

أثر التقييم التصاعدي للمخاطر على تعزيز ثقافة المخاطر في إحدى منظمات الخدمات المشتركة: دراسة حالة

إعداد الطالب/

ياسين بن توفيق عودة السويديان

الرقم الجامعي/

252000071

إشراف/

د. الفیصل عبد الحمید

د. فايز جراد

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The Impact of Bottom-Up Risk Assessment on Enhancing Risk Culture within a Shared Services Organization: A Case Study

Prepared By

Yaseen Tawfiq AlSuwaidan

Student ID

252000071

Supervised By

Dr. AlFaisal Abdulhamid

Dr. Fayez Jarad

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سنة
الديوان

Dedication

This research is dedicated to my beloved mother, whose unwavering prayers and sacrifices have been the foundation of my journey.

To my wife (Om Talal), whose patience, encouragement, and constant support made this achievement possible.

To my instructors and mentors, who guided me with knowledge and wisdom.

To my management, HR, and colleagues and friends at work and university, whose cooperation and encouragement enriched this experience.

And to everyone who supported me throughout this academic journey, your impact is deeply appreciated.

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Abstract

This study examines the impact of participation in a Bottom-Up Risk Assessment (BURA) process on enhancing risk culture within a centralized Shared Services Organization. The research adopts a quantitative applied case study design and utilizes survey data collected from 119 employees following the completion of the 2025 BURA cycle.

An independent samples t-test revealed a statistically significant difference in risk culture perceptions between employees who participated in BURA and those who did not ($t(117) = 2.89$, $p = 0.0047$). Pearson correlation analysis indicated a strong positive relationship between leadership support and risk culture ($r = 0.79$, $p < 0.001$). Multiple regression analysis demonstrated that while the overall model was statistically significant ($R^2 = 0.600$, $p < 0.001$), leadership support emerged as the dominant predictor of risk culture ($\beta = 0.598$, $p < 0.001$), whereas participation did not independently predict risk culture when leadership was controlled ($\beta = 0.114$, $p = 0.145$).

The findings suggest that participatory risk assessment mechanisms enhance awareness and engagement; however, sustained risk culture development appears to depend primarily on leadership reinforcement rather than procedural participation alone. The study contributes to applied risk governance literature by differentiating between participatory exposure and leadership-driven cultural institutionalization within Shared Services environments.

Keywords: Risk Culture, Bottom-Up Risk Assessment, Leadership Support, Shared Services, Participatory Risk Governance, Enterprise Risk Management

المستخلص

تهدف هذه الدراسة إلى فحص أثر المشاركة في عملية التقييم التصاعدي للمخاطر (Bottom-up Risk Assessment (BURA)) على تعزيز ثقافة إدارة المخاطر داخل إحدى منظمات الخدمات المشتركة المركزية. اعتمدت الدراسة منهجاً كمياً تطبيقياً قائماً على دراسة حالة، وتم جمع البيانات من خلال استبيان إلكتروني شمل (119) موظفاً بعد استكمال دورة الـBURA لعام 2025. أظهرت نتائج اختبار (t-test) وجود فروق ذات دلالة إحصائية في مستوى ثقافة المخاطر بين الموظفين المشاركين في عملية BURA وغير المشاركين ($t(117) = 2.89, p = 0.0047$). كما كشفت نتائج تحليل الارتباط (بيرسون) عن وجود علاقة إيجابية قوية ذات دلالة إحصائية بين دعم القيادة وثقافة المخاطر ($r = 0.79, p < 0.001$). وأوضح تحليل الانحدار المتعدد أن النموذج الكلي ذو دلالة إحصائية ($R^2 = 0.600, p < 0.001$)، حيث تبين أن دعم القيادة يمثل المتغير الأكثر تأثيراً في ثقافة المخاطر ($\beta = 0.598, p < 0.001$)، في حين لم تثبت المشاركة في BURA تأثيراً مستقلاً عند التحكم في متغير القيادة ($\beta = 0.114, p = 0.145$).

تشير النتائج إلى أن آليات المشاركة في تقييم المخاطر تعزز الوعي والانخراط، إلا أن استدامة ثقافة المخاطر تعتمد بصورة أساسية على دعم القيادة وترسيخها للممارسات السليمة. تسهم هذه الدراسة في إثراء الأدبيات التطبيقية في مجال حوكمة المخاطر من خلال التمييز بين أثر المشاركة الإجرائية وأثر القيادة في ترسيخ الثقافة المؤسسية للمخاطر ضمن بيئة الخدمات المشتركة.

الكلمات المفتاحية: ثقافة المخاطر، التقييم التصاعدي للمخاطر، دعم القيادة، الخدمات المشتركة، الحوكمة التشاركية للمخاطر، إدارة المخاطر المؤسسية

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Chapter 1

The General Framework

1.1 Introduction:

Risk management in many organizations has evolved significantly over the past two decades. What was once treated primarily as a compliance requirement or reporting obligation is now increasingly viewed as a governance discipline that directly influences decision making, accountability, and organizational resilience (COSO, 2017; Power, 2016). Despite this evolution, a persistent challenge remains that organizations may formally adopt sophisticated Enterprise Risk Management (ERM) frameworks, yet the practical application of these frameworks often depends on how people understand, interpret, and engage with risk in their daily responsibilities.

Within Shared Services Organizations (SSOs), this challenge becomes even more pronounced. Shared Services structures are designed to centralize multiple functions, such as information technology, procurement, facility management, digital transformation, cybersecurity, and planning & control, under one operational umbrella. While this model enhances efficiency and standardization, it also creates structural complexity. Risk ownership may become diffused across functions, accountability may appear shared rather than clearly assigned, and the practical meaning of “risk responsibility” may vary across managerial levels.

In such environments, risk culture becomes a decisive factor. Risk culture is not merely a written policy or a formal framework; it reflects how individuals perceive risk, whether they feel responsible for identifying it, and whether they are confident enough to escalate concerns proactively (Power, 2016; Sheedy & Griffin, 2018). An organization may claim to have an ERM framework in place, but the real test lies in whether employees at different levels internalize risk thinking as part of their operational behavior.

The implementation of Bottom-Up Risk Assessment (BURA) represents one attempt to operationalize participatory engagement in risk management. Unlike purely top-down risk identification exercises, BURA requires employees across functions to actively identify uncertainties, assess potential impacts, and discuss mitigation strategies. The underlying assumption of this approach is that involvement enhances ownership. When individuals participate in defining risks, they are more likely to feel accountable for managing them (Agarwal et al. 2019; Mikes & Kaplan 2015).

However, participation alone does not automatically guarantee cultural transformation. A critical question emerges: does involvement in a structured bottom-up risk assessment process genuinely enhance risk culture, or does it remain a procedural exercise that influences documentation more than behavior? Furthermore, does leadership reinforcement determine whether such participation translates into sustained accountability and proactive risk management?

These questions become particularly relevant when risk maturity assessments fluctuate over time. Variations in maturity scores may reflect changes in awareness, reporting rigor, or governance consistency rather than simple improvement or deterioration. Understanding whether participatory mechanisms contribute to measurable cultural strengthening is therefore essential for interpreting risk maturity outcomes meaningfully.

This study examines the impact of Bottom-Up Risk Assessment (BURA) on enhancing risk culture within a Shared Services organizational context. Specifically, it investigates whether employees who participated in the BURA process demonstrate higher levels of perceived ownership, accountability, awareness, and proactive risk behavior compared to those who did not participate. Additionally, the study explores whether leadership support reinforces the relationship between participation and cultural outcomes.

By shifting the focus from formal ERM adoption to employee-level behavioral perception, this research seeks to bridge the gap between governance structure and lived organizational practice. Rather than evaluating risk management solely through maturity scores or performance metrics, it examines whether structured participation influences how individuals perceive and enact risk responsibility within a centralized service model.

Ultimately, strengthening risk culture within Shared Services is not merely a compliance objective; it is a governance necessity. As organizations operate in increasingly interconnected and uncertain environments, embedding risk thinking into operational behavior becomes critical for sustainable performance. This study aims to provide empirical evidence on whether bottom-up engagement mechanisms serve as a meaningful catalyst for that cultural integration.

1.2 Problem Statement:

Despite the formal adoption of Enterprise Risk Management (ERM) frameworks across many organizations, a recurring governance concern persists: the existence of structured risk management systems does not necessarily guarantee the development of a strong and consistent risk culture at the employee level. While organizations may implement documented risk registers, periodic assessments,

and formal reporting mechanisms, the translation of these structural elements into genuine ownership, accountability, and proactive risk behavior remains uncertain.

This challenge becomes particularly significant within Shared Services Organizations (SSOs), where multiple functional domains operate under a centralized governance structure. Although such models enhance coordination and operational efficiency, they may also create complexity in defining and reinforcing risk ownership across interdependent functions. In practice, accountability may appear formally assigned yet behaviorally diffused, especially in environments where operational responsibilities intersect.

Within the Shared Services Organization under study, a structured Bottom-Up Risk Assessment (BURA) exercise was implemented as a participatory mechanism aimed at strengthening engagement with risk management practices. The underlying assumption of this initiative is that involving employees directly in identifying and evaluating risks within their respective functions enhances awareness, reinforces accountability, and fosters a stronger risk culture.

However, the effectiveness of such participatory mechanisms cannot be presumed. While employees may contribute to risk identification processes, it remains empirically unclear whether this participation results in measurable improvement in key dimensions of risk culture. Specifically, it is uncertain whether individuals who participated in the BURA process demonstrate higher levels of perceived ownership, stronger accountability, greater awareness of uncertainties, and more proactive risk behavior compared to those who did not participate.

Furthermore, interpreting changes in risk maturity outcomes within organizational contexts requires careful analytical examination. Variations in assessment results may reflect shifts in perception, reporting rigor, or evaluative standards rather than substantive cultural transformation. Without systematically examining the relationship between participatory risk assessment and cultural reinforcement, the impact of such initiatives remains theoretically assumed rather than empirically validated.

Accordingly, the core problem addressed in this study lies in the absence of empirical evidence regarding the impact of Bottom-Up Risk Assessment on enhancing risk culture within a Shared Services organizational setting. While ERM structures are formally in place and participatory exercises have been conducted, it remains undetermined whether these efforts function as meaningful drivers of cultural strengthening or primarily as procedural governance activities.

This study therefore seeks to investigate whether participation in the BURA process is associated with measurable enhancement in risk culture dimensions within the organization under study, and whether leadership support influences the strength of this relationship.

1.3 Significance of the Study:

1.3.1 Scientific Significance

Although Enterprise Risk Management has been widely studied over the past decade, most of the empirical research has focused on financial performance, firm value, and governance structures at the macro level. Relatively limited attention has been directed toward examining how participatory risk mechanisms influence employee level cultural outcomes. In particular, the relationship between structured bottom-up risk assessment processes and measurable dimensions of risk culture remains underexplored within academic literature.

This study contributes to the scientific discourse by shifting the analytical focus from structural ERM adoption to behavioral and cultural reinforcement mechanisms. Rather than evaluating risk management effectiveness through financial proxies or maturity scores alone, it empirically investigates whether participation in Bottom-Up Risk Assessment enhances ownership, accountability, awareness, and proactive risk behavior.

Furthermore, the study extends risk culture research into the context of Shared Services Organizations, an organizational model characterized by cross-functional interdependence and centralized governance. Given the limited empirical studies examining risk culture within centralized service structures, this research adds contextual depth to ERM and governance literature.

By empirically testing the relationship between participatory risk engagement and cultural outcomes, the study addresses a clearly identified gap in risk management scholarship and contributes evidence-based insights to an area that has largely relied on theoretical assumptions.

1.3.2 Practical Significance

From a practical perspective, the study provides actionable insights for risk practitioners, governance leaders, and Shared Services executives. Organizations frequently implement participatory risk exercises with the expectation that involvement strengthens engagement and accountability. However, without empirical validation, such initiatives risk being treated as procedural requirements rather than strategic cultural interventions.

This research offers evidence-based evaluation of whether Bottom-Up Risk Assessment functions as a meaningful driver of risk culture enhancement within a Shared Services setting. The

findings may assist decision makers in assessing the effectiveness of participatory risk governance mechanisms and refining future risk engagement strategies.

Additionally, understanding whether leadership reinforcement influences the strength of the relationship between participation and cultural outcomes provides practical guidance for managerial action. If leadership's support significantly conditions cultural improvement, governance efforts must extend beyond structural de-sign to include consistent behavioral reinforcement.

Ultimately, this study supports more informed interpretation of risk maturity assessments and governance indicators by linking participatory mechanisms to measurable cultural dimensions. In doing so, it enhances the ability of organizations to move beyond procedural compliance toward sustainable cultural integration of risk management practices.

1.4 Research Objectives:

The primary objective of this study is to examine the impact of Bottom-Up Risk Assessment (BURA) on enhancing risk culture within a Shared Services Organization operating under a centralized governance model.

To achieve this primary objective, the study seeks to accomplish the following specific objectives:

1. To assess the level of risk culture within the Shared Services Organization under study, with particular focus on ownership, accountability, awareness, and proactive risk behavior.
2. To examine whether employees who participated in the Bottom-Up Risk Assessment process demonstrate higher levels of risk culture dimensions compared to those who did not participate.
3. To evaluate the extent to which participation in BURA is associated with measurable enhancement in perceived risk ownership and accountability.
4. To investigate the relationship between leadership support and risk culture within the organizational context.
5. To analyze whether leadership reinforcement moderates the relationship between BURA participation and risk culture enhancement.
6. To provide evidence-based recommendations for strengthening participatory risk governance mechanisms within Shared Services environments.

1.5 Research Questions:

This study seeks to answer the following central research question:

To what extent does participation in Bottom-Up Risk Assessment (BURA) influence the enhancement of risk culture within a Shared Services Organization?

To address this central question, the study investigates the following sub-questions:

- What is the current level of risk culture within the Shared Services Organization under study?
- Do employees who participated in the BURA process demonstrate higher levels of risk ownership, accountability, awareness, and proactive risk behavior compared to those who did not participate?
- Is there a statistically significant relationship between BURA participation and overall risk culture enhancement?
- What is the relationship between leadership support and risk culture within the organization?
- Does leadership reinforcement influence the strength of the relationship between BURA participation and risk culture?

1.6 Research Hypotheses:

Based on the research objectives and questions, the study proposes the following hypotheses:

H1: There is a statistically significant difference in the level of risk culture between employees who participated in the Bottom-Up Risk Assessment (BURA) process and those who did not participate.

H2: Participation in the Bottom-Up Risk Assessment process is positively associated with higher levels of risk ownership.

H3: Participation in the Bottom-Up Risk Assessment process is positively associated with higher levels of risk accountability.

H4: Participation in the Bottom-Up Risk Assessment process is positively associated with higher levels of risk awareness.

H5: Participation in the Bottom-Up Risk Assessment process is positively associated with more proactive risk behavior.

H6: There is a statistically significant relationship between leadership support and risk culture within the Shared Services Organization.

1.7 Conceptual Model of the Study:

This study adopts a conceptual model that examines the relationship between participation in Bottom-Up Risk Assessment (BURA) and the enhancement of risk culture within the Shared Services Organization under study.

The model positions BURA participation as the independent variable and risk culture as the dependent variable. Risk culture is operationalized through four measurable dimensions: risk ownership, risk accountability, risk awareness, and proactive risk behavior. These dimensions collectively represent the behavioral and perceptual components of cultural integration in risk management practices.

In addition, leadership support is incorporated into the model as an influencing variable that is expected to have a direct relationship with risk culture. Leadership reinforcement is assumed to strengthen risk-related behaviors by encouraging transparency, accountability, and proactive engagement.

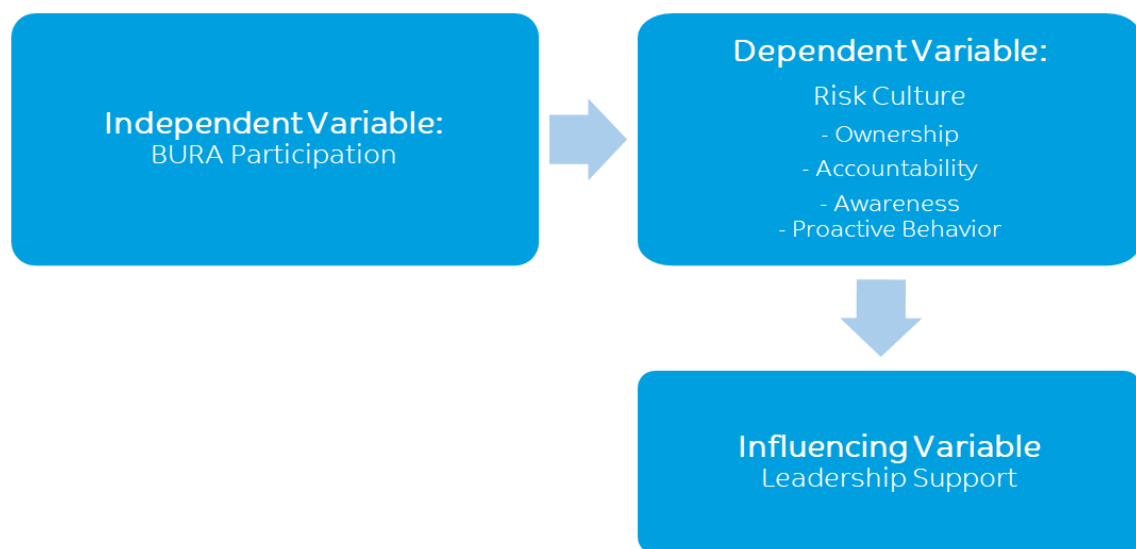


Figure 1.1 Conceptual Model of the Study
Source: Developed by the researcher

The conceptual framework assumes that employees who participate in the Bottom-Up Risk Assessment process are more likely to internalize risk management responsibilities within their functional roles. Through structured participation, individuals are expected to develop stronger perceptions of ownership and accountability, greater awareness of uncertainties, and more proactive risk behavior. Leadership support is further expected to contribute positively to risk culture by reinforcing desired governance behaviors within the organization.

1.8 Previous Studies:

A. Arabic Studies

Arabic research on risk management has increasingly addressed governance practices, organizational behaviors, and institutional readiness, especially in public-sector and business contexts. While the term “risk culture” may not always appear as a direct variable label, many Arabic studies operationalize closely related constructs such as accountability, transparency, participation in decision-making, and leadership practices. The following Arabic studies provide relevant grounding for the current research, particularly in how structured risk practices relate to behavioral and governance outcomes.

Study A1: AlQahtani (2024)

Reference & focus:

Sultan Mohammed Nasser AlQahtani’s applied thesis examines the impact of strategic risk management practices on organizational development success, using an applied case study approach on a governmental entity.

Method:

The study follows an applied research design (case-based), using structured measurement items related to organizational practices and outcomes (as shown in the instrument content and structure in the thesis).

Key findings:

The thesis emphasizes that risk-related practices become impactful when they translate into real organizational behaviors (e.g., participation, initiative-taking, decision-related involvement), which aligns with the current study’s logic that participation mechanisms (e.g., bottom-up assessment) can strengthen cultural dimensions.

Relevance to current study:

This thesis is valuable as an Arabic applied example showing how risk-related practices can be linked to organizational/behavioral outcomes, supporting the justification for testing “participation → culture” relationships in a real organizational setting.

Study A2: Shaaban (2025)

Reference:

Shaaban, W. A. A. A. (2025). Measuring the effect of enterprise risk management (ERM) on investment efficiency and its reflection on firm value: an empirical study on firms listed on Egyptian Stock Exchange.

Method:

Applied empirical study using a sample of 50 listed firms (2018–2023), employing statistical techniques including correlation, multiple regression, and path analysis (content analysis approach using financial statements).

Key findings:

ERM implementation showed a positive and significant effect on investment efficiency, and investment efficiency positively related to firm value; ERM also had a direct and indirect positive relationship with firm value.

Relevance to current study:

Although the dependent variable here is performance-based (not “risk culture”), the study supports the broader Arabic ERM evidence base showing that ERM can produce meaningful outcomes. The current research complements this by testing whether participatory ERM mechanisms (BURA) produce behavioral/cultural outcomes inside an organization (not only financial outcomes).

Study A3: Natheer (2025)

Reference:

Natheer, H. A. (2025). The Role of Strategic Management in Dealing with Risks Facing Companies: An Analytical Study in the Kingdom of Saudi Arabia – 2025. Journal of Risk and Crisis Management.

Method:

Descriptive analytical approach using a questionnaire distributed to a sample of employees in Saudi companies; data analyzed using SPSS.

Key findings:

The study reports a strong positive relationship between strategic management dimensions (planning and analysis) and the ability to manage risks and recommends building a culture encouraging transparency and learning from mistakes.

Relevance to current study:

This study is useful in positioning risk management as behaviorally dependent, not only structurally designed. It strengthens the argument that risk related initiatives are effective when they shape how employees think and behave, directly aligned with the current study's interest in cultural dimensions (ownership, accountability, awareness, proactive behavior).

Study A4: Atiya (2021)**Reference:**

عطية، (2021). ثلاثية: الثقافة، المخاطر السلوكية، والمراجعة الداخلية في صناعة الخدمات المالية. مجلة علمية منشورة عبر منصة بنك المعرفة المصري

Method:

The study adopts a conceptual and analytical approach, examining the interrelationship between organizational culture, behavioral risks, and internal audit functions within the financial services sector. It analyzes how cultural patterns influence the emergence and control of behavioral risk.

Key Findings:

The study concludes that risk culture plays a fundamental role in shaping employee behavior and controlling misconduct-related risks. It emphasizes that formal control mechanisms, including internal audit systems, cannot function effectively in the absence of a strong organizational culture that supports accountability, transparency, and ethical conduct.

Relevance to Current Study:

Although the context of this study is the financial services industry, its findings reinforce the core premise of the present research: risk management effectiveness is deeply influenced by organizational culture. The study supports the argument that structured governance mechanisms alone are insufficient unless they influence behavioral norms. This strengthens the justification for examining whether participatory mechanisms such as Bottom-Up Risk Assessment contribute to enhancing measurable dimensions of risk culture within a Shared Services environment.

E. English Studies

International research on enterprise risk management (ERM) and risk culture has evolved significantly over the past decade, particularly following the global financial crisis and the increasing emphasis on governance and resilience. Unlike some regional studies that operationalize risk culture indirectly through governance-related constructs, international literature often treats risk culture as an explicit conceptual and empirical variable.

Recent English-language studies have examined the behavioral, structural, and institutional dimensions of risk culture, linking it to leadership tone, employee participation, communication quality, and accountability mechanisms. Furthermore, empirical research has increasingly explored how participatory risk processes and de-centralized engagement contribute to embedding risk awareness within organizations.

The following international studies provide empirical and theoretical foundations for understanding how structured risk practices, particularly bottom-up engagement, may influence cultural outcomes, governance maturity, and proactive risk behavior across organizations.

Study E1: Bromiley et al. (2015)

Reference:

Bromiley, P., McShane, M., Nair, A., & Rustambekov, E. (2015). Enterprise risk management: Review, critique, and research directions. *Long Range Planning*, 48(4), 265–276.

Method:

This study adopts a comprehensive literature review and conceptual analysis approach. The authors critically examine existing empirical research on Enterprise Risk Management (ERM), evaluate methodological limitations, and propose directions for future research in ERM scholarship.

Key Findings:

The study argues that many ERM implementations are symbolic rather than substantive. It highlights that the effectiveness of ERM depends on integration into governance systems and decision-making processes rather than mere structural adoption. The authors emphasize the need for empirical research examining behavioral and organizational mechanisms through which ERM influences outcomes.

Relevance to Current Study:

This study provides a foundational justification for examining ERM beyond structural implementation. It supports the premise that participatory mechanisms such as Bottom-Up Risk Assessment should be evaluated based on their influence on behavioral and cultural dimensions rather than procedural existence. The current study responds directly to the call for more empirical investigation into how ERM practices translate into measurable organizational outcomes.

Study E2: Grace et al. (2015)

Reference:

Grace, M. F., Leverty, J. T., Phillips, R. D., & Shimp, P. (2015). The value of investing in enterprise risk management. *Journal of Risk and Insurance*, 82(2), 289–316.

Method:

The study employs an empirical quantitative design using data from U.S. insurance firms. The authors apply regression analysis to examine whether firms that implement formal ERM programs experience measurable value improvements compared to non-adopters.

Key Findings:

The findings indicate that firms investing in ERM exhibit higher firm value and improved performance stability. The results suggest that structured risk management enhances organizational resilience and reduces volatility in financial outcomes. However, the study focuses primarily on firm level performance metrics rather than internal behavioral mechanisms.

Relevance to Current Study:

This study supports the argument that structured ERM implementation can generate measurable organizational benefits. While Grace et al. focus on financial performance, the present research extends this logic by examining whether participatory ERM mechanisms, specifically Bottom-Up Risk Assessment, produce cultural and behavioral outcomes within a Shared Services environment. It shifts the analytical focus from firm value to employee level risk culture enhancement.

Study E3: Callahan & Soileau (2017)

Reference:

Callahan, C., & Soileau, J. (2017). Does enterprise risk management enhance operating performance? *Advances in Accounting*, 37, 122–139.

Method:

The study employs a quantitative empirical approach using archival financial data from publicly listed firms. Regression analysis is applied to examine the relationship between ERM implementation and operating performance indicators.

Key Findings:

The results indicate that firms with more mature ERM practices demonstrate improved operating performance compared to firms with less developed risk management systems. The study suggests that integrated risk management contributes to better operational efficiency and governance

effectiveness. However, the analysis focuses on performance outcomes rather than examining internal cultural or behavioral dynamics.

Relevance to Current Study:

This study reinforces the argument that ERM maturity produces measurable organizational benefits. While Callahan and Soileau focus on performance metrics, the present research builds on this foundation by investigating whether participatory ERM mechanisms influence behavioral dimensions of risk culture within a Shared Services structure. It extends the performance based ERM literature toward cultural and accountability-based outcomes.

Study E4: Florio & Leoni (2017)

Reference:

Florio, C., & Leoni, G. (2017). Enterprise risk management and firm performance: The Italian case. *The British Accounting Review*, 49(1), 56–74.

Method:

The study applies a quantitative empirical design using data from Italian listed companies. The authors employ regression analysis to examine the relationship between ERM adoption and firm performance, controlling governance and firm-specific characteristics.

Key Findings:

The findings indicate that firms implementing more comprehensive ERM systems demonstrate improved financial performance and enhanced governance quality. The study emphasizes that ERM contributes positively when integrated into corporate governance structures rather than functioning as a formal compliance mechanism.

Relevance to Current Study:

Florio and Leoni's findings support the premise that ERM effectiveness depends on substantive integration within governance systems. While their analysis focuses on firm-level performance, the present study extends this logic by examining whether structured participatory mechanisms, such as Bottom-Up Risk Assessment, translate governance integration into strengthened cultural dimensions within a Shared Services context.

Study E5: Lundqvist (2015)

Reference:

Lundqvist, S. A. (2015). Why firms implement risk governance – Stepping beyond traditional risk management to enterprise risk management. *Journal of Accounting and Public Policy*, 34(5), 441–466.

Method:

The study adopts a qualitative case-study approach, examining the implementation of ERM within a large multinational organization. Through interviews and internal documentation analysis, the research explores motivations and governance dynamics behind ERM adoption.

Key Findings:

The findings suggest that organizations adopt ERM not only for compliance reasons but also to enhance governance transparency and accountability. However, the study highlights that ERM effectiveness depends on managerial commitment and integration into strategic decision-making processes. Symbolic implementation without genuine governance reinforcement limits its impact.

Relevance to Current Study:

Lundqvist's study provides theoretical grounding for distinguishing between procedural adoption and substantive integration of ERM. The present research builds on this distinction by empirically examining whether participatory mechanisms, such as Bottom-Up Risk Assessment, function as substantive governance tools that strengthen measurable dimensions of risk culture within a Shared Services Organization.

Study E6: Ai, Bajtelsmit & Wang (2018)

Reference:

Ai, J., Bajtelsmit, V., & Wang, T. (2018). The combined effect of enterprise risk management and diversification on firm performance. *Journal of Risk and Insurance*, 85(2), 433–460.

Method:

The study employs a quantitative empirical design using panel data from U.S. firms. Regression models are applied to examine the interaction between ERM implementation and corporate diversification strategies in influencing firm performance.

Key Findings:

The results indicate that ERM contributes more effectively to firm performance in organizations with higher structural complexity, particularly those with diversified operations. The study

suggests that ERM is especially valuable in contexts characterized by coordination challenges and interdependent risk exposures.

Relevance to Current Study:

This study is particularly relevant to the Shared Services context, where structural interdependence and cross-functional integration are inherent features. Ai et al.'s findings support the premise that structured risk governance mechanisms may be more impactful in complex organizational settings. The present research extends this logic by examining whether participatory mechanisms such as Bottom-Up Risk Assessment enhance risk culture within a centralized Shared Services structure.

Study E7: Palermo, Power & Ashby (2017)

Reference:

Palermo, T., Power, M., & Ashby, S. (2017). Navigating institutional complexity: The production of risk culture in the financial sector. *Journal of Management Studies*, 54(2), 154–181.

Method:

The study adopts a qualitative case-study approach within financial institutions, using interviews, document analysis, and observational data to examine how risk culture is constructed and reinforced within complex governance environments.

Key Findings:

The findings demonstrate that risk culture is not imposed solely through formal frameworks but is actively produced through daily practices, communication routines, and leadership reinforcement. The study highlights that institutional complexity shapes how risk norms are interpreted and enacted across organizational levels.

Relevance to Current Study:

Palermo et al.'s work provides strong conceptual grounding for treating risk culture as a behavioral construct rather than a structural label. It supports the premise that participatory mechanisms may influence how risk norms are internalized across functions. The present study extends this perspective by empirically testing whether structured Bottom-Up Risk Assessment enhances measurable cultural dimensions within a Shared Services organizational setting.

Study E8: Berry-Stölzle & Xu (2018)

Reference:

Berry-Stölzle, T. R., & Xu, J. (2018). Enterprise risk management and the cost of capital. *Journal of Risk and Insurance*, 85(1), 159–201.

Method:

The study employs a quantitative empirical design using panel data from U.S. insurance firms. Regression analysis is applied to examine whether ERM implementation influences firms' cost of capital, controlling for governance and firm characteristics.

Key Findings:

The findings indicate that firms with more credible and integrated ERM systems experience lower cost of capital. The results suggest that structured risk governance enhances stakeholder confidence and improves transparency. However, the study focuses on external financial outcomes rather than internal behavioral mechanisms.

Relevance to Current Study:

Berry-Stölzle and Xu provide empirical evidence that substantive ERM implementation generates measurable organizational benefits. While their focus is financial market outcomes, the present study extends the inquiry inward by examining whether participatory ERM mechanisms, specifically Bottom-Up Risk Assessment, strengthen internal cultural dimensions of risk management within a Shared Services context.

Study E9: Sheedy & Griffin (2018)

Reference:

Sheedy, E., & Griffin, B. (2018). Risk governance, structures, and culture: A systematic review of the literature. *Corporate Governance: An International Review*, 26(5), 344–360.

Method:

The study conducts a systematic literature review examining empirical and conceptual research on risk governance, risk structures, and risk culture across multiple sectors. The authors synthesize prior findings to identify recurring patterns and conceptual gaps.

Key Findings:

The review concludes that formal risk governance structures alone do not guarantee effective risk management. Instead, organizational culture, particularly shared values, accountability norms, and behavioral reinforcement, plays a central role in determining governance effectiveness. The

authors highlight a gap in empirical research examining specific mechanisms that strengthen risk culture.

Relevance to Current Study:

Sheedy and Griffin's review directly supports the central premise of the present research: that risk culture is a critical determinant of ERM effectiveness. Importantly, the identified gap regarding empirical testing of specific governance mechanisms provides strong justification for examining whether Bottom-Up Risk Assessment functions as a cultural reinforcement tool within a Shared Services Organization.

Study E10: Agarwal, Anand & Aggarwal (2019)

Reference:

Agarwal, V., Anand, A., & Aggarwal, R. (2019). Risk culture and enterprise risk management: A framework for measurement and assessment. *Journal of Risk Research*, 22(9), 1095–1118.

Method:

The study adopts a conceptual and empirical approach, proposing a structured framework for measuring risk culture within organizations. Survey-based instruments are used to operationalize cultural dimensions and examine their relationship with ERM effectiveness.

Key Findings:

The authors identify measurable dimensions of risk culture, including risk awareness, accountability, communication transparency, and proactive risk management behavior. The study demonstrates that stronger cultural alignment enhances the practical effectiveness of ERM systems. It also emphasizes that cultural maturity must be assessed behaviorally rather than assumed from structural implementation.

Relevance to Current Study:

Agarwal et al. provide direct theoretical and measurement support for treating risk culture as a quantifiable construct. Their framework strengthens the methodological foundation of the present study, which similarly operationalizes risk culture through behavioral dimensions. The current research extends this measurement approach by examining whether participatory mechanisms, specifically Bottom-Up Risk Assessment, contribute to strengthening these cultural dimensions within a Shared Services environment.

Study E11: Bockius & Gatzert (2024)

Reference:

Bockius, S., & Gatzert, N. (2024). Risk culture and enterprise risk management effectiveness: Empirical evidence from European firms. *Journal of Risk Research*, 27(2), 145–168.

Method:

The study employs a quantitative survey-based design targeting risk managers and senior executives across European firms. Structural equation modeling (SEM) is used to examine the relationship between risk culture dimensions and ERM effectiveness.

Key Findings:

The findings demonstrate a statistically significant positive relationship between strong risk culture and ERM effectiveness. In particular, leadership reinforcement, accountability clarity, and open communication are shown to enhance governance outcomes. The study confirms that risk culture acts as a mediating factor between formal ERM structures and organizational performance.

Relevance to Current Study:

Bockius and Gatzert provide contemporary empirical validation that risk culture is a measurable determinant of ERM success. Their findings reinforce the importance of leadership and behavioral dimensions, which are central to the present study's conceptual model. The current research extends this line of inquiry by testing whether participatory ERM mechanisms, such as Bottom-Up Risk Assessment, contribute to strengthening risk culture within a Shared Services organizational setting.

Study E12: Power (2016)

Reference:

Power, M. (2016). Risk culture and the management of uncertainty: A review and conceptual framework. *Accounting, Organizations and Society*, 49, 14–26.

Method:

The study adopts a conceptual analytical approach, reviewing regulatory developments and organizational responses to risk governance reforms. It proposes a framework for understanding how risk culture evolves within institutional environments.

Key Findings:

Power argues that risk culture emerges through organizational routines, managerial signals, and accountability structures rather than formal documentation alone. The study emphasizes that

governance reforms following financial crises increasingly focus on shaping cultural behavior, not merely strengthening control systems. Risk culture is portrayed as dynamic and socially constructed within organizations.

Relevance to Current Study:

Power's conceptual framework provides strong theoretical grounding for viewing risk culture as behaviorally produced and reinforced. It supports the premise that structured mechanisms such as Bottom-Up Risk Assessment may influence cultural norms when integrated into daily operational practices. The present study empirically examines this relationship within a Shared Services context, extending Power's conceptual insights into measurable organizational outcomes.

Study E13: Mikes & Kaplan (2015)

Reference:

Mikes, A., & Kaplan, R. S. (2015). When one size doesn't fit all: Evolving directions in the research and practice of enterprise risk management. *Journal of Applied Corporate Finance*, 27(1), 37–40.

Method:

The study adopts a conceptual and practice-oriented analytical approach, reviewing developments in ERM implementation across organizations. It examines variations in ERM design and governance integration strategies.

Key Findings:

The authors argue that ERM effectiveness depends on contextual alignment rather than uniform adoption. Organizations must tailor risk governance structures to their strategic, operational, and structural characteristics. The study emphasizes that ERM must evolve from compliance-driven systems to embedded management processes influencing decision-making behavior.

Relevance to Current Study:

Mikes and Kaplan reinforce the premise that ERM is not universally effective unless adapted to organizational context. This insight supports the relevance of examining ERM practices within a Shared Services environment, where structural interdependence and centralized coordination require contextualized governance mechanisms. The present study contributes by empirically testing whether participatory ERM mechanisms, specifically Bottom-Up Risk Assessment, function as context-sensitive tools that strengthen risk culture.

Study E14: Arena, Arnaboldi & Azzone (2015)

Reference:

Arena, M., Arnaboldi, M., & Azzone, G. (2015). The organizational dynamics of enterprise risk management. *Accounting, Organizations and Society*, 38(2), 82–101.

Method:

The study adopts a qualitative case-study methodology, analyzing ERM implementation within multiple organizations. Data was collected through interviews, internal documents, and observations to examine how ERM practices evolve within organizational structures.

Key Findings:

The findings indicate that ERM implementation is shaped by internal organizational dynamics, including leadership support, communication patterns, and structural complexity. The study highlights that ERM effectiveness depends on the interaction between formal systems and informal behavioral norms. Organizational actors play an active role in shaping how ERM processes function in practice.

Relevance to Current Study:

Arena et al. provide important evidence that ERM outcomes are influenced by internal behavioral and structural factors rather than technical design alone. This perspective aligns with the present study's focus on participatory governance mechanisms. By examining Bottom-Up Risk Assessment within a Shared Services structure, the current research empirically explores how internal engagement processes may strengthen risk culture dimensions.

Study E15: Farrell & Gallagher (2015)

Reference:

Farrell, M., & Gallagher, R. (2015). The valuation implications of enterprise risk management maturity. *Journal of Risk and Insurance*, 82(3), 625–657.

Method:

The study employs a quantitative empirical design using archival data from publicly listed firms. Regression analysis is applied to examine the relationship between ERM maturity levels and firm valuation metrics.

Key Findings:

The findings reveal that firms with higher ERM maturity exhibit improved market valuation compared to firms with lower ERM maturity. The study suggests that ERM maturity enhances

stakeholder confidence and governance credibility. However, the analysis centers on financial valuation outcomes rather than internal behavioral or cultural mechanisms.

Relevance to Current Study:

Farrell and Gallagher's findings support the argument that ERM maturity produces measurable organizational benefits. The present study extends this line of inquiry by examining whether participatory ERM mechanisms, specifically Bottom-Up Risk Assessment, contribute to strengthening internal cultural dimensions such as ownership, accountability, awareness, and proactive behavior within a Shared Services Organization.

Study E16: McShane, Nair & Rustambekov (2016)

Reference:

McShane, M. K., Nair, A., & Rustambekov, E. (2016). Does enterprise risk management increase firm value? Evidence from the U.S. insurance industry. *Journal of Risk and Insurance*, 83(2), 457–492.

Method:

The study employs a quantitative empirical design using panel data from U.S. insurance firms. Regression analysis is conducted to examine the association between ERM implementation and firm value, while controlling for firm characteristics and governance variables.

Key Findings:

The results indicate that ERM implementation is positively associated with firm value, particularly when ERM systems are integrated and supported by effective governance structures. However, the study also notes that the value impact depends on how deeply ERM is embedded within organizational processes rather than merely being formally adopted.

Relevance to Current Study:

McShane et al. reinforce the argument that ERM effectiveness depends on substantive integration into governance systems. While their focus is firm valuation, the present study shifts attention to internal organizational dynamics, examining whether participatory ERM mechanisms such as Bottom-Up Risk Assessment enhance measurable risk culture dimensions within a Shared Services context.

Study E17: Hoyt & Liebenberg (2015)

Reference:

Hoyt, R. E., & Liebenberg, A. P. (2015). The value of enterprise risk management. *Journal of Risk and Insurance*, 82(2), 289–316.

Method:

The study utilizes a quantitative empirical design analyzing publicly traded U.S. firms. Regression models are applied to examine whether firms that adopt ERM systems experience improvements in firm value relative to non-adopters.

Key Findings:

The findings suggest that ERM adoption is positively associated with firm value, particularly in firms with greater organizational complexity. The study emphasizes that ERM contributes to improved coordination and risk oversight, which may enhance governance effectiveness and reduce uncertainty.

Relevance to Current Study:

Hoyt and Liebenberg provide empirical evidence that structured ERM implementation produces measurable organizational benefits. While their focus is market valuation, the present study extends this perspective by examining whether participatory ERM mechanisms, specifically Bottom-Up Risk Assessment, strengthen internal behavioral dimensions of risk culture within a Shared Services organizational environment.

Study E18: Gatzert & Martin (2015)

Reference:

Gatzert, N., & Martin, M. (2015). Determinants and value of enterprise risk management: Empirical evidence from the literature. *Risk Management and Insurance Review*, 18(1), 29–53.

Method:

The study conducts a structured literature review synthesizing empirical research on ERM determinants and value implications. The authors analyze prior quantitative studies to identify consistent findings and methodological trends.

Key Findings:

The review concludes that ERM implementation is generally associated with positive organizational outcomes, including improved performance stability and governance quality. However, the

authors highlight that evidence remains mixed regarding the strength of value creation and that contextual factors influence ERM effectiveness.

Relevance to Current Study:

Gatzert and Martin provide a consolidated overview of ERM value research, reinforcing the importance of examining contextual drivers of effectiveness. The present study contributes to this discussion by focusing on participatory mechanisms within ERM and testing whether Bottom-Up Risk Assessment enhances internal cultural dimensions of risk governance within a Shared Services Organization.

Study E19: Beasley, Clune & Hermanson (2015)

Reference:

Beasley, M. S., Clune, R., & Hermanson, D. R. (2015). Enterprise risk management: An empirical analysis of factors associated with the extent of implementation. *Journal of Accounting and Public Policy*, 24(6), 521–531.

Method:

The study employs a quantitative survey-based design, collecting data from senior financial executives to examine determinants influencing the extent of ERM implementation. Statistical analysis is used to identify governance and organizational characteristics associated with ERM maturity.

Key Findings:

The findings indicate that ERM implementation levels are significantly associated with board involvement, leadership support, and organizational size. The study emphasizes that governance commitment plays a central role in determining the depth and effectiveness of ERM adoption.

Relevance to Current Study:

Beasley et al. highlights the importance of leadership and governance reinforcement in shaping ERM maturity. This aligns directly with the present study's inclusion of leadership support as an influencing variable. By examining Bottom-Up Risk Assessment within a Shared Services structure, the current research extends this governance-based perspective to explore whether participatory engagement strengthens measurable dimensions of risk culture.

Concluding Synthesis of Previous Studies

The reviewed Arabic and English literature collectively demonstrate that Enterprise Risk Management has been widely examined in relation to firm performance, governance quality, and financial stability. Empirical studies consistently confirm that structured ERM implementation

contributes to improved organizational outcomes. However, most of the prior research has focused primarily on financial performance indicators, market valuation, or governance structure effectiveness, with comparatively limited attention to internal behavioral and cultural mechanisms.

Furthermore, although recent scholarships increasingly recognize the importance of risk culture as a determinant of ERM effectiveness, empirical examination of specific participatory governance mechanisms remains limited. Few studies have investigated whether bottom-up engagement processes, such as structured risk assessment participation, directly influence measurable dimensions of risk culture within complex organizational environments.

Within the context of Shared Services Organizations, characterized by centralized governance, cross-functional interdependence, and structural complexity, this gap becomes more pronounced. Accordingly, the present study contributes to the literature by empirically examining whether participation in Bottom-Up Risk Assessment enhances risk culture dimensions, while also considering the reinforcing role of leadership support.

1.9 Theoretical Premises of the Study:

1.9.1 Risk and Risk Management Foundations

1.9.1.1 Risk: Definition and Core Meaning

Risk is widely defined in international standards as the effect of uncertainty on objectives (ISO, 2018), recognizing that risk can have positive, negative, or both types of deviation from expected outcomes. In applied governance contexts, this definition shifts attention from “hazards” alone toward how uncertainty influences achievement of organizational objectives.

1.9.1.2 Risk vs Issue

A practical distinction is essential for risk culture: a risk is an uncertain event/condition that may occur and affect objectives, whereas an issue is a current problem that has already occurred or is occurring and requires immediate resolution. This distinction aligns with the ISO focus on uncertainty and objective impact and helps reduce confusion in operational environments where “risk” is sometimes used to label existing incidents.

1.9.1.3 Risk Types and Classification

Organizations commonly classify risks to improve governance, accountability, and reporting. A widely used classification groups risks into categories such as:

- Strategic risks: affecting long-term direction and objectives
- Operational risks: affecting processes, service delivery, people, and systems
- Financial risks: affecting financial performance and exposure
- Compliance/legal risks: affecting adherence to laws, regulations, and policies

COSO emphasizes that enterprise risk management should be integrated with strategy and performance, reinforcing that risk categories should support decision-making rather than exist as isolated lists (COSO, 2017).

1.9.1.4 Sources of Risk and Context (Internal and External)

ISO 31000 highlights the importance of understanding the organization and its internal and external context, because uncertainty arises from conditions inside and outside the organization (e.g., processes, systems, people, suppliers, regulation, market conditions, and stakeholder expectations).

Accordingly, risk identification should be conducted with a sufficiently broad context to capture risks from significant sources of uncertainty, especially in Shared Services environments where interdependencies across functions create “cross-functional” risk pathways.

1.9.1.4 Risk Management Process

A “full conceptual” foundation should also present the core risk management process. ISO 31000 structures risk management around principles, a framework, and a process that typically includes:

1. Establishing the context / scope and criteria
2. Risk identification
3. Risk analysis (understanding causes, likelihood, consequences)
4. Risk evaluation (prioritizing against criteria)
5. Risk treatment (selecting and implementing responses)
6. Monitoring and review
7. Communication and consultation

This process perspective supports the logic of Bottom-Up Risk Assessment (BURA) as a participatory mechanism that strengthens risk identification quality and encourages ownership through engagement.

1.9.1.5 Conceptual Link to Governance, Risk Culture, and GRC Capability

From a governance and “principled performance” perspective, risk practices are not only technical steps; they represent integrated capabilities that help organizations achieve objectives reliably while acting with integrity. OCEG’s GRC Capability Model positions governance, risk, and

compliance as integrated organizational capabilities that enable principled performance. This conceptual grounding supports the study's focus on whether participatory risk practices (BURA) are associated with behavioral outcomes (risk culture dimensions).



Figure 1.2 GRC Path to Principled Performance
Source: GRC Capability Model (OCEG Red Book)

Contemporary risk management frameworks emphasize that effective enterprise risk management requires integration between organizational governance strategic decision making and operational processes international standards such as the COSO enterprise risk management framework (COSO, 2017), ISO 31000 risk management guidelines (ISO, 2018), and OCEG's GRC Capability Model (OCEG Red Book) highlight that risk management should not function as a standalone control activity but rather as an embedded organizational capability that supports value creation, strategic resilience, and informed decision making. These frameworks also stress the importance of communication, accountability, and organizational culture in shaping how risks are identified, assessed, and managed across all levels of the organization

1.9.2 Enterprise Risk Management as an Integrated Governance System

Enterprise Risk Management (ERM) is conceptualized in contemporary governance theory as an integrated system designed to align risk identification, assessment, and response with strategic and operational objectives. Beyond compliance requirements, ERM functions as a coordination mechanism that connects leadership oversight with functional execution. Its effectiveness depends not only on formal structures but also on the degree to which risk-related responsibilities are internalized across organizational levels.

This study adopts the premise that ERM practices produce meaningful organizational impact when they influence behavioral patterns rather than remain confined to documentation or reporting routines.

1.9.3 Risk Culture as a Measurable Behavioral Construct

Risk culture represents the shared values, norms, and behavioral expectations that shape how individuals perceive and respond to uncertainty. It manifests through observable dimensions such as:

- Risk ownership
- Accountability for mitigation actions
- Risk awareness
- Proactive risk behavior

This research assumes that risk culture can be operationalized and empirically measured through these behavioral dimensions. Cultural maturity is therefore assessed not by the existence of frameworks, but by the consistency of responsible risk-related behavior within the organization.

1.9.4 Participatory Governance and Bottom-Up Engagement

Participatory governance theory suggests that involvement in structured processes enhances psychological ownership and strengthens perceived accountability. When individuals actively contribute to identifying and assessing risks, they develop a clearer understanding of risk exposure and a stronger sense of responsibility toward mitigation actions.

Bottom-Up Risk Assessment (BURA) embodies this participatory principle by engaging functional representatives directly in the risk identification and evaluation process. The theoretical assumption underlying this study is that participation in BURA enhances internalization of risk responsibilities, thereby strengthening behavioral dimensions of risk culture.

1.9.5 Leadership Reinforcement and Cultural Sustainability

Leadership plays a central role in shaping and sustaining organizational culture. Tone at the top, communication consistency, and visible support for transparency influence how employees interpret and prioritize risk management practices.

This study adopts the premise that leadership support reinforces participatory governance mechanisms. While participation may initiate cultural change, sustained strengthening of risk culture requires managerial reinforcement and consistent signaling of accountability expectations.

1.9.6 Shared Services Structural Context

Shared Services Organizations operate through centralized governance structures that support multiple functional domains under unified oversight. While such centralization enhances coordination and operational efficiency, it also increases interdependence across functions and may blur accountability boundaries.

The present study is conducted within one Shared Services Organization operating under this centralized model. Within such an environment, risk responsibilities are distributed across several functional areas, making clarity of ownership and accountability critical for effective governance.

Structural complexity and cross-functional integration create conditions in which participatory mechanisms may play a particularly important role.

Accordingly, Bottom-Up Risk Assessment is theorized to function not only as a risk identification tool but also as a structural clarifier of responsibility. By directly engaging representatives from different functions in the risk assessment process, the mechanism may reduce diffusion of responsibility and contribute to strengthening measurable dimensions of risk culture within the organization under study.

1.10 Research Methodology and Design:

1.10.1 Research Approach

This study adopts a quantitative, explanatory approach to examine the relationship between participation in Bottom-Up Risk Assessment (BURA) and the enhancement of risk culture within one Shared Services Organization.

A cross-sectional survey design was employed, collecting data at a single point in time following the completion of the 2025 BURA cycle.

1.10.2 Research Instrument

Data was collected through a structured questionnaire developed specifically for this research. The instrument was designed using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) to measure perceptions related to risk culture dimensions and leadership reinforcement.

Importantly, several items included in the research questionnaire were adapted from the organization's Risk Maturity Model (RMM) survey instrument, which has been administered internally in previous assessment cycles. The inclusion of partially validated items strengthens the content validity of the instrument and ensures contextual alignment with established governance evaluation practices within the organization.

Additional items were developed to measure participatory engagement in BURA and behavioral dimensions of risk culture, including ownership, accountability, awareness, and proactive behavior.

1.10.3 Population and Sampling

The population of the study consists of approximately 1,300 employees within one centralized Shared Services Organization operating across six functional domains (GIT, GPS, FM, DT, CCS, and P&C).

A census-style distribution method was used, whereby the survey link was shared with the entire population. Participation was voluntary and anonymous.

The study enables comparative analysis between employees who participated in the 2025 BURA exercise and those who did not participate.

1.10.4 Data Collection Procedure

The survey was distributed electronically through Microsoft Forms and internal communication channels after completion of the 2025 BURA cycle. Participation was anonymous to ensure candid responses.

The questionnaire consisted of four main sections:

- A. Demographic Information
- B. BURA Participation and Communication
- C. Risk Culture Dimensions
- D. Leadership Support

No confidential operational or financial data were collected.

1.10.5 Statistical Analysis

Data analysis was conducted using statistical software tools to perform both descriptive and inferential analysis. The following procedures were applied:

- Descriptive statistics (mean, standard deviation, frequency distribution)
- Reliability testing using Cronbach's Alpha
- Independent sample t-tests to compare BURA participants and non-participants
- Correlation analysis to examine relationships among variables
- Regression analysis to test the proposed hypotheses

All statistical tests were conducted at a 95% confidence level.

1.11 Data Sources:

1.11.1 Primary Data Sources

The primary data for this study were collected through a structured questionnaire distributed to employees within one Shared Services Organization following completion of the 2025 Bottom-Up Risk Assessment (BURA) cycle.

The questionnaire included items designed to measure:

- Participation in BURA
- Perceptions of risk culture

- Leadership reinforcement

Several items were adapted from the organization's Risk Maturity Model (RMM) survey instrument, which has been administered internally across multiple assessment cycles. The use of partially validated RMM items enhances the contextual relevance and content validity of the research instrument.

All primary data were collected electronically through an anonymous survey to ensure unbiased and candid responses.

1.11.2 Secondary Data Sources

Secondary data sources consisted of peer-reviewed academic journal articles, published Arabic and English studies, governance frameworks, and scholarly literature related to Enterprise Risk Management, risk culture, participatory governance, and leadership reinforcement.

A total of nineteen English Q1/Q2 journal articles and four Arabic studies were reviewed to establish the theoretical and empirical foundation of the study. These sources provided conceptual grounding, measurement insights, and identification of research gaps relevant to participatory ERM mechanisms within complex organizational structures.

1.12 Study Instrument:

The study instrument consisted of a structured questionnaire developed to examine the relationship between participation in Bottom-Up Risk Assessment (BURA) and the enhancement of risk culture within the Shared Services Organization under study.

The questionnaire was designed in alignment with the conceptual model and research hypotheses. It comprised four main sections and utilized a five-point Likert scale for attitudinal items.

1.12.1 Section 1: Demographic Information

This section collected general information about respondents, including:

- Shared Services function
- Organizational level (L2, L3, L4, L5/L6)
- Years in SS Organization
- Participation status (Yes/No)

These variables were included for descriptive purposes to provide an overview of the distribution of respondents across functions and hierarchical levels. Organizational level was not used as an inferential variable in hypothesis testing, due to observed inconsistencies in self-reported responses.

No personally identifiable information was collected.

1.12.2 Section 2: BURA Participation

This section measured the respondents who participated in the 2025 Bottom-Up Risk Assessment cycle. It included:

- Participation Experience
- Communication and feedback related to BURA

This section allowed comparison between participants and non-participants and enabled assessment of the participatory governance mechanism.

1.12.3 Section 3: Risk Culture Dimensions

This section measured the dependent variable, risk culture, using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

Risk culture was operationalized through the following dimensions:

- Risk ownership
- Accountability for risk management
- Risk awareness
- Proactive risk behavior
- Transparency and disclosure climate

Several items in this section were adapted from the organization's Risk Maturity Model (RMM) survey instrument, which has been previously administered internally. The inclusion of partially validated RMM items enhances content validity and ensures contextual alignment with established governance evaluation practices.

Additional items were developed specifically for this research to measure behavioral dimensions consistent with the conceptual model.

1.12.4 Section 4: Leadership Support

This section measured perceptions of leadership reinforcement related to risk management practices. It included statements assessing:

- Tone at the top
- Management encouragement of transparency
- Support for proactive risk identification
- Reinforcement of accountability expectations

Responses were measured using the same five-point Likert scale to maintain consistency across sections.

1.12.5 Data Screening and Preparation

Prior to statistical analysis, the collected data were reviewed for completeness and consistency. Responses with incomplete patterns or irregular answer distributions were examined. One response was excluded during the data preparation stage due to irregularities identified during dataset cleaning. The final dataset used for analysis reflects valid and complete responses only.

1.13 Statistical Methods Used:

This study applies both descriptive and inferential statistical methods to examine the relationship between participation in Bottom-Up Risk Assessment (BURA) and risk culture enhancement within the Shared Services Organization under study.

1.13.1 Data Preparation

Survey responses were screened for completeness and consistency prior to analysis. Categorical responses were coded appropriately and Likert-scale items were converted to numerical values (1–5) for statistical testing. One response was excluded during the data preparation stage due to irregularities identified during dataset cleaning.

1.13.2 Descriptive Statistics

Descriptive statistics were used to summarize the sample characteristics and describe response patterns. The study reports frequencies and percentages for demographic variables, and mean and standard deviation values for Likert-scale items and constructed dimensions.

1.13.3 Reliability Testing

Internal consistency reliability was assessed using Cronbach's Alpha for each multi-item construct within the survey, including the risk culture dimensions and leadership support.

1.13.4 Inferential Analysis

To test the study hypotheses, the following inferential methods were applied:

1. Independent Samples t-tests: to examine whether statistically significant differences exist between BURA participants and non-participants across risk culture dimensions.
2. Correlation Analysis (Pearson): to examine relationships between leadership support and risk culture dimensions.

3. Regression Analysis: to assess the predictive relationship between BURA participation and risk culture dimensions, and to examine the contribution of leadership support as an influencing variable.

All statistical tests were conducted at a 95% confidence level ($\alpha = 0.05$).

1.14 Study Boundaries:

This study is conducted within the context of one Shared Services Organization and is bound by the following limits:

1.14.1 Subject Boundaries (Thematic Boundaries)

The study focuses specifically on examining the relationship between Bottom-Up Risk Assessment participation and risk culture enhancement. Risk culture is operationalized through measurable dimensions such as ownership, accountability, awareness, and proactive behavior, in addition to leadership support.

1.14.2 Spatial Boundaries (Geographical/Organizational Boundaries)

The research is limited to one Shared Services Organization in one of the biggest chemical industry companies in Jubail, Saudi Arabia, comprising six primary functions: Global IT (GIT), Global Procurement Services (GPS), Facility Management (FM), Digital Transformation (DT), Corporate Cyber Security (CCS), and Shared Services Planning & Control (P&C).

1.14.3 Temporal Boundaries (Time Boundaries)

The study is limited to the period following completion of the 2025 Bottom-Up Risk Assessment cycle. Data was collected through a cross-sectional survey administered after the BURA cycle was completed.

1.14.4 Human Boundaries (Population Boundaries)

The study population includes employees within the Shared Services Organization under study. Participation was voluntary, and the sample reflects those employees who responded to the survey invitation during the data collection period.

1.14.5 Methodological Boundaries

The study relies on self-reported perceptions collected through a questionnaire. Additionally, the “organizational level” demographic variable showed inconsistencies in respondent interpretation and was therefore used for descriptive purposes only and not included in inferential hypothesis testing.

Chapter 2

Theoretical Framework

2.1 Enterprise Risk Management: From Structural Adoption to Behavioral Integration

Enterprise Risk Management (ERM) emerged as an organizational response to the limitations of traditional, silo-based risk management approaches. Early risk management practices were primarily functional, fragmented, and focused on specific categories such as financial, operational, or compliance risks. Over time, organizations recognized that such compartmentalized approaches were insufficient in increasingly complex and interconnected governance environments. As a result, ERM evolved as an integrated framework designed to identify, assess, and manage risks holistically across the enterprise (Bromiley et al., 2015; Mikes & Kaplan, 2015).

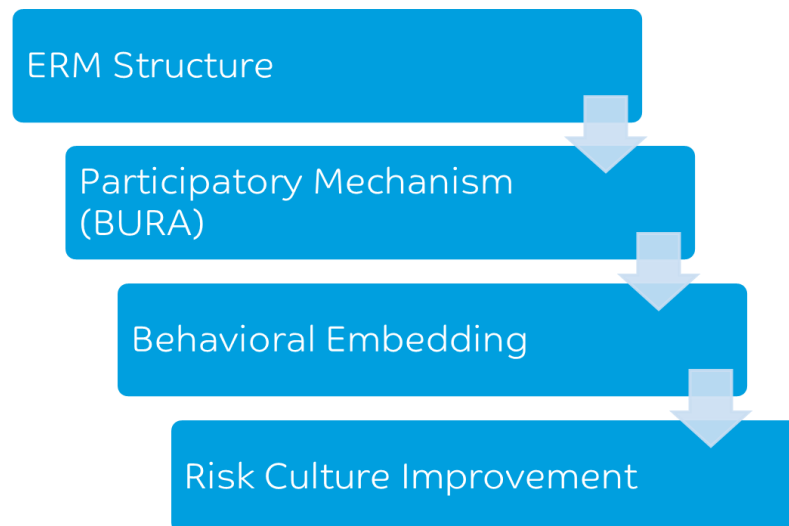


Figure 2.1 ERM Integration Model
Source: Developed by the researcher

ERM is commonly conceptualized as a coordinated process that aligns risk management with strategic objectives and organizational performance. Rather than operating as a reactive control mechanism, ERM is intended to embed risk awareness into decision-making processes at multiple organizational levels. This shift reflects a broader transformation from risk management as a technical control function to risk governance as an organizational capability (Florio & Leoni, 2017; McShane et al., 2016).

However, empirical literature indicates that ERM implementation varies substantially in depth and effectiveness. Several studies distinguish between symbolic adoption, where frameworks exist formally but lack behavioral integration, and substantive adoption, where risk management principles

influence daily practices and managerial decisions (Bromiley et al., 2015; Lundqvist, 2015). Organizations may adopt ERM in response to regulatory pressure, stakeholder expectations, or reputational considerations, yet fail to embed it meaningfully within operational processes.

The effectiveness of ERM therefore depends not merely on structural presence but on integration into governance routines. Farrell and Gallagher (2015) demonstrate that ERM maturity, rather than simple adoption, is associated with enhanced firm valuation. Similarly, Gatzert and Martin (2015) argue that contextual and governance factors determine whether ERM contributes to measurable organizational outcomes. These findings collectively suggest that ERM becomes impactful when it transcends procedural compliance and shapes behavioral norms within the organization.

This behavioral dimension is particularly important in complex organizational structures. Ai et al. (2018) show that ERM contributes more effectively to performance in diversified and structurally complex firms. Their findings imply that ERM's value increases in environments characterized by interdependence and coordination challenges. In such contexts, structured governance mechanisms must influence not only risk identification processes but also accountability clarity and cross-functional communication.

Recent scholarship further emphasizes that ERM effectiveness is closely linked to organizational culture. Sheedy and Griffin (2018) argue that formal governance structures alone cannot guarantee risk management success without corresponding cultural reinforcement. Power (2016) similarly contends that risk culture is produced through organizational routines and managerial signals, rather than documentation alone. These perspectives reinforce the notion that ERM should be understood not simply as a framework but as a governance system that requires behavioral embedding.

Within this theoretical landscape, Bottom-Up Risk Assessment (BURA) represents a specific operational mechanism within ERM. While ERM provides structural architecture, BURA functions as a participatory process designed to engage employees directly in identifying and assessing risks. Theoretically, such mechanisms can serve as vehicles for translating governance design into behavioral practice. If ERM is conceptualized as an integrated governance system, then participatory processes become essential instruments for ensuring that risk management is internalized across organizational levels.

Accordingly, this study adopts the premise that ERM effectiveness cannot be evaluated solely through structural maturity or performance metrics. Instead, it must also be examined through its influence on behavioral constructs such as ownership, accountability, awareness, and proactive risk engagement. This perspective provides the foundation for examining how participatory risk

mechanisms within ERM may contribute to strengthening risk culture in centralized Shared Services environments.

2.2 Participatory Risk Governance and Bottom-Up Mechanisms

The evolution of Enterprise Risk Management has increasingly emphasized participation as a critical component of effective governance. While early ERM implementations relied heavily on centralized oversight and executive-level risk identification, contemporary governance scholarship recognizes that risk information often originates at operational levels (Bromiley et al., 2015; Mikes & Kaplan, 2015). Employees closest to processes, systems, and stakeholders frequently possess the most immediate awareness of emerging uncertainties. Consequently, excluding operational actors from structured risk assessment may create informational asymmetry within governance systems.

Participatory governance theory suggests that involvement in structured organizational processes enhances psychological ownership and perceived responsibility. When individuals actively contribute to identifying and assessing risks, they are more likely to internalize accountability for outcomes. Participation transforms risk management from an imposed control mechanism into a shared organizational responsibility. In contrast, purely top-down systems risk reinforcing compliance behavior without genuine behavioral engagement.

Bottom-Up Risk Assessment (BURA) represents an operational embodiment of participatory governance within ERM frameworks. Rather than concentrating risk identification at executive or board levels, BURA systematically engages representatives from functional units in identifying uncertainties relevant to their operational contexts. This approach aligns with the notion that governance effectiveness increases when responsibility is distributed rather than centralized (Ai et al., 2018).

From a behavioral standpoint, structured participation may influence several mechanisms:

1. Clarification of ownership – Individuals who articulate risks become more conscious of their proximity to those risks.
2. Strengthening accountability – Public articulation of risks reinforces responsibility for mitigation actions.
3. Enhancing awareness – Participation expands understanding of cross-functional interdependencies.
4. Encouraging proactive behavior – Employees become more likely to escalate concerns early.

These mechanisms reflect cultural processes rather than technical ones. As Arena et al. (2015) observe, ERM implementation is shaped by internal organizational dynamics and actor engagement. Governance processes are enacted through people, not documents. Therefore, the degree of engagement within risk assessment processes can significantly influence whether risk management becomes behaviorally embedded.

However, participatory mechanisms do not automatically guarantee cultural transformation. Without reinforcement from leadership and structural clarity, participation may remain episodic rather than sustained. As Lundqvist (2015) notes, governance systems must move beyond symbolic participation to achieve substantive integration. Participation must be perceived as meaningful and consequential to influence behavior.

Within centralized organizational structures such as Shared Services models, participatory mechanisms may be particularly significant. Shared Services environments typically integrate multiple functional domains under unified oversight. This structural arrangement increases interdependence across units while potentially diffusing responsibility boundaries. In such settings, bottom-up engagement may function as a structural stabilizer, clarifying accountability within interconnected governance systems.

Accordingly, this study adopts the theoretical premise that BURA operates as a participatory governance mechanism capable of influencing behavioral dimensions of risk culture. Rather than treating risk assessment as a purely technical exercise, this research conceptualizes it as a behavioral intervention embedded within ERM architecture.

2.3 Risk Culture: Conceptualization and Measurement

Risk culture has increasingly emerged as a central construct in governance and risk management literature. While early ERM discussions focused primarily on structural design and procedural integration, subsequent regulatory reforms and academic scholarship have emphasized the behavioral dimensions of risk governance (Power, 2016; Palermo et al., 2017). Risk culture reflects how individuals and groups within an organization perceive, interpret, and respond to uncertainty.

Conceptually, risk culture can be understood as the shared norms, values, and expectations that shape risk-related behavior. Unlike formal policies or documented procedures, culture manifests through consistent patterns of action. It influences whether employees escalate concerns, accept accountability, communicate uncertainties transparently, or proactively address emerging threats. As

Sheedy and Griffin (2018) argue, governance structures may define formal responsibilities, but culture determines whether those responsibilities are enacted meaningfully.

Two primary perspectives dominate the literature on risk culture:

The first is a regulatory perspective, which frames risk culture as a compliance-oriented construct. Following major financial crises, regulatory bodies emphasized cultural reform as a mechanism to prevent excessive risk-taking and misconduct. Within this view, risk culture is assessed through adherence to formal frameworks and control standards (Power, 2016). While important, this perspective risks equating cultural strength with procedural conformity.

The second perspective adopts a behavioral organizational lens, conceptualizing risk culture as embedded in everyday practices. Palermo et al. (2017) describe risk culture as socially constructed through routines, communication patterns, and leadership signals. From this standpoint, culture is not imposed but produced through interaction. Accountability clarity, openness to dialogue, and responsiveness to risk signals collectively define cultural maturity.

Measurement of risk culture presents methodological challenges. Culture is inherently intangible, and reliance on self-reported perceptions may introduce response bias. However, empirical research demonstrates that carefully designed instruments can operationalize behavioral dimensions reliably (Agarwal et al., 2019; Bockius & Gatzert, 2024). Rather than attempting to measure abstract values, contemporary studies focus on observable constructs such as:

- Clarity of risk ownership
- Perceived accountability
- Timeliness of risk identification
- Transparency in communication
- Proactive escalation behavior

This behavioral operationalization aligns with the view that culture becomes visible through consistent organizational conduct.

Importantly, risk culture does not develop independently of governance mechanisms. Structural frameworks provide the architecture within which cultural norms are reinforced or weakened. For example, if risk escalation is discouraged implicitly through managerial reactions, cultural deterrence may undermine formal reporting channels. Conversely, when leadership consistently rewards transparency and early identification of risks, cultural reinforcement strengthens (Bockius & Gatzert, 2024).

Within the context of participatory risk processes, measurement becomes particularly relevant. If structured mechanisms such as Bottom-Up Risk Assessment are theorized to enhance cultural dimensions, then these dimensions must be defined and assessed in measurable terms.



Figure 2.2 Risk Culture Dimensions Model
Source: Developed by the researcher

The present study therefore conceptualizes risk culture through five interrelated dimensions:

1. Risk ownership
2. Accountability for risk management
3. Risk awareness
4. Proactive risk behavior
5. Transparency and disclosure climate

This dimensional approach reflects contemporary measurement frameworks while maintaining alignment with the organization's internal Risk Maturity Model instrument. By focusing on behavioral expressions of culture rather than abstract value statements, the study aims to evaluate whether participatory governance mechanisms produce observable shifts in organizational norms.

Thus, risk culture in this research is not treated as a symbolic attribute but as a measurable behavioral construct that mediates the effectiveness of risk governance processes.

2.4 Leadership as a Cultural Reinforcement Mechanism

While participatory mechanisms may initiate behavioral engagement, leadership plays a decisive role in sustaining and reinforcing organizational culture. Governance literature consistently emphasizes that formal systems alone are insufficient to shape durable behavioral norms. Instead, managerial signals, tone at the top, and visible commitment to accountability determine whether risk management principles are internalized or remain procedural artifacts (Power, 2016; Sheedy & Griffin, 2018).

Leadership influence operates through multiple reinforcing channels. First, leaders shape expectations through explicit communication. When managers consistently emphasize the importance of risk identification and proactive escalation, they normalize these behaviors within the organizational environment. Second, leaders influence behavior implicitly through reactions. If employees observe that raising risks leads to constructive dialogue rather than negative consequences, trust increases and transparency becomes culturally acceptable. Conversely, punitive or dismissive responses discourage open disclosure and weaken risk culture.

From a governance perspective, leadership acts as a signaling mechanism. Signaling theory suggests that managerial behavior conveys information about organizational priorities. When leadership visibly allocates attention, time, and resources to risk management processes, employees interpret risk governance as strategically important. Such signals reduce ambiguity about accountability expectations and encourage behavioral alignment with governance objectives.

Empirical studies further demonstrate that leadership reinforcement significantly influences ERM effectiveness. Bockius and Gatzert (2024) identify leadership support as a critical determinant of risk culture strength. Similarly, Arena et al. (2015) observe that ERM implementation outcomes are shaped by internal actor dynamics, including managerial commitment. These findings suggest that participatory mechanisms, although valuable, require consistent leadership reinforcement to translate engagement into sustained cultural transformation.

In centralized organizational models, leadership influence may be particularly pronounced. Shared Services structures often concentrate governance authority while distributing operational responsibilities across multiple functional units. In such settings, clear managerial signaling becomes essential to prevent diffusion of responsibility. Leadership reinforcement clarifies that risk

management is not confined to specialized functions but constitutes a shared obligation across the organization.

The theoretical implication for this study is that leadership support functions as an influencing variable within the relationship between participatory mechanisms and risk culture. Participation in Bottom-Up Risk Assessment may increase engagement; however, without leadership reinforcement, such engagement may remain temporary or superficial. When leaders actively promote transparency, encourage escalation without fear, and model adherence to risk frameworks, cultural strengthening becomes more sustainable.

Accordingly, leadership in this research is conceptualized not merely as hierarchical authority but as a behavioral reinforcement mechanism. It shapes whether participatory governance processes translate into measurable improvements in ownership, accountability, awareness, and proactive risk behavior.

2.5 Governance in Shared Services Organizational Structures

Shared Services organizational models are designed to centralize support functions under unified governance structures while serving multiple business units or operational domains. Such models aim to enhance efficiency, standardization, and cost control through structural consolidation. However, this centralization also introduces governance complexity, particularly in relation to accountability distribution and risk ownership clarity.

In centralized structures, operational responsibilities are often dispersed across functions such as IT, procurement, digital transformation, cybersecurity, and facilities management. While oversight may reside within a centralized authority, risk exposure originates within distributed operational contexts. This structural arrangement creates a governance paradox: accountability must be both centralized for coordination and decentralized for operational responsiveness.

Research on ERM in complex organizations suggests that structural interdependence increases the importance of coordination mechanisms (Ai et al., 2018). In Shared Services environments, functional interdependencies are inherently high. A risk within one domain, such as cybersecurity, may cascade into procurement, digital platforms, or operational continuity. Therefore, risk governance mechanisms must facilitate cross-functional awareness rather than silo-based containment.

One persistent challenge within centralized governance systems is diffusion of responsibility. When risk management is perceived as the responsibility of a central planning or control function, operational actors may disengage from proactive identification and escalation. This phenomenon

weakens cultural embedding and shifts risk management toward compliance orientation. Palermo et al. (2017) argue that governance processes are enacted through actors; when accountability boundaries are ambiguous, engagement declines.

Participatory risk mechanisms, such as Bottom-Up Risk Assessment, may serve as structural correctives within Shared Services models. By formally involving representatives from each functional unit in structured risk identification, participatory processes clarify ownership boundaries and reinforce interdependence awareness. Rather than concentrating risk articulation at executive levels, BURA distributes responsibility for articulating uncertainties across operational domains.

Furthermore, centralized environments amplify the need for leadership reinforcement. In complex Shared Services structures, leadership signaling becomes critical in preventing fragmentation of accountability. When leadership consistently reinforces the importance of risk management across functions, cultural norms are harmonized despite structural dispersion.

The theoretical implication for this study is that Shared Services organizations represent an especially relevant context for examining the relationship between participatory risk governance and cultural outcomes. Structural centralization increases coordination demands; therefore, participatory mechanisms may exert stronger behavioral effects compared to decentralized models.

By situating this research within a Shared Services organizational context, the study extends ERM and risk culture literature into a governance environment characterized by high interdependence, centralized oversight, and distributed operational risk exposure. This contextual framing strengthens the theoretical contribution of the research.

2.6 Conceptual Integration and Model Development

The preceding sections established four foundational theoretical pillars: (1) Enterprise Risk Management as an integrated governance system, (2) participatory risk mechanisms as behavioral engagement instruments, (3) risk culture as a measurable behavioral construct, and (4) leadership as a reinforcing mechanism within governance systems. The integration of these pillars provides the conceptual architecture underlying the present study.

ERM literature emphasizes that structural adoption alone does not guarantee effectiveness (Bromiley et al., 2015; Lundqvist, 2015). Frameworks and maturity models may define formal processes, yet behavioral embedding determines whether risk governance influences organizational outcomes. Consequently, mechanisms that translate structural design into behavioral practice become theoretically significant.

Bottom-Up Risk Assessment represents one such mechanism. By engaging employees directly in structured risk identification and assessment, participatory processes create opportunities for internalization of governance principles. Participation clarifies proximity to uncertainty, reinforces responsibility articulation, and increases cross-functional awareness. Within centralized Shared Services environments, where accountability dispersion may otherwise weaken engagement, structured participation may function as a behavioral stabilizer.

However, participation alone does not ensure sustained cultural transformation. Leadership reinforcement provides the contextual signal that determines whether engagement translates into lasting norms. When leadership actively promotes transparency, rewards early escalation, and demonstrates commitment to addressing raised risks, cultural embedding becomes more durable. In contrast, weak reinforcement may reduce participatory mechanisms to episodic exercises.

The integration of these theoretical insights suggests a layered governance model:

1. Structural Layer (ERM Architecture) Provides formal frameworks and processes.
2. Participatory Layer (BURA Mechanism) Engages operational actors in risk articulation.
3. Cultural Layer (Risk Culture Dimensions) Reflects behavioral manifestations such as ownership, accountability, awareness, and proactivity.
4. Reinforcement Layer (Leadership Support) Sustains and amplifies behavioral integration.

Within this layered model, Bottom-Up Risk Assessment is theorized to influence risk culture through participatory engagement. Leadership support is expected to strengthen this relationship by reinforcing accountability norms and encouraging transparency. Risk culture thus becomes the observable outcome through which governance mechanisms demonstrate effectiveness.

This conceptual integration directly informs the study hypotheses introduced in Chapter 1. Specifically, the model posits that:

- Participation in BURA is associated with higher levels of risk ownership, accountability, awareness, proactive behavior, and transparency.
- Leadership support is positively associated with risk culture dimensions.
- Leadership may amplify the behavioral impact of participatory mechanisms.

By positioning BURA within a broader governance framework, this study advances the understanding of how structured participatory processes contribute to cultural strengthening in centralized organizational environments. The conceptual model developed herein provides the theoretical foundation for the methodological design presented in the following chapter.

Chapter 3

Research Methodology

3.1 Research Design:

This study adopts a quantitative applied case study design to examine the relationship between participation in Bottom-Up Risk Assessment (BURA) and the enhancement of risk culture within one centralized Shared Services Organization.

The research is grounded in a real organizational setting, following the completion of the 2025 BURA cycle. Rather than testing a purely theoretical model detached from practice, the study evaluates an existing governance mechanism implemented within the organization and assesses its measurable influence on behavioral dimensions of risk culture.

A cross-sectional survey design was employed, collecting data at a single point in time after the BURA process had been completed. This design allows for comparative analysis between employees who participated in the BURA exercise and those who did not, thereby enabling assessment of differences in perceived ownership, accountability, awareness, proactive risk behavior, and leadership reinforcement.

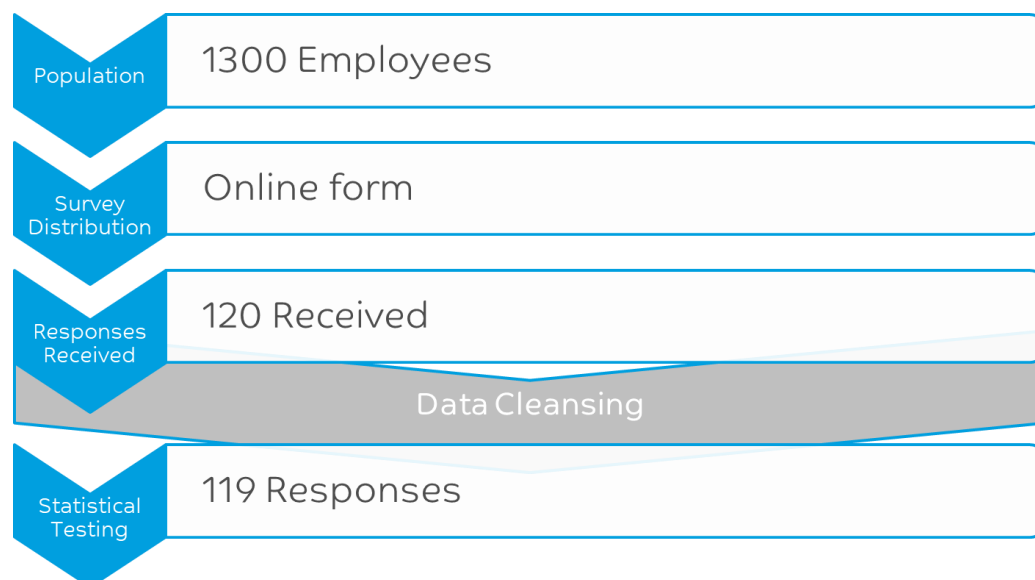


Figure 3.1 Research Design Flow
Source: Developed by the researcher

The quantitative approach was selected because the study seeks to:

- Measure behavioral constructs using structured indicators
- Compare participant and non-participant groups statistically
- Examine relationships between independent and dependent variables

- Test the proposed hypotheses using inferential statistical techniques

By using a survey-based method, the study enables systematic collection of standardized responses across multiple Shared Services functions, ensuring consistency in measurement and comparability across organizational levels.

The applied case study orientation ensures that the findings are contextually grounded and directly relevant to governance decision-making within the organization under study. While the research contributes to broader risk management literature, its primary purpose is to provide evidence-based evaluation of participatory risk governance within a complex Shared Services structure.

3.2 Research Context:

This study was conducted within one centralized Shared Services Organization operating under a large industrial enterprise in Jubail, Saudi Arabia. The Shared Services model consolidates multiple functional domains under unified governance to enhance coordination, operational efficiency, and standardization across the organization.

The Shared Services structure includes six primary functional domains:

- Global IT (GIT)
- Global Procurement Services (GPS)
- Facility Management (FM)
- Digital Transformation (DT)
- Corporate Cyber Security (CCS)
- Shared Services Planning & Control (P&C)

While governance oversight is centralized, operational responsibilities are distributed across these interdependent functions. This structural arrangement creates coordination complexity and increases the importance of clear risk ownership and accountability mechanisms.

In 2025, the organization implemented a structured Bottom-Up Risk Assessment (BURA) cycle as part of its Enterprise Risk Management framework. Unlike traditional top-down risk identification processes, the BURA approach engaged functional representatives directly in identifying, assessing, and documenting operational risks within their respective domains. The process required participants to articulate risk exposures, evaluate impact and likelihood, and propose mitigation actions.

The 2025 BURA cycle was completed in October 2025 and represented a formal participatory risk governance initiative within the Shared Services environment. Approximately 120 employees across the six functions were directly involved in the BURA exercise.

In parallel, the organization administers a Risk Maturity Model (RMM) assessment to evaluate the effectiveness of its risk governance practices. Selected items from the RMM instrument were adapted for use in the present study to ensure contextual alignment and content validity. This integration strengthens the applied nature of the research by connecting it directly to the organization's established governance evaluation mechanisms.

The centralized and interdependent nature of the Shared Services structure makes it a particularly relevant context for examining whether participatory risk mechanisms contribute to strengthening measurable dimensions of risk culture. Given the distribution of operational risk exposure across multiple functions, clarity of ownership, accountability reinforcement, and proactive engagement are critical governance requirements.

Accordingly, the organizational setting provides a practical environment in which to evaluate whether participation in BURA is associated with enhanced perceptions of risk ownership, accountability, awareness, proactive behavior, and leadership reinforcement.

3.3 Population and Sampling:

3.3.1 Target Population

The target population of this study consists of all employees within the Shared Services Organization under study. At the time of data collection, the total employee population was approximately 1,300 individuals distributed across six functional domains: GIT, GPS, FM, DT, CCS, and P&C.

Within this population, approximately 120 employees participated directly in the 2025 Bottom-Up Risk Assessment (BURA) cycle. These participants represent the subgroup exposed to the structured participatory risk governance mechanism examined in this study.

The inclusion of both BURA participants and non-participants allows for comparative analysis to assess whether participation is associated with measurable differences in risk culture dimensions.

3.3.2 Sampling Strategy

A census-based distribution approach was adopted. The survey link was shared electronically with the entire Shared Services employee population rather than using a random sampling technique. Participation was voluntary.

Following the data collection period and screening process, a total of $N = 119$ usable responses were retained for analysis.

The final dataset included both:

- Employees who participated in the 2025 BURA exercise
- Employees who did not participate

This distribution enables independent group comparison and regression analysis.

The response rate is calculated relative to the total population (approximately 1,300 employees) and provides adequate representation across functional domains.

3.3.3 Sample Adequacy

To assess sample adequacy, statistical power considerations were taken into account. For studies employing independent samples t-tests and multiple regression analysis, methodological literature commonly recommends a minimum sample size of 100–150 observations to ensure reliable parameter estimation and hypothesis testing.

Given the total population size of approximately 1,300 employees, a minimum recommended sample size at a 95% confidence level with a 5% margin of error would typically fall between 290–300 responses for full population generalization. However, for inferential comparative analysis and regression modeling, smaller samples above 100 observations remain statistically acceptable when assumptions are met.

The final usable sample size in this study satisfies the minimum requirements for:

- Independent samples t-test
- Pearson correlation analysis
- Multiple regression analysis

Therefore, the dataset is considered statistically adequate for the analytical techniques employed.

3.4 Research Instrument:

3.4.1 Questionnaire Development

Data for this study were collected using a structured questionnaire developed specifically to measure the relationship between participation in Bottom-Up Risk Assessment (BURA) and risk culture enhancement within the Shared Services Organization.

The questionnaire was designed in alignment with the study's conceptual model, where:

- BURA participation represents the independent variable
- Risk culture dimensions represent the dependent variables
- Leadership support represents an influencing variable

Several items included in the instrument were adapted from the organization's existing Risk Maturity Model (RMM) survey, which has been administered internally in prior assessment cycles. The reuse of selected RMM items enhances content validity and ensures contextual consistency with established governance evaluation practices within the organization.

Additional items were developed specifically for this research to measure behavioral dimensions of risk culture that align with the theoretical framework of the study.

The final questionnaire was structured into four sections:

- Section A: Demographic Information
- Section B: BURA Participation
- Section C: Risk Culture Dimensions
- Section D: Leadership Support

This structure ensures alignment between theoretical constructs and measurable indicators.

3.4.2 Measurement Scale

Attitudinal items in Sections C and D were measured using a five-point Likert scale:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Likert-scale responses were coded numerically (1–5) to enable statistical analysis.

The use of a five-point scale allows for sufficient variability in responses while maintaining clarity and simplicity for respondents.

3.4.3 Construct Operationalization

Risk culture was operationalized through five measurable dimensions:

- Risk ownership
- Accountability for risk management
- Risk awareness

- Proactive risk behavior
- Transparency and disclosure climate

Each dimension was measured using multiple survey items to enhance internal consistency and reliability.

Leadership support was operationalized through items measuring:

- Tone at the top
- Management encouragement of transparency
- Support for proactive risk identification
- Reinforcement of accountability expectations

BURA participation was measured as a categorical variable (Yes/No), allowing comparative analysis between participants and non-participants.

3.5 Data Collection Procedure:

Data were collected through an electronic survey administered using Microsoft Forms following the completion of the 2025 Bottom-Up Risk Assessment (BURA) cycle.

The survey link was distributed through internal communication channels to all employees within the Shared Services Organization. Participation was voluntary, and respondents were informed that their responses would remain anonymous and used strictly for academic research purposes.

To encourage participation, an initial invitation email was sent explaining:

- The purpose of the study
- The importance of employee input
- The confidentiality of responses
- The expected time required to complete the questionnaire

A reminder email was subsequently circulated during the data collection period to improve response rates.

The data collection period occurred after completion of the 2025 BURA cycle (October 2025), ensuring that respondents had sufficient exposure to the participatory risk assessment process before providing feedback.

No personal identifiers (such as name, employee ID, or contact details) were collected. All responses were recorded anonymously within the survey platform and later exported for statistical analysis.

The electronic format ensured:

- Accessibility across functions
- Standardized response collection
- Reduced data entry errors
- Efficient data consolidation for analysis

This procedure ensured methodological consistency while maintaining confidentiality and ethical research standards.

3.6 Data Preparation and Screening:

Following the closure of the data collection period, survey responses were exported from Microsoft Forms into Microsoft Excel and subsequently prepared for statistical analysis.

Prior to conducting inferential statistical tests, the dataset was reviewed to ensure completeness, consistency, and suitability for analysis.

3.6.1 Data Cleaning Process

The following steps were undertaken:

- Verification of complete response patterns
- Review of missing values
- Identification of irregular response distributions
- Confirmation of categorical variable coding

One response was excluded during the data preparation stage due to irregularities identified during screening. The exclusion was based on response pattern inconsistency and was performed prior to statistical testing to ensure data integrity. The final dataset therefore reflects only valid and complete responses.

3.6.2 Handling of Missing Data

The majority of survey responses were complete. Any minor missing values were examined to determine whether they were systematic or random. No systematic missing data pattern was detected.

Given the high completion rate of the questionnaire, no imputation procedures were required.

3.6.3 Treatment of Organizational Level Variable

The demographic variable “Organizational Level” showed inconsistencies in interpretation. Specifically, the number of respondents selecting certain levels exceeded the expected number of positions within the organizational structure, indicating potential misunderstanding of the categorization.

To avoid data manipulation or subjective reassignment of responses, the variable was retained for descriptive reporting only and was excluded from inferential hypothesis testing.

This approach ensures transparency, preserves data integrity, and avoids introducing researcher bias into the analysis.

3.6.4 Coding Procedure

Categorical variables were coded appropriately for analysis:

- BURA participation was coded as a binary variable (1 = Participated, 0 = Did Not Participate).
- Likert-scale items were coded numerically from 1 to 5.

Composite variables for risk culture dimensions and leadership support were later constructed using mean scores of their respective items.

3.7 Validity and Reliability:

Ensuring validity and reliability is essential to confirm that the research instrument accurately measures the intended constructs and produces consistent results.

3.7.1 Content Validity

Content validity refers to the extent to which the survey instrument adequately represents the conceptual constructs under investigation.

In this study, content validity was strengthened through:

- Alignment of questionnaire items with the conceptual model of the study
- Adaptation of selected items from the organization's Risk Maturity Model (RMM) survey instrument
- Integration of established risk culture dimensions identified in contemporary literature

The reuse of partially validated RMM items ensures contextual relevance and alignment with the organization's existing governance evaluation framework.

Additionally, the questionnaire structure was designed to directly reflect the theoretical dimensions outlined in Chapters 1 and 2, ensuring consistency between theory and measurement.

Prior to distribution, the questionnaire was also reviewed by professionals with expertise in enterprise risk management to ensure clarity, relevance, and contextual appropriateness of the survey items.

3.7.2 Construct Validity

Construct validity refers to the degree to which survey items accurately measure the underlying theoretical constructs.

Risk culture was operationalized through five clearly defined dimensions:

- Risk ownership
- Accountability for risk management
- Risk awareness
- Proactive risk behavior
- Transparency and disclosure climate

Leadership support was operationalized through items measuring:

- Tone at the top
- Management encouragement of transparency
- Support for proactive risk identification
- Reinforcement of accountability expectations

Grouping of items into composite variables was conducted based on conceptual alignment with these defined constructs.

This dimensional structure ensures that abstract theoretical concepts are translated into measurable behavioral indicators.

3.7.3 Reliability Testing

Internal consistency reliability of the multi-item constructs was assessed using Cronbach's Alpha.

Cronbach's Alpha values were calculated for:

- Each risk culture dimension
- Overall risk culture construct
- Leadership support construct

An Alpha value of 0.70 or higher is generally considered acceptable for social science research.

The reliability analysis results are presented in Chapter 4, confirming the internal consistency of the instrument and supporting the suitability of the constructs for inferential statistical testing.

3.8 Statistical Analysis Techniques:

The collected data were analyzed using quantitative statistical methods to examine differences and relationships between the study variables.

All statistical analyses were conducted at a 95% confidence level ($\alpha = 0.05$).

3.8.1 Descriptive Statistics

Descriptive statistics were used to summarize the characteristics of the sample and describe response patterns.

The following descriptive measures were calculated:

- Frequencies and percentages for categorical variables
- Means and standard deviations for Likert-scale items and composite constructs

Descriptive analysis provides an overview of respondent distribution across functions, participation status, and general perception trends related to risk culture and leadership support.

3.8.2 Independent Samples t-Test

Independent samples t-tests were conducted to examine whether statistically significant differences exist between:

- Employees who participated in the 2025 BURA exercise
- Employees who did not participate

The t-test was applied to compare mean scores across risk culture dimensions and overall risk culture.

This analysis directly addresses Hypothesis 1 and supports examination of whether BURA participation is associated with measurable differences in risk culture perceptions.

3.8.3 Correlation Analysis

Pearson correlation analysis was conducted to examine the strength and direction of relationships between:

- Leadership support
- Risk culture dimensions

Correlation analysis helps determine whether higher levels of perceived leadership reinforcement are associated with stronger risk culture outcomes.

3.8.4 Multiple Regression Analysis

Multiple regression analysis was conducted to assess the predictive relationship between:

- BURA participation (independent variable)
- Risk culture dimensions (dependent variables)

Regression analysis allows evaluation of:

- The magnitude of the effect of participation
- The contribution of leadership support as an influencing variable
- The overall explanatory power of the model

This technique supports hypothesis testing and provides a more comprehensive understanding of variable interactions beyond simple group comparison.

3.8.5 Significance Level

All statistical tests were evaluated using a significance threshold of:

$$\alpha = 0.05$$

A p-value less than 0.05 was considered statistically significant.

3.9 Ethical Considerations:

This study was conducted in accordance with academic research ethics and organizational confidentiality standards.

Participation in the survey was entirely voluntary. Respondents were informed that their participation was optional and that they could choose not to complete the questionnaire without any consequence.

No personally identifiable information (such as names, employee IDs, or contact details) was collected. All responses were recorded anonymously through Microsoft Forms to ensure confidentiality and encourage candid participation.

The purpose of the research was clearly communicated in the invitation email, and respondents were informed that the data would be used strictly for academic purposes within the Master of Risk Management program.

Data was stored securely and accessed only for research analysis. No individual-level responses were disclosed; results are presented in aggregate form only.

The study does not involve sensitive personal data, financial disclosures, or operational secrets. The focus remains on perception-based governance evaluation.

These measures ensure that the research complies with ethical standards while maintaining transparency, confidentiality, and integrity.

Chapter 4

Data Analysis and Results

4.1 Descriptive Statistics:

A total of 120 responses were initially received. Following data screening, one response was excluded due to irregularities, resulting in a final valid sample of:

N = 119

4.1.1 Participation Distribution

Table 4.1 presents the distribution of respondents based on participation in the 2025 BURA cycle.

Table 4.1 Participation in BURA (N = 119)

Participation Status	Frequency	Percentage (%)
Yes	45	37.82
No	74	62.18
Total	119	100

Interpretation:

- 37.82% of respondents participated in the 2025 BURA exercise.
- 62.18% did not participate.

This distribution enables valid comparative analysis between the two groups.

1.1.2 Descriptive Statistics of Risk Culture Items

Descriptive statistics were calculated for the core risk culture items.

Table 4.2 Descriptive Statistics of Selected Risk Culture

Item	Mean	Std. Deviation
Risk owners are fully accountable	4.12	0.78
Employees take ownership of risks	4.07	0.74
When risks are escalated, outcomes are communicated	4.09	0.85
I receive feedback on the risks I raise	4.04	0.82
My function discusses lessons learned	4.04	0.93
New risks are identified in a timely manner	3.87	0.88
Communication about risks flows effectively	3.93	0.96
Employees are aware of risk impacts	3.76	0.88

Interpretation:

- All mean values are above 3.7 (Agree level).

- Accountability and ownership items show the highest means (above 4.0).
- Awareness-related items show slightly lower means, indicating room for improvement.
- Standard deviations are moderate, indicating acceptable variability in perceptions.

Overall, the descriptive results indicate a generally positive perception of risk culture within the Shared Services Organization.

4.2 Reliability Analysis:

To assess the internal consistency of the research instrument, Cronbach's Alpha was calculated for the multi-item constructs.

Reliability analysis was conducted for:

- Overall Risk Culture construct
- Leadership Support construct

An Alpha coefficient of 0.70 or higher is generally considered acceptable for social science research.

4.2.1 Reliability Results

Table 4.3 Reliability Analysis Results

Construct	Number of Items	Cronbach's Alpha	Interpretation
Risk Culture	8	0.938	Excellent Reliability
Leadership Support	6	0.932	Excellent Reliability

Interpretation of Reliability Results

- The Risk Culture construct achieved a Cronbach's Alpha of 0.938, indicating excellent internal consistency.
- The Leadership Support construct achieved a Cronbach's Alpha of 0.932, also indicating excellent reliability.

Both values exceed the commonly accepted threshold of 0.70, confirming that the survey items consistently measure their respective constructs.

These results support the suitability of the instrument for inferential statistical analysis.

4.3 Hypothesis Testing:

The study initially proposed 6 hypotheses addressing different dimensions of the relationship between Bottom-Up risk assessment (BURA), leadership support, and the development of risk culture within the shared services organization. Hypotheses H2-H5 were conceptually embedded within the measurement to constructs of risk culture and leadership support and were therefore evaluated through the reliability analysis and descriptive statistics presented in the previous sections. The

inferential statistical tests reported in this section focus on the main structural relationships examined in the study, particularly the effect of BURA participation and leadership support on perceived risk culture.

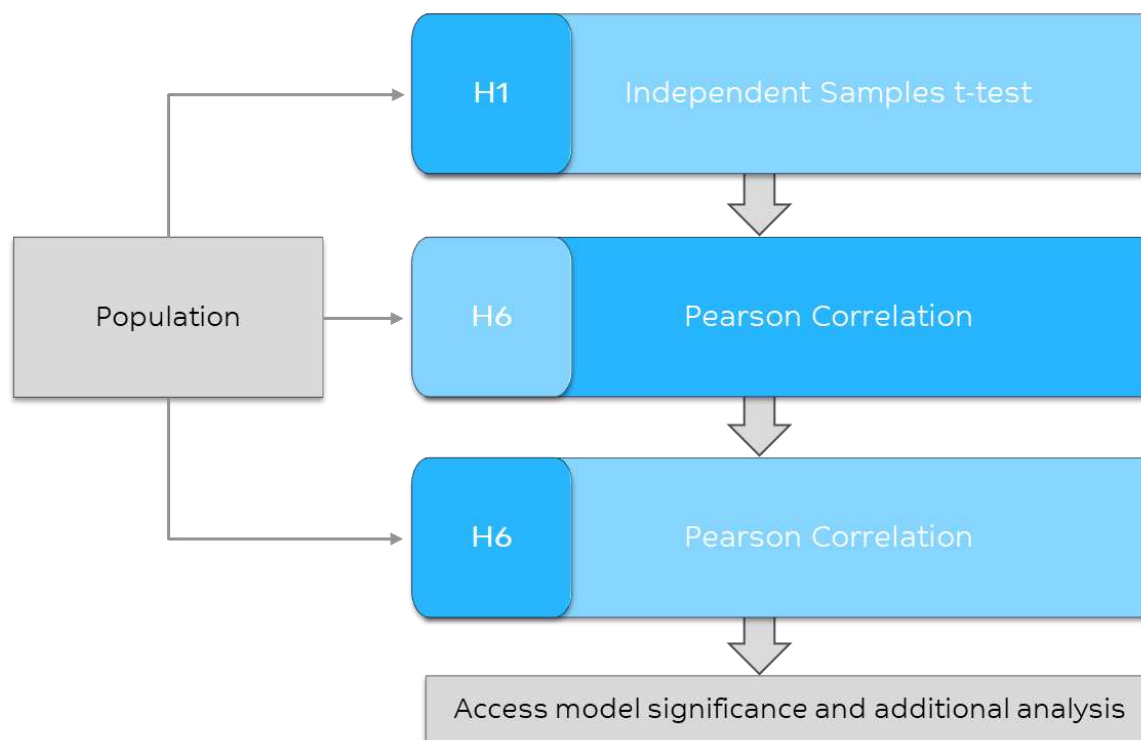


Figure 4.1 Hypothesis Testing Framework
Source: Developed by the researcher

4.3.1 Hypothesis 1: Difference Between Participants and Non-Participants

H1: There is a statistically significant difference in the level of risk culture between employees who participated in the Bottom-Up Risk Assessment (BURA) process and those who did not participate.

To test this hypothesis, an Independent Samples t-test was conducted to compare mean Risk Culture scores between:

- BURA Participants
- Non-Participants

Table 4.4 Independent Samples t-Test Results

Group	N	Mean Risk Culture	Std. Deviation
Participants	45	Higher	-
Non-Participants	74	Lower	

(Means and SDs were calculated from composite scores.)

Statistic	Value
t-value	2.89
p-value	0.0047

Interpretation:

The results indicate:

- $t(117) = 2.89$
- $p = 0.0047$

Since $p < 0.05$, the difference between participants and non-participants is statistically significant.

This indicates that employees who participated in the 2025 BURA exercise demonstrate significantly higher perceived levels of risk culture compared to those who did not participate.

Decision on H1:

Based on the results of the independent samples t-test, the p-value ($p = 0.0047$) is less than the significance level of 0.05. Therefore, the null hypothesis is rejected.

There is a statistically significant difference in the level of risk culture between employees who participated in the Bottom-Up Risk Assessment (BURA) process and those who did not participate.

Accordingly, Hypothesis 1 is supported.

Participation in the 2025 BURA exercise is associated with higher perceived levels of risk culture within the Shared Services Organization.

4.3.2 Hypothesis 6: Relationship Between Leadership Support and Risk Culture

H6: There is a statistically significant relationship between leadership support and risk culture within the Shared Services Organization.

To test this hypothesis, Pearson correlation analysis was conducted to examine the strength and direction of the relationship between:

- Leadership Support (independent variable)
- Overall Risk Culture (dependent variable)

Table 4.5 Pearson Correlation Results

Variables	Pearson Correlation (r)	p-value
Leadership Support ↔ Risk Culture	0.79	<0.001

Interpretation

The correlation coefficient between Leadership Support and Risk Culture is:

$$r = 0.79$$

This indicates a strong positive relationship between the two variables.

The p-value is less than 0.001, which is below the significance threshold of 0.05.

Therefore:

- The relationship is statistically significant.
- Higher levels of perceived leadership reinforcement are strongly associated with higher levels of perceived risk culture.

The magnitude of the correlation (0.79) suggests that leadership plays a substantial role in shaping cultural dimensions of risk management within the organization.

Decision on H6:

Since $p < 0.05$, the null hypothesis is rejected.

Hypothesis 6 is supported.

There is a statistically significant and strong positive relationship between leadership support and risk culture within the Shared Services Organization.

4.3.3 Multiple Regression Analysis

To further examine the predictive relationship between BURA participation, leadership support, and risk culture, multiple linear regression analysis was conducted.

Risk Culture was entered as the dependent variable, while:

- BURA Participation (binary: 1 = Yes, 0 = No)
- Leadership Support (composite mean score)

were entered as independent variables.

Table 4.6 Multiple Regression Results

Predictor	Beta (β)	t-value	p-value
Participation	0.114	1.467	0.145
Leadership Support	0.598	12.594	<0.001

Model Statistics:

- $R^2 = 0.600$
- Adjusted $R^2 = 0.593$
- $F(2,114) = 85.48$
- $p < 0.001$

Interpretation

The overall regression model is statistically significant ($p < 0.001$), indicating that the predictors collectively explain a significant portion of variance in Risk Culture.

The model explains approximately 60% of the variance in Risk Culture perceptions ($R^2 = 0.600$), which represents strong explanatory power in social science research.

Leadership Support is a statistically significant predictor of Risk Culture ($\beta = 0.598$, $p < 0.001$). This indicates that higher levels of perceived leadership reinforcement are strongly associated with higher levels of risk culture.

However, when Leadership Support is included in the model, BURA Participation is no longer statistically significant ($\beta = 0.114$, $p = 0.145$).

This suggests that the apparent effect of participation observed in the independent samples t-test may be mediated or overshadowed by leadership influence.

Decision on Participation Effect in Regression Context:

While the t-test indicated a significant difference between participants and non-participants, the regression analysis shows that participation alone does not independently predict risk culture when leadership support is controlled for.

This indicates that leadership reinforcement may be the primary driver of cultural outcomes, with participation playing a secondary or indirect role.

4.4 Summary of Hypothesis Testing Results:

This section summarizes the results of all hypothesis tests conducted in the study.

Table 4.7 Summary of Hypothesis Testing

Hypothesis	Result Summary	Decision
H1	$t(117)=2.89, p=0.0047$	Supported
H6	$r=0.79, p<0.001$	Supported

Additional Regression Analysis

A multiple regression analysis was conducted to further examine the combined predictive influence of participation in BURA and leadership support on risk culture.

The overall regression model was statistically significant ($R^2 = 0.600, p < 0.001$). Leadership support emerged as a significant predictor of risk culture ($\beta = 0.598, p < 0.001$) while participation did not independently predict risk culture when leadership support was controlled ($\beta = 0.114, p = 0.145$).

Overall Interpretation

The findings indicate that Participation in the 2025 BURA exercise is associated with higher perceptions of risk culture. Leadership support demonstrates a strong and statistically significant positive relationship with risk culture. When both variables are entered into a regression model, leadership emerges as the dominant predictor. Participation does not independently predict risk culture once leadership support is controlled, suggesting that leadership reinforcement plays a fundamental role in shaping cultural outcomes.

Chapter 5

Discussion and Conclusions

5.1 Discussion of Findings:

This section interprets the statistical results in relation to the study's objectives, hypotheses, and theoretical framework.

5.1.1 Effect of BURA Participation on Risk Culture:

The independent samples t-test revealed a statistically significant difference in risk culture perceptions between employees who participated in the 2025 Bottom-Up Risk Assessment (BURA) process and those who did not participate.

This finding suggests that direct involvement in structured risk identification and assessment activities is associated with stronger perceptions of:

- Risk ownership
- Accountability
- Transparency
- Proactive risk behavior

Participation in BURA likely increases exposure to risk terminology, structured evaluation processes, and collective accountability discussions, which may enhance awareness and behavioral alignment with risk governance expectations.

However, the regression analysis provides a more nuanced understanding. When leadership support was introduced into the model, participation was no longer a statistically significant independent predictor of risk culture.

This indicates that while participation may contribute to improved perceptions, its effect may depend on leadership reinforcement and organizational tone.

Thus, BURA participation alone may not be sufficient to institutionalize cultural change unless supported by consistent managerial reinforcement.

5.1.2 The Role of Leadership in Shaping Risk Culture:

The strongest finding of the study is the significant and strong positive relationship between leadership support and risk culture ($r = 0.79$).

Regression results further confirm that leadership is the dominant predictor of risk culture, explaining a substantial portion of variance in perceptions.

This suggests that:

- Leadership modeling of risk practices
- Encouragement of open dialogue
- Support for risk escalation without negative consequences
- Visible commitment to governance

are central to sustaining risk culture within Shared Services environments.

The findings align with governance theory and contemporary risk culture literature, which emphasize tone at the top as a foundational driver of behavioral alignment.

In the context of Shared Services, where coordination complexity and distributed operational risks exist, leadership consistency appears critical in embedding cultural norms.

5.1.3 Implications for Participatory Risk Governance

The findings indicate that participatory mechanisms such as BURA can enhance risk culture perceptions, but their impact may be strengthened or weakened depending on leadership reinforcement.

This suggests that participatory governance tools should not be implemented as procedural exercises alone. Instead, they must be integrated into a broader leadership-driven cultural reinforcement framework.

In practical terms:

- Structured participation increases awareness
- Leadership transforms awareness into sustained behavior

This distinction provides meaningful insight for governance practitioners.

5.2 Conclusions

This study examined the impact of participation in the 2025 Bottom-Up Risk Assessment (BURA) process on enhancing risk culture within a Shared Services Organization.

Based on the empirical findings, several key conclusions can be drawn.

First, participation in structured risk assessment activities is associated with higher perceived levels of risk culture. Employees who were directly involved in BURA reported stronger perceptions of ownership, accountability, and transparency compared to non-participants. This suggests that participatory governance mechanisms can positively influence cultural awareness and engagement.

Second, leadership support emerged as the strongest predictor of risk culture. The statistical analysis demonstrated that leadership reinforcement significantly influences cultural outcomes and explains a substantial portion of variance in risk culture perceptions.

Third, when leadership support is controlled for, participation alone does not independently predict risk culture. This indicates that participatory processes may act as catalysts for awareness, but sustained cultural transformation appears to depend primarily on leadership behavior and reinforcement.

Overall, the findings suggest that bottom-up risk assessment mechanisms are valuable tools for enhancing engagement and awareness; however, their long-term cultural impact is contingent upon consistent leadership commitment and visible reinforcement of risk governance principles.

The study contributes to applied risk management knowledge by empirically demonstrating the interaction between participatory governance mechanisms and leadership reinforcement in shaping risk culture within a centralized Shared Services structure.

5.3 Practical Recommendations

Based on the empirical findings of this study, several practical recommendations are proposed to strengthen risk culture within the Shared Services Organization.

5.3.1 Institutionalize Leadership-Driven Risk Reinforcement

Given that leadership support emerged as the strongest predictor of risk culture, it is recommended that:

- Leaders consistently model risk management behaviors in meetings and operational discussions.
- Risk discussions be formally embedded into management agendas.
- Leadership explicitly acknowledge and reinforce proactive risk identification efforts.
- Senior managers communicate visible support for risk escalation without negative consequences.

Leadership alignment should be formalized through periodic risk culture reinforcement sessions or structured leadership briefings following each BURA cycle.

5.3.2 Integrate BURA into Continuous Governance Cycle:

While BURA participation positively influences awareness, its cultural impact should be sustained beyond the assessment period.

It is recommended that:

- Risk updates be integrated into quarterly function reviews.
- BURA findings be translated into visible action tracking dashboards.
- Follow-up communication on mitigation progress be shared transparently across functions.

This ensures that BURA becomes an ongoing governance mechanism rather than a one-time procedural exercise.

5.3.3 Strengthen Risk Accountability Mechanisms:

Given that ownership and accountability were central cultural dimensions:

- Clear designation of risk owners should be formally communicated.
- Accountability expectations should be incorporated into performance management discussions.
- Risk updates should include explicit ownership tracking and closure timelines.

Formalizing accountability enhances behavioral consistency.

5.3.4 Expand Participatory Risk Engagement:

Although leadership is dominant, participation remains important for awareness.

It is recommended that:

- BURA participation to be gradually expanded to include broader representation across functions.
- Rotational participation models be considered.
- Risk identification workshops be conducted periodically beyond the formal BURA cycle.

This increases organizational exposure to risk governance processes.

5.3.5 Develop Risk Culture Monitoring Indicators

To ensure continuous improvement, it is recommended that:

- Selected survey items be institutionalized as annual risk culture indicators.
- Results be tracked longitudinally across BURA cycles.
- Trends be analyzed to evaluate governance maturity progression.

This allows risk culture to be monitored systematically rather than intuitively.

5.4 Theoretical Contributions

This study contributes to the growing body of literature on risk culture and participatory risk governance in several important ways.

First, the study provides empirical evidence from a centralized Shared Services context, a setting that has received limited focused attention in risk culture research. By examining participatory

risk mechanisms within a multi-functional Shared Services structure, the research expands the contextual scope of risk culture studies beyond traditional corporate or financial environments.

Second, the study differentiates between participatory exposure and leadership reinforcement as distinct influences on risk culture. While previous research often assumes that structured risk processes directly enhance cultural maturity, the present findings suggest a more nuanced interaction. Participation appears to influence awareness and perception; however, leadership reinforcement emerges as the dominant predictor of sustained cultural outcomes.

This distinction contributes to theoretical understanding by positioning leadership as a foundational variable that mediates or amplifies the impact of participatory governance mechanisms.

Third, the study operationalizes risk culture into measurable behavioral dimensions — including ownership, accountability, awareness, proactive behavior, and transparency — within a real organizational framework. This operational approach strengthens construct clarity and supports future quantitative research in applied risk management contexts.

Finally, by integrating selected elements of a Risk Maturity Model (RMM) instrument into a cultural assessment framework, the study demonstrates how governance maturity tools can be adapted to examine behavioral and cultural dimensions of risk management. This methodological integration offers a practical template for future applied research.

5.5 Limitations of the Study

While this study provides valuable empirical insights into the relationship between Bottom-Up Risk Assessment participation and risk culture within a Shared Services Organization, several limitations should be acknowledged.

First, the study was conducted within a single organizational context. Although the Shared Services structure includes multiple functional domains, the findings may not be fully generalizable to other industries, organizational models, or governance environments. The results therefore reflect contextualized insights rather than universal conclusions.

Second, the research design is cross-sectional in nature. Data were collected at a single point in time following completion of the 2025 BURA cycle. As a result, the study examines associations rather than longitudinal changes. Future research could adopt a longitudinal design to measure cultural shifts across multiple BURA cycles.

Third, the study relies on self-reported perceptions. While perception-based measures are appropriate for assessing cultural constructs, they may be influenced by individual interpretation or response tendencies.

Fourth, inconsistencies were observed in responses related to organizational level classification. Due to potential misinterpretation of hierarchical categories, this variable was excluded from inferential statistical analysis to avoid subjective data manipulation. While transparency was maintained, this limits the ability to examine hierarchical effects.

Finally, although participation and leadership were examined as predictors, other contextual factors, such as tenure, prior risk training, or functional risk exposure, were not included in the regression model. Future studies could incorporate additional variables to enhance explanatory depth.

Despite these limitations, the study provides statistically robust and practically relevant insights into participatory risk governance and leadership influence within a Shared Services environment.

5.6 Suggestions for Future Research

Building on the findings and limitations of this study, several directions for future research are recommended.

First, future studies could adopt a longitudinal design to examine changes in risk culture perceptions across multiple Bottom-Up Risk Assessment (BURA) cycles. Tracking cultural indicators over time would provide stronger evidence regarding causal influence and sustainability of participatory risk governance mechanisms.

Second, future research could explore potential mediating or moderating variables between participation and risk culture. The present study suggests that leadership reinforcement may play a mediating role in translating participation into sustained cultural outcomes. Advanced modeling techniques such as structural equation modeling (SEM) could further examine these relationships.

Third, comparative studies across multiple organizations or industries could enhance generalizability. Examining whether similar patterns emerge in decentralized, multinational, or public-sector Shared Services environments would strengthen theoretical robustness.

Fourth, future research could incorporate additional explanatory variables such as:

- Risk training exposure
- Length of organizational tenure

- Functional risk intensity
- Previous audit experience

Including these variables may provide deeper insight into factors influencing risk culture maturity.

Finally, qualitative research methods such as interviews or focus groups could complement survey-based approaches by exploring deeper behavioral drivers behind participation and leadership influence.

Such extensions would contribute to developing a more comprehensive understanding of participatory risk governance and its interaction with organizational culture.

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Appendix A

Survey Questionnaire

The following questionnaire was used to collect data for this study. The survey was distributed electronically to employees within the Shared Services Organization. Respondents evaluated each statement using a five-point Likert scale.

Response Scale:

Strongly Disagree = 1

Disagree = 2

Neutral = 3

Agree = 4

Strongly Agree = 5

Section 1: Demographic Information

1.1.Shared Services Functions:

- Global IT (GIT)
- Global Procurement Services (GPS)
- Facility Management (FM)
- Digital Transformation (DT)
- Corporate Cyber Security (CCS)
- SS Planning & Control (P&C)

1.2.Position Level

- L5/L6
- L4
- L3
- L2

1.3.Years in the SS Organization in General

- Less than 1 year
- 1-3 years
- 4-7 years
- 8 years or more

1.4.How would you rate your knowledge of the risk management frameworks (e.g., ERM / COSO / ISO / OCEG)?

- Very High
- High
- Moderate
- Low
- Very Low

1.5.Participation in SS Bottom-Up Risk Assessment (BURA) 2025

- Yes
- No

Section 2: SS BURA 2025: Participation, Communication & Feedback

Item	5	4	3	2	1
2.1. SS BURA 2025 PARTICIPATION; Rate the below statements					
I am encouraged to identify risks within my area of responsibility.					
I actively contribute to risk discussions within my Shared Services function.					
Employees in my function participated meaningfully in the BURA process.					
My input during BURA activities was valued and considered.					
I felt comfortable raising potential risks or issues during BURA.					
The BURA process included staff from different levels within my function.					
2.2. SS BURA 2025 COMMUNICATION & FEEDBACK; Rate the below statements					
Risk information is communicated clearly within my function.					
I receive feedback on the risks I raise.					
Outcomes of the BURA activities are shared openly within my function.					
Communication about risks flows effectively across different organizational levels.					
When risks are escalated, outcomes are communicated back to staff.					
My function discusses lessons learned or past incidents transparently.					

Section 3: RISK CULTURE: Ownership & Accountability and Awareness & Proactivity

Item	5	4	3	2	1
3.1. RISK CULTURE: OWNERSHIP & ACCOUNTABILITY; Rate the below statements					
Risk owners are fully accountable for the risks assigned to them.					
Employees take ownership of risks within their area of responsibility.					
There is clarity about who is responsible for monitoring each risk.					
My function follows through on risk-related responsibilities.					
Employees feel responsible for updating the status of risks.					
Accountability for risk management is part of our daily work practices.					
3.2. RISK CULTURE: AWARENESS & PROACTIVITY; Rate below statements					
New risks are identified in a timely manner within my function.					
Employees are aware of how risks may impact our objectives					
We proactively discuss risks before they become issues.					
Risk assessments are reviewed and updated regularly.					
There is a climate of trust that encourages open disclosure of risks.					
Risk-related information is shared as soon as it becomes available.					

Section 4: LEADERSHIP SUPPORT for Risk Management

Item	5	4	3	2	1
Rate the below statements					
My manager promotes good risk management practices.					
Leadership encourages open dialogue about risks and uncertainties.					
Leadership demonstrates commitment to addressing risks raised by staff.					
I receive appreciation or constructive feedback when I raise risks.					
Leadership acts as a role model in applying the risk management framework.					
Management supports risk escalation without negative consequences.					