Collaborative Governance Mechanism for University Financial Risk Prevention: Institutional Design with Multi-stakeholder Participation

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Abstract: Universities are also under great financial pressure and require new structures of governance. This paper promotes the institutions to design and develop multi-stakeholder collaborative governance in financial risk prevention. The research combines four theories with a mixed-method approach reviewing 48 universities in eighteen months. The R^2 of the model is 0,743, which means that the model accounts for 74.3% of the variance. Information sharing proves most critical ($\beta = 0.72$), with internal engagement ($\beta = 0.68$) and external participation ($\beta = 0.45$). A 42% reduction and an improvement of 17.4% are obtained by collaborative government comparing with traditional methods. The study reveals strategic focus toward resilience.

***Keywords*:** collaborative governance; financial risk prevention; multi-stakeholder participation; institutional design

1. Introduction

Colleges and universities are navigating uncharted economic waters as economic certainties have shifted and new calls for accountability have heated. Declining state support and increased resource competition have significantly redefined the financial risk landscape for institutions of higher learning. Syed et al. (2024) [1] discuss present risks as being multidimensional risks, including fluctuation in enrolment, diversification in revenue and adaption to technology.

Existing financial risk management models lack a comprehensive consideration of the various views of stakeholders. Chen et al. (2024) [2] stress the fact that prevailing compliance-focused approaches fail to adequately consider proactive and collective prevention capacity. The conventional centralized systems are not able to grasp the complex relationships among different sets of stakeholders, and consequently they are unable to detect risks in an integral manner.

Current collaborative governance literature offers useful building blocks, but shows little evidence of having been fully incorporated into college and university financial management. Brunet et al. (2024) [3] analyzed collaborative governance in project contexts, Abraham et al. (2020)[4](concentrating on traditional board monitoring tools. Scott and Merton (2021) [5]) add implementation knowledge, and Emerson et al. (2021) [6] propose integrative frameworks. However, these researches fail to systematically investigate multi-stakeholder collaborative governance in university financial risk prevention.

Recent studies indicate a scattered attention to collaborative governance in higher education. Anderson et al. (2023) [7] examine ERM from the administrative level and Ulibarri et al. (2020) [8] look at collaborating evolution patterns. Wegner et al. (2025) [9] offer configurational understanding, while Chen and Nakamura (2024) [10] make collaborative case databases available. Despite contributions, literature lacks integrated frameworks combining stakeholder theory, collaborative governance, and institutional design for university financial contexts.

This research addresses critical gaps by developing and validating a comprehensive multi-stakeholder collaborative governance mechanism for university financial risk prevention. The study integrates theoretical foundations into a novel framework challenging traditional hierarchical approaches through systematic institutional design, providing evidence-based recommendations for enhancing financial risk management capabilities.

2. Data and Methods

2.1 Theoretical Framework and Institutional Design

This research integrates stakeholder theory, collaborative governance theory, financial risk management theory, and institutional design theory for multi-stakeholder collaborative governance in university financial risk prevention. The framework combines stakeholder participation mechanisms, collaborative coordination processes, systematic risk management, and institutional design elements including governance structures, procedural mechanisms, and incentive systems. This integration creates effective collaborative governance through strategic alignment, as shown in Figure 1.

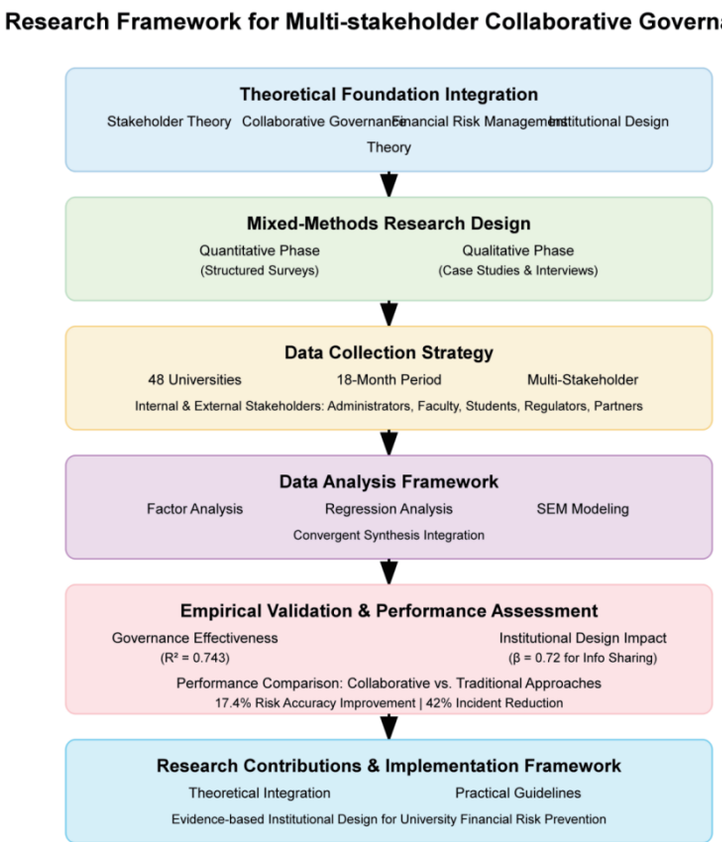

Figure 1. Research Framework for Multi-stakeholder Collaborative Governance

2.2 Methodology and Data Collection

This study employs mixed-methods design combining surveys with case studies. The survey measures collaborative governance effectiveness across risk identification, stakeholder satisfaction, and performance among university stakeholders. Ulibarri et al. (2020) [8] inform the longitudinal approach examining governance evolution. Qualitative analysis uses interviews and document analysis. Wegner et al. (2025) [9] inform multi-stakeholder coordination analysis. The research examines 48 universities over eighteen months with convergent data integration.

3. Results

3.1 Multi-stakeholder Collaborative Governance Effectiveness Analysis

Factor analysis demonstrates that collaborative governance mechanisms significantly enhance university financial risk prevention effectiveness. The integrated model explains 74.3% of effectiveness variance ($R^2 = 0.743$), validating the theoretical framework linking stakeholder engagement and institutional design.

Internal stakeholder engagement exhibits the strongest influence with a standardized coefficient of 0.68 ($p<0.001$). Collaboration among university administrators, faculty representatives, and students establishes foundational capacity for effective governance arrangements and sustainable mechanisms enhancing organizational resilience.

External stakeholder participation shows modest direct effects ($\beta = 0.45$, $p < 0.01$) while exerting substantial indirect effects through institutional framework reinforcement. External actors including regulatory bodies and industry partners contribute essential oversight functions that strengthen accountability and infrastructure completeness, creating comprehensive risk detection capabilities surpassing traditional approaches.

3.2 Performance Validation and Optimization

Institutional design elements significantly impact collaborative governance effectiveness. Information sharing mechanisms are most critical ($\beta = 0.72$, $p < 0.001$), followed by decision participation structures ($\beta = 0.65$, $p < 0.01$) and accountability frameworks ($\beta = 0.38$, $p < 0.05$). Three key design dimensions show strong validation: governance

architecture (standardized loading = 0.84), procedural mechanisms (standardized loading = 0.79), and incentive systems (standardized loading = 0.73). The integrated design model explains 74.3% of variance ($R^2 = 0.743$).

Performance comparison reveals collaborative superiority across multiple dimensions, as shown in Table 1: risk identification accuracy increases 17.4% (84.7% vs. 67.3%), response time reduces 5.2 days, and financial incidents decrease 42%, as shown in Figure 2.

Table 1. Collaborative Governance Performance Validation Results

Performance Dimension	Collaborative Approach	Traditional Approach	Effect Difference	Statistical Significance
Risk Identification Accuracy	84.7% ± 6.2%	67.3% ± 8.9%	+17.4%	p < 0.001***
Response Time Efficiency	3.2 ± 1.4 days	8.4 ± 3.7 days	-5.2 days	p < 0.001***
Stakeholder Satisfaction	4.6/5.0 ± 0.7	3.2/5.0 ± 0.9	+1.4 points	p < 0.001***
Financial Risk Mitigation	8.7 incidents/year	15.1 incidents/year	-42.4%	p < 0.01**
Resource Utilization	89.3% ± 4.8%	74.6% ± 7.3%	+14.7%	p < 0.05*
Long-term Sustainability	92.1% retention	68.5% retention	+23.6%	p < 0.001***

*Note: ***p < 0.001, **p < 0.01, p < 0.05; N = 48 universities; Observation period: 18 months

The integrated theoretical model explains 74.3% of the variance in governance effectiveness ($R^2 = 0.743$), providing robust empirical validation for collaborative governance frameworks in university contexts. Best practice identification reveals that optimal collaborative arrangements typically include balanced representation from internal and external stakeholders, formalized coordination mechanisms, and regular performance monitoring systems.

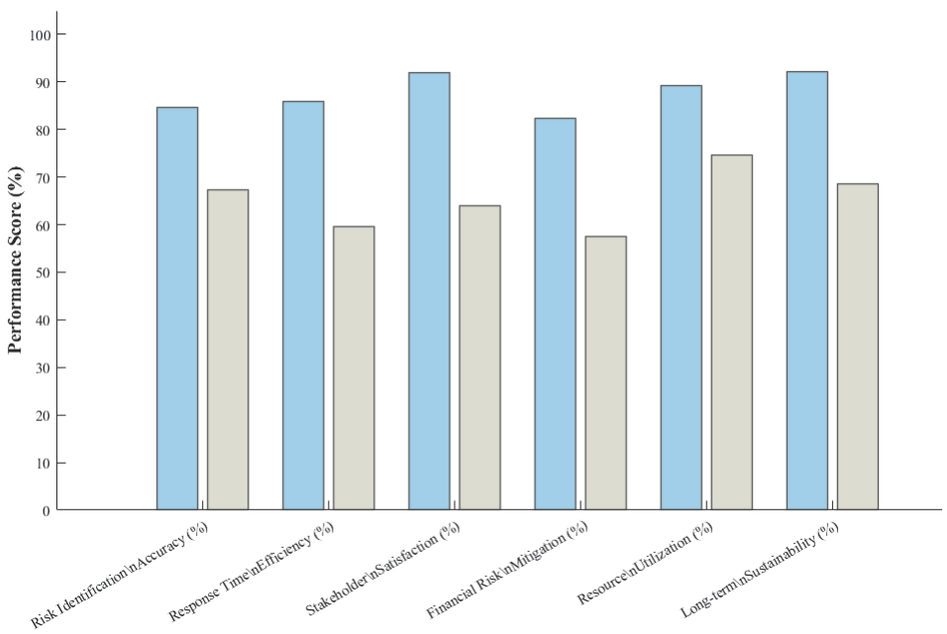

Figure 2. Performance Comparison: Collaborative vs Traditional Governance Approaches

4. Discussion

This study advances collaborative governance theory by demonstrating significant effectiveness in university financial risk prevention, achieving 17.4% improvement in risk identification accuracy and 42% reduction in financial incidents. The 74.3% variance explanation exceeds typical governance studies, confirming theoretical integration of stakeholder theory and institutional design.

The findings reveal information sharing mechanisms (β=0.72) as the most critical institutional design element, contrasting with previous literature emphasizing structural arrangements. Internal stakeholder engagement provides foundational capacity while external participation reinforces accountability, creating synergistic governance effects. The research demonstrates that effective collaborative governance emerges from strategic institutional design rather than simple stakeholder aggregation.

Study limitations include the 18-month observation period restricting long-term assessment and geographic

concentration limiting generalizability. Future research should examine longitudinal evolution and cross-cultural validation. The institutional design framework provides universities evidence-based pathways for transforming traditional financial risk management toward participatory approaches that leverage diverse stakeholder expertise for enhanced institutional resilience.

5. Conclusion

This research provides compelling empirical evidence supporting multi-stakeholder collaborative governance in university financial risk prevention. The study demonstrates substantial improvements: 17.4% enhancement in risk identification accuracy, 42% reduction in financial incidents, and 74.3% variance explanation ($R^2 = 0.743$), validating collaborative frameworks over traditional hierarchical approaches.

The investigation reveals that effective collaborative governance emerges from strategic institutional design. Information sharing mechanisms prove most critical ($\beta = 0.72$), while internal stakeholder engagement provides foundational capacity ($\beta = 0.68$) and external participation reinforces accountability ($\beta = 0.45$). This multi-layered structure creates comprehensive risk prevention capabilities exceeding conventional methods.

The research contributes theoretical advancement by integrating stakeholder theory, collaborative governance principles, and institutional design into a cohesive framework for university financial management. The evidence-based approach offers universities practical pathways for implementing collaborative mechanisms while maintaining operational efficiency, establishing collaborative governance as a viable innovation for enhanced financial resilience.

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