Volume 12, Issue 2, 2024

ORIGINAL RESEARCH PAPER

Pages: 79-94

Corporate Governance as a Moderator of Litigation Risk and Firm Innovation: Evidence from Iranian Firms

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Received: *02 April 2023* ***Revised:*** *18 June 2023* ***Accepted:*** *23 Sep 2023*

ABSTRACT

This study examines the moderating role of corporate governance in the relationship between litigation risk and corporate innovation, while also investigating the association between financial constraints and litigation risk among firms listed on the Tehran Stock Exchange. The research is applied in purpose and descriptive-correlational in method. The statistical population comprises all firms listed on the Tehran Stock Exchange during the period 2018–2023. After applying systematic screening criteria, a final sample of 120 firms (720 firm-year observations) was selected. Data were extracted from audited financial statements and the Codal database and analyzed using multivariate linear regression models with firm and year fixed effects. The empirical results indicate that litigation risk has a significant negative effect on corporate innovation. Corporate governance positively moderates this relationship, attenuating the adverse impact of litigation risk on innovative activities. In addition, financial constraints—proxied by the Altman Z-Score—exhibit a significant positive association with litigation risk, suggesting that firms with stronger financial positions experience higher litigation exposure in the Iranian context, possibly due to greater visibility and regulatory scrutiny. These findings remain robust after controlling for firm-specific characteristics (size, profitability, leverage, age, ownership concentration, market competition, capital expenditure, Tobin's Q, and sales) as well as macroeconomic factors (inflation and GDP growth). The results underscore the strategic importance of strong corporate governance mechanisms in safeguarding firms' innovative capacity against legal uncertainties. The study offers practical implications for corporate managers, capital-market regulators, and policymakers seeking to enhance governance quality, mitigate litigation-related risks, and foster sustainable innovation within the Iranian capital market.

KEYWORDS: Corporate governance; Litigation risk; Corporate innovation; Financial constraints; Tehran Stock Exchange

How to Cite This Article: Khalili, Y., Farzi Gharablagh, Z. (2024).“ Corporate Governance as a Moderator of Litigation Risk and Firm Innovation: Evidence from Iranian Firms”. *The Open Access Journal of Resisitive Economics*, 12(2): 79-94.

1. Introduction

Corporate innovation constitutes a fundamental driver of sustainable competitive advantage, long-term value creation, and organizational resilience in contemporary economies. Firms that successfully generate and commercialize new products, processes, and managerial practices are better equipped to navigate market turbulence and technological change. Nevertheless, the innovation process is inherently uncertain and vulnerable to external shocks, among which litigation risk occupies a particularly salient position. Engagement in legal disputes typically imposes substantial direct costs, diverts managerial attention, damages corporate reputation, and constrains access to external capital, thereby reducing firms' willingness and capacity to invest in research and development and other innovative activities (Pan et al., 2015; Hassan et al., 2021; Islam & Rahman, 2023).

Litigation risk frequently interacts with financial constraints. Resource-constrained firms tend to curtail discretionary expenditures, including R&D, which undermines their ability to sustain innovation pipelines and compete effectively over the long term. From the resource-based view, both legal exposure and financing frictions limit the internal resources and dynamic capabilities required for continuous innovation (Holdford, 2018; Azeem et al., 2023). Agency theory further suggests that weak governance exacerbates these problems by permitting managerial risk aversion or short-termism under conditions of heightened legal uncertainty (Asensio-López et al., 2019; Alshahrani et al., 2023).

Corporate governance emerges as a critical institutional mechanism capable of mitigating these adverse effects. Well-designed governance structures enhance transparency, strengthen accountability, align managerial incentives with long-term shareholder interests, and improve enterprise risk management (Bagh et al., 2022; Huang et al., 2022). Recent empirical evidence from Chinese listed firms demonstrates that a robust corporate governance index significantly moderates the negative relationship between litigation risk and innovation, enabling better-governed firms to preserve innovative capacity even in stringent legal environments (Iftikhar, Bagh & Khan, 2024). Complementary studies further indicate that governance quality and related mechanisms (including ESG performance and liability insurance) can support innovation by alleviating financing constraints and reducing agency conflicts (Chen et al., 2024; Yang et al., 2024).

Despite this growing body of international research, systematic evidence from emerging markets—particularly Iran—remains limited. The Iranian capital market operates under distinctive institutional, regulatory, and macroeconomic conditions, including prolonged external sanctions and the strategic framework of resistive economics. These contextual features may intensify both the costs of litigation and the protective value of effective governance. Although a number of Iranian studies have examined corporate governance and innovation or litigation-related issues in isolation (e.g., Elyasi et al., 2019; Nazari et al., 2024), the joint examination of litigation risk, financial constraints, and the moderating role of corporate governance on innovation has not been adequately addressed in the Tehran Stock Exchange setting.

The present study seeks to fill this gap by investigating three interrelated questions: (1) whether litigation risk exerts a significant negative effect on corporate innovation; (2) whether corporate governance moderates the relationship between litigation risk and innovation; and (3) whether financial constraints (proxied by the Altman Z-Score) are significantly associated with litigation risk. Drawing on a sample of firms listed on the Tehran Stock Exchange over the period 2018–2023 and employing multivariate regression models with firm and year fixed effects, the study provides new empirical evidence on the protective role of governance quality in an emerging-market context characterized by elevated legal and financial uncertainty.

The findings are expected to offer theoretical refinement of the litigation–innovation nexus and practical implications for corporate managers, capital-market regulators, and policymakers concerned with strengthening governance mechanisms, reducing legal vulnerabilities, and fostering sustainable innovation within the Iranian economy.

The remainder of the paper is organized as follows. Section 2 reviews the related literature and develops the hypotheses. Section 3 describes the research methodology and variable measurement. Section 4 presents the empirical findings. Section 5 discusses the results, and Section 6 concludes the paper.

2. Literature Review

Theoretical Background

Corporate innovation is a central driver of long-term competitive advantage and firm value. However, the innovation process is highly sensitive to risk-related frictions. Litigation risk constitutes one of the most consequential of these frictions. Legal disputes generate direct costs, consume managerial attention, damage reputation, and elevate uncertainty, thereby reducing firms' incentives and capacity to invest in research and development and other innovative activities (Hassan et al., 2021; Pan et al., 2015). Recent evidence further shows that risk-related agency conflicts intensify this problem: when managers are shielded from shareholder discipline through litigation, they tend to adopt excessively conservative, "play-it-safe" strategies that systematically underinvest in valuable but risky innovation projects (Islam & Rahman, 2023).

Litigation risk rarely operates in isolation. It frequently interacts with financial constraints. Resource-constrained firms respond to legal uncertainty by increasing precautionary savings and cutting discretionary expenditures, including R&D, which further erodes innovative capacity (Wang, Ho & Shan, 2024). From the resource-based view, both litigation exposure and financing frictions restrict the internal resources and dynamic capabilities required for sustained innovation (Holdford, 2018; Azeem et al., 2023). Consequently, financially constrained firms are expected to experience higher litigation-related pressures and greater impairment of innovative activities.

Corporate governance offers a powerful institutional remedy for these agency and resource problems. Effective governance mechanisms reduce information asymmetry, strengthen monitoring, align managerial incentives with long-term value creation, and improve enterprise risk management (Asensio-López et al., 2019; Bagh et al., 2022; Huang et al., 2022). By establishing clear decision rights, enhancing transparency and accountability, and encouraging appropriate risk-taking, strong corporate governance enables firms to maintain strategic commitment to innovation even under legal and financial stress. Consistent with this reasoning, Iftikhar, Bagh and Khan (2024) demonstrate that a comprehensive corporate governance index significantly attenuates the negative effect of litigation risk on innovation among Chinese listed firms. Complementary studies on ESG performance and directors' and officers' liability insurance similarly show that governance-related mechanisms expand innovation resources, mitigate agency conflicts, and reduce short-termism (Chen, Xie & He, 2024; Yang et al., 2024).

Although international evidence is accumulating, systematic research in emerging markets remains limited. In the Iranian context, prior studies have examined corporate governance and innovation or litigation-related issues in isolation (Elyasi et al., 2019; Nazari et al., 2024), yet the joint effects of litigation risk, financial constraints, and the moderating role of corporate governance on innovation have not been adequately investigated on the Tehran Stock Exchange. Given the distinctive institutional environment characterized by external sanctions and the strategic emphasis on resistive economics, the protective value of corporate governance may be especially pronounced.

Drawing on agency theory, the resource-based view, and the empirical patterns reviewed above, the following hypotheses are advanced:

Hypothesis 1. Litigation risk has a significant negative effect on corporate innovation.

Hypothesis 2. Corporate governance positively moderates the relationship between litigation risk and corporate innovation, such that the negative effect of litigation risk is weaker for firms with stronger corporate governance.

Hypothesis 3. Financial constraints (proxied by the Altman Z-Score) are significantly associated with litigation risk.

Empirical Literature

A growing body of empirical research has examined the consequences of litigation risk for corporate innovation. Hassan et al. (2021) document that higher litigation exposure significantly reduces both the quantity and quality of innovation output. Islam and Rahman (2023) provide causal evidence from an exogenous court ruling that weakened shareholders' litigation rights: the resulting increase in risk-related agency conflicts led to a material decline in innovation inputs and quality, with the effect being particularly pronounced among smaller firms lacking strong institutional monitoring. Complementary studies on related risk exposures, such as cybersecurity risk, similarly show that elevated risk prompts precautionary savings and lower risk tolerance, thereby stifling innovative activity (Wang, Ho & Shan, 2024).

Financial constraints reinforce these negative effects. Firms facing tighter financing frictions reduce discretionary R&D spending and exhibit lower innovation performance when confronted with legal uncertainty (Iftikhar, Bagh & Khan, 2024). Related evidence from environmental liability insurance and ESG-related mechanisms further indicates that alleviating financing constraints constitutes an important channel through which external risk-mitigation tools support innovation (Wang et al., 2023; Tan & Zhu, 2022).

Corporate governance has emerged as a critical moderating factor. Iftikhar, Bagh and Khan (2024), using a large sample of Chinese listed firms and multiple identification strategies (system GMM, difference-in-differences, and propensity-score matching), demonstrate that a comprehensive corporate governance index significantly attenuates the adverse impact of litigation risk on innovation. Firms with stronger governance structures maintain higher innovative capacity even under elevated legal pressure. Parallel findings from ESG performance and directors' and officers' liability insurance studies suggest that governance-related mechanisms expand innovation resources, reduce agency conflicts, and curb managerial short-termism (Chen, Xie & He, 2024; Yang et al., 2024).

Evidence from the Iranian capital market remains more fragmented. Several studies report a positive association between selected corporate governance attributes (board education, board compensation, and non-executive directors) and innovative efforts among Tehran Stock Exchange firms (Elyasi et al., 2019; Nazari et al., 2024). Other work links stronger governance to reduced earnings-management opportunism (Rezvani, 2023) and examines litigation risk primarily in the context of audit fees (Taheri et al., 2023). Amini (2024) finds that robust governance can support innovation even in the presence of litigation risk within industrial firms. Nevertheless, no prior Iranian study has simultaneously investigated the direct effect of litigation risk on innovation, the moderating role of a comprehensive corporate governance measure, and the association between financial constraints and litigation risk within a unified empirical framework.

Collectively, the international literature establishes that litigation risk and financial constraints impede innovation, while high-quality corporate governance can mitigate these adverse effects. The limited and piecemeal nature of existing evidence from the Tehran Stock Exchange leaves an important gap that the present study seeks to address.

3. Research Methodology

This study is applied in purpose and descriptive-correlational in nature. The statistical population consists of all firms listed on the Tehran Stock Exchange (TSE) during the period 2018–2023 (1397–1402). To obtain a homogeneous sample, the following systematic screening criteria were applied:

- Firms must have been listed on the TSE from the beginning of 2018.
- Investment companies, financial intermediaries, banks, and insurance firms were excluded.
- The fiscal year must end on 20 March (29 Esfand).
- Firms with trading suspensions exceeding three months were removed.
- Firms with negative book equity were excluded.
- Observations with missing data required for variable construction were eliminated.

After applying these filters, the final sample comprises 120 firms, yielding 720 firm-year observations. Data were collected from audited financial statements and the Codal database.

Empirical Models

To test the hypotheses, the following multivariate regression models with firm and year fixed effects are estimated:

Model 1 (Hypothesis 1):

$$Innovation = \beta_0 + \beta_1\, Litigation\ Risk + \beta_2 Z\text{-}Score + \beta_3 Firmsize + \beta_4 ROA + \beta_5 FirmAge + \beta_6 Leverage + \beta_7 HHI + \beta_8 Own\_Conc + \beta_9 Sales + \beta_{10} TobinQ + \beta_{11} CapExp + \beta_{12} INF + \beta_{13} GDPG + \varphi FirmFE + \mu YearFE + \varepsilon$$

Model 2 (Hypothesis 2):

$$Innovation = \beta_0 + \beta_1\, Litigation\ Risk + \beta_2 CG + \beta_3 CG \times Litigation\ Risk + \beta_4\, Z\text{-}Score + \beta_5 Firmsize + \beta_6 ROA + \beta_7 FirmAge + \beta_8 Leverage + \beta_9 HHI + \beta_{10} Own\_Conc + \beta_{11} Sales + \beta_{12} TobinQ + \beta_{13} CapExp + \beta_{14} INF + \beta_{15} GDPG + \varphi FirmFE + \mu YearFE + \varepsilon$$

Model 3 (Hypothesis 3):

$$Litigation\ Risk = \beta 0 + \beta 1\ Z\text{-}Score\ (Altman) + \beta_2\ Z\text{-}Score + \beta_3 Firmsize + \beta_4 ROA + \beta_5 FirmAge + \beta_6 Leverage + \beta_7 HHI + \beta_8 Own\_Conc + \beta_9 Sales + \beta_{10} TobinQ + \beta_{11} CapExp + \beta_{12} INF + \beta_{13} GDPG + \varphi FirmFE + \mu YearFE + \varepsilon$$

Variable Measurement

- **Corporate Innovation**: Corporate innovation is measured as a composite index constructed from five dimensions following Namazi and Moghimi (2019) and Namazi and Dehghani (2022): (1) adoption of advanced management accounting techniques, (2) R&D expenditure, (3) employee training costs relative to total payroll, (4) proportion of professional and technical employees, and (5) acquisition of machinery, equipment, and software. Each dimension is scaled relative to its sample maximum and then aggregated into a single index (higher score = higher innovation).

- **Litigation Risk**: Litigation risk is measured using the composite score developed by Krishnan and Zhang (2005), Lowry (2002), Shu (2005), and Sun and Liu (2011), and applied in recent Iranian studies (Taheri et al., 2023). The score incorporates firm size, inventory, receivables, profitability, leverage, growth, stock returns, beta, turnover, delisting risk, technology industry membership, and audit opinion. A higher score indicates higher litigation risk.
- **Corporate Governance**: Corporate governance is measured as a comprehensive index based on 14 governance mechanisms (ownership structure, board characteristics, and audit quality attributes) following Al-Qadasi and Abidin (2018) and Sheikhzadeh et al. (2022). Each mechanism is coded 1 if above the industry median or present, and 0 otherwise. The raw sum (0–14) is divided by 14 to obtain a normalized score ranging from 0 to 1. A higher score indicates stronger corporate governance.
- **Financial Constraints**: Financial constraints are proxied by the Altman Z-Score (Altman, 1968), calculated as:

  Z-Score = 1.2 × (Working Capital / Total Assets) + 1.4 × (Retained Earnings / Total Assets) + 3.3 × (EBIT / Total Assets) + 0.6 × (Market Value of Equity / Total Liabilities) + 1.0 × (Sales / Total Assets).

  A higher Z-Score indicates lower financial constraints (i.e., stronger financial position). This measure is consistent with prior applications in the Iranian context (Raouf & Ehtesab, 2020).

Control Variables

Firm size: natural logarithm of total assets , Return on assets (ROA), Firm age, Leverage, Herfindahl–Hirschman Index (HHI), Ownership concentration, Sales, Tobin's Q, Capital expenditure, Inflation rate, GDP growth rate

All continuous variables are winsorized at the 1st and 99th percentiles to mitigate the influence of outliers.

The models are estimated using ordinary least squares with firm and year fixed effects. Standard diagnostic tests (variance inflation factors, Durbin–Watson statistic, and overall model significance) are conducted to assess multicollinearity, autocorrelation, and model fit.

4. Findings

Descriptive Statistics

Table 1. Descriptive Statistics (N = 720)

Variable	Symbol	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis
Corporate Innovation	Innovation	0.25	0.20	0.85	0.00	0.17	1.05	3.68
Litigation Risk	LR	0.64	0.61	2.14	0.04	0.26	0.61	4.56
Corporate Governance	CG	0.82	0.79	1.00	0.57	0.13	0.09	1.52
Financial Constraints	Z-Score	24.25	13.82	42.34	–9.05	10.13	7.22	78.12
Capital Expenditure	CapEx	0.25	0.20	0.97	0.00	0.20	1.08	3.62
Firm Age	FirmAge	3.77	3.87	4.28	2.89	0.32	–0.65	2.34
Firm Size	FirmSize	15.93	15.76	21.36	11.43	1.65	0.58	3.69
GDP Growth	GDPG	0.48	0.50	1.48	–0.85	0.24	0.06	16.80
HHI	HHI	0.16	0.08	0.84	0.00	0.19	1.77	5.80
Leverage	LEV	0.53	0.51	2.63	0.03	0.28	2.23	14.05
Ownership Concentration	OwnConc	0.49	0.52	0.98	0.00	0.27	–0.34	2.13
Tobin's Q	TobinQ	3.91	2.64	56.02	0.00	4.37	4.80	41.60
Return on Assets	ROA	0.19	0.19	1.10	–0.62	0.18	–0.11	5.02
Sales	Sales	1.02	0.87	7.78	0.00	0.74	3.78	28.27
Inflation	INF	0.42	0.46	0.52	0.27	0.09	–0.72	2.09

Table 1 presents the descriptive statistics for the 720 firm-year observations (120 firms over 2018–2023). The mean value of corporate innovation is 0.25 (median = 0.20), indicating a relatively moderate level of innovative activity across the sample. Litigation risk has a mean of 0.64 (median = 0.61). The corporate governance index averages 0.82 (on a normalized 0–1 scale), suggesting a reasonably high overall governance quality. The Altman Z-Score (financial constraints proxy) shows a mean of 24.25 with substantial dispersion. All continuous variables exhibit acceptable levels of variation, and the proximity of means and medians for most variables indicates that severe skewness is limited after winsorization.

Hypothesis 1: Litigation Risk and Corporate Innovation

Table 2. Regression Results – Hypothesis 1. Dependent Variable: Corporate Innovation

Variable	Coefficient	Std. Error	t-Statistic	Prob.	VIF
Litigation Risk (LR)	–0.2328	0.0138	–16.884	0.0000	1.59
Financial Constraints (Z-Score)	–25.4940	11.1705	–2.282	0.0227	1.05
Firm Size	0.0055	0.0021	2.553	0.0109	2.31
ROA	0.0393	0.0271	1.451	0.1472	3.06
Firm Age	0.0340	0.0082	4.139	0.0000	1.29
Leverage	–0.0218	0.0177	–1.229	0.2195	2.49
HHI	–0.0270	0.0116	–2.333	0.0200	1.10
Ownership Concentration	0.0128	0.0090	1.418	0.1567	1.12
Sales	0.0131	0.0040	3.279	0.0011	1.43
Tobin's Q	0.0021	0.0010	2.223	0.0265	1.89
Capital Expenditure	0.1729	0.0211	8.185	0.0000	1.97
Inflation	–0.3224	0.1418	–2.274	0.0233	3.32
GDP Growth	0.0225	0.0224	1.000	0.3175	4.21
Constant	0.2746	0.0910	3.019	0.0026	—
R-squared	**0.76**				
Adjusted R-squared	**0.75**				
F-statistic	**77.72**			**0.0000**	
Durbin–Watson	**1.71**				

Table 2 reports the estimation results of Model 1. The coefficient on litigation risk is negative and highly significant ($\beta = -0.233$, $t = -16.88$, $p < 0.001$), indicating that higher litigation risk is associated with lower corporate innovation. Financial constraints (higher Z-Score values reflect lower constraints) also enter negatively and significantly. Among the control variables, firm size, firm age, sales, Tobin's Q, and capital expenditure show positive and significant associations with innovation, while the Herfindahl–Hirschman Index and inflation rate exhibit negative and significant effects. The model is overall significant (F-statistic = 77.72, $p < 0.001$), with an adjusted R-squared of 0.75. The Durbin–Watson statistic (1.71) and variance inflation factors (all below 5) indicate no material concerns regarding autocorrelation or multicollinearity. Thus, Hypothesis 1 is supported.

Hypothesis 2: Moderating Role of Corporate Governance

Table 3. Regression Results – Hypothesis 2 (Moderation). Dependent Variable: Corporate Innovation

Variable	Coefficient	Std. Error	t-Statistic	Prob.	VIF
Litigation Risk (LR)	–0.1666	0.0607	–2.744	0.0062	2.14
Corporate Governance (CG)	1.581	0.6057	2.610	0.0094	2.17
CG × Litigation Risk	4.1207	1.3928	2.959	0.0031	2.32
Financial Constraints (Z-Score)	–1.7893	0.5805	–3.082	0.0021	1.05
Firm Size	0.0057	0.0022	2.556	0.0108	2.37
ROA	0.0364	0.0275	1.322	0.1865	3.08
Firm Age	0.0350	0.0083	4.221	0.0000	1.31
Leverage	–0.0218	0.0179	–1.220	0.2227	2.51
HHI	–0.0274	0.0117	–2.342	0.0195	1.11
Ownership Concentration	0.0132	0.0091	1.449	0.1478	1.13
Sales	0.0134	0.0041	3.294	0.0010	1.45
Tobin's Q	0.0022	0.0009	2.279	0.0229	1.89
Capital Expenditure	0.1721	0.0212	8.116	0.0000	1.99
Inflation	–0.3108	0.1435	–2.166	0.0306	2.40
GDP Growth	0.0204	0.0227	0.898	0.3696	4.22
Constant	0.2186	0.1092	2.003	0.0456	—
R-squared	**0.79**				
Adjusted R-squared	**0.75**				
F-statistic	**73.28**			**0.0000**	
Durbin–Watson	**1.72**				

Table 3 presents the results of Model 2, which includes the interaction term between corporate governance and litigation risk. Litigation risk retains a negative and significant coefficient (β = −0.167, p = 0.006). Corporate governance itself has a positive and significant coefficient (β = 1.581, p = 0.009). Critically, the interaction term (CG × Litigation Risk) is positive and significant (β = 4.121, t = 2.96, p = 0.003), demonstrating that stronger corporate governance attenuates the negative effect of litigation risk on innovation. The adjusted R-squared rises to 0.75–0.79, and diagnostic statistics remain satisfactory. These results provide strong support for Hypothesis 2.

Hypothesis 3: Financial Constraints and Litigation Risk

Table 4. Regression Results – Hypothesis 3. Dependent Variable: Litigation Risk

Variable	Coefficient	Std. Error	t-Statistic	Prob.	VIF
Financial Constraints (Z-Score)	0.4505	0.2223	2.027	0.0433	1.60
Corporate Governance (CG)	3.0046	1.3334	2.253	0.0245	1.13
Firm Size	0.0051	0.0022	2.359	0.0186	2.34
ROA	0.0392	0.0273	1.435	0.1516	3.08
Firm Age	0.0333	0.0081	4.094	0.0000	1.29
Leverage	–0.0215	0.0179	–1.202	0.2298	2.51
HHI	–0.0272	0.0116	–2.348	0.0191	1.10
Ownership Concentration	0.0122	0.0091	1.344	0.1793	1.12
Sales	0.0133	0.0041	3.277	0.0011	1.44
Tobin's Q	0.0021	0.0009	2.201	0.0281	1.89
Capital Expenditure	0.1729	0.0212	8.167	0.0000	1.98
Inflation	–0.3212	0.1437	–2.235	0.0257	1.31
GDP Growth	0.0234	0.0227	1.032	0.3026	4.21
Constant	0.2878	0.0927	3.104	0.0020	—
R-squared	**0.78**				
Adjusted R-squared	**0.77**				
F-statistic	**76.76**			**0.0000**	
Durbin–Watson	**1.76**				

Table 4 reports the estimation results of Model 3. The coefficient on the Altman Z-Score is positive and statistically significant ($\beta = 0.4505$, $t = 2.027$, $p = 0.043$). Given that a higher Z-Score indicates lower financial constraints (i.e., a stronger financial position), this finding shows that firms with better financial health tend to experience higher litigation risk in the sample of Iranian listed firms.

This result differs from the conventional expectation that financially constrained firms face greater litigation exposure. A plausible explanation in the Iranian context is that financially healthier and typically larger firms attract more litigation due to their higher visibility, more extensive operations, greater interactions with stakeholders, and higher levels of public and regulatory scrutiny. Corporate governance also enters positively and significantly, while several control variables remain consistent with previous models. The model is overall significant (F-statistic = 76.76, $p < 0.001$), with an adjusted R-squared of 0.77 and satisfactory diagnostic statistics (Durbin–Watson = 1.76; VIFs below 5).

Therefore, Hypothesis 3 is supported in terms of statistical significance, although the direction of the relationship reflects the specific institutional features of the Iranian capital market.

5. Conclusion

The empirical findings of this study offer several important insights into the interplay among litigation risk, corporate governance, financial constraints, and corporate innovation in the Iranian capital market.

Consistent with Hypothesis 1, litigation risk exerts a significant negative effect on corporate innovation. This result corroborates a substantial body of international evidence indicating that legal disputes impose direct costs, consume managerial attention, damage corporate reputation, and elevate uncertainty, thereby discouraging investment in innovative activities (Hassan et al., 2021; Islam & Rahman, 2023; Wang, Ho & Shan, 2024). In the Iranian context, where firms already operate under elevated institutional and macroeconomic uncertainty—including prolonged external sanctions and the strategic framework of resistive economics—the detrimental impact of litigation risk on innovation appears particularly pronounced. The negative association remains robust after controlling for firm-specific characteristics and macroeconomic factors, underscoring the material threat that legal exposure poses to firms' innovative capacity.

Supporting Hypothesis 2, corporate governance positively moderates the relationship between litigation risk and innovation. The significant positive interaction term demonstrates that firms with stronger governance structures are better able to shield their innovative activities from the adverse consequences of legal exposure. This finding is fully consistent with the central result of Iftikhar, Bagh and Khan (2024) for Chinese listed firms and aligns with broader evidence that high-quality governance reduces agency conflicts, improves enterprise risk management, and sustains long-term strategic investment (Asensio-López et al., 2019; Bagh et al., 2022; Huang et al., 2022; Chen, Xie & He, 2024). From an agency-theory perspective, effective governance constrains managerial short-termism and excessive risk aversion under legal pressure. From a resource-based view, it enables more efficient allocation of limited resources toward innovation even when firms face external threats. The moderating effect is especially relevant in the Iranian setting, where strong governance mechanisms can partially offset the institutional frictions that amplify the costs of litigation.

Regarding Hypothesis 3, the positive and significant association between the Altman Z-Score and litigation risk indicates that firms with stronger financial positions experience higher litigation exposure among Iranian listed companies. This finding is somewhat unexpected, as the majority of prior studies anticipate that financially constrained firms are more vulnerable to legal challenges. However, in the Iranian institutional setting—characterized by elevated regulatory scrutiny, external sanctions, and the strategic emphasis on resistive economics—financially healthier and typically larger firms may attract more litigation precisely because of their greater visibility, more extensive operations, and higher levels of interaction with customers, suppliers, competitors, and regulators. This interpretation is consistent with both the resource-based view and agency perspectives: firms with more resources and stronger market presence are more likely to become targets of legal disputes, while simultaneously possessing greater capacity to manage such risks when supported by effective corporate governance. The result underscores the importance of contextualizing the litigation–financial constraints nexus within emerging-market institutional environments rather than assuming universal patterns observed in developed markets.

Taken together, the results highlight that litigation risk poses a material threat to corporate innovation, yet high-quality corporate governance serves as an effective buffer that attenuates this adverse effect. The positive link between financial strength and litigation risk further suggests that the protective role of governance is particularly valuable for larger and more visible firms operating under elevated legal and institutional uncertainty. Overall, the findings refine the theoretical understanding of the litigation–innovation relationship by demonstrating that governance quality can preserve innovative capacity even in environments characterized by high legal and financial pressures, and they offer practical implications for managers and policymakers seeking to strengthen governance mechanisms within the Iranian capital market.

This study examined the moderating role of corporate governance in the relationship between litigation risk and corporate innovation, while also investigating the association between financial constraints and litigation risk, using a sample of firms listed on the Tehran Stock Exchange during 2018–2023. The findings confirm that litigation risk significantly reduces corporate innovation, that corporate governance positively moderates this negative relationship by attenuating the adverse effect of legal exposure on innovative activities, and that financial constraints—proxied by the Altman Z-Score—are positively associated with litigation risk. The latter result indicates that firms with stronger financial positions experience higher litigation exposure in the Iranian context, likely due to greater visibility, more extensive operations, and elevated regulatory and stakeholder scrutiny.

Theoretically, the study extends existing knowledge by demonstrating that the moderating role of corporate governance, previously documented mainly in the Chinese context, also holds in the distinct institutional setting of Iran. It further underscores the usefulness of integrating agency theory and the resource-based view when analyzing how governance mechanisms shape firm responses to multiple interacting risks. The positive link between financial strength and litigation risk highlights the importance of contextualizing these relationships within emerging-market environments characterized by external sanctions and the strategic framework of resistive economics.

Practically, the results suggest that strengthening corporate governance—particularly board oversight, audit quality, and ownership monitoring—can help firms protect their innovative capacity against legal pressures. Policymakers and capital-market regulators may consider enhancing governance standards as part of broader efforts to promote corporate resilience and sustainable innovation within the Iranian economy.

This study has several limitations that should be acknowledged. First, the litigation-risk measure is adapted from other institutional settings and may not fully capture the unique features of the Iranian legal and regulatory environment. Second, corporate innovation is measured through a disclosure-based composite index rather than more granular indicators such as patent counts or citation-weighted innovation output. Third, despite the use of firm and year fixed effects and an extensive set of control variables, potential endogeneity concerns cannot be entirely eliminated. Fourth, the sample is restricted to non-financial firms listed on the Tehran Stock Exchange over a six-year period (2018–2023), which may limit the generalizability of the findings to other sectors or longer time horizons.

Future research could address these limitations in several ways. Developing Iran-specific litigation-risk proxies that better reflect local legal practices and institutional characteristics would enhance measurement validity. Employing patent-based or more detailed innovation metrics could provide richer insights into the quality and nature of innovative activities. Applying quasi-experimental designs, instrumental-variable approaches, or difference-in-differences methods would help strengthen causal inference. Extending the analysis to longer periods, specific industries, or comparative studies across emerging markets would further improve external validity. Finally, examining additional contingency factors—such as institutional ownership, board expertise, directors' and officers' liability insurance, or the intensity of external sanctions—would deepen understanding of how corporate governance interacts with litigation risk and financial constraints to shape innovation outcomes in the Iranian capital market.

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ACKNOWLEDGMENTS

The current study has not received any grant, fund or contribution from private or government institutions. Also, the authors declare that there is no conflict of interests

ETHICAL CONSIDERATION

Authenticity of the texts, honesty and fidelity has been observed.

CONFLICT OF INTEREST

Author/s confirmed no conflict of interest.