



Unraveling Determinants of Risk Culture in Islamic Banking: Perspectives from Importance-Performance Matrix Analysis

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ABSTRACT

This study aims to enhance our understanding of the determinants of risk culture within Islamic Banking and provide valuable guidance to management for strengthening it. Using an explanatory research design, quantitative methodology, and importance-performance matrix analysis, we distributed Google Forms to 400 employees via email and WhatsApp. The pivotal determinants of risk culture identified in the study are organization, competency, and leadership. Risk culture, which includes organizational principles, norms, frameworks, and guidelines shaping risk management, is primarily determined by the organization. The research emphasizes the crucial role of leadership in establishing, cultivating, and implementing a risk culture, highlighting its substantial impact on upholding risk management standards. Underlining the pivotal significance of organization and leadership is essential for strengthening risk culture in Islamic Banking. This involves enhancing organizational capabilities through core values, regulatory frameworks, and a steadfast commitment to robust risk management standards. Leadership in Islamic banking holds a critical position, providing unwavering support for minimizing errors, fostering operational consistency, and maintaining a resolute track record of achievements. By emphasizing these three interrelated dimensions, the study contributes to the advancement of sustainable and resilient Islamic banking practices on a global scale.

Keywords: risk culture; organization; competence; leadership; islamic banking.

INTRODUCTION

In the banking sector, risk culture is a fundamental aspect that shapes individuals' and organizations' perceptions, attitudes, and behaviors toward risk.¹ emphasizes that risk culture reflects how individuals perceive risk, their willingness to take it, and their ability to control it. This culture not only nurtures personal accountability but also equips individuals with the capability to adapt and persevere in unexplored domains.²

¹ Marco di antonio, "Risk Culture in Different Bank Businesses," 2017, 31–71.

² Udo Milkau, "Risk Culture during the Last 2000 Years – from an Aleatory Society to the Illusion of Risk Control," *International Journal of Financial Studies* 5, no. 4 (2017).

The development of customs and norms within a risk culture is a dynamic process, molded by diverse factors and evolving from shared experiences over time.³ The interplay of formal tools, such as reward systems and regulations, along with individual psychological processes in identifying, assessing, and mitigating risk, collectively constitutes what is known as risk culture. This phenomenon exhibits continual evolution, iteratively renewing itself each time it confronts a shock.⁴

Notably, a deficient risk culture emerged as a contributing factor to the 2008 banking crisis.⁵ The collapse of risk culture not only resulted in a lack of emphasis on consumers and clients but also led to excessive and uncontrolled risk-taking.⁶

Given its profound influence on decisions related to risk-taking, policy formulation, and ultimate decision-making, risk culture stands as a pivotal facet of risk management.⁷ Consequently, the Central Bank, in its regulatory capacity, anticipates that all banks will institute a risk culture grounded in the principle of prudence. Importantly, this expectation does not imply an avoidance of risk; rather, it signifies the adoption of a risk-taking culture that aligns with the bank's risk appetite, enabling sustainable growth without encountering financial distress.

According to the Financial Stability Board (FSB), cultivating a positive risk culture in banks requires unwavering adherence to specific fundamental components, including a resilient leadership culture, meticulous employee accountability, commensurate rewards, transparent communication, and the introduction of challenges.⁸ The "Tone from the Top" emphasizes the board of directors and senior management's responsibility in setting standards for the organization's risk culture and assessing implemented measures. Adherence to sound risk management practices and maintaining high standards of integrity at all levels significantly contributes to a robust risk culture.⁹

The board and upper management delegate ownership of the risk policy to employees, fostering individual accountability and awareness of the consequences of violating the risk management policy.¹⁰ Responsibilities

³ Simon Ashby, Tommaso Palermo, and Michael Power, *Risk Culture in Financial Organisations: An Interim Report*, The London School of Economics and Political Science, 2013.

⁴ Ashby, Palermo, and Power, *Risk Culture in Financial Organisations: An Interim Report*.

⁵ Nicola Bianchi and Franco Fiordelisi, "Measuring and Assessing Risk Culture," in *Risk Culture in Banking*, 2017.

⁶ Ashby, Palermo, and Power, *Risk Culture in Financial Organisations: An Interim Report*.

⁷ Paul Hopkin, *Fundamental of Risk Management 4th Edition*, Kogan Page Limited, vol. 4, 2017; Alessandro Carretta, Vincenzo Farina, and Paola Schwizer, "Risk Culture and Banking Supervision," *Journal of Financial Regulation and Compliance* 25, no. 2 (2017).

⁸ FSB, "Guidance on Supervisory Interaction with Financial Institutions on Risk Culture: A Framework for Assessing Risk Culture," *Financial Stability Board* (2014).

⁹ FSB, "Guidance on Supervisory Interaction with Financial Institutions on Risk Culture: A Framework for Assessing Risk Culture."

¹⁰ FSB, "Guidance on Supervisory Interaction with Financial Institutions on Risk Culture: A Framework for Assessing Risk Culture."

associated with each line of business, the risk management department, internal audit, and other control functions play a pivotal role in continuous risk monitoring, identification, management, and mitigation.

Building on this, ¹¹ propose that governance and organizational structure fortify a risk culture, nurturing risk behaviors anticipated by firms. A robust risk culture reflects the collective commitment of employees to uphold boundaries and an understanding of acceptable risk-taking limits (risk attitude). Structural components of the risk management framework, including training, reward/performance plans, oversight by designated risk managers, and a comprehensive risk framework, contribute to fortifying a risk and management culture. This culture clarifies each individual's role and contribution in establishing priorities for risk behavior.¹²

In light of this gap, this study aims to explore risk culture within the context of Islamic banking to provide a more contextual understanding aligned with Sharia values. The researcher is interested in this topic based on the rapid growth of the Islamic banking industry in Indonesia, which requires a deeper understanding of how risk culture operates within Islamic values. Furthermore, the findings of this research are expected to contribute both theoretically and practically to the development of more effective and context-specific risk management systems for Islamic banks, and to provide a strategic foundation for policy formulation by regulators and decision-makers.

Literature Review

Risk culture in banking institutions reflects the shared awareness, attitudes, and behaviors of organizational actors—namely senior management, boards of directors, and operational staff—toward risk-related decision-making. This cultural construct significantly shapes how daily operations are conducted, especially concerning compliance and strategy implementation. At its core, risk culture bridges individual tendencies to take risks with an organization's structural and normative support for risk-taking behavior.¹³ This influence on decision-making significantly impacts both management and staff in their day-to-day operations.¹⁴ Essentially, risk culture defines the link between an individual's inclination for risk-taking and the corporate culture encouraging such behavior.

¹⁵ asserts that individual and collective beliefs, attitudes, and behavioral patterns contribute to cultivating a positive risk culture. Studies on risk culture

¹¹ Elizabeth A. Sheedy and Barbara Griffin, "Empirical Analysis of Risk Culture in Financial Institutions: Interim Report," *SSRN Electronic Journal* (2014).

¹² Sheedy and Griffin, "Empirical Analysis of Risk Culture in Financial Institutions: Interim Report."

¹³ International Finance Corporation, *Risk Culture, Risk Governance, and Balanced Incentives*. Risk Culture, Risk Governance, and Balanced Incentives, 2015.

¹⁴ International Finance Corporation, *Risk Culture, Risk Governance, and Balanced Incentives*. Risk Culture, Risk Governance, and Balanced Incentives.

¹⁵ Hopkin, *Fundamental of Risk Management 4th Edition*, vol. 4, p. .

and the creation of a risk culture model often concentrate on corporate governance and individual elements. The personal component emphasizes skills and leadership underscored by risks taken as rewards. Organizational governance strongly stresses openness and effective risk management.¹⁶

¹⁷developed a risk model aligned with the IRM risk culture model, highlighting personal characteristics such as motivation and competence alongside organizational aspects like values, strategies, rules, and procedures. Additionally, the administrative component of the Treating Customers Fairly¹⁸ risk model places greater emphasis on recruiting and training, rewards, tactics, and values than on leadership and decision-making as individual components. The risk culture model crafted by the¹⁹ underscores the competence and leadership of individual members, reinforced by optimal incentives, departing from the earlier model. Leadership within a risk culture is assessed based on criteria like setting a good example, applying corporate principles, being risk-aware, and drawing lessons from past experiences.

Analyzing an organization's policies, procedures, and risk management guidelines facilitates the identification of any formal risk culture.²⁰ Furthermore, organizational structure and governance enrich risk culture, fostering anticipated risk behaviors in everyday operations, as evidenced in the study by.²¹ Research by²² suggests that organizational values profoundly shape corporate entities, leading to the study hypothesis based on this premise:

H1: There exists a positive association between the organization and the prevailing risk culture model.

Leadership plays a crucial role.²³ As a result, the development of risk culture is significantly shaped by competent leadership.²⁴ Additionally, the organization is influenced by the leader's commitment to instilling and

¹⁶ Richard Anderson and Peter Richardson, "Risk Culture: Resources for Practitioners," *The Institute of Risk Management*, no. December (2012).

¹⁷ Deloitte, *Cultivating a Risk Intelligent Culture: Understand, Measure and Strengthen*, 2012.

¹⁸ P.J. McConnell, "A Risk Culture Framework for Systematically Important Banks," *Journal of Risk and Governance* 3, no. 1 (2013).

¹⁹ FSB, "Guidance on Supervisory Interaction with Financial Institutions on Risk Culture: A Framework for Assessing Risk Culture."

²⁰ Sheedy and Griffin, "Empirical Analysis of Risk Culture in Financial Institutions: Interim Report."

²¹ Sheedy and Griffin, "Empirical Analysis of Risk Culture in Financial Institutions: Interim Report."

²² Giampaolo Gabbi, Mattia Pianorsi, and Maria Gaia Soana, "The Impact of Risk Culture on Bank Reputation," in *Risk Culture in Banking*, 2017.

²³ Anderson and Richardson, "Risk Culture: Resources for Practitioners"; McConnell, "A Risk Culture Framework for Systematically Important Banks"; FSB, "Guidance on Supervisory Interaction with Financial Institutions on Risk Culture: A Framework for Assessing Risk Culture."

²⁴ M. J. Hao and R. Yazdanifard, "How Effective Leadership Can Facilitate Change," *Global Journal of Management and Business Research: A Administration and Management* 15, no. 9 (2015).

upholding a risk culture in decision-making processes related to risk.²⁵ The subsequent hypothesis suggests:

H2: There exists a positive correlation between risk culture and leadership.

²⁶highlights competence and leadership as crucial dimensions in shaping an individual's approach to risk. Cultivating competence is integral to establishing a robust risk culture. In this context, competence refers to an individual's ability to effectively manage job-related events or maintain a consistently stable attitude and behavior.²⁷ Furthermore, ²⁸outlines four key attributes relevant to risk management: (1) developing robust relationships, (2) effective communication, (3) analytical skills, and (4) adept management.

In the realm of risk management, creating a risk culture requires educating and training individuals in risk management practices and procedures.²⁹ Employees who undergo such education not only acquire values aligned with Islamic principles but also gain technical proficiency and expertise in various risk management methodologies. Additionally, a company's risk culture is significantly influenced by the careful selection and recruitment of employees based on their risk preferences.³⁰ Recruitment and training emerge as the principal determinants shaping the risk capabilities of employees, thereby significantly impacting the overarching risk culture. Empirical research further supports the assertion that competence plays a pivotal role in influencing risk culture.³¹ The subsequent hypothesis is formulated based on these considerations:

H3: There exists a positive correlation between competence and risk culture.

Overall, the literature converges on the idea that an effective risk culture is a dynamic interaction between structure (governance and recruitment), individual traits (competence and leadership), and reinforcement mechanisms (training, values, and incentives). This integrated perspective serves as a credible theoretical basis to understand how risk culture evolves in Islamic banking institutions.

²⁵ Mohamad Hisyam Selamat and Othman Ibrahim, "The Moderating Effect of Risk Culture in Relationship between Leadership and Enterprise Risk Management Implementation in Malaysia," *Business Management and Strategy* 9, no. 1 (2018).

²⁶ FSB, "Guidance on Supervisory Interaction with Financial Institutions on Risk Culture: A Framework for Assessing Risk Culture."

²⁷ Signe M. Spencer and Jr Lyle M. Spencer, "Competence at Work: Models for Superior Performance. Japan Productivity Center.," *John Wiley & Sons, Inc.* (1993).

²⁸ Hopkin, *Fundamental of Risk Management 4th Edition*, vol. 4, p. .

²⁹ Cormac Bryce et al., "Should the Insurance Industry Be Banking on Risk Escalation for Solvency II?," *International Review of Financial Analysis* 46 (2016).

³⁰ Yihui Pan, Stephan Siegel, and Tracy Yue Wang, "Corporate Risk Culture," *Journal of Financial and Quantitative Analysis* 52, no. 6 (2017): 2327-2367, <https://www.cambridge.org/core/product/70E9FA6207341E81D280A6CC0E67E165>.

³¹ Iwona Gorzen-Mitka, "Leading Markers Of Risk Culture In Organization," *European Journal of Sustainable Development* 7, no. 1 (2018).

METHODS

This study adopts the Importance-Performance Matrix Analysis (IPMA) approach to analyze the factors shaping risk culture in the Islamic banking sector. IPMA is selected because it provides two-dimensional insights: the relative importance of a construct in influencing the dependent variable, and the actual performance of that construct in practice. This approach is particularly valuable in management as it allows for the prioritization of actions based on both impact and actual achievement, making the research findings more applicable and strategic³².

The IPMA process begins by estimating the total effect of each construct on risk culture through the Partial Least Squares Structural Equation Modeling (PLS-SEM) model. This value reflects the level of importance of each construct in shaping risk culture. The next step involves measuring the performance of the construct by calculating the average score of its indicators, which is then transformed into a scale of 0–100. The combination of these two dimensions is mapped into four matrix quadrants: (1) Keep up the good work – high importance and high performance, (2) Concentrate here – high importance but low performance, (3) Low priority – low importance and low performance, and (4) Possible overkill – high performance but low importance³³.

The importance of measuring employee perceptions in assessing risk culture highlights the necessity of utilizing surveys with a questionnaire instrument or conducting interviews.³⁴ To evaluate these attitudes, the instrument strategically adapts risk culture indicator items from the³⁵ using the Likert scale, ranging from 1 to 7.³⁶

For the selection of respondents, the study focuses on employees of the state-owned Islamic Banking firm (BUMN) Regional, employing a non-probability volunteer sample approach. Adhering to the ten times rule in PLS-SEM, which establishes minimum sample requirements, the study prescribes a minimum of 40 samples, derived from a calculated four times 10.

In accordance with³⁷ methodological recommendations, the minimum sample size is calculated to be 124 samples, considering three paths, α : 5%, and

³² Christian M. Ringle and Marko Sarstedt, "Gain More Insight from Your PLS-SEM Results the Importance-Performance Map Analysis," *Industrial Management and Data Systems*, 2016.

³³ Noorjahan Banon Teeluckdharry, Viraiyan Teeroovengadum, and Ashley Keshwar Seebaluck, "A Roadmap for the Application of PLS-SEM and IPMA for Effective Service Quality Improvements," *TQM Journal* 36, no. 5 (2024).

³⁴ Sheedy and Griffin, "Empirical Analysis of Risk Culture in Financial Institutions: Interim Report."

³⁵ FSB, "Guidance on Supervisory Interaction with Financial Institutions on Risk Culture: A Framework for Assessing Risk Culture."

³⁶ Sheedy and Griffin, "Empirical Analysis of Risk Culture in Financial Institutions: Interim Report."

³⁷ Jacob Cohen, "Quantitative Methods in Psychology: A Power Primer," *Psychological Bulletin* 112, no. 1 (1992).

R2: 0.1. The variability in the number of observations depends on the number of paths, the significance level, and the adjusted R-Square.

The administration of Google Forms questionnaires to 400 employees via email and WhatsApp resulted in 140 responses over the subsequent two months. However, due to inconsistencies or anomalies, 9 out of the 140 responses were considered unusable. Consequently, 131 samples were deemed suitable for further data analysis. A detailed exposition of the respondents' profiles is provided in Table 1.

Table 1. Respondent Characteristic

Respondent Characteristic		N	%
Gender	Male	99	75.57
	Female	32	24.43
Age	27 - 36 years	44	33.59
	37 - 46 years	71	54.20
	47 - 56 years	16	12.21
Tenure	0 -10 years	38	29.01
	11 - 20 years	88	67.18
	21 - 30 years	4	3.05
	31 - 40 years	1	0.76
Education Level	Associate	10	7.63
	Degree		
	Bachelor Degree	110	83.97
	Master Degree	11	8.40

RESULT AND DISCUSSION

Measurement Model

The measurement model evaluates integral aspects of convergent and discriminant validity. Convergent validity assesses the extent to which multiple measurement items associated with a specific concept converge and share a substantial degree of variance.³⁸ Indicators of convergent validity, such as outer loadings, average variance extract (AVE), and composite reliability (CR), are essential, where outer loading approximates the relationship in the reflective measurement model, representing the overall contribution of the item to the assigned construct.

For the reflective constructs of leadership, competence, risk culture, and organization, all outer loadings in Figure 1 surpass the established cutoff value of 0.60, signifying a satisfactory level of reliability for each indicator. Additionally, Table 2 presents the AVE values for each variable, all exceeding 0.50, including risk culture (0.663), competence (0.870), leadership (0.761), and organization (0.739). These findings affirm that each variable fulfills the criteria for convergent validity.

³⁸ Joseph F. Hair et al., "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks," *Sage* (2017).

The scrutiny of convergent validity lays the foundation for assessing discriminant validity, which measures the distinctiveness between different constructs. Discriminant validity is achieved when the AVE of each construct exceeds the squared correlation between that construct and any other in the model.³⁹ Table 3 impeccably demonstrates that the square roots of the AVE values for each construct surpass the correlations between constructs, establishing the discriminant validity of the measurement model and signifying clear demarcation between the constructs.

In conclusion, the thorough examination of convergent and discriminant validity within the measurement model affirms the reliability and distinctiveness of the variables, providing a robust foundation for subsequent analyses.

Table 2. Result Measurement Model

Variable	CR	AVE	VIF
Organization	0.969	0.739	1.687
Leadership	0.972	0.761	1.441
Competence	0.982	0.870	1.753
Risk Culture	0.962	0.663	-

The Heterotrait-Monotrait Ratio of Correlation (HTMT), renowned for its methodological robustness and surpassing cross-loading criteria⁴⁰, was rigorously employed to assess discriminant validity. The HTMT values in Table 3 consistently fall below the widely accepted criterion of 0.90.⁴¹ This compelling evidence affirms the absence of challenges in discriminant validity within the measurement model.

Consequently, the construct has not only met but surpassed the standards for measurement validity and reliability. Meticulous analyses of outer loadings, composite reliability, average variance extracted (AVE), and discriminant validity provide robust evidence. This comprehensive evaluation further fortifies confidence in the integrity and soundness of the measurement model.

³⁹ Hair et al., "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks."

⁴⁰ Jörg Henseler, Christian M. Ringle, and Marko Sarstedt, "A New Criterion for Assessing Discriminant Validity in Variance-Based Structural Equation Modeling," *Journal of the Academy of Marketing Science* 43, no. 1 (2015); Claes Fornell and David F Larcker, "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research* 18, no. 1 (1981): 39–50, <http://www.jstor.org/stable/3151312>.

⁴¹ Andrew H. Gold, Arvind Malhotra, and Albert H. Segars, "Knowledge Management: An Organizational Capabilities Perspective," *Journal of Management Information Systems* 18, no. 1 (2001).

Table 3. Result Heterotrait-Monotrait Ratio of Correlation (HTMT)

	Risk Culture	Leadership	Competence	Organization
Risk Culture				
Leadership	0.651			
Competence	0.607	0.519		
Organization	0.640	0.496	0.621	

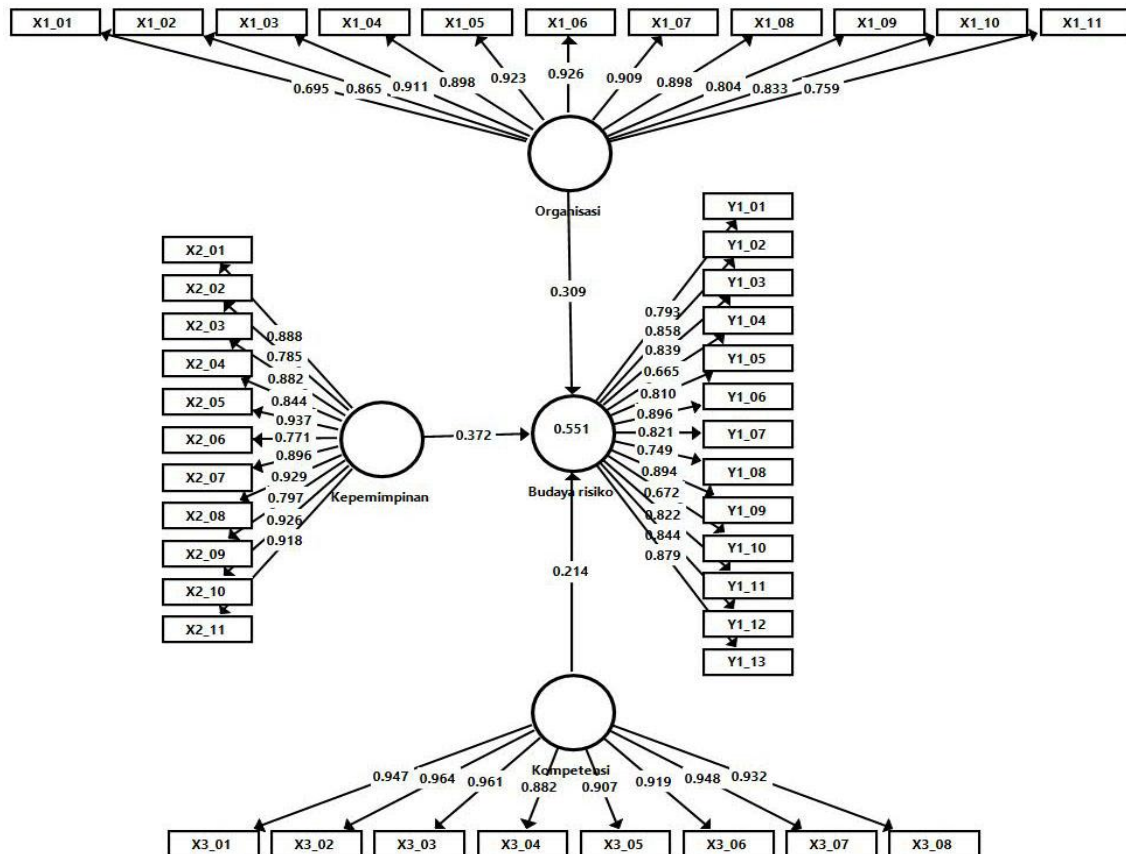


Figure 1. SEM Model

Structural Model

The subsequent step in the analytical process, once the constructs have been established as valid and reliable, involves evaluating the output of the structural model. This phase aims to assess the model's predictive capacity and the intricate interrelationships among its constructs. The initial scrutiny of the structural model encompasses an examination of lateral collinearity, determined by the Variance Inflation Factor (VIF) collinearity statistic. Typically, collinearity is considered a concern if the VIF value exceeds 3.3,⁴² while a value exceeding

⁴² Adamantios Diamantopoulos and Judy A. Siguaw, "Formative versus Reflective Indicators in Organizational Measure Development: A Comparison and Empirical Illustration," *British Journal of Management* 17, no. 4 (2006).

five may suggest a higher likelihood of collinearity.⁴³ As indicated in Table 2, the absence of lateral multicollinearity is affirmed within this model, given that the VIF values of the independent variables (organization, leadership, and competence) are below the threshold of 3.3.

Subsequently, the hypothesis testing phase entails the execution of a bootstrap procedure with a repeat sample of 5000, as recommended by.⁴⁴ This procedure aims to derive the path coefficient of each construct along with its significance level, as illustrated in Figure 1. The assessment of the path coefficient's significance, coupled with the values of R², Q², and the effect size of f², collectively gauges the model's predictive efficacy concerning the relationship between exogenous and endogenous variables. Table 4 elucidates that a positive and statistically significant correlation exists between risk culture and organization ($\beta = 0.309$, $p < 0.05$), as well as between risk culture and leadership ($\beta = 0.372$, $p < 0.05$). Finally, a positive and substantial relationship is discerned between risk culture and competence ($\beta = 0.214$, $p < 0.05$). This comprehensive analysis contributes to a nuanced understanding of the intricate relationships within the structural model, substantiating its robustness and relevance.

Table 4. Result Testing the hypothesis

Hypothesis	Path	Std. Beta	Std. Error	t-statistic	p-value	Note
H1	Organization → Risk Culture	0.309	0.070	4.386	0.000	Significant
H2	Leadership → Risk Culture	0.372	0.065	5.699	0.000	Significant
H3	Competence → Risk Culture	0.214	0.077	2.788	0.003	Significant

Furthermore, Table 5 presents the outcomes of assessing the effect size of f², Q², and R². The risk culture variable yields an R² value of 0.551, signifying that organization, competence, and leadership collectively account for 55.10% of the variance in risk culture. The remaining variance is influenced by factors not explicitly considered in this study. As per the guidelines of ⁴⁵, the general benchmarks for endogenous latent variables categorized as substantial, moderate, or weak are R² values of 0.75, 0.50, or 0.25, respectively. According to this criterion, when the calculated R² falls within the range of 0.5 to 0.75, it denotes a moderate level. This nuanced interpretation provides a comprehensive perspective on the substantial impact of organization, competence, and leadership on the variance in risk culture.

⁴³ Hair et al., "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks."

⁴⁴ Hair et al., "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks."

⁴⁵ Hair et al., "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks."

Table 5. Result Estimating R^2 , Q^2 , and f^2

Path	Construct	R^2	Q^2	f^2	Note
	Risk Culture	0.551	0.541	-	R^2 : Moderate Q^2 : Significant
Organization à Risk Culture				0.126	Medium
Leadership à Risk Culture				0.214	Medium
Competence à Risk Culture				0.058	Small

The effect sizes, represented by values of 0.02, 0.15, and 0.35, signify modest, medium, and significant impacts of exogenous latent variables, as per the primary method for evaluating f^2 proposed by.⁴⁶ The f^2 value of 0.126 for organization on risk culture, presented in Table 5, suggests a moderate impact on risk culture. Similarly, leadership exhibits a moderate influence on risk culture, evidenced by the f^2 value of 0.216 for leadership and risk culture. In contrast, competence demonstrates a relatively modest effect on risk culture, with an f^2 value of 0.058.

Furthermore, the assessment of the model's predictive relevance, as indicated by the Q^2 value, asserts that the model possesses predictive relevance for specific endogenous constructs when the Q^2 value exceeds 0.⁴⁷ Notably, Table 5 highlights the substantial predictive relevance of the risk culture Q^2 value, computed at 0.541. These nuanced effect sizes and predictive relevance indicators contribute to a comprehensive understanding of the intricate relationships within the structural model.

Importance-Performance Matrix Analysis

This research centers on risk culture as the focal construct, employing Importance-Performance Matrix Analysis (IPMA). The significance value of the structural equation model comprehensively takes into account the combined effects of the variables. In contrast, the latent variable scores undergo scaling, ranging from 0 for the lowest to 100 for the highest, to generate the value or performance index.⁴⁸ The Importance-Performance Matrix is meticulously examined, considering both the overall effect (importance) and index value (performance), as meticulously detailed in Table 6.

Table 6. Total Effect and Index Value

	Total Effect (Importance)	Index Value (Performances)
Organization	0.309	83.102
Leadership	0.372	79.895
Competence	0.214	84.228

⁴⁶ Jacob Cohen, "Statistical Power Analysis for the Behavioural Sciences. Hillside," NJ: Lawrence Earlbaum Associates, 1988.

⁴⁷ Cohen, "Statistical Power Analysis for the Behavioural Sciences. Hillside"; Hair et al., "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks."

⁴⁸ Hair et al., "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks."

The paramount element in risk culture, as delineated in Table 6, is the total effect leadership score of 0.372, surpassing the relevance of other latent factors. Organizational competence falls in the intermediate range, followed by competence. Furthermore, Figure 2 visually depicts the relationship between performance and importance. The quality spectrum is depicted on the vertical axis, spanning from subpar to excellent. Simultaneously, the perceived value of these qualities is represented along the horizontal axis, ranging from insignificant to extremely important.

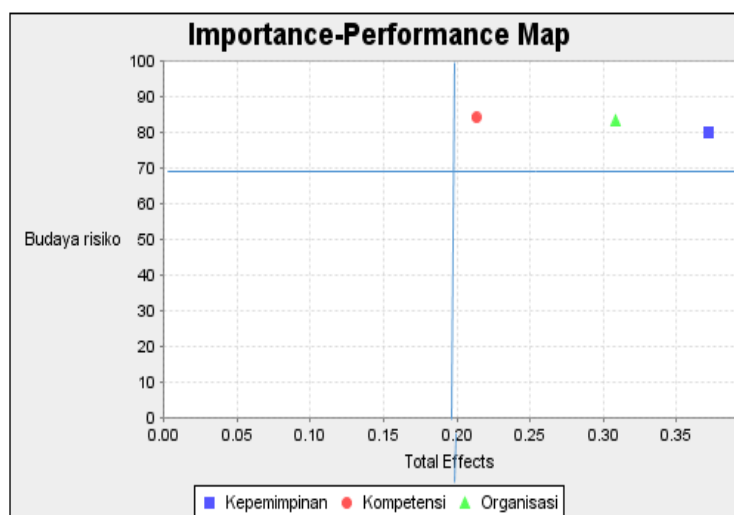


Figure 2. IPMA Risk Culture

The creation of a performance-importance map, delineated into four quadrants, is demonstrated with Q1 (maintain excellent performance), Q2 (important to enhance), Q3 (excessive performance for less significant issues), and Q4 (low priority), as outlined by.⁴⁹ As portrayed in Figure 2, the organization holds significant importance (0.309) and exhibits commendable performance (83.102). Similarly, leadership bears substantial significance (0.372) and showcases commendable performance (79.895), while competence is highly effective (0.214) and performs well (84.228). This implies that to sustain current performance and continue the commendable job, the organization's leadership and competency are situated in quadrant one.

Discussion

The Importance-Performance Matrix Analysis (IPMA) findings reveal that leadership holds the highest importance score (0.372) in shaping risk culture, followed by organization (0.309) and competence (0.214). However, competence shows the highest performance (84.23), suggesting that employees in Islamic banking perceive themselves as well-equipped in managing risk. All three

⁴⁹ John A Martilla and John C James, "Importance-Performance Analysis," *Journal of Marketing* 41, no. 1 (1977): 77-79, <http://www.jstor.org/stable/1250495>; Hair et al., "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks."

constructs fall into Quadrant I, which signals that they are current strengths – but leadership demands greater strategic focus due to its pivotal impact.

Leadership emerged as the most critical driver of risk culture. Islamic leadership significantly contributes to developing internal values, work motivation, and ultimately employee performance, reinforcing cultural adherence to ethical and Sharia-compliant standards ⁵⁰. Additionally, the interaction between leadership and organizational culture has been shown to enhance institutional effectiveness in the banking sector, further supporting this finding ⁵¹.

Organizational culture also contributes significantly to risk culture. Institutions that cultivate cultural alignment with long-term strategy and governance standards tend to perform better in both compliance and resilience ⁵². A related case study on the formation of Jordan Islamic Bank revealed how organizational structure and religious-cultural alignment were key in shaping Islamic banking identity and legitimacy ⁵³. However, corporate cultures that overemphasize control without fostering collaboration have been shown to increase systemic risk in conventional banking contexts, raising caution for Islamic institutions to balance structure and innovation ⁵⁴.

Competence, while showing the lowest importance score, had the strongest performance. This indicates that while it may not be the main strategic lever, competence is already a strong asset and should be preserved. In Islamic contexts, competence supported by religious grounding improves risk sensitivity and readiness to implement Sharia-aligned decisions⁵⁵. Nonetheless, competence alone is insufficient to build risk culture without structural and ethical alignment.

In conclusion, the IPMA results offer clear guidance for Islamic banks: maintain high-performing areas like competence and organizational structure, while intensifying development in leadership, which has the greatest potential to strengthen risk culture. These findings underscore the strategic importance of integrating ethical leadership, organizational alignment, and competency-building into Islamic financial governance frameworks.

⁵⁰ Nadia A. Abdelmegeed Abdelwahed et al., “Unleashing Potential: Islamic Leadership’s Influence on Employee Performance via Islamic Organizational Values, Organizational Culture and Work Motivation,” *International Journal of Law and Management* (January 22, 2024).

⁵¹ Francisca Omama Koranteng et al., “Assessing the Moderating Role of Organizational Culture in the Relationship between Organizational Leadership and Organizational Efficiency in the Banking Sector,” *Evidence-based HRM* 10, no. 3 (2022).

⁵² Badar Nadeem Ashraf, Changjun Zheng, and Sidra Arshad, “Effects of National Culture on Bank Risk-Taking Behavior,” *Research in International Business and Finance* 37 (2016).

⁵³ Bassam Maali and Christopher Napier, “Accounting, Religion and Organisational Culture: The Creation of Jordan Islamic Bank,” *Journal of Islamic Accounting and Business Research* 1, no. 2 (2010).

⁵⁴ Duc Duy Nguyen, Linh Nguyen, and Vathunyoo Sila, “Does Corporate Culture Affect Bank Risk-Taking? Evidence from Loan-Level Data,” *British Journal of Management* 30, no. 1 (2019).

⁵⁵ Misbahuddin Azzuhri, Min-Ping Huang, and Dodi W Irawanto, “Reinventing Spiritual Leadership from an Indonesian Perspective,” *Journal of Cross Cultural Management* (2024).

CONCLUSION

This study successfully addresses its primary objective: to identify and analyze the key determinants of risk culture within the context of Islamic banking using the Importance-Performance Matrix Analysis (IPMA). The research confirms that leadership, organizational structure, and competence significantly shape risk culture. Among these, leadership emerged as the most critical factor, not only due to its highest importance score but also for its role in fostering adherence to Sharia-compliant governance and ethical behavior.

The findings contribute theoretically by strengthening the understanding of risk culture as a multidimensional construct influenced by structural, individual, and behavioral factors in Islamic banking. Practically, this study offers clear guidance for Islamic bank management to prioritize leadership development, reinforce organizational values and structures, and sustain existing competence levels.

Furthermore, the IPMA approach enables strategic prioritization—highlighting leadership as a high-impact area needing improvement despite good performance, while competence and organizational structure should be maintained due to their consistently strong performance and importance.

In conclusion, to strengthen the risk culture in Islamic banks, a balanced focus is required: improve leadership practices to align more effectively with Sharia-based risk governance, uphold strong organizational foundations, and maintain high levels of employee competence. These efforts will reinforce ethical risk-taking behavior and enhance institutional resilience.

Limitations of this study lie in its respondent scope, which focuses on branch-level employees. Future research is encouraged to incorporate perspectives from senior executives and board members to provide a more comprehensive understanding of risk culture formation at all organizational levels..

Author's Contribution

Saimara A.M. Sebayang: Contribute to formulating research ideas, collecting data, processing data, and interpreting data.

Sukiman: Contributing to writing systematics, research methods, analyzing interpretation results.

Rizal Agus: Contributed to compiling a literature review.

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Declaration of Competing Interest

The author declares that there is no conflict of interest.

Ethical Approval

Ethical approval No patient-identifying parts in this paper were used or known to the authors.

Therefore, no ethical approval was requested.

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