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From Innovation Capabilities to ISO 56001 Adoption: The Mediating Role of Organizational Readiness to Changes in Saudi Banking

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ABSTRACT
Innovation is increasingly treated as a strategic necessity in turbulent environments; however, many organizations struggle to convert innovation intentions into executed outcomes because their readiness and conversion mechanisms are weak. This challenge is especially salient in regulated service sectors, such as banking, where innovation must be institutionalized without compromising operational discipline. Drawing on capability and readiness reasoning, this study examines how innovation-related capabilities translate into ISO 56001 adoption as an innovation management system, with organizational readiness to change (ORC) specified as a mediating mechanism in Saudi banks. Using a quantitative cross-sectional survey of managers and employees in Jeddah-based banks (N = 139) and PLS-SEM with bootstrapping (5,000 subsamples), the findings show that innovation process capability, innovation performance management capability, and innovation strategy capability each strengthen ORC, and ORC, in turn, increases ISO 56001 adoption, while all three capabilities also retain significant direct effects, indicating partial mediation. The model explains substantial variance in adoption (R^2 = 0.714) and readiness (R^2 = 0.650), with an acceptable fit (SRMR = 0.060). Banks should pair capability development with deliberate readiness-building to strengthen substantive adoption. Future research should longitudinally test this pathway across regulated service contexts.
Keywords: ISO 56001, innovation management system, organizational readiness to change, innovation capabilities, PLS-SEM, Saudi banking sector..

1. INTRODUCTION:

Innovation has increasingly been positioned as a strategic necessity in ever-changing settings environments rather than an optional strategic initiative (Garrido-Moreno et al., 2024). In such settings, a recurring implementation barrier is that many organizations generate ideas that do not translate into executed outcomes because their readiness and conversion mechanisms are weak (Lokuge et al., 2019). Digital transformation research in business and management has raised vast interest among academics in recent decades, reflecting the growing challenges that organizations face in adapting to a digital world (Kraus et al., 2022). Innovation is increasingly treated as a core condition for sustaining organizational performance rather than an occasional initiative that can be pursued opportunistically (Cristache et al., 2025).

In banking, this imperative is amplified by the rapid diffusion of digital channels, normalization of technology-mediated service encounters, and pressure to reconfigure internal processes to simultaneously support speed, reliability, and compliance. These pressures are not unique to any single country; they increasingly characterize regulated service organizations that must innovate while preserving their operational discipline. In the Saudi context, the shift towards digital banking illustrates that technology-enabled service models have become mainstream, thereby raising the managerial stakes of innovation execution and governance in banks (Alnemer, 2022). Accordingly, the organizational problem is rarely whether banks should innovate but how innovation can be governed as a repeatable organizational capability rather than a set of fragmented efforts. This concern aligns with the growing attention to innovation management systems as a means of formalizing innovation-related practices, roles, and decision processes so that innovation can be managed systematically across units and time (Karstegl et al., 2025).

Within this stream, standard-based approaches have been advanced as a pathway for establishing a common innovation language, codified requirements, and auditable routines that can support organizational learning and consistency. This is reflected in the emergence of ISO 56002 as a standardization attempt in the innovation management domain, which signals a broader movement towards institutionalizing innovation management through formal guidance (Alfaqaei et al., 2024). ISO 56001 extends this standard-based logic by articulating the requirements for an innovation management system, thereby raising a practical question for banks and other regulated service organizations: what organizational conditions transform a standard's intention into meaningful adoption rather than symbolic compliance?

Addressing this question requires theorizing adoption as a capability-building process rather than a simple decision outcome. From a dynamic capabilities perspective, adoption is expected to depend on an organization's capacity to continuously reconfigure routines and

managerial systems to match shifting demands and opportunities. Dynamic capabilities can be disaggregated into sensing, seizing, and transforming (Teece, 2014). However, capability-oriented explanations remain incomplete if they ignore the organizational change conditions that enable implementation of such capabilities. ISO 56001 adoption is inherently a change initiative that requires coordinated behavior, shared commitment, and confidence in execution across organizational members and functions. In this regard, organizational readiness to change (ORC) is particularly relevant because it captures a collective implementation condition through organizational members' commitment and efficacy (Weiner 2009). Therefore, ORC provides a theoretically grounded mechanism through which innovation capabilities may translate into adoption outcomes, particularly when adoption requires organization-wide alignment rather than localized compliance.

Accordingly, this study develops a capability-to-readiness-to-adoption pathway in the context of the Saudi banking sector. The conceptual framework positions three innovation capability dimensions as antecedents of ORC: innovation process capability, innovation performance management capability, and innovation strategy capability. It then links ORC to ISO 56001 adoption while also allowing direct effects from the three capability dimensions to adoption. This structure reflects the argument that banks may possess innovation-related capabilities that directly support standards-based adoption, while ORC operates as a proximal change condition that converts capability endowments into effective implementation across functions and units.

This study contributes to innovation management systems research in three ways. First, it advances empirical reasoning on organizational conditions associated with ISO 56001 adoption in a regulated service context by specifying capability-based drivers and an implementation-relevant mediator (Karstegl et al., 2025). Second, it extends readiness-centered reasoning by embedding the ORC within a capability-driven adoption model, thereby connecting change psychology with standards-based innovation governance (Weiner, 2009). Third, it strengthens the international relevance of ISO 56001 research by clarifying a generalizable mechanism: capabilities shape readiness, and readiness shapes adoption, which is likely to be salient in other regulated service settings facing similar digital, competitive, and compliance pressures (Teece, 2014). From a managerial and policy standpoint, this framing implies that standards-based innovation management diffusion will be strengthened when organizations build both capability foundations and implementation readiness, and when assurance mechanisms encourage substantive implementation capacity rather than symbolic adoption.

2. Theoretical Framing, Literature Review, and Hypotheses Development

This study integrates complementary theoretical perspectives–resource-based reasoning, dynamic capabilities theory, and readiness theory–to explain ISO 56001 adoption as a standards-based innovation governance outcome. Management system standards are commonly treated in the innovation and operations literature as codified governance templates that translate managerial aspirations into routinized auditable practices. In the quality domain, the ISO 9000 family is framed as a managerial architecture that structures work from upstream activities to downstream delivery (Manders et al., 2016). This framing is relevant for ISO 56001 because an innovation management system standard is similarly positioned as an organization-wide design for coordinating innovation intentions, decision-making rules, and routinized execution.

In standards-based innovation governance, adoption is consequential because standards shape the interfaces and evaluation criteria that discipline how innovation is coordinated and assessed (Blind et al., 2023). Evidence from other ISO-type domains shows that adoption explanations are often organized around drivers, benefits, and challenges, reinforcing the view that standard adoption is shaped by internal conditions and implementation realities (Fuchs et al., 2020). Evidence from environmental management scheme adoption indicates that organizational impacts can be mixed but often tilt positive, suggesting that system adoption can generate outcomes beyond symbolic compliance, contingent on internal conditions (García-Álvarez et al., 2023). Taken together, this stream supports treating ISO 56001 adoption as a system-level governance commitment, rather than a narrow technical choice.

The resource-based view provides the first anchor for considering innovation-related capabilities in adoption contexts. Sustainable advantage is tied to the quality of the underlying resource base and whether it has strategic attributes that competitors cannot easily replicate (Bowman and Ambrosini, 2007). Accordingly, innovation process capability, innovation strategy capability, and innovation performance management capability (P) can be theorized as higher-order organizational resources that shape the feasibility and value of the adoption of standards. Innovation performance management capability is an organization's ability to define innovation performance indicators and systematically monitor, evaluate, and use performance information to steer innovation decisions, learning, and governance. If these capabilities are underdeveloped, organizations may struggle to translate ISO 56001 requirements into stable routines, monitor progress credibly, and align innovation activities with strategic priorities. If they are mature, standard adoption can consolidate and scale innovation as organizational competence.

Dynamic capabilities theory extends this logic by explaining why capabilities are particularly salient under uncertainty and changing stakeholder expectations, which characterize regulated service sectors such as banking. Dynamic capability reasoning is frequently used to explain how organizations sense, seize, and reconfigure resources to sustain innovation amid environmental turbulence (Garrido-Moreno et al., 2024). It emphasizes renewing the competence base by integrating and

reconfiguring resources as conditions shift (Hadi & Ali, 2025). From this perspective, adopting ISO 56001 is not merely a static compliance choice but an adaptive move through which banks institutionalize routines for prioritization, execution, and reconfiguration around innovation.

However, capability endowments alone may not guarantee successful implementation. Organizational readiness to change explains why organizations with similar resources can differ substantially in their capacity to implement change. Readiness is a collective state that combines commitment and confidence in a specific change effort (Weiner, 2009). Higher readiness is expected to increase effort and persistence, whereas lower readiness predicts resistance and weaker implementation quality, making readiness a proximal mechanism linking capabilities to adoption outcomes (Shea et al., 2014). Therefore, this study theorizes that readiness is both a proximal driver of ISO 56001 adoption and a mediating pathway through which innovation capabilities translate into adoption outcomes.

2.1 Innovation Process Capability and Organizational Readiness to Change

Innovation process capability reflects the extent to which innovation work is routinized, coordinated and supported by repeatable practices. Such routinization reduces ambiguity in the execution of innovation, which should strengthen collective confidence in implementing systemic changes. Readiness depends, in part, on shared beliefs about capability and feasibility (Weiner, 2009). Innovation process capability research also shows that measurement and control across the innovation process is uneven, with early stage indicators often neglected, which supports the emphasis on structured process capability (Dziallas & Blind, 2019). Digital innovation capability similarly operationalizes the process as a core micro-foundation, aligning with innovation process capability as a structured organizational capability rather than an ad hoc activity (Kroh et al., 2024).

Process capability is also intertwined with the coordination of interdependent resources across the phases of innovation work. Chiarabilli et al. (2023) show that innovation-focused structures develop through multi-phase processes that require integration across resources. More broadly, adoption journeys in complex technologies highlight that “process readiness” is not optional, supporting the expectation that process capability elevates readiness perception (Uren & Edwards, 2023). Therefore, a stronger innovation process capability should be associated with higher organizational readiness to change when adopting ISO 56001.

H1: Innovation process capability is positively related to organizational readiness to change.

2.2 Innovation Performance Management Capability and Organizational Readiness to Change

Innovation performance management capability captures an organization’s ability to monitor, interpret, and use performance-related information to steer innovation efforts and justify improvement initiatives. Readiness theory suggests that confidence in practices and resources shapes whether members perceive change as feasible. Hradecky et al. (2022) identified confidence in practices and resources as determinants that can motivate or inhibit readiness in adoption contexts (Hradecky et al., 2022). Innovation performance measurement literature recognizes the innovation process as multi-stage, supporting performance management as a capability that governs the conversion of inputs into realized outcomes (Yu et al., 2021). Product innovation performance is frequently operationalized using sales shares attributable to innovations of different novelty, reinforcing the logic that performance management capability requires explicit metrics and tracking systems (Guerrero et al., 2023).

Readiness is not only about capability but also about perceived value, which can be strengthened when performance management clarifies the expected benefits and progress signals (Weiner, 2009). Accordingly, innovation performance management capability should reinforce informational and evaluative conditions that support both confidence and perceived worthwhileness, thereby strengthening readiness to adopt ISO 56001.

H2: Innovation performance management capability is positively related to organizational readiness to change.

2.3 Innovation Strategy Capability and Organizational Readiness to Change

Innovation strategy capability reflects an organization’s capacity to set priorities, align innovation initiatives with strategic intent, and allocate attention and resources coherently. From a standards and innovation perspective, system adoption is consequential because standards define what is measured and prioritized in innovative activities (Blind et al., 2023). Digital tools and external networks have been empirically framed as strategic drivers of innovation, reinforcing that strategy capability is a capability bundle that orients resource allocation and external engagement (Garrido-Moreno et al., 2024). The IMS also frames an innovation management system as a structured mechanism for achieving strategic goals through managed innovation (Karstegl et al., 2025). When strategy capability clarifies goals and expected value, it should strengthen the worthwhileness component of readiness (Weiner, 2009). Thus, innovation strategy capability should elevate readiness by strengthening the shared meaning, prioritization, and perceived value associated with ISO 56001 adoption.

H3: Innovation strategy capability is positively related to organizational readiness to change.

2.4 Organizational Readiness to Change and ISO 56001 Adoption

Readiness theory predicts adoption behavior because it links collective commitment and confidence in action and

persistence. Weiner (2009) explicitly ties readiness to adoption behavior, which conceptually covers adopting ISO 56001 as a standards-based innovation system (Weiner, 2009). Therefore, organizational readiness should positively predict the adoption of ISO 56001.

H4: Organizational readiness to change is positively related to the adoption of the ISO 56001.

2.5 Direct Effects of Innovation Capabilities on ISO 56001 Adoption

Adoption can also reflect capability-driven enactment, where organizations with stronger innovation capabilities may implement structured systems more readily because they already possess the necessary routines and coordination mechanisms. IMS is a structured framework for managing innovation to achieve strategic goals (Karstegl et al., 2025). In addition, standards define the interfaces and metrics by which innovation is assessed, implying that capability maturity can facilitate compliance with evaluative structures (Blind et al., 2023). Accordingly, innovation process capability, innovation performance management capability, and innovation strategy capability are expected to be directly and positively associated with ISO 56001 adoption.

H5: Innovation process capability is positively related to ISO 56001 adoption.

H6: Innovation performance management capability is positively related to ISO 56001 adoption.

H7: Innovation strategy capability is positively related to ISO 56001 adoption.

2.6 The Mediating Role of Organizational Readiness to Change

The mediation logic is grounded in the idea that capabilities shape the collective psychological state needed to execute system-level change, and that this state translates into adoption behavior. Readiness is defined in terms of commitment and collective confidence (Weiner, 2009), and higher readiness increases the likelihood of adopting an innovation and sustaining the implementation effort (Weiner, 2009). Therefore, readiness is expected to mediate the effect of innovation capability on ISO 56001 adoption.

H8: ORC mediates the relationship between innovation process capability and ISO 56001 adoption.

H9: ORC mediates the relationship between innovation performance management capability and ISO 56001 adoption.

H10: ORC mediates the relationship between innovation strategy capability and ISO 56001 adoption

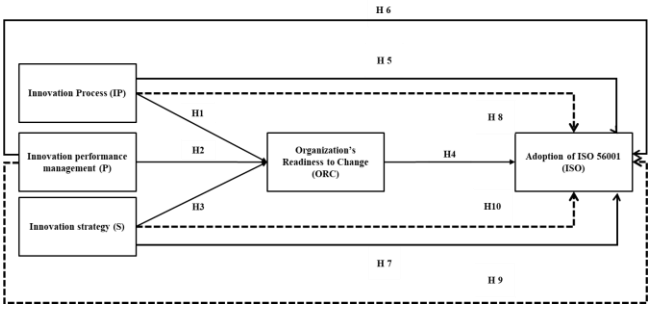

Figure 1: conceptual model

3. Method

3.1 Research Design

This study adopted a quantitative, survey-based research design to empirically examine the proposed research relationships and enable hypothesis testing in the context of the Saudi banking sector. A cross-sectional approach was employed to capture perceptions at a single point in time, which is appropriate for examining the behavioral and managerial constructs related to innovation management. The quantitative design provides a statistically reliable basis for generalizing the findings within the context of banking institutions in Saudi Arabia. Data were collected using a structured questionnaire that was distributed electronically to ensure efficiency and broad accessibility among respondents. The target respondents comprised managers and employees working in the banking sector in Saudi Arabia who were directly involved in innovation-related activities and decision-making processes. Banks located in Jeddah were selected as the focal geographical context because of their strategic economic importance and concentration of financial institutions.

3.2 Study Instrument

A questionnaire survey was used as the primary data collection instrument, as it is considered an appropriate method for gathering perceptual data from organizational respondents when the constructs and measurement scales are well-established. The questionnaire was developed based on an extensive review of ISO 56001 standard specifications and requirements, with minor modifications to ensure contextual relevance to the Saudi banking sector. The survey instrument was designed for academic research purposes and comprised multiple constructs measured using multi-item scale. A five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree was employed to facilitate response consistency and alignment with the research objectives.

3.3 Data Collection and Sample

Data was collected using an online survey created on the Google Forms platform and distributed via email to potential respondents. The study sample comprised managers and employees working in banks in Jeddah, Saudi Arabia. A total of 160 completed questionnaires were initially collected for analysis. Following preliminary data screening procedures, including checks for incomplete responses and response consistency, 21

questionnaires were excluded from the analysis. The remaining valid responses were retained for subsequent statistical analyses.

3.4 Common Method Bias Assessment

Given the cross-sectional and self-reported nature of the data, common method bias (CMB) was assessed to ensure the robustness of the study's findings. Harman's single-factor test was conducted using a principal component analysis without rotation. The results indicate that no single factor accounts for the majority of the variance. In line with the commonly applied interpretive logic for Harman-style diagnostics, common method bias is typically viewed as less problematic when the first unrotated factor explains less than 50% of the total variance (Renz et al., 2025). Simultaneously, Harman's single-factor test should be interpreted cautiously as a diagnostic check that does not mitigate common method bias (Srivastava & Rao, 2025). Additionally, procedural remedies were applied during data collection, including ensuring respondent anonymity and emphasizing that there were no right or wrong answers to reduce potential social desirability bias.

3.5 Measurement Model: Validity and Reliability Testing

The reliability and validity of the measurement scales were rigorously assessed. Internal consistency reliability was evaluated using Cronbach's alpha, with values exceeding the recommended threshold of 0.70, indicating acceptable reliability. Construct validity was examined using convergent and discriminant validity assessments. Convergent validity was established by confirming adequate factor loadings, average variance extracted (AVE) values above 0.50, and composite reliability (CR) values exceeding 0.70 (Hair et al,.2019). Discriminant validity was verified by ensuring that the square root of the AVE for each construct exceeded its correlation with the other constructs. To further ensure face and content validity, the questionnaire was reviewed by academic experts with experience in innovation management and banking research(Sarstedt et al., 2021).

3.6 Data Analysis Procedure

Partial least squares structural equation Model Modeling-SEM) was employed to analyze the data and test the proposed research model. PLS-SEM is particularly suitable for analyzing complex models involving multiple constructs and mediating relationships, as well as for prediction-oriented research. To strengthen methodological transparency, the adequacy of the final sample size for PLS-SEM estimation was assessed using an a priori statistical power rationale that aligns with the regression-equivalent logic often used for structural path models in PLS-SEM reporting and design decisions (Hair et al., 2019; Kock & Hadaya, 2018). Using conventional parameters ($\alpha = 0.05$; power = 0.80) and a medium effect size ($f^2 = 0.15$) (Cohen, 1992) and considering the maximum number of predictors pointing to an endogenous construct, the minimum required sample size was derived using G*Power 3.1 for regression-type power calculations (Faul et al., 2009). The final usable sample in this study (N = 139) exceeded this minimum requirement, indicating sufficient statistical power for hypothesis testing in the proposed PLS-SEM model (Hair et al., 2019; Kock & Hadaya, 2018). The analysis followed a two-step procedure (Richter et al., 2016). First, the measurement model was evaluated to confirm the constructs' reliability and validity. Second, the structural model was assessed to examine the significance of the hypothesized relationships and the model's explanatory power. PLS-SEM was preferred over traditional econometric techniques because of its ability to handle complex structural relationships and its suitability for survey-based research, where the identification of valid external instruments is challenging.

4. Results

4.1 Participant Demographics

The descriptive statistics of the study participants are presented in Table 1. The results indicate that the sample is predominantly male, accounting for 63.3% of the respondents, while females accounted for 36.7%. In terms of organizational role, 56.1% of the respondents occupied managerial positions, whereas 43.9% were employees. Regarding professional experience, the majority of respondents (43.9%) have between 5 and 10 years of experience. This was followed by those with more than 15 years of experience and those with 11–15 years of experience, each representing 20.9% of the sample. A smaller proportion of respondents (14.4%) reported having less than five years of work experience. Overall, the distribution of respondents across demographic categories suggests a balanced representation of roles and experience levels, providing a suitable basis for the subsequent empirical analysis.

Table 1: Sample Characteristics

Demographics Variables	Categories	Frequency	Percentage %
Position	Manager	78	56.1
	Employee	61	43.9
Year of Experience	Less than 5 years	20	14.4
	5 to 10 years	61	43.9
	11 to 15 years	29	20.9

	More than 15 years	29	20.9
Gender	Male	88	63.3
	Female	51	36.7

4.2 Measurement Model Assessment

Following the guidelines proposed by Hair et al. (2019) and Sarstedt et al. (2022), the measurement model was evaluated by examining the indicator reliability, internal consistency reliability, and convergent validity. As recommended by Hair et al. (2019), indicator reliability was first assessed by inspecting the factor loadings of all the measurement items. As presented in Table 2, the factor loadings for all retained items exceeded the recommended threshold of 0.60, indicating adequate indicator reliability across constructs. Internal consistency reliability was assessed using Cronbach's alpha and composite reliability (CR), with values ≥ 0.70 considered acceptable. As shown in Table 3, Cronbach's alpha values ranged from 0.889 to 0.916, while CR values ranged from 0.913 to 0.937, thereby exceeding the recommended thresholds and confirming strong internal consistency for all constructs. Convergent validity was assessed using the average variance extracted (AVE) with a minimum threshold of 0.50, as suggested by Sarstedt et al. (2021). The AVE values for all constructs exceeded this criterion, ranging from 0.603 to 0.751, thereby confirming adequate convergent validity.

Table 2: Reliability and (convergent) validity

Construct	Items	Factor Loading	AVE	Cronbach's alpha CA	Composite reliability CR
Innovation Process (IP)	IP1	0.743	0.652	0.910	0.929
	IP2	0.810			
	IP3	0.746			
	IP4	0.820			
	IP5	0.845			
	IP6	0.842			
	IP7	0.837			
Innovation performance management (P)	P1	0.794	0.685	0.908	0.929
	P2	0.760			
	P3	0.811			
	P4	0.854			
	P5	0.874			
	P6	0.868			
Innovation Strategy (S)	S1	0.675	0.603	0.889	0.913
	S2	0.697			
	S3	0.757			
	S4	0.817			
	S5	0.834			
	S6	0.753			
	S7	0.882			
Organization's Readiness to Change (ORC)	ORC1	0.829	0.748	0.916	0.937

	ORC2	0.848			
	ORC3	0.853			
	ORC4	0.890			
	ORC5	0.868			
	ORC6	0.896			
	ORC7	0.931			
Adoption of ISO 56001 (ISO)	ISO1	0.838	0.751	0.889	0.923
	ISO2	0.793			
	ISO3	0.898			
	ISO4	0.905			
	ISO5	0.913			

The Fornell and Larcker (1981) criterion was employed to assess discriminant validity. According to Hair et al. (2017), discriminant validity is established when the square root of the average variance extracted (AVE) for each construct is greater than its correlation with other constructs in the model. As reported in Table 4, the square roots of the AVE values (presented on the diagonal) for Innovation Process (IP = 0.807), ISO 56001 adoption (ISO = 0.867), Organization's Readiness to Change (ORC = 0.865), Performance (P = 0p828), and Innovation Strategy (S = 0.777) all exceed the corresponding inter-construct correlations. These results confirm adequate discriminant validity and demonstrate that the measurement model is valid and reliable for subsequent structural model analysis.

Table 3: Discriminant validity

Construct	IP	ISO	ORC	P	S
IP	0.807				
ISO	0.664	0.867			
ORC	0.635	0.784	0.865		
P	0.427	0.582	0.590	0.828	
S	0.384	0.576	0.620	0.326	0.777

4.3 Structural Model Assessment

The structural model was assessed by examining its explanatory power, model fit, and collinearity, following the established PLS-SEM guidelines. The key evaluation criteria included the coefficient of determination (R^2), standardized root mean square residual (SRMR), and collinearity diagnostics. According to Sarstedt et al. (2022), the R^2 coefficient reflects a model's predictive accuracy by capturing the proportion of variance explained in each endogenous construct. Chin (1998) suggests that R^2 values of approximately 0.19 indicate weak explanatory power, values around 0.33 represent moderate explanatory power, and values approaching 0.67 reflect substantial explanatory capability. As shown in Figure 2, the R^2 value for the adoption of ISO 56001 was 0.714, with an adjusted R^2 of 0.706, indicating a high level of explanatory power. Similarly, the R^2 value for an organization's readiness to change is 0.650, with an adjusted R^2 of 0.642, suggesting substantial predictive accuracy. These results demonstrate that the proposed model explains a considerable proportion of the variance in the endogenous constructs, thereby confirming the model's strong in-sample predictive relevance.

The overall model fit was further evaluated using the standardized root mean square residual (SRMR). According to Henseler et al. (2016), SRMR values below 0.08 indicate an acceptable model fit. The SRMR value for the saturated model was 0.060, which was well below the recommended threshold, confirming a satisfactory fit between the proposed model and the observed data.

In addition, collinearity among the predictor constructs was assessed to ensure the robustness of the structural model. Following the recommendations of Hair et al. (2019) and Sarstedt et al. (2022), variance inflation factor (VIF) values below the critical threshold indicate that multicollinearity is not a concern. The results suggest that collinearity does not adversely affect model estimation.

4.4 Hypothesis Testing

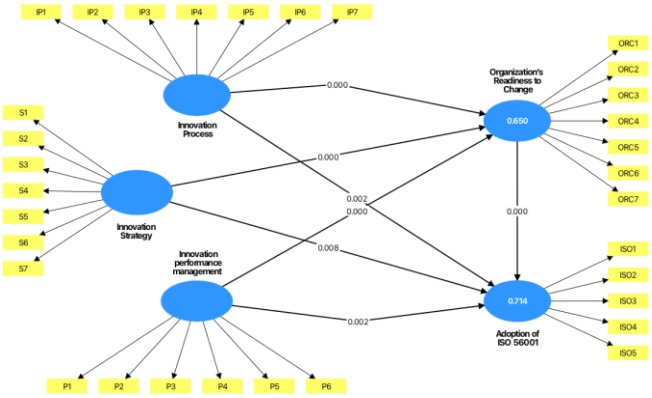

Figure 2: Path analysis

The results of the hypothesis testing for the direct effects are presented in Table 4. In line with the recommendations of Sarstedt et al. (2022), a bootstrapping procedure with 5,000 subsamples was employed to obtain stable and reliable estimates of path coefficients. The statistical significance of the hypothesized relationships was assessed using t-values and p-values. Following the guidelines proposed by Hair et al. (2019), path coefficients were considered statistically significant when the t-value exceeded 1.96, and the p-value was below 0.05.

Direct Effects

As reported in Table 4, the results of the structural model provide strong empirical support for all hypothesized direct relationships (H1–H7). Specifically, Innovation Process (IP) exhibits a positive and statistically significant effect on an organization's Readiness to Change (ORC) ($\beta = 0.370$, $t = 6.477$, $p < 0.001$), thereby supporting H1. Similarly, Innovation Performance Management (P) is positively associated with ORC ($\beta = 0.292$, $t = 4.717$, $p < 0.001$), confirming H2. In addition, Innovation Strategy (S) demonstrates a strong and significant influence on ORC ($\beta = 0.388$, $t = 7.196$, $p < 0.001$), thus H3 is accepted.

Furthermore, the Organization's Readiness to Change (ORC) shows a positive and significant relationship with the Adoption of ISO 56001 (ISO) ($\beta = 0.434$, $t = 4.877$, $p < 0.001$), thus providing empirical support for H4.

In addition to these indirect pathways, the findings reveal significant direct effects of innovation-related capabilities on ISO 56001 adoption. Specifically, Innovation Process (IP) has a positive and significant effect on ISO adoption ($\beta = 0.245$, $t = 3.135$, $p = 0.002$), supporting H5. Likewise, Innovation Performance Management (P) positively influences ISO adoption ($\beta = 0.184$, $t = 3.150$, $p = 0.002$), confirming H6. Finally, Innovation Strategy (S) also exerts a significant positive effect on ISO adoption ($\beta = 0.162$, $t = 2.639$, $p = 0.008$), leading to the acceptance of H7.

Table 4: Structure path estimates

Relationship	Path coefficient	S. Deviation	T Statistics	P Values	Decision
(H1) IP → ORC	0.370	0.057	6.477	0.001	Supported
(H2) P → ORC	0.292	0.062	4.717	0.001	Supported
(H3) S → ORC	0.388	0.054	7.196	0.001	Supported
(H4) ORC → ISO	0.434	0.089	4.877	0.001	Supported
(H5) IP → ISO	0.245	0.078	3.135	0.002	Supported
(H6) P → ISO	0.184	0.059	3.150	0.002	Supported
(H7) S → ISO	0.162	0.061	2.639	0.008	Supported

Indirect Effects

The proposed model incorporates the mediating role of the Organization's Readiness to Change (ORC) in explaining the indirect relationships between innovation-related factors and the adoption of ISO 56001. The mediation effects were examined using a bootstrapping procedure with 5,000 resamples and a 95% confidence interval, following Preacher et al. 's (2007) recommendations. The results of the indirect effects analysis are reported in Table 5.

The findings indicate that ORC significantly mediates the relationship between the Innovation Process (IP) and the Adoption of ISO 56001 (ISO). Specifically, the indirect effect of IP on ISO through ORC was positive and statistically significant ($\beta = 0.161$, $t = 4.286$, $p < 0.001$), thereby supporting H8. Similarly, the results demonstrate a significant mediating effect of ORC on the relationship between Innovation Performance Management (P) and ISO adoption ($\beta = 0.127$, $t = 3.275$, $p = 0.001$), supporting H9. Furthermore, ORC significantly mediated the relationship between Innovation Strategy (S) and ISO adoption ($\beta = 0.168$, $t = 3.857$, $p < 0.001$), thus supporting H10.

Table 5: Indirect path estimates

Relationship	Path coefficient	S. Deviation	T Statistics	P Values	Decision
(H8) IP → ORC → ISO	0.161	0.037	4.286	0.001	Supported
(H9) P → ORC → ISO	0.127	0.039	3.275	0.001	Supported
(H10) S → ORC → ISO	0.168	0.044	3.857	0.001	Supported

5. Discussion

This study examined how innovation capabilities translate into ISO 56001 innovation management system adoption in Saudi banks through the intervening mechanism of organizational readiness to change. The results provide consistent evidence that innovation process capability, innovation performance management capability, and innovation strategy capability contribute positively to readiness, which, in turn, strengthens ISO 56001 adoption. Importantly, all three innovation capabilities retain statistically significant direct effects on ISO 56001 adoption, indicating that banks do not rely on readiness alone to convert innovation capability into standard-based adoption.

ISO 56001 adoption can be interpreted as the institutionalization of a formal innovation management system rather than the mere presence of innovation intentions or ad hoc initiatives (Karstegl et al., 2025). Accordingly, the strong explanatory power observed for ISO 56001 adoption ($R^2 = 0.714$) is consistent with the view that adoption is strongly associated with internal organizational conditions that enable the formalization, coordination, and repeatability of innovation practices.

5.1 Interpreting the Direct Effects

The strongest predictors of organizational readiness to change were innovation strategy capability ($\beta = 0.388$) and innovation process capability ($\beta = 0.370$), followed by innovation performance management capability ($\beta = 0.292$). This pattern suggests that readiness is shaped most strongly by strategic framing and alignment, together with mature innovation processes that clarify roles, activities, and governance expectations during the change. Innovation performance management capability remains important, but its comparatively smaller effect suggests that measurement and review discipline alone may be insufficient to foster readiness unless paired with an articulated innovation direction and routinized processes.

Organizational readiness to change also emerged as the most proximal driver of ISO 56001 adoption ($\beta = 0.434$). This is theoretically meaningful because readiness reflects collective motivational and capability-related conditions that determine whether change efforts move from intention to execution (Granberg et al., 2025).

5.2 Understanding the Mediating Role of Readiness

The mediation results indicate that organizational readiness to change transmits part of the effect of each innovation capability on ISO 56001 adoption. Because the direct paths from innovation capabilities to adoption remained significant alongside the indirect paths, the findings support a dual-channel mechanism: innovation capabilities contribute to adoption partly by strengthening readiness and partly through direct operational pathways.

Substantively, innovation process capability, innovation performance management capability, and innovation strategy capability provide adoption capacity in two ways. First, they strengthen internal implementation conditions that make adoption more likely (readiness). Second, they provide tangible structures (process routines, performance governance routines, and strategic alignment) that can be mapped onto ISO 56001 requirements, thereby accelerating adoption even when readiness is uneven across organizational units.

5.3 Why Innovation Performance Management Capability Still Matters for Adoption

Although innovation performance management capability has the smallest direct effect among the three innovation capabilities, it remains statistically significant for both readiness and ISO 56001 adoption. This aligns with the nature of formal standards that require traceability and assessment mechanisms. In standards-based innovation governance, measurement and evaluation are part of how innovation is disciplined, justified, and made auditable (Blind et al., 2023). Therefore, innovation performance management capability can reduce ambiguity around innovation progress and results by enabling monitoring, evaluation, and evidence-based governance follow-up, supporting readiness, and facilitating translation into ISO 56001-compliant practices.

5.4 Limitations and Future Research Directions

This study is subject to limitations that bound its interpretation. The cross-sectional design constrains causal inference and does not capture how readiness and adoption evolve over time. The single-country, single-sector setting supports contextual relevance but limits generalizability beyond Saudi banking. The use of self-reported survey measures may introduce perceptual bias despite the CMB checks conducted. Future research

should longitudinally examine ISO 56001 adoption, compare the results across regions and regulated service sectors, and integrate objective indicators of innovation governance maturity and implementation progress.

6. Implications

6.1 Theoretical Implications (grounded in empirical magnitudes)

This study contributes to the emerging stream of innovation management systems (IMS) by empirically specifying ISO 56001 adoption as a capability-enabled, readiness-dependent organizational outcome. An IMS is not merely a set of discrete tools; it is a managerial architecture through which innovation is organized, governed, and steered toward objectives (Karstegl et al., 2025). By positioning ORC as a proximal mechanism through which innovation-related capabilities translate into ISO 56001 adoption, this study advances readiness theory in a standards-oriented context. The ORC is conceptually grounded in a shared organizational state that combines commitment and efficacy (Weiner, 2009).

The empirical magnitudes reinforce this dual-path explanation. Innovation strategy capability ($\beta = 0.388$, $p < 0.001$), innovation process capability ($\beta = 0.370$, $p < 0.001$), and innovation performance management capability ($\beta = 0.292$, $p < 0.001$) shape the ORC. ORC exhibited the largest proximal association with ISO 56001 adoption ($\beta = 0.434$, $p < 0.001$), while the capabilities retained direct effects on adoption: innovation process capability ($\beta = 0.245$, $p = 0.002$), innovation performance management capability ($\beta = 0.184$, $p = 0.002$), and innovation strategy capability ($\beta = 0.162$, $p = 0.008$). Taken together, these coefficients indicate that adoption is not only an attitudinally enabled readiness outcome but also a function of routinized managerial capabilities that can directly shape ISO 56001-aligned innovation governance.

This theoretical framing is consistent with the view that standards operate as infrastructural devices in innovation systems, shaping interfaces and evaluative criteria, rather than serving as neutral documentation (Blind et al., 2023). Finally, the study's explanatory strength for ISO 56001 adoption ($R^2 = 0.714$) and ORC ($R^2 = 0.650$) reinforces a capability-based interpretation of standard adoption in regulated-service settings.

6.2 Managerial and Policy Implications (grounded in empirical magnitudes)

For bank leaders pursuing ISO 56001 as an innovation management system, the results imply that adoption is unlikely to be sustained if it is treated as a documentation exercise disconnected from organizational commitment and collective efficacy. Organizational readiness to change was the strongest proximal predictor of ISO 56001 adoption ($\beta = 0.434$, $p < 0.001$), and the model explained substantial variance in adoption ($R^2 = 0.714$) and readiness ($R^2 = 0.650$). Accordingly, managerial and policy recommendations should prioritize interventions that strengthen readiness while reinforcing the innovation capabilities that most strongly shape it.

First, managers should treat ORC as a measurable implementation condition and embed readiness-building workstreams into their adoption roadmaps. Because readiness has the largest association with adoption ($\beta = 0.434$), interventions should strengthen change commitment and change efficacy through leadership communication and participation, as well as through training, resourcing, and implementation support mechanisms (Weiner, 2009; Granberg et al., 2025). At the policy level, diffusion is likely to be strengthened when assurance mechanisms emphasize demonstrated implementation preparedness rather than symbolic adoption.

Second, capability development should reflect the observed magnitudes of the readiness model. Innovation strategy capability ($\beta = 0.388$) and innovation process capability ($\beta = 0.370$) have the strongest effects on readiness, followed by innovation performance management capability ($\beta = 0.292$). This implies prioritizing clear innovation priorities and governance intent and then embedding them into routinized innovation processes that define roles, activities, and decision rights. Innovation performance management capability remains important, but its comparatively smaller readiness coefficient suggests that performance indicators, monitoring, and review routines are most effective when anchored to a clear strategic intent and stable innovation processes.

Third, the direct effects indicate that capability-driven enactment matters alongside readiness. Innovation process capability has the strongest direct effect on adoption ($\beta = 0.245$), followed by innovation performance management capability ($\beta = 0.184$) and innovation strategy capability ($\beta = 0.162$). Therefore, banks should institutionalize end-to-end innovation routines and governance-integrated workflows early, while embedding innovation indicators, monitoring, and review cycles that support traceability and learning consistent with standards-based assessment expectations (Blind et al., 2023). This ensures that ISO 56001 functions as a structured innovation governance system rather than an isolated certification initiative (Karstegl et al., 2025).

7. Conclusion

This study investigated how Saudi banks translate innovation-related capabilities into ISO 56001 adoption, with organizational readiness for change as a proximal implementation mechanism. The results supported all hypothesized relationships (H1–H10). Innovation process capability, innovation performance management capability, and innovation strategy capability each increase ORC, and ORC increases the adoption of ISO 56001. The three capability dimensions also retained significant direct effects on adoption, indicating partial mediation, in which readiness transmits a meaningful share of capability influence, while capabilities also exert direct operational effects.

Conceptually, the findings reinforce that the adoption of ISO 56001 is best understood as the institutionalization of a structured innovation governance architecture rather than a narrow administrative decision (Karstegl et al., 2025). Banks are more likely to adopt ISO 56001 when they have the capability foundation needed to operationalize structured innovation routines and the collective commitment and confidence required to implement organizational change consistently (Weiner, 2009). Accordingly, adoption varies because capability maturity supplies routinized structures that can align with ISO 56001 requirements, while readiness conditions whether these structures are enacted as coordinated implementation behaviors rather than remaining fragmented or symbolic. Therefore, substantive adoption is most likely when innovation capabilities and readiness mutually reinforce each other as complementary implementation conditions.

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