The Impact of Corporate Governance Practices on Firm-Level Innovations and Their Market Value : Empirical Evidence from India

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Abstract

Purpose : In this study, empirical data from non-financial companies listed on Indian stock markets was used to assess the impact of firm-level innovation on the market value of Indian enterprises. This study also looked into how corporate governance practices affect the growth of an innovative ecosystem in the Indian market.

Methodology : We evaluated data of the 77 non-financial companies listed on the BSE 200 index using the fixed effect panel data regression technique. The experimental phase lasted six years, from 2016 to 2021. The market value of the company was determined using the price-to-book ratio. The moderating influence of corporate governance characteristics on market value was measured using three factors: board independence, promoter stake, and CEO duality. Measurement of R&D spending relative to total sales was used as a stand-in for innovation level in the selected companies.

Findings : The results showed a substantial correlation between firm-level innovation and the market valuation of the research's selected enterprises. The empirical evidence supported the hypothesis that corporate governance mechanisms can catalyze the innovation ecosystem in the selected firms.

Practical Implications : This study clearly demonstrated that while some corporate governance elements augment the level of innovation in businesses, a small number of other variables can impair the innovation ecosystem in those businesses.

Originality/Value : This study expanded on earlier research by examining how corporate governance practices affect firm-level innovations and their market value.

Keywords : **corporate governance, firm-level innovation, Indian listed companies, firm performance**

JEL Classification Codes : G3, G34, O32, O34

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Any nation in the modern world can envision holistic progress and development only by emphasizing the promotion of innovation. It is essential to a country's ability to compete. Businesses can think about sustainable development by putting creative fixes to the numerous issues they occasionally confront into practice (Sharma et al., 2018). Organic growth of a company is only possible via the adoption of cutting-edge techniques as a consequence of its efforts in the field of market research (Ben & Dwivedi, 2013). Unlike in the past, we have recently observed numerous Indian companies gaining significant attention as a result of their innovative ideas, whether they are presented as a product or as a method of providing a specific service. Due to its relevance in the worldwide context, the idea of innovation is changing corporate culture and is being accepted more by top executives. Since it can improve the fortunes of clients, investors, businesses, and the economy as a whole, innovation in firms is likewise appreciated. Numerous studies have come to the conclusion that successful inventions can eventually increase the value of a company (Benita, 2019; Castiglione et al., 2018; Chen, 2017). It is a generally acknowledged standard that a company that consistently and progressively invests in its R&D expenses will be expected to have more creative business solutions in order to stay successful in the market. A plethora of research studies have reported positively on the impact of R&D expenditures on firm performance (Hu et al., 2020; Jitsutthiphakorn, 2021; Otchia, 2020). This investment in R&D is greatly influenced by the nature, size, and characteristics of firms. Large companies have been shown to invest more than smaller companies do, and urban companies are said to contribute more to R&D than companies in outlying locations do (Bronzini & Piselli, 2016).

The formal management structure of a company is essential for directing its inventive activities and later commercializing innovation inputs into the business processes. Managerial ownership is also found to have a significant impact on the firm's innovation performance and, subsequently, on its commercialization (Singh et al., 2022). A company's innovation performance is influenced by both hard and soft internal elements, including managerial practices and governance structures, as well as hard internal factors like R&D people, R&D investment, and R&D commercialization (Albors-Garrigos et al., 2018; Allen et al., 2015). By carefully studying the research that is currently available on the subject, one might uncover two persuasive yet competing arguments regarding the influence of CG principles on innovation in organizations. According to some, CG techniques have a positive effect on an organization's level of innovation because they can ultimately improve the firm's performance in the market (Água & Correia, 2020; Jose et al., 2021; O'Connor & Rafferty, 2012). A different school of thinking focuses on agency issues and contends that if business executives prefer less risky business strategies, they might cut back on R&D spending and focus on activities that will help them gain in the short term.

Studies have also reported that in certain cases, innovation within a firm is discouraged by company executives due to the fear of hostile takeovers (Tayeb et al., 2023). Taking into consideration the aforementioned criteria that explain differing opinions regarding the significance of CG practices in fostering firm-level innovation, this research is conducted to experimentally validate the correlations that exist between CG practices and innovation among Indian firms. Understanding how CG practices support creative practices in a business setting is this study's primary objective. Through the focus on innovation initiatives that are measured in relation to a company's R&D expenses, the research has objectively demonstrated how CG may enhance performance and competitiveness at the business level.

Review of Literature and Hypotheses Formulation

There are two primary lines of existing literature that the present study is related to. First, the correlation between a firm's market value and its level of innovation is examined. Innovation is the term coined for inventing new ideas, processes, products, or services (Jitsutthiphakorn, 2021). Innovation intensity is defined as the proportion of R&D expenditure to total sales (Busru & Shanmugasundaram, 2017). The body of research demonstrates that funding

research and development is essential to innovation (Amore & Bennedsen, 2016; Hu et al., 2020; Rubera & Kirca, 2012). Atalay et al. (2013) found product and process innovation as a more vital instrument to achieve sustainable competitive power. The expenditure incurred on R&D is focused on attaining a competitive advantage. Schumpeter's theory (Ziemnowicz, 2020) proclaims that there exists a positive relationship between innovative ideas and firm value; however, several studies conducted in this context fail to give a cumulative result. The impact of product innovations and newly obtained patents on business performance in several U.S. and Canadian industries was investigated in the longitudinal study by Artz et al. (2010). They found that product innovation had a big influence on the overall company performance. Therrien et al. (2011) looked into the relationship between innovation and company success in a few different service sectors. The findings showed that companies need to either join the market first or create new items with a high level of novelty if they want to increase sales through innovations. Through an empirical study involving Turkish manufacturing enterprises in several industries, Gunday et al. (2011) investigated the effects of product, process, organization, and marketing innovations on various areas of firm performance, including successes in production, marketing, and finance.

Some researchers have found an insignificant relationship between innovation intensity and market value (Arora & Bhandari, 2017; Rubera & Kirca, 2012). Latifi et al. (2021), in their work, reported that business model innovation can give a company a competitive edge and improve performance; however, many small and medium-sized businesses (SMEs) struggle to see the desired results when they innovate their business model. Since business model innovation modifies a company's business model fundamentally and irreversibly, it involves a great deal of risk, ambiguity, and uncertainty. Considering the various views of multiple researchers, the following hypothesis is formulated for this study:

- **Ha1 :** Innovation intensity has a significant positive impact on the market value of a firm.

The second line of research focuses on how corporate governance influences the association between a firm's market value and its level of innovation. Many pieces of research (Gupta, 2019; Negi & Jain, 2022) showed that corporate governance and the market value of a firm are related to each other; however, there is no conclusive result, whether it's either direct or indirect or positive or negative. Guluma (2021) studied 11,634 Chinese listed firms and found a substantial positive association between ownership concentration, product market competitiveness, and firm performance as assessed by ROA and Tobin's *Q*. Debt financing also showed a significant negative correlation with return on assets and Tobin's *Q*, two metrics used to assess the success of businesses. Firm performance is found to be negatively correlated with dual leadership. The empirical findings also demonstrated that managerial haughtiness negatively impacted the relationships between ownership concentration, dual leadership, board independence, and business performance. Overconfidence among managers, however, reduced the influence of debt financing on company performance as measured by Tobin's *Q*.

The three variables of corporate governance that are focused on in this study are CEO duality, promoter shareholding, and board independence. The Chairman, executive, non-executive, and independent directors make up the board of directors, also known as the board. According to Mukhibad and Setiawan (2020), the percentage of independent directors on a board of directors is what defines board independence. Independent directors are members of the board's non-executive team who are not involved in everyday affairs and do not have any significant connection to the company. The key role of independent directors is monitoring the implementation of new strategies and preventing collusion between board members (Haldar, 2017). Bhatt and Bhattacharya (2015) and Sandhya and Parashar (2019) looked into the relationship between board independence and financial success and concluded that it was advantageous for firm performance. Chauhan and Pasricha (2010) found no evidence of a significant correlation between the success of the firm and the characteristics of board independence. In this case, the moderating variable to determine the relationship between the market value of the company and the

degree of innovation was board independence. When the chief executive officer plays the role of a Chairman, it is called CEO duality. CEO duality represents a more substantial level of internal control, where a strong CEO, who also serves as the board's chair, undermines oversight by the board. This might suggest a bad correlation between firm performance and this (Yu, 2023). Researchers who emphasize the benefits of CEO duality, such as Chiu et al. (2021) and Guizani and Abdalkrim (2022), supported the stewardship idea. Due to endogeneity issues, the relationship between CEO duality and business performance has contradictory findings (Yang & Zhao, 2014).

Indian companies are mostly predominated by families and promoters (Shikha & Mishra, 2019). Surya Bahadur (2016) stated that the relationship between corporate governance and financial performance is bi-directional. The researcher stated a good correlation between several board committees, director compensation, and board independence. A negative relationship is found with leverage, promoters' shareholding, and board size. The effectiveness of the business environment is increased by firm-level operating performance, and corporate governance practices in emerging economies have a significant impact on the operating environment and business performance (Kayalvizhi & Thenmozhi, 2018). Tayeb et al. (2023) discovered that board independence, board size, and CEO duality are significant predictors of innovation for China-listed firms, with board independence having the strongest predictive importance on innovation. The results of the research done by Sierra-Morán et al. (2021) showed that board size, board independence, board diversity, and the number of board committees all significantly improved the innovative ecosystem in the chosen companies. They backed the idea that CG practices serve as a bridge connecting innovation and business performance. For this investigation, we propose the following hypothesis after taking into account the various findings:

- **Ha2 :** Corporate governance practices within a firm moderate the relationship between research intensity and the market value of a firm.

This literature included three main firm-specific mechanisms of corporate governance that have a significant role in the market value of the firm. Furthermore, a few control variables, specifically age, firm size, and leverage, are included to capture the picture more precisely. The age of a firm is calculated on the base of its incorporation year. Firm size is taken as a value equal to the natural logarithm value of total sales (Arora & Sharma, 2016; Guizani & Abdalkrim, 2022). Long-term debt is used to procure tangible assets. Leverage is used to get the corporate tax shield. Arora and Bhandari (2017) found that CSR, corporate governance index, size, and leverage demonstrated a significant effect on firm performance.

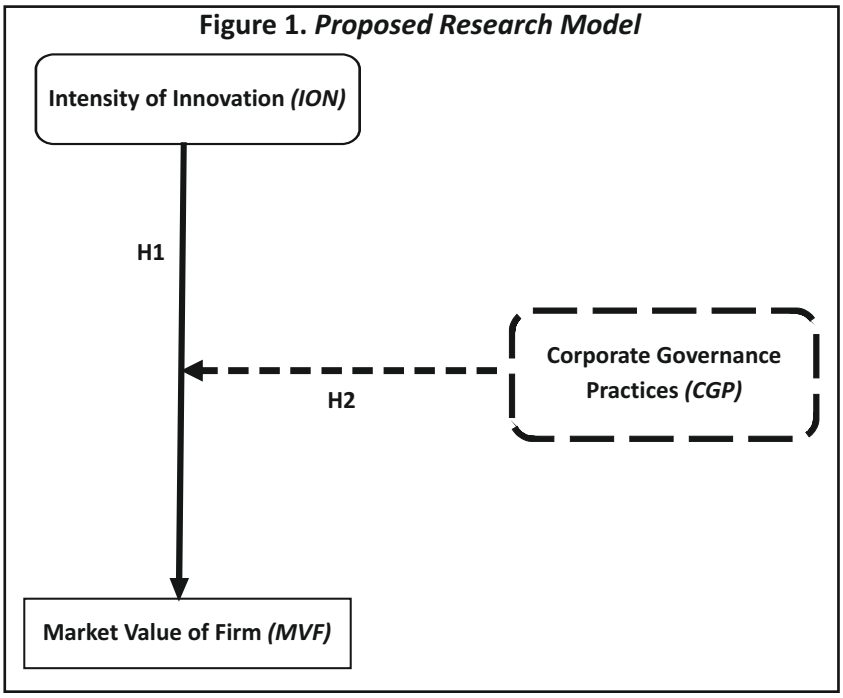
Objectives of the Study

The main focus of this research is to comprehend any connections that might exist between an organization's innovation initiatives and its ability to compete in the market. Using information from listed Indian companies, the research also concentrated on the moderating influence of CG practices in enhancing company innovation and competitiveness. This research has formulated specific objectives:

- To understand the impact of innovation intensity on the market value of firms.
- To investigate how corporate governance factors influence the relationship between a firm's market value and level of innovation.

Figure 1 depicts the research model of the study.

Figure 1. ***Proposed Research Model***



Data and Variables

Data

The Prowess IQ database and the corresponding companies' annual reports provide the data for this study. For additional examination, information on the listed businesses that made up the BSE 200 Index was gathered. The study period was from 2016 to 2021. Companies showing negative returns during the study period were eliminated from the final sample. Data about financial companies were also not included in the final analysis due to the differences in the CG regulations concerning these companies. After conducting all these screenings, the data pertaining to 77 companies are used for further analysis.

Input and Output Variables

The proxies used for capturing the data needed for testing the proposed relationship are as follows:

The innovation intensity (ION) measure records the outcomes of the investments made by companies in R&D throughout the 2016–2021 research period. The market value of the company is estimated using the price-to-book ratio as a stand-in. Board independence (BI), promoter's stake (PS), and CEO duality (CD) are the moderating variables utilized to examine the effect of corporate governance practices. Additionally, a few control variables are added to strengthen the estimation results' robustness. These are the firm's age, size, and leverage-to-asset ratio.

Definition of Variables

Table 1 displays the computational methods utilized to determine the values of the dependent, independent, and moderating variables.

Table 1. ***Definition of Variables***

Variables	Computational Definition	Acronym
Dependent Variable		
Market Value of Firm	Price-to-book value	*MVF*
Independent Variables		
Intensity of Innovation	R&D expenditure / Total sales	*ION*
Moderating Variable		
Corporate Governance Practices	**1. Board Independence :** Total number of independent directors/Total number of board directors.	*BI*
	2. Promoter's Stake : Percentage of shares held by promoters of the company.	*PS*
	3. CEO Duality : Dummy variable 1 when the CEO is also the Chairman of the Board, and 0 is used otherwise.	*CD*
Control Variables		
Age of the Firm	Present year – incorporation year	*AG*
Firm Size	Natural logarithm of Sales	*FS*
Leverage Ratio	Total Debt / Total Assets	*LR*

Model and Methodology

The main purpose of this study is to find out how corporate governance practices affect both overall market performance and firm-level innovation. The study is empirical, and the hypotheses are validated using a quantitative method. The study uses regression analysis to examine the relationships between the variables discovered in the investigation. We utilized the subsequent regression equations to arrive at the study's findings:

$$MVF = \alpha_0 + \beta_1 ION_{it} + \beta_2 AG_{it} + \beta_3 FS_{it} + \beta_4 LR_{it} + \omega_{it} \quad (1)$$

$$MVF = \alpha_0 + \beta_1 ION_{it} + \beta_2 AG_{it} + \beta_3 FS_{it} + \beta_4 BI_{it} + \beta_5 PS_{it} + \beta_6 CD_{it} + \omega_{it} \quad (2)$$

$$MVF = \alpha_0 + \beta_1 ION_{it} + \beta_2 AG_{it} + \beta_3 FS_{it} + \beta_4 BI_{it} + \beta_5 (ION * BI)_{it} + \omega_{it} \quad (3)$$

$$MVF = \alpha_0 + \beta_1 ION_{it} + \beta_2 AG_{it} + \beta_3 FS_{it} + \beta_4 PS_{it} + \beta_5 (ION * PS)_{it} + \omega_{it} \quad (4)$$

$$MVF = \alpha_0 + \beta_1 ION_{it} + \beta_2 AG_{it} + \beta_3 FS_{it} + \beta_4 CD_{it} + \beta_5 (ION * CD)_{it} + \omega_{it} \quad (5)$$

where,

MVF = Market value of firm,
ION = Intensity of innovation,
BI = Board independence,
PS = Promoter's stake,
CD = CEO duality,
AG = Age of the firm,
FS = Firm size,
LR = Leverage ratio,

α_0 = regression intercept and ω = composite error term.

To ascertain the impact of innovation intensity and corporate governance practices on the market value of the selected Indian firms, an empirical investigation is carried out.

Empirical Analysis and Results

Descriptive Statistics

Table 2 is presented with the results of the descriptive statistics. The price-to-book ratio is used to calculate a company's market value, and the average value is 7.19, with a maximum value of 36.39. For prospective investors, generally, any value under three is good, as it indicates an undervalued stock if all other economic parameters do not show any abnormal conditions. Among the selected companies, few companies have very minimal investment for their R&D initiatives, which is the reason why the minimum value is showing a value near zero for this variable. The maximum contribution made by selected companies in this category is 23% of their total sales turnover. The highest percentage of independent directors on the boards of Indian firms is 83, with an average of 50% of the directors being independent. These results are consistent with many other studies conducted on Indian-listed companies (Chauhan & Pasricha, 2010; Jose et al., 2021). In 29% of the chosen companies, the same individual held the positions of CEO and Chairman of the Board. The average proportion of promoter contributions in the chosen Indian companies is 56%, a high percentage. As a result of these expanded shareholdings, owners of the company will continue to be alert about the firm's economic performance. The selected companies have an average age of 50 years, and the sample comprised companies with over 100 years of experience in the Indian corporate landscape. The logarithm of sales turnover is used to calculate the average business size, and the result is 11.66. Few companies used less than 10% of debt in their capital structure, but on an average, the firms utilized 41% of debt in their capital structure. Most of the companies that used a smaller amount of debt in their capital structure were practicing the principles of the pecking order theory, i.e., they were very much dependent on their retained earnings to meet their capital structure requirements. Limiting the involvement of outside parties in the administration of business matters may be one reason for this practice.

Table 2. ***Descriptive Statistics***

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis
Market Value of Firm	7.19	5.04	36.39	0.61	6.53	1.69	5.96
Intensity of Innovation	0.02	0.01	0.23	0.00	0.04	2.44	9.34
Board Independence	0.57	0.50	0.83	0.12	0.35	0.55	1.32
Promoter's Stake	55.71	56.21	85.96	19.45	13.89	–0.42	2.46
CEO Duality	0.29	0.00	1.00	0.00	0.45	0.94	1.88
Age of the Firm	50.36	46.00	114.00	16.00	21.62	0.69	2.91
Firm Size	11.66	11.53	15.63	9.27	1.29	0.67	3.21
Leverage Ratio	0.41	0.40	0.78	0.08	0.16	0.27	2.17

Correlation Analysis

To determine whether there is a correlation between the many independent variables found in this study, we performed a correlation analysis (results are shown in Table 3). It is discovered that there is no need to eliminate any of the independent variables because the correlation between the different variables is at acceptable values.

Table 3. ***Correlation Statistics***

	ION	*BI*	*PS*	*CD*	*AG*	*FS*	*LR*
ION	1						
BI	–0.0244	1					
PS	–0.0759	0.0374	1				
CD	–0.0482	0.1475	0.0231	1			
AG	–0.1414	0.0956	0.1998	0.1082	1		
FS	–0.2246	0.0113	0.1073	0.0549	0.0566	1	
LR	–0.2501	0.0222	0.0879	0.2424	0.0531	0.3371	1

The robustness test is also conducted using the variance inflation factor (VIF) test, and it is found that none of the VIF values are more significant than 8; thereby, it can be assumed that the data are free from multi-collinearity problems. So, it is decided to proceed with model estimations to arrive at conclusions regarding the hypotheses formulated for this research.

Model Estimations

We conducted a thorough analysis using the balanced panel data of 77 non-financial companies listed on the BSE in order to draw findings about the formulated hypotheses. To determine the model prerequisites, the Hausman test is used. As per the results, the null hypothesis is not accepted, so further analysis is done using fixed effect panel data estimation. For reducing the variance in data, a few control variables are also used, viz., age of the firm, leverage ratio, and firm size. The results are analyzed at 1%, 5%, and 10% significance levels. The valuation results are presented in Table 4.

Table 4. ***Regression Estimation Using the Fixed Effect Model***

Independent Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Intercept	0.0000	0.0000	0.0000	0.0000	0.0000
ION	0.0734*	0.0652*	0.0601*	0.0000***	0.0379**
	(1.0968)	(1.1159)	(0.4312)	(3.7529)	(0.8796)
BI	-------	0.0801*	0.0001***	------	------
		(–0.1111)	(4.4004)		
PS	-------	0.01232**	------	------	0.0891*
		(0.8982)			(1.7045)
CD	--------	0.0611*	------	0.0322**	------
		(–0.3261)		(–2.1481)	
AG	0.0001***	0.0001***	0.0022***	0.0031**	0.0621*
	(6.6671)	(1.1159)	(3.0743)	(2.0611)	(1.1201)
FS	0.0108 **	0.09111*	0.0001***	0.0000***	0.0000 ***
	(–0.9996)	(1.1159)	(0.2100)	(3.3488)	(1.9114)
LR	0.0001**	0.0001***	0.0103**	0.019**	0.0035**
	(3.9781)	(3.9728)	(2.5779)	(2.3538)	(2.9359)

*IOI*BI*	------	------	0.0473**	------	------
			(–1.4515)		
*IOI*PS*	------	------	------	------	0.0241**
					(1.1722)
*IOI*CD*	------	------	------	0.0672***	------
				(–0.4236)	
Observations	456	456	456	456	456
R-Squared	0.4421	0.6632	0.2829	0.2477	0.3131
Prob (*F*-statistic)	0.0000	0.0000	0.0000	0.0000	0.0000

Note. *t* - statistics are presented in parentheses.

*** denotes significance at 1%, ** denotes significance at 5%, * denotes significance at 10%.

- Model 1 = Regression of IOI against MVF (price to book value).
- Model 2 = Regression of IOI and CG against MVF (price to book value).
- Model 3 = Regression of IOI and Interaction term BI against MVF (price to book value).
- Model 4 = Regression of IOI and Interaction term CD against MVF (price to book value).
- Model 5 = Regression of IOI and Interaction term PS against MVF (price to book value).

First, the analysis takes into account the level of innovation and how it affects the chosen enterprises' market value. The results reveal a positive influence of the intensity of innovation on the market value of a firm. The relationship is significant at a 1% level. We observe that the R^2 value is 0.4421. Thus, the findings support the acceptance of Ha1, i.e., innovation intensity has a significant positive impact on the market value of listed firms in India. The second model is estimated by including corporate governance variables along with innovation intensity. The estimation results improve in their predictability, and the relationship is significant at 1%. In this, the R^2 value is found to be 0.6632. At the 5% significance level, it is discovered that the corporate governance variable, promoter's share, has a positive significant impact on firms' market values. The other variables, that is, board independence and CEO duality, show a significant negative impact on the market value of firms at a 10% significance level. The purpose of the third, fourth, and fifth model estimations is to determine how corporate governance characteristics interact with the current link between a firm's market value and level of innovation. With price-to-book value as the dependent variable, three regression models are estimated, each having corporate governance variables as independent variables. The results support Ha2. The regression outputs are as follows:

The *F*-statistics pertaining to board independence are found to be significant at 1%. The R^2 value is determined to be 0.2829, and the interaction term is likewise significant at $p<0.05$. However, it is noticed that the interaction term has a negative influence (–1.4515) on the dependent variable, i.e., the price-to-book value of the firms. The findings suggest that having a large number of independent directors on a board may have a detrimental effect on a company's market value. This may be due to a lack of active involvement of independent board members in the development activities of the firm (Gupta, 2019). The estimation results of the interaction effect of the promoter's stake exhibit a significant positive influence on the existing relationship between the innovation intensity and the market value of firms. The R^2 value is 0.3131, and the interaction term is significant at $p<0.05$. The *F*-statistics is also significant at 1%. Here, we can notice that the model predictability is much higher than what is noticed in the estimation results of board independence as a moderating variable. Using CEO duality as the interaction variable, the fourth model is estimated, and the outcome is found to be negatively significant at 1%. The interaction value is 0.0672, and it is significant at 10%. The R^2 value is found to be 0.2477. The negative association of CEO duality may be because of this dual role, and they might tend to focus more on dealing with internal transactions rather

than focusing on the overall performance of the company (Allen et al., 2015). Therefore, the study's findings conclude that CEOs who play several responsibilities (CEO duality) may lessen the level of innovation in India's listed companies.

Conclusion

The main goal of this study is to look at the connection between firm-level innovation and corporate governance practices in listed non-financial enterprises in India. It is possible to conclude from the evidence that corporate governance practices have a significant influence on promoting innovative ecosystems in Indian companies. Promoter's stake reveals a sizeable positive impact on the market value of enterprises among the corporate governance factors evaluated; on the other hand, board independence and CEO duality demonstrate a notable detrimental effect. The findings of this study are consistent with a select number of other investigations (Behal & Uppal, 2023; Chen, 2017; Hu et al., 2020). This study clearly demonstrates that while some corporate governance elements may increase the intensity of innovation in businesses, there are just a few more factors that could impair the innovation ecosystem in those businesses. To make sure that they give more weight to those variables that can favorably increase the market value of enterprises, regulators and policymakers may reexamine the country's corporate governance rules and obligatory legislation.

Managerial and Theoretical Implications

This study has produced empirical data that supports the importance of corporate governance practices within businesses for raising their market value. Additionally, it has demonstrated the benefit of CG practices in encouraging innovations in a corporate setting. In order to increase the market value, businesses might concentrate precisely on those CG factors that can have a substantial impact on their innovation activities. Beyond a certain point, enterprises will not benefit from a simple confirmation of the mandatory CG standards set forth in SEBI regulations. In order to improve the market acceptability of businesses, corporate leadership will need to be alert enough to promote innovation within the current business framework and to ensure that this innovation is properly commercialized. Evidence for the connection between firm-level innovation and its effect on market value has also been revealed by this research. In order to be competitive in the industry, the report suggests that companies should continue to innovate in the future.

Any firm must place a high premium on evaluating a company's participation in various creative projects and the amount of R&D expenditure required to meet client expectations. For the board leaders, coming to a consensus on this can frequently be challenging because it may require some short-term gain concessions. The study's conclusions may be useful, particularly in the context of emerging economies, and they may also assist policymakers in choosing appropriate governance procedures that could increase the business's market value.

Limitations of the Study and Scope for Future Research

In this study, proxies are utilized to gauge how identified variables affect the firm's market value. Other metrics may be used to elaborately represent and evaluate this relationship. Therefore, more factors can be used in this area's future studies to measure firm-level innovation. The impact of CG practices can also be investigated further by including more factors like gender diversity, board involvement, board activities, and the composition of different committees in an effort to make the proposed model more predictable. Similarly, variations in the market value of companies can be monitored using additional measures like Tobin's *Q* and EVA. Future researchers can take these factors into account in various institutional frameworks by keeping this work as a base model.

Authors' Contribution

Dr. Amiya Bhaumik developed the research paper's concept and fundamental hypothesis. To conclude the established associations, Dr. Asha Elizabeth Thomas developed the fundamental framework for the study and carried out the statistical analysis. In order to finalize the variables and their correlations, Jean Mary Aruja retrieved high-quality research papers and conducted a review of the literature. Additionally, she gathered the necessary data from the Prowess IQ database and extracted it for empirical analysis.

Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

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References

Água, P. B., & Correia, A. (2020). Innovation governance in practice: A business policy approach. *Corporate Board: Role, Duties and Composition*, *16*(2), 54–64. http://doi.org/10.22495/cbv16i2art5

Albors-Garrigos, J., Ignacio Igartua, J., & Peiro, A. (2018). Innovation management techniques and tools: Its impact on firm innovation performance. *International Journal of Innovation Management*, *22*(6), 1850051. http://doi.org/10.1142/S1363919618500512

Allen, M. R., Adomdza, G. K., & Meyer, M. H. (2015). Managing for innovation: Managerial control and employee level outcomes. *Journal of Business Research*, *68*(2), 371–379. https://doi.org/10.1016/j.jbusres.2014.06.021

Amore, M. D., & Bennedsen, M. (2016). Corporate governance and green innovation. *Journal of Environmental Economics and Management*, *75*, 54–72. https://doi.org/10.1016/j.jeem.2015.11.003

Arora, A., & Bhandari, V. (2017). Do firm-level variables affect corporate governance quality and performance? Evidence from India. *International Journal of Corporate Governance*, *8*(1), 1–24. http://doi.org/10.1504/IJCG.2017.10006062

Arora, A., & Sharma, C. (2016). Corporate governance and firm performance in developing countries: Evidence from India. *Corporate Governance*, *16*(2), 420–436. https://doi.org/10.1108/CG-01-2016-0018

Artz, K. W., Norman, P. M., Hatfield, D. E., & Cardinal, L. B. (2010). A longitudinal study of the impact of R&D, patents, and product innovation on firm performance. *Journal of Product Innovation Management*, *27*(5), 725–740. https://doi.org/10.1111/j.1540-5885.2010.00747.x

Atalay, M., Anafarta, N., & Sarvan, F. (2013). The relationship between innovation and firm performance: An empirical evidence from Turkish automotive supplier industry. *Procedia - Social and Behavioural Sciences*, *75*, 226–235. https://doi.org/10.1016/j.sbspro.2013.04.026

Behal, V., & Uppal, R. K. (2023). Factors impacting corporate social responsibility of top firms listed in India. *Indian Journal of Finance*, *17*(6), 27–44. https://doi.org/10.17010/ijf/2023/v17i6/171974

Ben, P. J., & Dwivedi, N. (2013). The role of corporate governance: A hurdle or steroid in the commercialization of innovations? *Indian Journal of Corporate Governance*, *6*(1), 18–31. https://doi.org/10.1177/0974686220130102

Benita, F. (2019). A new measure of transport disadvantage for the developing world using free smartphone data. *Social Indicators Research*, *145*, 415–435. https://doi.org/10.1007/s11205-019-02107-x

Bhatt, R. R., & Bhattacharya, S. (2015). Board structure and firm performance in Indian IT firms. *Journal of Advances in Management Research, 12*(3), 232–248. https://doi.org/10.1108/JAMR-07-2014-0042

Bronzini, R., & Piselli, P. (2016). The impact of R&D subsidies on firm innovation. *Research Policy*, *45*(2), 442–457. https://doi.org/10.1016/j.respol.2015.10.008

Busru, S. A., & Shanmugasundaram, G. (2017). Effects of innovation investment on profitability and moderating role of corporate governance: Empirical study of Indian listed firms. *Indian Journal of Corporate Governance*, *10*(2), 97–117. https://doi.org/10.1177/0974686217730938

Castiglione, C., Infante, D., & Zieba, M. (2018). Technical efficiency in the Italian performing arts companies. *Small Business Economics*, *51*(3), 609–638. https://doi.org/10.1007/s11187-017-9931-1

Chauhan, S., & Pasricha, J. S. (2010). Corporate governance structure and performance of Indian companies. *Indian Journal of Corporate Governance*, *3*(2), 110–121. https://doi.org/10.1177/0974686220100202

Chen, S. (2017). The relationship between innovation and firm performance: A literature review. Advances in Computer Science Research (Volume 82). *Proceedings of 2017 7th International Conference on Social Network, Communication and Education (SNCE 2017)*. Atlantis Press. http://dx.doi.org/10.2991/snce-17.2017.132

Chiu, J., Chen, C.-H., Cheng, C.-C., & Hung, S.-C. (2021). Knowledge capital, CEO power, and firm value: Evidence from the IT industry. *The North American Journal of Economics and Finance, 55*, 101012. https://doi.org/10.1016/j.najef.2019.101012

Guizani, M., & Abdalkrim, G. (2022). Ownership structure, board independence and auditor choice: Evidence from GCC countries. *Journal of Accounting in Emerging Economies, 12*(1), 127–149. https://doi.org/10.1108/JAEE-06-2020-0145

Guluma, T. F. (2021). The impact of corporate governance measures on firm performance: The influences of managerial overconfidence. *Future Business Journal*, *7*(1), 50. https://doi.org/10.1186/s43093-021-00093-6

Gunday, G., Ulusoy, G., Kilic, K., & Alpkan, L. (2011). Effects of innovation types on firm performance. *International Journal of Production Economics*, *133*(2), 662–676. https://doi.org/10.1016/j.ijpe.2011.05.014

Gupta, A. (2019). A study into the acceptance level of Corporate Governance Code 2008 by Dutch listed companies. *Indian Journal of Finance*, *13*(5), 25–36. https://doi.org/10.17010/ijf/2019/v13i5/144183

Haldar, A. (2017). *Assessment of the role of independent director and its effectiveness for the growth and development of shareholders' value of the firm*. National Foundation for Corporate Governance.

Hu, X., Danso, B. A., Mensah, I. A., & Addai, M. (2020). Does innovation type influence firm performance? A dilemma of star-rated hotels in Ghana. *Sustainability*, *12*(23), 9912. https://doi.org/10.3390/su12239912

Jitsutthiphakorn, U. (2021). Innovation, firm productivity, and export survival: Firm-level evidence from ASEAN developing countries. *Journal of Economic Structures*, *10*(1), Article 22. https://doi.org/10.1186/s40008-021-00251-7

Jose, A. M., Jose, M. T., & Suresh, G. (2021). Impact of corporate governance on financial performance of Nifty 50 companies: An empirical analysis. *Indian Journal of Research in Capital Markets*, *8*(3), 22–36. http://doi.org/10.17010/ijrcm/2021/v8i3/167955

Kayalvizhi, P. N., & Thenmozhi, M. (2018). Does quality of innovation, culture and governance drive FDI?: Evidence from emerging markets. *Emerging Markets Review*, *34*, 175–191. https://doi.org/10.1016/j.ememar.2017.11.007

Latifi, M.-A., Nikou, S., & Bouwman, H. (2021). Business model innovation and firm performance: Exploring causal mechanisms in SMEs. *Technovation*, *107*, 102274. https://doi.org/10.1016/j.technovation.2021.102274

Mukhibad, H., & Setiawan, D. (2020). Could risk, corporate governance, and corporate ethics enhance social performance? Evidence from Islamic banks in Indonesia. *Indian Journal of Finance*, *14*(4), 24–38. https://doi.org/10.17010/ijf/2020/v14i4/151706

Negi, G., & Jain, A. (2022). Corporate governance and firm value – An empirical study of financial services firms in India. *Indian Journal of Finance*, *16*(9), 42–53. https://doi.org/10.17010/ijf/2022/v16i9/172159

O'Connor, M., & Rafferty, M. (2012). Corporate governance and innovation. *Journal of Financial and Quantitative Analysis*, *47*(2), 397–413. https://doi.org/10.1017/S002210901200004X

Otchia, C. S. (2020). Mechanisms and impacts of innovation on firm survival: Evidence from sub-Saharan Africa. In, *Designing integrated industrial policies Volume II* (1st ed.). Routledge.

Rubera, G., & Kirca, A. H. (2012). Firm innovativeness and its performance outcomes: A meta-analytic review and theoretical integration. *Journal of Marketing*, *76*(3), 130–147. https://doi.org/10.1509/jm.10.0494

Sandhya, S., & Parashar, N. (2019). A study on corporate governance practices of selected banks in India. *Indian Journal of Finance*, *13*(2), 36–47. https://doi.org/10.17010/ijf/2019/v13i2/141686

Sharma, J. P., Jhunjhunwala, S., & Sharda, S. (2018). Corporate governance and innovation. In S. Dhir, & Sushil (Eds.), *Flexible strategies in VUCA markets. Flexible systems management* (pp. 63–75). Springer. https://doi.org/10.1007/978-981-10-8926-8_5

Shikha, N., & Mishra, R. (2019). Corporate governance in India - battle of stakes. *International Journal of Corporate Governance*, *10*(1), 20–41. https://doi.org/10.1504/IJCG.2019.098041

Sierra-Morán, J., Cabeza-García, L., González-Álvarez, N., & Botella, J. (2021). The board of directors and firm innovation: A meta-analytical review. *BRQ Business Research Quarterly*. https://doi.org/10.1177/23409444211039856

Singh, R. K., Sharma, M., Kumar, A., & Singh, Y. (2022). Corporate governance mechanism – financial performance nexus: Empirical evidence from Indian banks. *Indian Journal of Finance*, *16*(7), 23–41. https://doi.org/10.17010/ijf/2022/v16i7/170633

Surya Bahadur, G. C. (2016). Corporate governance and firm performance: Empirical evidence from India. *Journal of Business and Management Research*, *1*(2), 48–65. https://doi.org/10.3126/jbmr.v1i2.15663

Tayeb, M. Y. S., Gang Ye, C., & Ming, J. (2023). Corporate governance, firm performance and innovation: The case of China's listed firms engaging in OFDI. *Applied Economics Letters*, *30*(8), 1052–1059. https://doi.org/10.1080/13504851.2022.2036317

Therrien, P., Doloreux, D., & Chamberlin, T. (2011). Innovation novelty and (commercial) performance in the service sector: A Canadian firm-level analysis. *Technovation*, *31*(12), 655–665. https://doi.org/10.1016/j.technovation.2011.07.007

Yang, T., & Zhao, S. (2014). CEO duality and firm performance: Evidence from an exogenous shock to the competitive environment. *Journal of Banking & Finance*, *49*, 534–552. https://doi.org/10.1016/j.jbankfin.2014.04.008

Yu, M. (2023). CEO duality and firm performance: A systematic review and research agenda. *European Management Review*, *20*(2), 346–358. https://doi.org/10.1111/emre.12522

Ziemnowicz, C. (2020). Joseph A. Schumpeter and innovation. In E. G. Carayannis (ed.), *Encyclopedia of creativity, invention, innovation and entrepreneurship* (pp. 1517–1522). Springer. https://doi.org/10.1007/978-3-319-15347-6_476

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