, with more than 200 others still awaiting approval, shows how much structural adjustment separates a digital investment from a financial result in this sector. For BPR management, the implication is to measure digital and learning-culture programs against absorptive-capacity indicators, knowledge-acquisition speed, meeting frequency, technology adoption, rather than against short-term ROI. For OJK, the null direct effect of digital transformation on performance argues for a differentiated licensing track that lets smaller rural banks pilot digital products at lower capital thresholds while their absorptive capacity matures.

Table 2. Learning Culture (X_1)

Dimension	Questions	Mean	LF	CA	CR	AVE
System Connection	Feedback of a new idea	3,70	0,792			
	Honest input and feedback from all members	3,99	0,877			
Dialogue and Inquiry	Building trust among employee	4,03	0,886	0,947	0,955	0,729
	External stakeholder collaboration	3,94	0,839			
	Internal employee collaboration	4,12	0,849			
	Risk-aware employees	3,93	0,896			
	Cross-functional problem solving	3,76	0,821			
	Performance gap evaluation	3,92	0,864			
<i>Learning culture mean</i>		3,92				

Internal data processed (2026)

Table 3. Digital Transformation (X_2)

Dimension	Questions	Mean	LF	CA	CR	AVE
Technology	Cloud computing adoption	3,79	0,868			
	Artificial intelligence utilization	3,60	0,757			
	Big data utilization	3,76	0,844			
	Biometric technology usage	3,75	0,805			
	Blockchain technology adoption	3,64	0,733			
Product	Real-time online transfers	3,93	0,793			
	Online banking users	3,83	0,863			
	Mobile banking users	3,86	0,843			
	Online credit dominance	3,78	0,782			
Strategy	Customer oriented	3,91	0,856	0,971	0,974	0,674
	Management aligned	3,83	0,802			
	Regulation compliant	3,81	0,787			
	Resource-aligned	3,80	0,833			
Input	Dedicated IT division	3,98	0,839			
	IT-skilled personnel	3,98	0,878			
	Allocated IT budget	3,83	0,834			
Collaboration	External partner collaboration	3,97	0,884			
	Fintech partnership collaboration	3,63	0,754			
<i>Digital transformation mean</i>		3,81				

Internal data processed (2026)

Table 4. Absorptive Capacity

Dimension	Questions	Mean	LF	CA	CR	AVE	R ²
Potential Acquisition	External knowledge acquisition	3,84	0,885				
	Relevant knowledge processing	3,90	0,887				
	New knowledge source identification	3,87	0,902				
Potential Assimilation	Open knowledge communication	3,97	0,844				
	Cross-functional knowledge support	3,94	0,816				
	Regular cross-functional meetings	3,88	0,857				
Realized Transformation	Knowledge integration capability	3,97	0,874	0,970	0,973	0,754	0,791
	New capability utilization	4,01	0,885				
	Capability integration into work	3,92	0,909				
Realized Application	Technology utilization	3,92	0,866				
	Technology-driven process efficiency	3,98	0,894				
	Technology-based financial gains	3,81	0,793				
<i>Absorptive capacity mean</i>		3,92					
<i>Internal data processed (2026)</i>							

Table 5. Business Performance

Dimension	Questions	Mean	LF	CA	CR	AVE	R ²
Non-financial	Higher customer satisfaction	3,74	0,859	0,930	0,947	0,781	0,599
	Stronger competitive position	3,61	0,899				
	Greater customer loyalty	3,73	0,894				
Financial	Higher growth of third-party funds (DPK)	3,55	0,853				
	Higher return on investment	3,54	0,911				
<i>Business performance mean</i>		3,63					
<i>Internal data processed (2026)</i>							

Table 6. Discriminant Validity - HTMT

	AC	LC	DT	BP
Absorptive Capacity				
Learning Culture	0,824			
Digital Transformation	0,807	0,650		
Business Performance	0,639	0,545	0,475	

Table 7. VIF

	AC	LC	DT	BP
Absorptive Capacity				4,794
Learning Culture	1,797			2,685
Digital Transformation	1,848			2,665
Business Performance				

Internal data processed (2026)

Discriminant validity testing shown in table 6 value falls below the 0.90 threshold, so the four constructs measure distinct concepts. Absorptive capacity and learning culture produce the highest ratio at 0.824, followed by absorptive capacity and digital

transformation at 0.807. Both values sit close to the conservative cutoff, signaling conceptual proximity between these constructs without crossing into overlap. Business performance score of 0,475 indicates that respondents perceive digital transformation and business performance as clearly separate constructs, consistent with the study's own finding that digital transformation carries no significant direct effect on business performance. While in table 7 inner VIF results show absorptive capacity's path to business performance with $VIF = 4.794$ approaches the 5.0 threshold reflecting the mediator's shared variance with both learning culture and digital transformation, yet remaining within tolerable limits. Learning culture 1.797 and digital transformation 1.848 indicating these exogenous constructs are theoretically and empirically distinct rather than redundant. Similarly, learning culture 2.685 and digital transformation 2.665 supporting the theoretical premise that organizational learning and technological capability operate as separate, complementary drivers of performance rather than overlapping measures.

Direct and Indirect Hypothesis Testing

Our next analysis is the hypothesis testing. The results of H_1 in Table 8 show a positive direct effect of learning culture on business performance. The results indicate a original sample of 0,05 with a non-significant p-value of 0,458, suggesting that even if new information and knowledge are present, this does not constitute a statistically significant direct effect on business performance, particularly with respect to long term non-financial performance such as increased customer loyalty and market share expansion. The research findings do not support the first hypothesis, because although learning-oriented practices such as dialogue may exist within organizations, they do not automatically translate into financial or non-financial performance outcomes without preceding complementary mechanisms. Not specifically testing collaboration, trust, input, and feedback at the second-order level may explain the insignificant result. This study is consistent with the findings of Syahrurahmah *et al.* (2023), which highlight the need for group performance mechanisms to be in place before organizational performance can be assessed in aggregate. Similarly, (Yuan & Chayanuvat, 2022) study stated that there needs to be a mechanism for collaboration between departments first. This occurs because short-term financial performance requires collaboration, trust, and further dissemination of knowledge to be reflected in long-term non-financial performance. Another research which supports this result was done by Githuku (2022) which mention that learning organization that inherit learning culture can only be done by learning person in the beginning. Here we can see that learning culture needs a catalyst in order to be converted to business performance. Learning culture effect on absorptive capacity got a different result from H_1 .

Here H_2 tested the positive direct effect of learning culture on absorptive capacity and yielded a strong and significant result (original sample 0,430; $p < 0,001$). This finding confirms that a supportive learning culture with dialogue and inquiry topic such as regular credit committee meetings to raise credit risk awareness, daily knowledge sharing regarding interest rate policies as performance gap evaluation, and updates on competitive conditions to enhance cross function problem solving, plays a critical role in enhancing an organization's ability to acquire, assimilate, transform, and apply external knowledge. This is in line with the research conducted by (Manalu et al., 2025), which states that learning culture functions as an important organizational foundation for building absorptive capacity rather than directly driving performance. Among the majority 53.9% of local government-owned BPR we can see from respondent, facilitating regular external stakeholder communication. Consistent with prior research, such collaboration

strengthens external knowledge acquisition, reflected in a mean of 3.84 and loading factor of 0.885.

H₃ evaluated the positive direct relationship between digital transformation and business performance. The results show a negative and non-significant coefficient (original sample -0.125 ; $p = 0.079$), leading us to reject our third hypothesis. This conclusion happened from our two tail hypothesis that suggest a positive impact from digital transformation to business performance. It means that digital transformation initiatives, when implemented on their own, may not immediately boost business performance and could even bring short-term adjustment costs or inefficiencies. Cao *et al.* (2024) stated that the success rate of technology applications heavily depends on how intensively they are used in business processes, so digital transformation doesn't automatically reflect in organizational performance. Similarly, a research report by OJK (2024) also stated that technology applications have not developed optimally might because BPRs still lack the capability to run digital technology and information system-based products and services, both in terms of cost and human resources. Technology-based products and services are also considered might not yet suitable for the needs of the communities in the operational areas of BPR, most of which are located in rural areas. The licensing requirements established by OJK for digital-based products and services are capital might be a burdensome for BPR, and the process takes a relatively long time. Another consideration according to the results of this study, is that BPR is still focused on interest income, maintaining credit quality, and controlling NPL, negatively discerning on the emergence of initial marginal costs in IT infrastructure projects.

Digital transformation exerted a strong, statistically significant positive effect on absorptive capacity (original sample = 0.413 ; $p < 0.001$), confirming H₄. This result seen the digital transformation as an external resource-configuration mechanism through which BPRs sense, acquire, and process new technological knowledge (Teece *et al.*, 1997; Teece, 2020). A notable divergence emerges internally rather than externally: while H₄ confirms digital transformation strongly builds absorptive capacity, H₃ shows no significant direct effect of digital transformation on business performance (-0.125 ; $p = 0.079$). This asymmetry indicates that BPRs successfully convert digital investment into knowledge-processing capability, yet that capability has not yet translated into measurable financial or non-financial gains, likely due to regulatory friction and infrastructure constraints unique to rural banking. Practically, the presence of competent IT personnel, cloud infrastructure, and data-processing systems strengthens an organization's capacity to identify, assimilate, and apply new information into daily banking operations rather than merely automating existing routines. This finding converges strongly with Chang *et al.*, (2022), which demonstrated that technologies such as artificial intelligence enhance operational efficiency and shorten service time, functionally reinforcing knowledge-processing capability. Wang *et al.* (2022) similarly confirmed a direct positive path from digital transformation to absorptive capacity, while Azizi *et al.* (2025), examining the automotive components sector, found that digital technology adoption elevates both daily productivity and annual performance through the same absorptive mechanism. For management, this implies that digital transformation budgets should prioritize absorptive-capacity-building activities, staff digital literacy since these investments yield the earliest measurable organizational returns, while financial performance gains should be expected only after absorptive capacity matures further.

Absorptive capacity exerted a significant positive direct effect on business performance (original sample = 0.263; $p = 0.012$), confirming H₅. Its positive coefficient of 0.263 indicates that absorptive capacity has a meaningful positive contribution to business performance. This finding suggests that BPRs with stronger capabilities to acquire, assimilate, transform, and apply external knowledge are better positioned to enhance operational effectiveness, respond to environmental changes, and achieve improved business performance. This result validates the core proposition of dynamic capability theory that a firm's ability to identify, assimilate, and apply external knowledge constitutes a critical, firm-specific capability generating superior performance outcomes (Teece et al., 1997; Teece, 2020). This finding converges with several prior studies. Wu et al. (2021) confirmed that absorptive capacity directly influences open innovation performance. Ding et al. (2023) similarly found that absorptive capacity significantly and positively affects survival and growth performance among Chinese SMEs, describing it as a strong predictor of business outcomes. Vaghef and Dornberger (2020), reviewing SME literature in the Netherlands, likewise concluded that greater industry-level absorptive capacity corresponds with higher aggregate performance, reinforcing the universality of this mechanism across firm sizes and sectors. For management, this implies that building absorptive capacity alone is insufficient; BPR leadership must actively institutionalize mechanisms, standardized knowledge-application procedures, and performance monitoring systems that convert absorbed knowledge into operational and financial outcomes.

Table 8. Direct Effect

	Hypothesis	Original Sample	p Values	Remarks
H ₁	Learning culture positively effects business performance	0,051	0,458	Not supported
H ₂	Learning culture positively effects absorptive capacity	0,430	0,000	Supported
H ₃	Digital transformation positively effects business performance	-0,125	0,079	Not supported
H ₄	Digital transformation positively effects absorptive capacity	0,413	0,000	Supported
H ₅	Absorptive capacity positively effects Business performance	0,263	0,012	Supported

Data processed with PLS 4.0 (2026)

H₆ analyzed the indirect effect of learning culture on business performance mediated by absorptive capacity. The research results showed that absorptive capacity was proven to mediate the effect of positive learning culture on business performance with an original sample of 0,113 and sig 0,037 < 0,05). Furthermore, these results indicate the nature of full mediation because as the direct effect is non-significant while the indirect effect is significant. Without realization and transformation, new knowledge cannot be applied to business processes, and company performance will not be optimal. As demonstrated by Sulaiman *et al.* (2023), the potential for acquiring new knowledge reduces the barriers of complex organizational structures, so that organizational performance will ultimately also improve. Similarly, Otoo (2024) concluded in his research on the SME industry in Ghana that there needs to be a system for identifying and transforming individual competencies before individual performance is translated into the company's total productivity figures. Also presented in Komara *et al.* (2025) where absorptive capacity was proven as mediator in learning orientation to business performance at rural banks in Jabodetabek area.

H₇ confirming that absorptive capacity serves as a crucial mediating role of digital transformation to business performance. This can be seen from the original sample value of 0,109 with a significance of 0,013, which has a stronger effect compared to the direct effect in H₃. This divergence indicates absorptive capacity as the sole meaningful pathway linking digital transformation to performance, an indirect-only mediation pattern rather than complementary mediation. Practically, digital investment alone does not improve BPR performance unless channeled through knowledge-absorption processes. This aligns with Kastelli et al. (2024), who found digital capacity affects innovation performance mainly through absorptive capacity, and Sherani et al. (2024), showing IT-enabled capabilities yield performance gains only when absorptive capacity converts knowledge into applicable outcomes. The ability of BPR to acquire and apply new technology into funding and lending platforms are a positive contributor to profit. Since IT is not the core competence, having third parties who master the knowledge and skill becomes really important. Vendors, fintech, and OJK effect the level of absorptive capacity, which then will triggered financial and non-financial performance. In line with research, this result is supported by (Ding et al., 2023), who concluded that the application and transformation of business processes from manual to automated and digital will contribute to business performance only when it enhances the organization's ability to absorb and exploit knowledge effectively.

Table 9. Indirect Effect

	Hypothesis	Original Sample	p Values	Mean	Std Dev	t-stat	Remarks
H ₆	Learning culture positively effects business performance mediated by absorptive capacity	0,113	0,037	0,11	0,054	2,094	Supported
H ₇	Digital transformation positively effects business performance mediated by absorptive capacity	0,109	0,013	0,103	0,044	2,489	Supported

Data processed (2026)

CONCLUSION AND RECOMMENDATIONS

Based on the findings of this study, it can be concluded that learning culture does not have a positive direct effect on business performance, while it positively influences absorptive capacity. Similarly, digital transformation does not exert a positive direct effect on business performance, but it has a significant positive effect on absorptive capacity. Furthermore, absorptive capacity is found to have a positive and significant effect on business performance, highlighting its critical role in translating organizational resources into performance outcomes. The study confirms the mediating role of absorptive capacity in the relationships between both learning culture and digital transformation and business performance, indicating that their performance impacts occur indirectly through enhanced knowledge absorption capabilities.

This study has several limitations that should be acknowledged. First, the research model is restricted to a limited set of variables which may not fully capture other relevant organizational or environmental factors influencing performance. Second, the scope of the study is confined to the rural banking financial services sector, thereby limiting the generalizability of the findings to other industries. Third, the empirical analysis focuses exclusively on BPR with assets of IDR 15 billion, operating in DKI Jakarta, West Java, Central

Java, and East Java, which may further constrain the applicability of the results to BPRs of different scales or operating in other regions. Methodological limitation of the study include the cross sectional design, self-report given by the clustering respondent, limited criterion applied in the purposive sampling technique and perception based measurement for business performance variables.

Based on the limitations identified in this study, several recommendations can be proposed for future research. First, subsequent studies are encouraged to incorporate additional explanatory variables that may influence the business performance particularly organizational ambidexterity, which reflects a firm's ability to simultaneously explore new opportunities and exploit existing resources in response to dynamic environmental changes and intense competition. This concept rooted in dynamic capability theory which contributes to the development of absorptive capacity literature (Erhan et al., 2024). Prior studies conducted by Andrade *et al.* (2023) suggest that ambidexterity plays a critical role in sustaining organizational performance and competitive advantage, making it a promising construct for deeper investigation in the context of banking industry. Second, future research may extend to government support as a contextual factor, as regulatory and policy support can significantly affect BPR performance from both internal and external perspectives (Firmansyah, 2026). Finally, further studies are recommended to explore the adoption of AI in greater depth, particularly its implications in managing bank assets and liabilities derived from third-party funds (Gallup, 2026).

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