



Strengthening Risk Culture through Tone at the Top and Knowledge Sharing: The Mediating Role of Collaborative Working in Local Government

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Abstract

This research aims to investigate the influence of Tone at the Top and Knowledge Sharing on Risk Culture, with Collaborative Working serving as a mediating variable within the Inspectorate of Madiun City. Strengthening risk culture is essential for local government internal oversight bodies to ensure organizational integrity and effective risk management. Using a descriptive-quantitative approach, data were collected through a census (total sampling) of 41 civil servants (ASN) at the Inspectorate via a structured five-point Likert scale questionnaire. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software to evaluate both direct and indirect relationships. The results reveal that Tone at the Top, Knowledge Sharing, and Collaborative Working each have a significant positive direct effect on Risk Culture. Furthermore, Collaborative Working successfully mediates the relationship between Knowledge Sharing and Risk Culture. However, Collaborative Working does not act as a mediator for Tone at the Top, suggesting that leadership commitment influences culture directly rather than through collaborative synergy. These findings emphasize that while leadership sets the ethical foundation, the mobilization of knowledge is the primary driver for collaborative practices that solidify a resilient risk culture in the public sector.

Keywords: Tone at the Top; Knowledge Sharing; Collaborative Working; Risk Culture; Internal Audit

1. Introduction

The implementation of Regional Development Risk Management (Manajemen Risiko Pembangunan Daerah) has become a fundamental pillar for local governments to ensure accountability, transparency, and the successful attainment of strategic organizational goals. In the specific context of the Indonesian public sector, particularly within the Madiun City Government, the effectiveness of these risk frameworks is often compromised by a significant gap in the underlying "Risk Culture" among Civil Servants (ASN) (Trump et al., 2023) (Ma et al., 2020). Risk culture is defined as the shared values, beliefs, knowledge, and collective understanding of risk held by a group with a common purpose, which fundamentally dictates how decisions are made and how uncertainties are managed within an organization (Bockius & Gatzert, 2024). Without a robust risk culture, risk management processes risk becoming mere administrative formalities—a "tick-the-box" exercise—rather than a dynamic and strategic tool for anticipating and mitigating potential failures (Domańska-Szaruga, 2020) (Miller, 2022).

A critical driver in the formation of this culture is the "Tone at the Top," which refers to the visible commitment, ethical leadership, and exemplary behavior demonstrated by high-level management. Leaders who prioritize risk awareness and integrity send a powerful signal throughout the organization, influencing subordinates' behavior through awareness, loyalty, or institutional authority. When leaders actively integrate risk considerations into performance planning and internal evaluations, they lay the foundation for a professional environment where risk management is viewed as a shared responsibility rather than an external imposition (Dürst & Kunz, 2025b). However, leadership alone is insufficient if the necessary information and expertise do not flow freely across the organization.

This brings the importance of "Knowledge Sharing" to the forefront of organizational resilience. Knowledge sharing involves the continuous exchange of insights, experiences, and data between at least two parties, allowing for the reshaping of knowledge into new contexts that foster innovation and informed decision-making. In many local government entities, information regarding risk management is still perceived as complex and difficult to access, making the exchange of knowledge a critical turning point for improving collective understanding (Breckenridge et al., 2018). Efficient knowledge sharing ensures that lessons learned from past failures or successful mitigations are socialized, thereby equipping the workforce with the intellectual tools required to sustain a healthy risk culture (Streicher et al., 2023) (Rahim et al., 2024).

Despite the importance of leadership and knowledge, the transition from institutional policy to a pervasive cultural norm often requires a catalyst. Recent organizational theories suggest that "Collaborative Working" serves as this essential bridge. Collaborative working is characterized by a shift toward hybrid, synergetic cooperation that transcends physical and virtual boundaries to increase efficiency and effectiveness (Liebhart, 2024). In the public sector, where departmental "silos" frequently hinder communication, a collaborative approach ensures that risk identification and mitigation occur through cross-functional and cascaded performance management. This synergy allows for the creation of a collective intelligence that is more robust than the sum of individual efforts, directly reinforcing the overall maturity of the organization's risk culture (Ellis et al., 2023) (Ghafoori et al., 2023).

This study is designed to empirically investigate the mechanisms for strengthening risk culture within the Inspectorate of Madiun City by analyzing the influence of "Tone at the Top" and "Knowledge Sharing" on "Risk Culture," with a specific focus on the mediating role of "Collaborative Working." The research aims to verify whether a strong leadership commitment directly enhances the organizational risk culture, determine the extent to which active knowledge exchange practices contribute to its resilience, and evaluate the direct impact of collaborative efforts on this cultural development. Furthermore, the study examines the mediating effect of "Collaborative Working" in bridging the relationship between leadership, knowledge sharing, and the final cultural outcome, ultimately providing a comprehensive model for local governments to transition from simple compliance toward an integrated, risk-aware organizational identity.

The novelty of this research lies in its integrated approach to testing the mediating role of "Collaborative Working" within a specific public sector auditing body in a developing nation. While extensive research exists on risk culture in the financial sector (Sinha & Arena, 2020), empirical studies that explore the intersection of leadership, knowledge exchange, and collaboration in Indonesian local government are relatively scarce. This research serves as a pilot study that offers a nuanced perspective on how social interactions and individual characteristics within the public sector can either leverage or hinder the effectiveness of institutional risk frameworks.

Furthermore, this study challenges the assumption that strong leadership automatically leads to effective risk management. By employing a quantitative approach using SmartPLS analysis, this research uncovers that the relationship between leadership and culture is significantly enhanced when it is channeled through collaborative behaviors (Xue et al., 2010) (Kwofie et al., 2019). This provides a unique theoretical implication: a strong leadership tone must be supported by practical, collaborative involvement in performance reporting to truly manifest as a sustainable risk culture. Thus, this study contributes a new evidence-based framework for local governments to identify the "critical points" where risk management implementation can be most effectively accelerated.

2. Methods

2.1 Research Approach and Design

The complexity of organizational behavior in the public sector, particularly concerning the internal audit function, necessitates a rigorous and systematic inquiry. This study investigates the influence of Tone at the Top and Knowledge Sharing on Risk Culture, with Collaborative Working serving as a mediating variable within the Inspectorate of Madiun City (Peraturan Presiden Republik Indonesia Nomor 39 Tahun 2023, 2023) (Peraturan Walikota Madiun Nomor 63 Tahun 2021 Tentang Kedudukan, Susunan Organisasi, Rincian Tugas Dan Fungsi Serta Tata Kerja Inspektorat, 2021). To achieve a comprehensive understanding of these dynamics, this research employs a descriptive research design with a quantitative approach. This methodological choice is grounded in the need to provide a systematic description of facts, characteristics, and relationships between the phenomena being studied. By utilizing quantitative procedures, the study produces numerical data that can be analyzed through descriptive and inferential statistics to test predefined hypotheses (Palermo et al., 2017) (Ching et al., 2021).

The conceptual framework illustrated in Figure 1 outlines the structural relationships between the primary research variables, positioning Tone at The Top (X1) and Knowledge Sharing (X2) as independent factors that influence Risk Culture (Y) both directly and indirectly through the mediating role of Collaborative Working (Z). This model establishes seven distinct hypothesis paths, where direct effects are analyzed alongside the intervening capacity of collaborative processes to determine their collective impact on the organizational risk environment (Semeyutin et al., 2023) (Owusu & Gupta, 2024).

This quantitative framework is particularly suitable for exploring the structural relationships between leadership commitment, information exchange, and cultural outcomes. As noted by Liebhart, the modern world of work increasingly relies on collaborative structures to navigate complex organizational landscapes (Liebhart, 2024). By adopting a structured approach, this research aims to clarify how these variables interact to strengthen the risk management

framework within a local government context. The choice of a descriptive-quantitative approach aligns with the objective of determining the frequency and distribution of specific attitudes and behaviors related to risk management among government officials. Furthermore, analyzing these core elements through empirical data provides a solid foundation for developing highly targeted interventions, ultimately ensuring that all public sector institutions can efficiently address unforeseen challenges while maintaining operational transparency, public trust, and continuous strategic resilience overall.

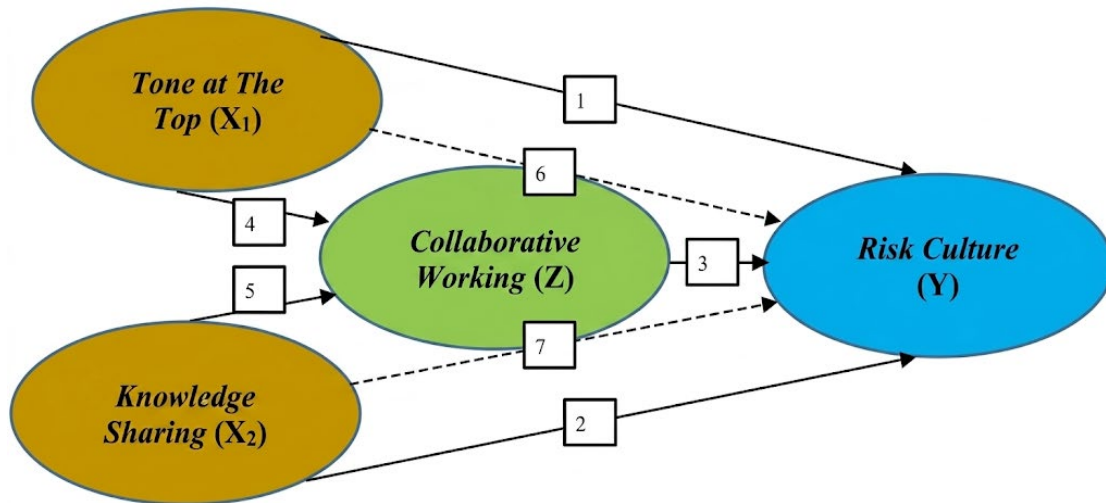


Figure 1. Conceptual framework of the research

Source: Data analysis

2.2 Operational Definition of Variables

To ensure clarity and consistency in measurement, each variable in this study is defined based on established theoretical frameworks:

- 1) **Tone at the Top (Independent Variable - X₁):** This refers to the ethical atmosphere created by the leadership of an organization. It represents the commitment of top management to integrity and risk awareness, which serves as the foundation for the organizational culture.
- 2) **Knowledge Sharing (Independent Variable - X₂):** This is defined as the sustainable exchange of knowledge between at least two parties through a reciprocal process. It involves the transformation of knowledge into new contexts to drive innovation and competency.
- 3) **Collaborative Working (Mediating Variable - Z):** This variable represents a shift toward a hybrid and strengthened synergy between physical and virtual workspaces. It is characterized by working together effectively and efficiently to achieve shared goals and create competitive advantages.
- 4) **Risk Culture (Dependent Variable - Y):** As defined by the Institute of Risk Management, risk culture represents the values, beliefs, knowledge, and understanding of risk shared by a group with a common purpose. It manifests in the collective behavior of leaders and employees regarding risk-taking and risk avoidance (Grebe & Marx, 2023) (Dürst & Kunz, 2025a).

2.3 Research Object and Location

The focal point of this research is the civil servants (ASN) at the Inspectorate of Madiun City. This location was strategically selected based on the Mayor of Madiun Regulation Number 14 of 2024 concerning Regional Development Risk Management (Peraturan Daerah Kota Madiun Nomor 14 Tahun 2024 Tentang Rencana Pembangunan Jangka Panjang Daerah Tahun 2025-2029, 2024). The Inspectorate holds a pivotal role in the local government structure, tasked with providing internal oversight and guidance for the implementation of risk management across various regional government units and cross-sectoral initiatives. Given its mandate to foster a robust internal control environment, the Inspectorate serves as an ideal "pilot" site for observing the development of a risk-aware culture.

Understanding the risk culture within this specific institution is critical, as the Inspectorate acts as the guardian of organizational integrity. Strengthening risk culture in such a setting requires a deep understanding of how knowledge is mobilized between practitioners to refine complex interventions, a process that Breckenridge (Breckenridge et al., 2018) describe as vital for structured collaborative working. The research thus focuses on how the internal dynamics of this oversight body influence the broader risk landscape of the Madiun City Government (Grieser & Pedell, 2022) (Sinha & Arena, 2020).

2.4 Population and Sampling Methodology

The population for this study encompasses all civil servants working within the Madiun City Inspectorate. In the context of this research, the population is defined as the entire group of individuals possessing specific characteristics relevant to the inquiry. Given the specialized nature of the Inspectorate and its relatively compact size, the study aims for a comprehensive representation of its workforce to ensure that the findings accurately reflect the organizational reality.

The sampling method employed is a non-probability sampling technique, specifically total sampling or a census approach. This means that every member of the population who meets the criteria is invited to participate in the study. This approach is beneficial in organizational studies where the total population is manageable, as it eliminates sampling error and provides a holistic view of the internal environment. High-quality collaborative working often depends on the critical behavioral indices of team members, as highlighted by Ellis (Ellis et al., 2023), making it essential to capture the perspectives of all relevant staff members to improve team outcomes.

2.5 Data Sources and Collection Instruments

This research utilizes both primary and secondary data sources to ensure a robust analysis. Primary data is collected directly from the source through a survey instrument distributed to the ASN at the Madiun City Inspectorate. Secondary data, on the other hand, consists of existing documents, archives, and reports related to the implementation of risk management within the institution. By strategically integrating these diverse informational elements, the methodology effectively minimizes potential biases and maximizes the overall validity of the findings, allowing for a comprehensive evaluation of the underlying administrative procedures that govern organizational safety protocols and strategic future planning.

The primary tool for data collection is a structured questionnaire designed to measure the four key variables: Tone at the Top, Knowledge Sharing, Collaborative Working, and Risk Culture. Each variable is operationalized through specific indicators and measured using a five-point Likert scale, ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). For instance, Collaborative Working is measured through indicators such as information sharing, mutual support, and the collaborative construction of deep knowledge. These indicators are essential because, as Xue argue, a cognition-driven framework is necessary for improving collaborative working in complex project environments (Xue et al., 2010) (Jiang et al., 2025) (Wu et al., 2008). The questionnaire underwent rigorous editing, coding, and tabulation processes before the final analysis (Montrezor et al., 2021) (Garcia et al., 2023).

2.6 Data Analysis Method

The data collected through the surveys is processed and analyzed using SmartPLS version 4 and Microsoft Office 2024. The analysis follows a two-stage approach: descriptive statistical analysis and inferential statistical analysis. Descriptive statistics are used to summarize the characteristics of the respondents and the distribution of their responses, providing a clear picture of the current state of risk culture and its drivers within the Inspectorate.

Inferential statistics are performed using Partial Least Squares Structural Equation Modeling (PLS-SEM). This method is chosen for its ability to estimate complex cause-and-effect relationship models with latent variables. The PLS-SEM analysis involves two primary steps:

The outer model evaluation ensures the validity and reliability of the research instruments. This includes:

- **Convergent Validity:** Assessed through Factor Loading and Average Variance Extracted (AVE) values.
- **Discriminant Validity:** Ensuring that each construct is distinct from others in the model.
- **Reliability Testing:** Using Cronbach's Alpha and Composite Reliability. A construct is considered reliable if these values are 0.70. High Cronbach's alpha values indicate that the variables are measured consistently and reliably.

The inner model focuses on testing the relationships between the latent variables and the significance of the research hypotheses. Key metrics include:

- **R-Square (R²):** Measures the proportion of variance in the dependent variable that can be explained by the independent variables, indicating the predictive power of the model.
- **F-Square (f²):** Evaluates the relative impact (effect size) of an exogenous variable on an endogenous variable.
- **Path Coefficients and Significance:** Determined through bootstrapping to test the seven hypotheses of the study, including the mediating effects of Collaborative Working.
- **Collinearity Statistics (VIF):** Used to ensure there is no problematic multicollinearity between independent variables, with a threshold value typically below 5.

By integrating these systematic steps, the methodology ensures that the findings regarding Tone at the Top, Knowledge Sharing, and Risk Culture are both scientifically valid and practically

relevant for the Madiun City Government. Consistent with the integrative frameworks proposed by Streicher, this holistic analysis allows for a nuanced understanding of how diverse organizational factors converge to shape a resilient risk culture (Streicher et al., 2023) (Kunz & Heitz, 2021) (Ahmad & Karim, 2019) (Mustika et al., 2022).

3. Results

3.1 Overview of Research Results

The empirical investigation into the dynamics of risk culture within the Inspectorate of Madiun City yields critical insights into how leadership commitment and information exchange shape organizational behavior. Based on the data processed from 41 civil servants (ASN) using Partial Least Squares Structural Equation Modeling (PLS-SEM), this chapter presents the findings regarding the influence of Tone at the Top and Knowledge Sharing on Risk Culture, with Collaborative Working as a mediator. The results reveal a complex landscape where some theoretical expectations are confirmed, while others are challenged by the specific organizational context of local government oversight.

The First Order Model shown in Figure 2 specifies the relationship between the latent constructs and their respective manifest variables, emphasizing the initial measurement layer of the analysis. By mapping the indicators—ranging from leadership tone to collaborative outputs—this model ensures that each latent variable is accurately represented by its underlying data points, providing a foundation for the subsequent structural path analysis. between Tone at The Top, Knowledge Sharing, Collaborative Working, and Risk Culture.

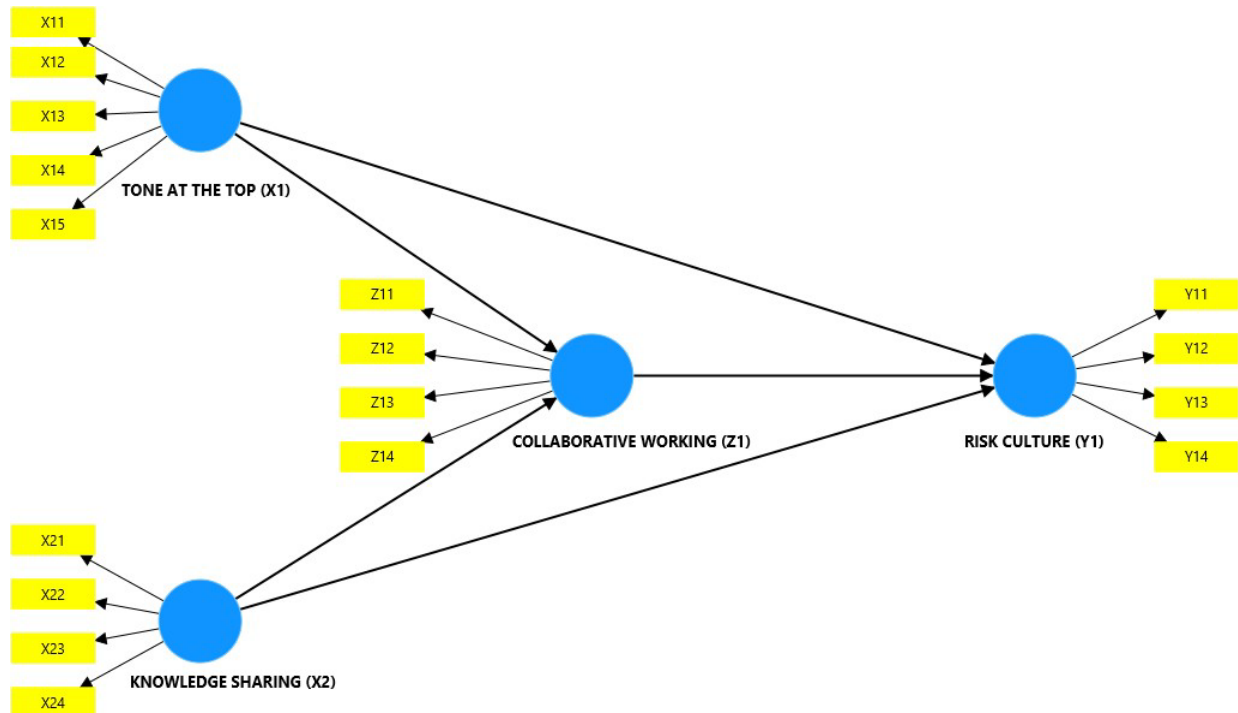


Figure 2. Order model for risk culture

Source: Data analysis

The Collinearity Statistic test results presented in Table 1 demonstrate that all tested relationships between variables—including Collaborative Working, Knowledge Sharing, and Tone at The Top towards Risk Culture and Collaborative Working—yield Variance Inflation Factor (VIF) values ranging from 2.344 to 4.588, all of which are categorized as "Good," indicating that there are no significant multicollinearity issues within the model. Therefore, researchers can confidently proceed with the hypothesis testing phase, as the distinct independent variables provide unique predictive power to the dependent variable without causing unstable or biased coefficient estimates.

Table 1. Collinearity statistic (VIF) test results

Variable Relationship	VIF Value	Description
Collaborative Working → Risk Culture	3.878	Good
Knowledge Sharing → Collaborative Working	2.344	Good
Knowledge Sharing → Risk Culture	4.588	Good
Tone at The Top → Collaborative Working	2.344	Good
Tone at The Top → Risk Culture	2.408	Good

Source: Data analysis

The path coefficient bootstrapping results in Table 2 reveal that five hypotheses are accepted, as evidenced by p-values below 0.05 and significant T-statistics, specifically for the direct effects of Tone at The Top, Knowledge Sharing, and Collaborative Working on Risk Culture, as well as the path from Knowledge Sharing to Collaborative Working and the indirect path from Knowledge Sharing to Risk Culture through Collaborative Working. Conversely, the relationship between Tone at The Top and Collaborative Working, both as a direct effect and an indirect effect on Risk Culture, is rejected due to p-values exceeding the 0.05 threshold and low T-statistic values.

The statistical analysis shows that out of the seven hypotheses tested, five are supported by the data, while two are rejected. Specifically, the direct paths from Tone at the Top, Knowledge Sharing, and Collaborative Working to Risk Culture all demonstrate significant positive effects. However, the role of Tone at the Top in fostering Collaborative Working and its indirect influence on Risk Culture through this mediator did not reach statistical significance. These findings underscore the nuanced nature of risk management maturity, which Domańska-Szaruga describes as an evolutionary process requiring alignment across multiple organizational levels (Domańska-Szaruga, 2020). Consequently, the results suggest that leadership influence is most potent when directed toward establishing cultural norms rather than merely facilitating teamwork. Future research should examine whether organizational size or industry-specific regulations act as moderating variables. Strengthening internal communication channels remains vital for ensuring that shared knowledge effectively enhances overall risk awareness. Furthermore, organizations must prioritize continuous professional development to bridge gaps between theoretical risk frameworks and practical daily operations. This holistic approach ensures that strategic objectives remain resilient against unforeseen market volatility and internal systemic vulnerabilities.

Table 2. Path coefficient bootstrapping significance test results

Hypothesis	Original Sample	Sample Mean	Standard Deviation	T-statistic	P-values	Description
Tone at The Top → Risk Culture	0.856	0.783	0.259	3.305	0.001	Accepted
Knowledge Sharing → Risk Culture	-0.583	-0.505	0.253	2.301	0.021	Accepted
Collaborative Working → Risk Culture	0.582	0.582	0.257	2.266	0.024	Accepted
Tone at The Top → Collaborative Working	0.128	0.159	0.194	0.66	0.509	Rejected
Knowledge Sharing → Collaborative Working	0.761	0.73	0.179	4.242	0	Accepted
Tone at The Top → Collaborative Working → Risk Culture	0.074	0.103	0.172	0.433	0.665	Rejected
Knowledge Sharing → Collaborative Working → Risk Culture	0.442	0.415	0.204	2.165	0.03	Accepted

Source: Data analysis

3.2 The Direct Impact of Leadership and Knowledge on Risk Culture

The analysis confirms that a strong Tone at the Top is a fundamental driver of Risk Culture at the Madiun City Inspectorate, with a path coefficient of 0.856 and a p-value of 0.001. This indicates that when leaders consistently demonstrate ethical behavior and prioritize risk awareness, it directly enhances the collective values and understanding of risk among staff. This aligns with the "Risk Culture Framework" proposed by Streicher, which emphasizes that an integrative approach—starting from the top—is essential for a holistic risk analysis (Streicher et al., 2023) (Sijbom et al., 2025) (Wang, 2025). The commitment shown by the leadership in Madiun serves as a behavioral template, reinforcing the institution's role as a guardian of regional development integrity (Kunz & Heitz, 2021).

Similarly, Knowledge Sharing was found to have a significant impact on Risk Culture ($p = 0.021$). The exchange of expertise and experience regarding risk management prevents information silos and fosters a shared language of risk. In complex public sector interventions, the ability to mobilize knowledge between practitioners is vital for refining processes. As staff share their insights on potential failures and mitigation strategies, the organization's collective "risk intelligence" grows, leading to a more resilient culture.

3.3 The Role of Collaborative Working as a Mediator

Collaborative Working occupies a unique position in this research. The data shows that Collaborative Working directly improves Risk Culture ($p = 0.024$), supporting the idea that synergy and mutual support are key to cultural development. In the modern world of work, collaborative structures are increasingly necessary to manage the interdependencies of organizational tasks.

When auditors and staff at the Inspectorate work together, they are more likely to identify cross-functional risks that might be missed in isolation.

However, the hypothesis that Tone at the Top influences Risk Culture *through* Collaborative Working was rejected ($p = 0.665$). The statistical results suggest that while leadership sets the "tone" for risk awareness, it does not necessarily translate into the actual collaborative behaviors needed for synergy. This discrepancy may be attributed to the rigid hierarchical structures often found in government institutions, where "tone" is perceived as a top-down directive rather than a catalyst for horizontal cooperation. This finding highlights a critical gap: leadership commitment is necessary for culture, but it requires different mechanisms—perhaps focused more on behavioral indices—to foster effective team collaboration.

In contrast, Knowledge Sharing showed a very strong influence on Collaborative Working ($p = 0.000$) and successfully mediated the relationship between Knowledge Sharing and Risk Culture ($p = 0.030$). This implies that the act of sharing information is the "fuel" for collaboration. When information flows freely, staff are better equipped to work together, which in turn solidifies the organizational risk culture. This cognition-driven approach is consistent with the work of Xue et al. (2010), who argue that building deep knowledge collaboratively is a prerequisite for improving project outcomes in complex environments.

4. Analysis and Discussion

4.1 Statistical Analysis and Hypotheses Testing Results

The primary objective of this study is to examine the structural relationships between Tone at the Top, Knowledge Sharing, Collaborative Working, and Risk Culture within the Inspectorate of Madiun City. Utilizing Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 4, the research evaluates both the direct effects and the indirect paths facilitated by mediation. The data, gathered from civil servants (ASN) who act as the vanguard of regional internal oversight, provides a unique empirical basis for discussing how leadership commitment and information flow translate into a resilient organizational culture (Streicher et al., 2023).

The measurement model (outer model) assessment confirmed the reliability and validity of the constructs. All indicators for Tone at the Top, Knowledge Sharing, Collaborative Working, and Risk Culture exhibited factor loadings above the recommended threshold, and the Average Variance Extracted (AVE) values exceeded 0.50, ensuring convergent validity. Furthermore, Cronbach's Alpha and Composite Reliability values were consistently above 0.70, indicating high internal consistency. This robust foundation allows for a meaningful interpretation of the structural model (inner model) results, where the path coefficients and p-values reveal the strength and significance of the hypothesized relationships (Kunz & Heitz, 2021).

4.2 The Dominance of Leadership: Tone at the Top and Risk Culture

The analysis reveals that Tone at the Top has a profound and statistically significant direct impact on Risk Culture (Path Coefficient: 0.856, $p < 0.05$). This finding suggests that the ethical atmosphere and the priority given to risk management by the leadership of the Madiun City Inspectorate are

the most influential factors in shaping the staff's risk awareness. When leaders consistently emphasize integrity and accountability, these values permeate the organizational layers, creating a collective understanding of risk (Bockius & Gatzert, 2024).

This result aligns with the "Risk Culture Framework" proposed by Streicher, Bielefeld, and Eller, which advocates for an integrative approach to risk analysis (Streicher et al., 2023) (Grieser & Pedell, 2022) (Grebe & Marx, 2023). According to their framework, organizational culture is not merely a byproduct of individual behaviors but is fundamentally rooted in the structural signals sent by top management. In the context of the Inspectorate, the leadership's "tone" serves as a benchmark for professional conduct. However, as noted by Sinha and Arena, there are often manifold conceptions of how risk culture should be audited and managed (Sinha & Arena, 2020). The strong correlation found here indicates that the Madiun City Inspectorate has successfully aligned its leadership vision with operational perceptions, thereby reducing the ambiguity that often plagues public sector risk frameworks. This clear alignment essentially empowers employees to proactively identify potential threats, ensuring that the institution maintains robust compliance standards while continuously improving its overall operational efficiency and strategic future resilience.

4.3 Knowledge Sharing: The Engine of Cultural Evolution

Knowledge Sharing was also found to exert a significant positive influence on Risk Culture. The statistical evidence supports the notion that a culture of risk is built on the continuous exchange of information and expertise. In the oversight environment of the Inspectorate, where auditors must navigate complex regulations and diverse operational risks, the ability to share "lessons learned" is invaluable (Domańska-Szaruga, 2020).

The significance of this relationship can be explained through the lens of Breckenridge, who emphasizes that mobilizing knowledge between practitioners is essential for refining complex interventions (Breckenridge et al., 2018). In this study, knowledge sharing acts as the mechanism through which abstract risk policies are transformed into practical, shared wisdom. When ASN members at the Inspectorate engage in open dialogue about potential failures and mitigation strategies, they are essentially co-creating a "risk-intelligent" environment. This finding is further supported by Domańska-Szaruga, who argues that the maturity of risk management culture is heavily dependent on the organization's ability to learn and adapt through shared experience (Domańska-Szaruga, 2020).

4.4 The Paradox of Collaborative Working as a Mediator

One of the most intriguing findings of this research is the role of Collaborative Working. While Collaborative Working was found to have a significant direct impact on Risk Culture ($p = 0.024$), it failed to mediate the relationship between Tone at the Top and Risk Culture. The hypothesis that leadership "tone" would foster a collaborative environment, which in turn would strengthen risk culture, was rejected ($p = 0.665$).

This "mediation paradox" suggests a disconnect between leadership rhetoric and collaborative practice. While the leadership is successful in communicating the importance of risk (direct effect),

this commitment does not automatically translate into the synergy required for collaborative working. As Liebhart discusses, collaborative working in the modern world requires more than just a mandate; it requires a structural shift in how work is organized, especially in hybrid or digitalized settings (Liebhart, 2024) (Christensen et al., 2024) (Wiedemann et al., 2024). In the bureaucratic context of the Inspectorate, traditional top-down communication may be effective for setting a "tone," but it might not be sufficient to break down the silos that hinder true collaboration.

Conversely, Knowledge Sharing showed a very strong influence on Collaborative Working ($p = 0.000$). This indicates that collaboration in the Inspectorate is driven by "bottom-up" information flows rather than "top-down" leadership directives. When staff have the tools and the culture to share knowledge, they naturally begin to work more collaboratively. Ultimately, this enhanced level of collaborative working serves as a crucial catalyst for developing a mature and resilient risk culture. This supports the cognition-driven framework for collaborative working proposed by Xue and Shen, which posits that deep knowledge construction is a prerequisite for effective synergy in complex environments (Xue et al., 2010) (Eni et al., 2025) (Zamiri & Esmaeili, 2024) (Hassanzadeh Mohassel et al., 2024).

4.5 Integrative Discussion: Building a Resilient Risk Culture

The synthesis of these findings points toward a multifaceted model of risk culture development. The data indicates that while Tone at the Top is the most powerful individual driver, the long-term sustainability of risk culture relies on the "connective tissue" provided by Knowledge Sharing and Collaborative Working (Dewi et al., 2024) (Said et al., 2023).

The significant mediation of Knowledge Sharing through Collaborative Working to Risk Culture ($p = 0.030$) suggests that the most effective path to a mature risk culture is through the democratization of information. When knowledge is shared, it creates a collaborative spark, which then solidifies into a robust risk culture. This is consistent with Ellis, who identified critical behavioral indices—such as trust and information flow—as essential for improving team outcomes in collaborative projects (Ellis et al., 2023) (Patel et al., 2012).

However, the Inspectorate must address the gap in the leadership-collaboration link. To move toward what Bockius and Gatzert describe as a comprehensive organizational risk culture, the leadership must go beyond just setting a "tone" (Bockius & Gatzert, 2024). They must actively participate in and facilitate the collaborative processes of their teams. Leadership should transition from being mere "risk advocates" to being "collaboration catalysts," ensuring that the ethical standards they champion are reflected in the way teams interact and solve problems collectively.

4.6 Theoretical and Practical Contributions

From a theoretical perspective, this research enriches the literature by testing these variables in the specific context of Indonesian local government oversight. It challenges the universal applicability of "Tone at the Top" as a panacea for all organizational ills, showing that its influence on collaboration may be limited in hierarchical structures. This adds a layer of nuance to the systematic literature reviews on risk culture and management control systems, such as those conducted by Kunz and Heitz (Dürst & Kunz, 2025b) (Moczydłowska et al., 2023).

Practically, for the Madiun City Government, these results provide a roadmap for institutional strengthening. The findings suggest that investment in knowledge management systems and collaborative platforms will yield higher returns for risk culture than leadership speeches alone. By fostering an environment where ASN feel empowered to share risks and work together across divisions, the Inspectorate can achieve the risk management maturity levels envisioned in Mayor of Madiun Regulation No. 18 of 2024 (Peraturan Daerah Kota Madiun Nomor 14 Tahun 2024 Tentang Rencana Pembangunan Jangka Panjang Daerah Tahun 2025-2029, 2024) (Dürst & Kunz, 2025b).

The results of this study offer a significant contribution to the literature on Risk Culture in the public sector. The rejection of the link between Tone at the Top and Collaborative Working suggests that "leading by example" may not be enough to break down the silos of a bureaucratic organization. While leaders in Madiun successfully advocate for risk awareness, the actual practice of working together remains more dependent on the technical and social processes of knowledge exchange. This supports the view that risk culture is not a monolithic entity but a collection of manifold conceptions that vary across different operational levels.

Furthermore, the significant role of Collaborative Working as a direct contributor to Risk Culture validates the importance of "Working Together" in local government. As organizations become more digital and hybrid, the ability to maintain synergy in virtual and physical spaces becomes a competitive advantage. The Inspectorate of Madiun City must therefore focus on strategies that move beyond mere "compliance" with risk directives toward a state where risk management is an integrated part of every collaborative effort (Streicher et al., 2023) (Kunz & Heitz, 2021).

Based on these results, the Inspectorate of Madiun City should prioritize practical steps to bridge the gap between leadership tone and collaborative action. First, leadership involvement must be more granular, extending from high-level policy to the actual performance planning and evaluation tiers. This ensures that the "tone" is not just a slogan but is embedded in the daily work cycles of the ASN.

Second, the institution should formalize its knowledge-sharing platforms. Since knowledge sharing is the most effective precursor to collaboration, creating structured "knowledge groups" could catalyze the development of a deeper risk culture (Bockius & Gatzert, 2024). By documenting innovations and encouraging open discussion of "near-misses," the Inspectorate can turn individual experiences into organizational assets. These efforts will ultimately lead to a more agile and risk-aware government, capable of navigating the dynamic challenges of regional development in the modern era (Obrenovic et al., 2020) (Yeboah, 2023).

5. Conclusions

Based on the results of the research conducted at the Inspectorate of Madiun City, it can be concluded that the development of a robust Risk Culture is significantly driven by both high-level leadership commitment and the organic flow of expertise within the organization. The study confirms that Tone at the Top and Knowledge Sharing exert a direct positive influence on risk awareness, underscoring that when leaders model ethical behavior and employees actively

exchange insights, the institutional resilience improves. Furthermore, Collaborative Working acts as a vital direct contributor to a risk-aware culture, emphasizing the importance of synergy in achieving organizational goals.

However, the mediating role of Collaborative Working presents a nuanced dynamic. While it successfully mediates the relationship between Knowledge Sharing and Risk Culture, it fails to bridge the gap between Tone at the Top and cultural outcomes. This suggests that while leadership is effective at setting the ethical "tone, this influence does not automatically translate into collaborative behaviors without the engine of information exchange. Ultimately, achieving a mature risk culture requires an integrated approach where top-down directives are supported by bottom-up knowledge mobilization, ensuring that collaboration becomes the practical manifestation of shared risk values.

Conflict of Interest

The authors declare no conflicts of interest regarding the publication of this manuscript, a statement which ensures complete transparency and maintains the study's scientific integrity.

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