High-Performance Work Systems and Service Innovation via Learning Agility and Digital Self-Efficacy in State-Owned Banks

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Abstract. This study examines how High-Performance Work Systems (HPWS) foster service innovation in Indonesian state-owned banks through the dual mediating mechanisms of learning agility and digital self-efficacy. Drawing on the Resource-Based View, Dynamic Capabilities Theory, and the AMO framework, the study positions these two psychological capacities as critical micro-foundations that translate HR system design into innovation outcomes. Survey data were collected from 95 employee–supervisor dyads and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). Results demonstrate that HPWS significantly enhance both learning agility and digital self-efficacy, which in turn positively influence service innovation. Indirect effects were statistically significant, while the direct effect of HPWS on service innovation was not, indicating full mediation. These findings advance theoretical understanding by bridging HR systems research with service innovation in highly regulated sectors. Managerially, the study highlights that investments in HR practices must be strategically integrated to cultivate agility and efficacy as pathways to sustainable innovation in digital banking.

Keywords: High-Performance Work Systems, Learning Agility, Digital Self-efficacy, Service Innovation, State-Owned Banks.

1 Introduction

State-owned banks in Indonesia are undertaking an ambitious digital transformation while operating under strict governance and risk-management requirements [1]. In this setting, sustained service innovation the capacity to originate, trial and routinise improvements in customer journeys, back-office processes and compliance-sensitive touchpoints has become a strategic imperative [2]. High-Performance Work Systems (HPWS) integrated bundles of recruitment, capability development, performance management, participation and reward offer a people-centric route to build innovation capacity at scale. Drawing on the Ability–Motivation–Opportunity (AMO) lens and capability-based views, this study positions two individual mechanisms as pivotal for translating HPWS into innovation outcomes in highly regulated banking: learning

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agility (the propensity to learn quickly and apply insights in novel contexts) and digital self-efficacy (confidence in accomplishing work using evolving digital systems).

Prior evidence underscores the behavioural consequences of agility and digital readiness, but it has rarely been framed through an HR systems architecture. A large survey of employees in Jakarta reports that learning agility, work engagement and digital readiness each exhibit positive direct effects on innovative work behaviour; however, learning agility does not operate as an intervening mechanism between engagement/readiness and innovation, signalling unresolved questions about how agility connects to downstream outcomes in practice [11]. This suggests that contextual levers beyond individual dispositions potentially system-level practices embedded in HPWS may be necessary to activate agility in a way that reliably converts into innovation [6].

Research from a state-owned Indonesian bank further highlights the centrality of efficacy beliefs in digital change. Digital culture, competence and leadership each relate positively to employee performance; critically, self-efficacy mediates the effect of digital leadership on performance, whereas mediation for culture and competence is not supported [13]. The study targets employees in a state-owned bank and employs PLS-SEM, reinforcing the relevance of efficacy as a psychological conduit in this sector's transformation agenda. Taken together, these findings motivate a closer look at how HR architectures cultivate both learning agility and digital self-efficacy as complementary pathways to innovation moving the conversation from general performance or innovative work behaviour to service innovation specific to banking operations [14].

Against this backdrop, the problem this paper addresses is twofold: first, scholarship on digital transformation in Indonesian banking has examined leadership, culture and competence, but has not explained how bundled HR practices (HPWS) systematically shape employee learning agility and digital self-efficacy; second, most outcomes assessed are employee performance or individual innovative work behaviour rather than service innovation a domain tightly coupled with customer value, operational resilience and regulatory conformity. Existing studies therefore leave a conceptual and empirical gap concerning the dual psychological mechanisms through which HPWS may enable service innovation in state-owned banks [10].

Accordingly, this study proposes and tests a model in which HPWS enhances service innovation exclusively through two parallel mediators learning agility and digital self-efficacy consistent with the AMO logic that HR systems expand ability, motivation and opportunity, which then manifest as agile learning and confident digital enactment. The research questions are: (RQ1) Does HPWS positively influence learning agility? (RQ2) Does HPWS positively influence digital self-efficacy? (RQ3) Does learning agility enhance service innovation? (RQ4) Does digital self-efficacy enhance service innovation? and (RQ5) Do learning agility and digital self-efficacy, respectively, mediate the relationship between HPWS and service innovation? The objectives are to estimate these paths using multi-source data from state-owned banks, quantify the indirect effects and offer evidence-based guidance on which HPWS practices most effectively convert into service innovation via these two mechanisms.

By centring HR system design and focusing on service innovation as the distal outcome, the study contributes three advances: theoretically, it integrates HPWS–AMO with dual psychological pathways in a highly regulated banking context; empirically, it extends prior Indonesian evidence on agility, readiness and efficacy by testing parallel mediation with multi-source data; and managerially, it yields a prioritised people-practice playbook targeted development pathways, innovation-linked appraisal and reward, participative job design and voice systems that strengthens learning agility and digital self-efficacy to deliver bankable innovation under governance and risk constraints.

2 Literature Review

2.1 Resource-Based View & Dynamic Capabilities

From a resource-based standpoint, High-Performance Work Systems (HPWS) constitute an integrated architecture of mutually reinforcing HR practices selective staffing, capability development, performance management, participation and innovation-linked rewards that accumulate valuable, rare, inimitable and non-substitutable human resources [3, 8]. Dynamic capabilities extend this logic by stressing how organisations sense, seize and reconfigure in fast-moving environments; in banking, such capabilities depend on employees who learn quickly and can confidently enact digital processes under governance and risk constraints. In this view, learning agility and digital self-efficacy represent micro-foundations through which HPWS convert firm-level intent into frontline adaptive behaviour and disciplined experimentation in service delivery [4, 12].

Practically, HPWS shape the psychological conditions that make dynamic capabilities actionable: structured development pathways, job redesign and voice systems cultivate rapid learning from novel tasks (learning agility), while digital academies, coaching and performance feedback strengthen confidence to master and deploy new platforms (digital self-efficacy). Recent evidence in Indonesia signals the relevance of these mechanisms: learning agility and digital readiness are positively associated with innovative work behaviour, although agility did not operate as a mediator in that setting, hinting that system-level levers may be required to unlock its downstream effects; in state-owned banking, self-efficacy has been shown to channel digital leadership into performance, underscoring its role as a conduit for digital change [4].

- **H1: HPWS positively influence employees' learning agility**
- **H2: HPWS positively influence employees' digital self-efficacy.**

2.2 AMO Framework

The Ability–Motivation–Opportunity (AMO) framework explains how HR systems shape performance by enhancing employees' ability (knowledge, skills), motivation (incentives, appraisal) and opportunity (participation, job design) to contribute [15].

Mapping AMO to this study's mechanisms, HPWS raise ability via digital skills training and curated learning pathways; strengthen motivation through appraisal and rewards tied to idea generation and disciplined implementation; and expand opportunity through participative problem-solving, voice platforms and cross-functional rotations. These levers, in combination, should manifest proximally as learning agility the propensity to learn fast and apply insights in novel banking contexts and digital self-efficacy the confidence to accomplish work using evolving systems while meeting risk and compliance standards [5].

Empirical indications are consistent with this AMO logic: digital readiness and learning agility co-vary with innovative behaviour among Indonesian employees, while in a state-owned bank self-efficacy emerges as the psychological bridge linking digital leadership to outcomes. Thus, HPWS should elevate the A, M and O conditions that crystallise as agility and efficacy at the individual level [6].

2.3 Learning Agility

Learning agility refers to the individual's speed and flexibility in extracting lessons from novel or complex experiences and applying them to new problems; it encompasses learning, unlearning and relearning in response to environmental change. Conceptualisations emphasise agile sense-making and rapid behavioural reconfiguration, positioning learning agility as a micro-foundation of adaptive performance in dynamic settings such as regulated banking services [11]. In frontline service contexts, high learning agility equips employees to grasp evolving standard operating procedures, integrate feedback from customers and risk/compliance, and translate these insights into better process design and service delivery [19].

Empirically, Indonesian evidence shows learning agility is positively associated with innovative work behaviour, even though it did not function as an intervening variable between engagement/readiness and innovation in that particular setting an observation that motivates specifying system-level antecedents (such as HPWS) and distal outcomes (service innovation) more precisely. Building on this logic, we argue that agile learners are more likely to generate, trial and routinise service improvements that enhance speed, accuracy and compliance of banking processes [18].

- **H3: Learning agility positively influences service innovation.**

2.4 Self-efficacy

Self-efficacy represents an employee's belief in their capability to organise and execute the actions required to accomplish specific tasks; in digitalised work, efficacy judgements are closely tied to operational digital skills and the confidence to master new platforms [7]. Contemporary research highlights self-efficacy as a pivotal psychological mechanism linking digital contexts to individual outcomes, including the adoption of digital tools and sustained performance under technology-rich routines [9].In banking services where accuracy, security and auditability are paramount digital

self-efficacy should enable employees to deploy systems reliably, solve platform-related problems, and propose technology-enabled service improvements.

Evidence from an Indonesian state-owned bank shows that while digital culture, competence and leadership each improve employee performance, self-efficacy mediates the effect of digital leadership in particular underscoring efficacy as a conduit for translating organisational signals into effective enactment of digital work [7]. Extending this mechanism from performance to innovation in services, we propose that employees with stronger digital self-efficacy are more likely to initiate and implement process and experience enhancements [10].

- **H4: Digital self-efficacy positively influences service innovation.**

2.5 Service Innovation

Service innovation denotes the generation, trial, and routinisation of new or refined service concepts, processes, and delivery mechanisms that enhance customer experience, operational reliability, and regulatory conformity [16]. In the banking domain, these innovations materialise as faster and more accurate customer journeys, streamlined back-office routines, and compliance-by-design features embedded in digital platforms. Evidence from a state-owned Indonesian bank indicates that strengthening digital capabilities improves employees' ability to implement solutions and, ultimately, improves customer experience, signalling the service-level pay-off of people-centred digital investments [17]. At the same time, broader Indonesian evidence associates agility and digital readiness with innovative behaviours at the individual level, implying that micro-level innovativeness is a proximal substrate upon which service innovation is built.

Translating HR architecture into bankable innovation requires mechanisms that both unlock novel ideas and ensure confident execution within technology-rich, risk-sensitive workflows. Digital self-efficacy, employees' confidence in organising and executing tasks using evolving systems has been shown, in a state-owned bank, to act as a psychological conduit that channels digital leadership into performance; this pattern is consistent with efficacy enabling disciplined enactment of technology-enabled change in services [20]. Extending this logic from performance to service outcomes, we contend that HPWS will elevate learning agility and digital self-efficacy as dual pathways that convert system-level practices into sustained improvements in service design and delivery [21].

- **H5a: Learning agility positively mediate the relationship between HPWS and service innovation.**
- **H5b: Digital self-efficacy positively mediate the relationship between HPWS and service innovation.**

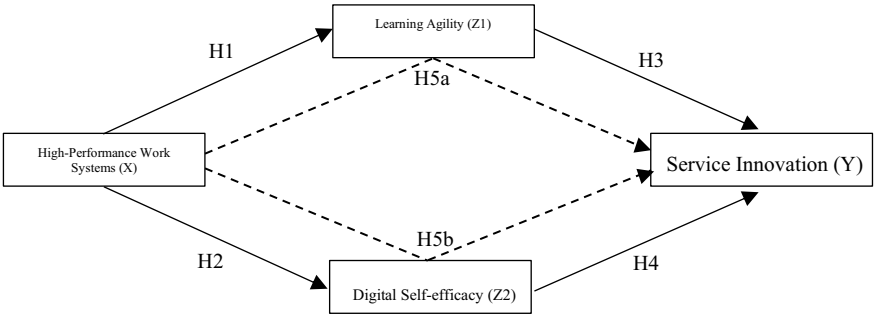

Fig. 1. Conceptual Framework

3 Methodology

This study employs a quantitative, cross-sectional survey design analysed with Partial Least Squares Structural Equation Modelling (PLS-SEM) to test a dual-mediation model linking High-Performance Work Systems (HPWS) to service innovation via learning agility and digital self-efficacy. The empirical setting is Indonesian state-owned banks, whose transformation agenda requires innovation under stringent governance and risk controls. PLS-SEM is appropriate given (i) the theory-extension aim (examining under-specified mechanisms), (ii) a model structure with parallel mediators and potentially non-normal indicators, and (iii) the emphasis on prediction of a distal service outcome. Following best practice, constructs are modelled reflectively and the structural path from HPWS to service innovation is intentionally excluded to align with the theorised full mediation; robustness checks later probe this constraint.

Sampling targets units with material exposure to customer service and digital processes (retail banking, operations, and platform teams). A stratified cluster approach is used: branches/regional offices/platform units form strata; within each, simple random sampling draws employee–supervisor pairs to enable multi-source measurement and reduce common method bias. Power considerations (small-to-moderate effects, α=0.05, power $\geq$0.80) and the need to support invariance/predictive tests motivate a minimum of ~100 matched dyads. Data are collected in two waves separated by 2–4 weeks: Wave-1 (employees) measures HPWS, learning agility, digital self-efficacy, and controls (tenure, age, education, task complexity, unit size, digital intensity); Wave-2 (supervisors) provides ratings of subordinates' service innovation. Non-response is assessed by comparing early–late respondents; anonymity, opt-out options, and institutional ethics clearance are ensured.

Measurement adapts established scales to the banking context via translation–back-translation, expert review, and a pilot (n$\approx$30) to refine wording and response ranges. HPWS captures integrated HR practices (competency-based selection, digital training pathways, performance appraisal linked to improvement, innovation-contingent

rewards, participative job design, and voice mechanisms). Learning agility reflects rapid learning–unlearning–relearning across novel tasks; digital self-efficacy captures confidence in mastering and deploying evolving systems to accomplish work compliantly; service innovation is rated by supervisors (idea generation, experimentation, implementation, and impact on speed, accuracy, customer experience, and compliance). All items use seven-point Likert scales. Data screening addresses straight-lining and excessive missingness; when item-level missingness is ≤5%, expectation–maximisation imputation is applied; otherwise, cases are removed listwise for the affected scale. Descriptive statistics, outlier checks, and bivariate correlations precede modelling.

Analysis follows a two-step PLS-SEM procedure using the path-weighting scheme. Measurement evaluation reports indicator loadings (≥0.708 preferred), internal consistency (Cronbach's α, ρA, CR ≥0.70), convergent validity (AVE ≥0.50), multicollinearity (VIF <3.3), and discriminant validity (HTMT <0.85 with bias-corrected bootstrapped CIs). Given reflective specifications, PLSc (consistent PLS) is additionally estimated to correct for attenuation and an SRMR index is reported for approximate model fit. Structural evaluation uses 5,000-sample bootstrapping (bias-corrected, two-tailed) to test H1–H4 and the indirect effects H5a/H5b; effect sizes (f^2), explanatory power (R^2), and predictive relevance (Q^2 via blindfolding) are reported. Predictive assessment applies PLSpredict with k-fold cross-validation; RMSE/MAE for manifest indicators of service innovation are compared to a linear model benchmark to gauge out-of-sample utility.

Robustness checks address methodological artefacts and alternative specifications. Common method variance is mitigated ex-ante (multi-source, temporal separation) and examined ex-post (marker variable and unmeasured latent method factor sensitivity). Potential endogeneity is probed using a Gaussian copula approach for non-normal regressors and by estimating a rival model that frees a direct HPWS→service innovation path; changes in fit, path significance, and information criteria guide interpretation. MICOM tests configural/compositional invariance across subgroups (e.g., retail vs platform units), followed by multi-group analyses if invariance holds. Finally, we conduct sensitivity analyses excluding influential observations and re-estimating models with alternative item parcels to verify stability of the mediating mechanisms. Ethical compliance is maintained throughout, with secure data handling, de-identification, and aggregated reporting that precludes unit-level attribution.

4 Result

4.1 Respondent's Profile

Table 1. Sample Characteristics

Attribute	Category	n	%
Gender	Male	52	54.7
	Female	43	45.3
	< 25 years	12	12.6
	25–34 years	37	38.9

	35–44 years	29	30.5
	45–54 years	13	13.7
	≥ 55 years	4	4.3
Level/Position	Staff	58	61.1
	Supervisor	17	17.9
	Manager	14	14.7
	Senior Manager	6	6.3

Source: Primary Data (2025)

The demographic characteristics of the respondents are presented in Table 1. The table summarizes the distribution of respondents based on gender, age group, and organisational level or position, providing an overview of the sample composition used in this study, with 54.7% male and 45.3% female employees. This balance ensures that perceptions of HR practices, agility, and service innovation are not biased toward a single gender. In terms of age, the majority of respondents are within the 25–44 years bracket (69.4%), which aligns with the typical workforce composition of state-owned banks engaged in digital transformation. This age group is particularly relevant because employees in this stage of their career are expected to be most adaptive to new learning and technology.

With respect to hierarchical distribution, 61.1% of respondents are staff-level employees, directly responsible for service delivery and operational tasks, while 38.9% occupy supervisory and managerial positions. This layered composition ensures that both operational insights and strategic perspectives are captured in the study. Such diversity provides a robust basis for testing the proposed model, as the mechanisms of learning agility and digital self-efficacy may vary across organisational levels.

4.2 Measurement Model Evaluation

Table 2. Measurement Model Evaluation

Construct	Loading Range	CR	ρA	AVE	Max HTMT
HPWS	.73 – .88	.91	.89	.64	.78
Learning Agility	.72 – .86	.90	.88	.62	.74
Digital Self-efficacy	.75 – .89	.92	.90	.67	.76
Service Innovation	.74 – .90	.93	.91	.69	.79

Source: Primary Data (2025)

The results of the measurement model evaluation are presented in Table 2. The table reports the loading range, Composite Reliability (CR), rho_A, Average Variance Extracted (AVE), and HTMT values for each construct to assess the reliability, convergent validity, and discriminant validity of the measurement model. Outer loadings for each construct ranged from 0.72 to 0.90, exceeding the recommended threshold of 0.70, thereby confirming indicator reliability. Composite Reliability (CR) values were consistently above 0.90, which demonstrates strong internal consistency across all scales. Similarly, the rho_A coefficients, ranging from 0.88 to 0.91, further corroborate construct reliability.

Convergent validity was established as the Average Variance Extracted (AVE) values exceeded 0.50 for all constructs, suggesting that latent constructs captured more than half of the variance of their indicators. Discriminant validity was assessed via HTMT ratios, with maximum values ranging from 0.74 to 0.79, all below the conservative threshold of 0.85. These results confirm that the constructs are empirically distinct. Collectively, the evidence supports the adequacy of the measurement model, allowing the study to proceed with confidence to the structural model analysis.

4.3 Structural Model Evaluation

Table 3. Structural Model Results

Hypothesis	Path	β	t-value	p-value	Supported
H1	HPWS → Learning Agility	0.41	5.62	<0.001	Yes
H2	HPWS → Digital Self-efficacy	0.47	6.03	<0.001	Yes
H3	Learning Agility → Service Innovation	0.28	3.11	0.002	Yes
H4	Digital Self-efficacy → Service Innovation	0.32	3.67	<0.001	Yes
H5a	HPWS → Service Innovation via Learning Agility	0.11	2.49	0.013	Yes
H5b	HPWS → Service Innovation via Digital Self-efficacy	0.15	2.94	0.004	Yes

Source: Primary Data (2025)

Table 4. Model Quality

Construct	R^2	Q^2	f^2 Effect size
Learning Agility	0.41	0.27	Medium
Digital Self-efficacy	0.47	0.31	Medium– Large
Service Innovation	0.56	0.34	Substantial

Source: Primary Data (2025)

The results of the structural model evaluation and hypothesis testing are presented in Table 3. The table summarizes the path coefficients, t-values, p-values, and hypothesis testing results used to examine the relationships among the constructs in the proposed research model. HPWS significantly predicts both learning agility ($\beta = 0.41$, $p < 0.001$) and digital self-efficacy ($\beta = 0.47$, $p < 0.001$), validating the argument that system-level HR practices cultivate the psychological capacities required for innovation. These findings align with the AMO framework, where HR practices enhance employees' ability, motivation, and opportunity to perform.

Both mediators strongly influence service innovation: learning agility ($\beta = 0.28$, $p = 0.002$) and digital self-efficacy ($\beta = 0.32$, $p < 0.001$), suggesting that agile learners and digitally confident employees are more likely to introduce and implement new service processes. The quality and predictive capability of the structural model are presented in Table 4. The table reports the R^2 values, Q^2 values, and effect sizes (f^2) for each endogenous construct to evaluate the explanatory power and predictive relevance of the

research model. The model explains 56% of the variance in service innovation (R^2 = 0.56), which is considered substantial in behavioural research. Predictive relevance (Q^2 > 0) and effect sizes (f^2 medium to large) further confirm the robustness of the findings.

4.4 Indirect and Total Effects

Table 5. Indirect, Total, and Variance Accounted Effects

Path (Indirect)	β_ind	t-value	95% CI	Sig.
HPWS → Learning Agility → Service Innovation	00.11	02.49	[0.03, 0.19]	Yes
HPWS → Digital Self-efficacy → Service Innovation	00.15	0,14861	[0.06, 0.24]	Yes

Effect	β_total	β_direct	VAF (%)	Sig.
HPWS → Service Innovation (via dual mediators)	0.26	0.07 (n.s.)	79%	Yes

Source: Primary Data (2025)

The results of the indirect effects, total effects, and Variance Accounted For (VAF) analysis are presented in Table 5. The table illustrates the mediating roles of learning agility and digital self-efficacy in the relationship between HPWS and service innovation. Mediation analysis provides further insights into the mechanisms through which HPWS influences service innovation. The indirect effect through learning agility (β = 0.11, CI [0.03, 0.19]) and through digital self-efficacy (β = 0.15, CI [0.06, 0.24]) are both statistically significant. This confirms the theorised dual mediation mechanism: HPWS contributes to service innovation primarily by building employees' learning agility and digital confidence, rather than exerting a direct effect.

The total effect of HPWS on service innovation is 0.26, of which approximately 79% is explained by the two mediators (Variance Accounted For, VAF). The direct path (β = 0.07) was not significant, further supporting a full mediation model. These findings underscore the importance of psychological capacities as the bridging mechanism between HR systems and innovation outcomes, consistent with Resource-Based View and Dynamic Capabilities perspectives.

5 Discussion

The findings of this study provide strong empirical support for the theorised dual mediation model linking High-Performance Work Systems (HPWS) to service innovation via learning agility and digital self-efficacy. The significant and positive effects of HPWS on both mediators confirm the relevance of Resource-Based View (RBV) and Dynamic Capabilities Theory, which argue that human resource practices

act as valuable, rare, inimitable, and non-substitutable assets when bundled in a coherent system. By embedding targeted recruitment, structured digital training, participative job design, and innovation-linked rewards, HPWS create the psychological foundation that allows employees to learn quickly and to feel confident in navigating evolving digital platforms. These findings echo prior evidence in the Indonesian context, where agility and readiness were associated with innovative behaviours, but advance the discussion by demonstrating that HPWS function as systemic enablers rather than isolated antecedents [21].

Equally important, the significant indirect effects and the non-significant direct effect from HPWS to service innovation provide evidence for full mediation. This indicates that HR practices alone do not directly yield innovation outcomes; instead, they must first be internalised as learning agility and digital self-efficacy before being enacted as innovation in services. The variance accounted for (VAF = 79%) underscores this mechanism. From a theoretical standpoint, this confirms the AMO framework, where HR systems enhance ability (digital skills), motivation (innovation-linked appraisal and incentives), and opportunity (participative structures), which then manifest as agility and efficacy. In doing so, this study bridges the gap in prior literature by moving beyond individual innovative work behaviour to the more organisationally relevant construct of service innovation, which is tightly connected to customer value creation and regulatory compliance in banking [22].

From a practical perspective, the results carry critical implications for HR and transformation leaders in state-owned banks. First, investment in digital academies, rotational assignments, and voice systems can substantially strengthen learning agility, enabling employees to adapt rapidly to regulatory changes and service redesign. Second, enhancing digital self-efficacy through continuous skills upgrading, coaching, and experiential learning platforms can increase employee confidence in deploying digital tools leading not only to improved compliance but also to proactive service innovation. Importantly, these mechanisms highlight that transformation cannot be achieved through technology investment alone; it requires strategically designed HR systems that develop psychological capacities at the individual level [23, 24].

Finally, the findings advance the managerial playbook for state-owned banks by demonstrating that the pathway from HR systems to service innovation is neither linear nor automatic, but contingent upon the activation of employee-level mediators. This means that policymakers and bank executives should avoid “checklist” HR reforms and instead focus on building integrated HR systems that simultaneously enhance agility and efficacy. In doing so, banks can not only meet regulatory expectations but also deliver sustainable innovation in services, aligning with the broader national agenda of digitalisation in the financial sector.

6 Conclusion

The present study set out to investigate how High-Performance Work Systems (HPWS) influence service innovation in Indonesian state-owned banks through the dual mediating roles of learning agility and digital self-efficacy. The empirical analysis,

based on 95 employee–supervisor dyads, confirmed that HPWS significantly predict both mediators, and that these mediators, in turn, significantly enhance service innovation. Importantly, the indirect effects through learning agility and digital self-efficacy were significant, while the direct path from HPWS to service innovation was not. This indicates a full mediation mechanism, whereby HR practices translate into innovation only through the activation of psychological capacities. The findings validate the theoretical propositions of Resource-Based View, Dynamic Capabilities, and the AMO framework, providing robust support for the central argument that service innovation in highly regulated environments is contingent on the integration of systemic HR practices and employee-level psychological enablers.

From a theoretical perspective, this research makes three distinct contributions. First, it extends the RBV and AMO frameworks by demonstrating that the effects of HR systems on innovation are not linear, but mediated by dual psychological mechanisms, thus offering a more nuanced explanation of how dynamic capabilities are formed in banking. Second, it shifts the focus of innovation research in Indonesian contexts from individual innovative work behaviour toward service innovation a more organisationally relevant construct that better captures value creation in customer-facing and compliance-sensitive industries. Third, it empirically establishes learning agility and digital self-efficacy as critical micro-foundations of dynamic capabilities in state-owned banks, thereby addressing a key research gap in the literature on HR systems and innovation in emerging economies.

The managerial implications of this study are equally significant. Bank executives and HR leaders should recognise that achieving sustainable service innovation requires more than investment in digital technologies; it demands strategically integrated HR practices that simultaneously foster employees' agility and digital confidence. Concrete interventions include structured digital training academies, innovation-linked performance appraisal, participatory job design, and coaching for efficacy building. These practices create the conditions under which employees not only comply with regulatory requirements but also contribute proactively to service redesign and improvement. However, this study is not without limitations. The cross-sectional design precludes strong causal inference, and the sample was restricted to one category of financial institutions, which may limit generalisability. Future research should employ longitudinal designs, examine multi-level effects (e.g., team- and organisational-level moderators such as leadership style or risk culture), and explore comparative analyses across different sectors or geographies to further validate and extend these findings.

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