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IMPACT OF CORPORATE GOVERNANCE PRACTICES ON PERFORMANCE IN INDIA'S IT INDUSTRY: AN EMPIRICAL ANALYSIS

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Abstract
This study investigates the impact of board composition and ownership attributes on firm performance within the IT sector in India, focusing on a decade following the enactment of the Companies Act 2013. We analyze the influence of Board Size, CEO Duality, Gender Diversity, Promoter Ownership, and Related Party Transactions on two performance measures: Return on Assets (ROA) and Tobin's Q. System Generalized Method of Moments (GMM) is employed to address potential endogeneity and provide robust estimates, while Ordinary Least Squares (OLS) is applied for robustness checks. The findings indicate that Board Size has a negative but statistically insignificant effect on firm performance, while CEO Duality exhibits a positive yet insignificant relationship with both ROA and Tobin's Q. Gender Diversity shows a positive and significant relationship, suggesting that diverse boards are beneficial for firm performance. Promoter Ownership demonstrates a positive but insignificant association with performance metrics, while Related Party Transactions present a negative and significant impact on firm outcomes. Control variables such as Leverage, Firm Size, and Firm Age are included to account for firm-specific characteristics. This research contributes to the corporate governance literature by highlighting how specific governance mechanisms influence firm performance in the Indian IT sector post-regulatory reform. The findings offer implications for policymakers and practitioners, emphasizing the importance of board diversity and the risks associated with related party transactions in enhancing firm value.

Keywords- Corporate Governance (CG), Companies Act 2013, Promoter ownership, Related Party Transaction (RPT).

1. Introduction

Corporate governance literature has expanded tremendously since the past few decades, evolving from a centre on basic oversight mechanisms to a comprehensive examination of the various aspects that affected organisational performance and stakeholder relationships. Early literature, rooted in Agency Theory (Jensen & Meckling, 1976), primarily centered on the principal-agent relationship, emphasizing the role of corporate governance mechanisms in mitigating conflicts of interest among management (agents) and shareholders (principals). However, as global markets became more complex, scholars began to recognize the limitations of the agency perspective, leading to the inclusion of Stakeholder Theory (Freeman, 1984) in corporate governance research. This theory argued that governance mechanisms should not only focus on shareholders but also on the different stakeholders, who are affected by corporate actions. Under this expanded view, corporate governance became a tool to balance the interests of all parties involved, promoting long-term sustainability and ethical practices (Donaldson & Preston, 1995). The literature further evolved with the introduction of Stewardship Theory which posits that managers, when empowered, act as stewards of the company, working diligently to achieve organizational goals rather than merely serving their self-interests. This perspective challenges the assumption that managers inherently act opportunistically, suggesting that with trust and autonomy, they can align more closely with the company's objectives, reducing the need for rigid governance controls. In addition to these theories, Resource Dependency Theory (Pfeffer & Salancik, 1978) has also been central to corporate governance discussions. This theory posits that

board members provide essential resources, such as expertise, access to networks, and legitimacy, which can significantly enhance firm performance.

Corporate governance reforms in India have undergone significant transformation, particularly after major corporate scandals exposed weaknesses in oversight mechanisms. The Satyam scandal of 2009, in particular, brought to light the urgent need for stricter governance frameworks (Sarkar, 2011). In response, the Indian government, alongside regulatory bodies like the Securities and Exchange Board of India (SEBI) and the Ministry of Corporate Affairs, introduced reforms that reshaped the corporate governance landscape. The Companies Act, 2013, marked a watershed moment in India's governance regime, replacing the outdated Companies Act of 1956 and bringing forth comprehensive changes, including stricter board independence, enhanced disclosure requirements, audit committee roles, and gender diversity mandates (Dharmapala & Khanna, 2014). Furthermore, SEBI's amendments to its Listing Obligations and Disclosure Requirements (LODR) in 2015 further aligned India's governance practices with global best practices (SEBI, 2015). These reforms were implemented not only to prevent corporate failures but also to foster greater transparency and improve firm performance by ensuring board accountability and promoting long-term sustainability (Kumar & Singh, 2013). The IT sector, one of the most dynamic and globally integrated industries in India, has particularly benefitted from these reforms as it faces growing scrutiny from both domestic and international investors. Overall, India's evolving corporate governance framework underscores the country's effort to enhance the credibility and competitiveness of its corporate sector on a global scale.

2. Literature Review & Hypothesis Development

a) Board Size

The optimal board size debate is centered on balancing the benefits of having a larger, more diverse board, such as enhanced monitoring, broader expertise, and greater access to resources, against the potential drawbacks, including decision-making inefficiencies, coordination challenges, and slower response times (Coles, Daniel, & Naveen, 2008). Some studies advocated that larger boards provide a diverse pool of expertise, particularly in capital-intensive industries such as steel, cement, and automobiles, which often require a broad set of skills and knowledge to manage complex operations (Singh & Gaur, 2013). However, other studies have pointed out that beyond a certain threshold, larger boards may become less effective due to communication difficulties and slower decision-making processes (Kumar & Singh, 2013). In some sector, board size has been linked to risk management and financial stability, given the highly regulated nature of the industry and its exposure to systemic risks. Research has shown that banks with larger boards tend to have more effective risk oversight, which is critical in preventing issues such as rising non-performing assets (NPAs) (Ghosh, 2017).

Overall, the association among board size and firm performance across various sectors in India is influenced by industry-specific factors, such as regulatory frameworks, capital intensity, and the need for innovation. While larger boards can provide valuable resources and enhance oversight, there is no one-size-fits-all solution, and the optimal board size varies depending on the sector's unique demands. Studies generally agree that the effectiveness of board size in improving performance is contingent on striking a balance between bringing in diverse expertise and maintaining efficient decision-making. Hence on the basis of above literature we made the following hypothesis.

H1: There is no strong and favourable association among board size and firm performance.

b) CEO Duality and Firm performance

In the Indian context, the association among CEO duality and firm performance presents mixed results, influenced by industry characteristics, firm size, and governance practices. Proponents of CEO duality argue that it leads to streamlined decision-making, quicker strategic execution, and a unified leadership vision, which can enhance firm performance in industries requiring fast responses to market changes (Jensen & Meckling, 1976; Brickley et al., 1997). This is particularly relevant in sectors such as manufacturing and consumer goods, where operational efficiency and coordination between management and the board are critical for sustaining competitive advantage (Boyd, 1995).

However, critics of CEO duality contend that consolidating power in one individual weakens the board's ability to effectively monitor the CEO, increasing the risk of managerial entrenchment and self-serving behavior (Finkelstein & D'Aveni, 1994). In heavily regulated sectors like energy and pharmaceuticals, where compliance, transparency, and accountability are vital, CEO duality can lead to governance risks and potentially lower firm performance due to weaker oversight (Peng et al., 2007). Furthermore, in industries with large, diversified conglomerates, CEO duality may limit independent board oversight, reducing the checks and balances needed to manage complex organizational structures (Shleifer & Vishny, 1997). The separation of roles is generally favored by institutional investors and is increasingly being encouraged to improve board independence and accountability, aligning with global corporate governance reforms (Chhaochharia & Grinstein, 2007). This trend indicates that in most sectors outside the IT industry, firms with CEO duality may underperform compared to those with a split leadership structure, due to the potential conflict of interest and weakened governance mechanisms that can emerge from concentrated authority (Singh & Gaur, 2009). Therefore, for more accurate findings we made the following hypothesis.

H2: CEO Duality and Firm Performance dos not have a strong and positive association.

c) Gender diversity and firm performance

The nexus among gender diversity on boards and firm performance has gained considerable attention in India, especially after the enactment of the Indian Companies Act 2013, which mandated the inclusion of at least one-woman director on the board of certain classes of companies. This regulatory change has encouraged greater gender representation across various industries, excluding the IT sector, fostering debates on its impact on firm performance. Proponents of gender diversity argue that it enhances the quality of decision-making by bringing diverse perspectives and fostering innovative problem-solving, which can positively influence firm performance (Carter, Simkins, & Simpson, 2003). Moreover, gender-diverse boards are often linked with improved corporate governance, better monitoring, and stronger stakeholder engagement, as female directors may be more sensitive to ethical issues and corporate social responsibility (Adams & Ferreira, 2009).

However, some studies suggest that the positive impact of gender diversity is contingent on the industry and the extent to which female directors are empowered to influence decision-making. In highly male-dominated industries like energy and infrastructure, the inclusion of female directors may be symbolic rather than substantive, resulting in limited impact on firm performance (Shrader, Blackburn, & Iles, 1997). Furthermore, in sectors that are still relatively conservative in adopting progressive corporate governance practices, gender diversity may not immediately translate into significant financial gains, as it requires time for structural and cultural shifts to take root. Overall, research in India suggests that after the Companies Act 2013, gender diversity on boards has become a key governance feature that can enhance firm performance, especially in industries that are more

receptive to diverse leadership (Singh, Kumar, & Vinnicombe, 2004). However, its effectiveness varies across sectors depending on how gender-inclusive policies are implemented and supported within organizational structures. So therefore, we arrived at the following hypothesis.

H3: There is no significant and positive relationship among Gender Diversity and Firm performance.

d) Promoter Ownership and firm performance

The association among promoter ownership and firm performance has been a significant topic in corporate governance literature, specifically in developing countries context like India. This concentrated ownership structure can affect both positively and negatively. On the positive side, promoter ownership can align the interests of the owners with those of the firm, leading to better decision-making and efficient monitoring, thereby improving firm performance. As the promoters hold substantial control, they may pursue long-term value creation strategies rather than focusing on short-term gains, leading to enhanced performance in terms of profitability and market valuation (Jensen & Meckling, 1976). However, excessive promoter ownership can also have negative consequences due to the entrenchment effect, where promoters may prioritize their personal benefits over minority shareholders, engaging in activities like expropriation of resources or pursuing suboptimal projects. This misalignment between promoter interests and other stakeholders can harm firm performance, especially in environments with weak institutional frameworks (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1999). Studies have shown a non-linear relationship between promoter ownership and performance, where moderate levels of promoter ownership can enhance organisation performance, but beyond a certain threshold, the benefits decrease, and entrenchment risks rise (Morck, Shleifer, & Vishny, 1988).

In the Indian context, where many firms have high promoter shareholding, this relationship is particularly relevant. Research has demonstrated that promoter ownership positively impacts firm performance when the governance mechanisms effectively mitigate entrenchment risks (Kumar, 2004). However, in cases where promoters dominate the board or lack oversight mechanisms, the performance can suffer due to governance inefficiencies and self-serving behavior (Singh & Gaur, 2009). On the basis of above literature, we made the following hypothesis.

H4: Promoter Ownership and Firm Performance does not have a strong and favourable association.

e) Related Party Transaction and firm performance

The association among related party transactions (RPTs) and firm performance in India has been a subject of intense scrutiny, particularly after the implementation of the Indian Companies Act 2013, which introduced stricter regulations to govern such transactions. In the Indian context, especially in non-IT sectors, RPTs are prevalent because of the dominance of family-owned firms and business groups. Prior to the Companies Act 2013, there were concerns about controlling shareholders using RPTs to tunnel resources out of firms, expropriating wealth from minority shareholders, which led to poorer financial performance (Bertrand, Mehta, & Mullainathan, 2002). The increased regulatory oversight post-2013 has sought to mitigate these risks by requiring board and shareholder approval for major RPTs, thus curbing the potential for abuse. Despite these safeguards, studies suggest that in some sectors particularly those with complex ownership structures, such as real estate and heavy industries RPTs can still have a negative impact on firm performance due to the potential for self-dealing and rent-seeking behavior (Jiang, Lee, & Yue, 2010). These transactions may create inefficiencies and weaken governance, negatively affecting market-based indicators like Tobin's Q and

MBV. While enhanced regulatory measures have reduced the frequency of abusive transactions, the overall effect on performance is still mixed. In conclusion, while related party transactions in India, post-Companies Act 2013, can contribute to improved firm performance when governed effectively, they also pose significant risks if mismanaged. The act's regulatory reforms have aimed to ensure that RPTs benefit the firm without compromising governance, but the actual impact continues to vary across different sectors, largely depending on the governance structure and the firm's ability to manage conflicts of interest.

H5: There is no significant and positive association among Related Party transaction and Firm performance.

3) Research Design

a) Data and Sample

The dataset for this study comprises data from 23 IT companies listed in India, focusing specifically on a 10-year period following the enactment of the Companies Act 2013. This time frame aligns with the post-regulatory landscape of corporate governance in India, which saw significant reforms with the Companies Act's implementation. Data were sourced from the Prowess IQ database, a credible resource for firm-level financial and governance information, ensuring accuracy and reliability (CMIE, 2023). The independent variables selected for analysis are board size, CEO duality, gender diversity, promoter ownership and related party transactions and dependent variables are Return on Assets (ROA) and Tobin's Q, which respectively represent the firm's accounting-based performance and market-based performance, offering a balanced view of firm outcomes. The System Generalized Method of Moments (GMM) was employed as the econometric technique to address potential endogeneity issues arising from unobserved heterogeneity and autocorrelation, leveraging the dynamic nature of panel data (Arellano & Bover, 1995; Blundell & Bond, 1998). This methodology provides robustness in estimating the causal relationships within a dynamic panel framework, making it suitable for CG research in emerging markets like India, where regulatory reforms significantly impact firm governance and performance.

Each independent variable in this study represents a unique aspect of corporate governance within IT companies in India. Here is a detailed explanation of each variable

Table 1: Variable description

Variable	Definition	Significance in Governance	Context in Indian IT Firms Post-Companies Act 2013
Board Size	Total number of directors on the board.	Larger boards may bring diverse insights but risk inefficiencies. Optimal board size ensures balance in oversight and decision-making.	Indian regulations encourage optimal board sizes to enhance governance efficiency, especially after the 2013 reforms.
CEO Duality	CEO holds both CEO and	Streamlined decision-making but	Indian reforms encourage role

	chairperson roles. (Dummy variable)	may reduce accountability and increase agency costs.	separation to improve checks and balances, especially in public firms.
Gender Diversity	Inclusion of female directors on the board.	Diverse boards enhance perspectives, promoting ethical discussions and long-term strategy.	The 2013 Act mandates at least one female director for certain companies, aiming to improve inclusivity and performance.
Promoter Ownership	Percentage of shares held by promoters or founders.	High promoter ownership can align interests but may lead to entrenchment, prioritizing personal over minority interests.	Promoter ownership is significant in India, influencing firm policies and management practices.
Related Party Transactions (RPTs)	Dealings between the company and related entities (e.g., subsidiaries, affiliates).	RPTs can offer synergies but may pose conflicts of interest if unmonitored, raising agency risk.	SEBI and the 2013 Act enforce stringent RPT disclosures to protect minority shareholders and ensure transactions benefit the firm.

b) Descriptive Statistics

The descriptive statistics presented in the table provide insights into the central tendency and dispersion of variables used in this study, which examines the impact of corporate governance characteristics on firm performance. The first two variables, LnROA and Tobin's Q, serve as dependent variables, capturing accounting-based and market-based performance, respectively. LnROA (logarithmic transformation of Return on Assets) has a mean of 0.761 with a standard deviation of 0.325, ranging from -1.415 to 1.725. Tobin's Q, a market-based measure of firm valuation, averages 2.547 with a broader dispersion (standard deviation of 1.425), suggesting notable variability across firms, ranging from 0.854 to 15.32.

Table 2: Descriptive Statistics

Variables	Obs	Mean	Std. Dev.	Min.	Max.
LnROA	230	.761	.325	-1.415	1.725
Tobin's Q	230	2.547	1.425	.854	15.32
LnBS	230	.847	.251	0	1.452
CD	230	.341	.262	0	1
LnGD	230	1.243	.511	0	1.658
LnPO	230	1.354	.361	0	1.532

LnRPT	230	2.314	.441	0	2.451
LnLev	230	.574	.264	.124	.856
LnAge	230	1.623	.521	.573	2.389
LnSize	230	6.32	.854	.638	4.583

Interrelationships among these variables are informed by prior studies. Board size, for instance, has been shown to correlate with firm performance, balancing oversight with decision-making efficiency (Yermack, 1996). CEO duality, with implications for power concentration, is often negatively associated with firm performance due to reduced board independence (Jensen & Meckling, 1976). Gender diversity is linked to improved decision quality and governance outcomes (Carter et al., 2003). High promoter ownership, although aligned with long-term interests, can lead to entrenchment risks (La Porta et al., 1999). The table reflects the diversity and variability of governance practices and firm characteristics, offering a comprehensive foundation for analyzing governance's impact on performance.

c) Correlation Matrix

The correlation matrix presented offers insights into the relationships between the study's variables, including both dependent (LnROA, LnTobin's Q) and independent variables (LnBS, CD, LnGD, LnPO, LnRPT, LnLev) as well as control variables (LnAge, LnSize). Here's a detailed analysis of each pairwise correlation:

Table 3: Correlation Matrix

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1)LnROA	1.000									
2)LnTobin's	0.452	1.000								
3)LnBS	0.051	0.084	1.000							
4)CD	0.035	0.175	0.025	1.000						
5)LnGD	0.042	0.152	0.005	0.155	1.000					
6)LnPO	0.078	0.036	0.058	0.254	0.041	1.000				
7)LnRPT	0.154	0.002	0.142	0.056	0.521	0.027	1.000			
8)LnLev	0.364	0.121	0.024	0.140	0.056	0.045	0.145	1.000		
9)LnAge	0.001	0.014	0.005	0.012	0.253	0.067	0.157	0.326	1.000	
10)LnSize	0.411	0.031	0.003	0.051	0.298	0.544	0.361	0.187	0.258	1.00

The low positive correlation (0.051) between LnROA and LnBS indicates a slight, albeit weak, relationship between firm profitability and board size. While larger boards may contribute to better oversight, some studies argue that beyond a certain size, board effectiveness can diminish due to coordination difficulties (Yermack, 1996). The low positive correlation (0.035) between LnROA and CEO duality suggests a minimal association, which aligns with mixed findings in the literature. CEO duality can sometimes lead to a concentration of power that may hinder firm performance due to reduced accountability (Jensen & Meckling, 1976). The correlation of 0.042 between LnROA and gender diversity is also low but positive, suggesting that gender diversity on the board has a minimal positive impact on firm profitability. Research suggests that diverse boards bring varied perspectives, contributing to better performance (Adams & Ferreira, 2009), but the effect may be less pronounced in some contexts. The correlation of 0.078 between LnROA and promoter ownership is low, indicating that while promoter ownership can contribute positively to profitability by aligning management and shareholder interests, its influence may be limited in magnitude, reflecting concerns of potential

entrenchment (La Porta et al., 1999). The correlation of 0.154 between LnROA and LnRPT is moderate, suggesting a potentially beneficial role of related party transactions, possibly due to operational synergies among group firms. However, related party transactions are sometimes scrutinized for conflicts of interest, which can negatively impact minority shareholders (Johnson et al., 2000). The low correlation (0.025) between board size and CEO duality suggests that board size has little impact on whether the CEO also serves as chair, consistent with findings that board structure is often independent of leadership role consolidation (Coles et al., 2008). A moderate positive correlation (0.521) between gender diversity and related party transactions might indicate that firms with diverse boards are more transparent about these transactions, reflecting a governance culture that values inclusivity and accountability (Carter et al., 2003).A high correlation (0.544) between promoter ownership and firm size may indicate that larger firms often retain significant promoter ownership, characteristic of family-owned or founder-led firms common in India, where promoters maintain control (Claessens et al., 2000). The correlations illustrate diverse relationships among corporate governance variables, firm characteristics, and performance metrics, consistent with the broader literature on corporate governance and firm performance.

d) Variance Inflation Factor

The Variance Inflation Factor (VIF) table presented assesses potential multicollinearity among the independent variables used in the model. VIF values greater than 10 typically indicate high multicollinearity, though values between 5-10 may also raise concerns.

Table 4: Multicollinearity test, VIF

Variable	VIF	1/VIF
LnBS	4.45	0.225
CD	1.56	0.641
LnGD	2.30	0.434
LnPO	1.86	0.537
LnRPT	3.57	0.280
LnLev	2.07	0.483
LnAge	1.68	0.595
LnSize	4.05	0.247
Total	2.69	

With a VIF of 4.45 and a tolerance value of 0.225 (1/VIF), LnBS is below the critical threshold of 10, but relatively higher than other variables, indicating moderate correlation with other predictors. This VIF suggests that board size is somewhat correlated with other governance attributes in the model. CD has a VIF of 1.56 and a tolerance of 0.641, indicating low multicollinearity. This value suggests that CEO duality is fairly independent of other variables, reflecting minimal intercorrelation. The VIF for LnGD is 2.30, with a tolerance of 0.434, indicating a moderate correlation with other predictors. Gender diversity does not show concerning levels of multicollinearity, likely due to its distinct contribution as a governance attribute. With a VIF of 1.86 and a tolerance of 0.537, LnPO displays low multicollinearity, suggesting that promoter ownership adds unique variance to the model without significant overlap with other variables. LnRPT has a VIF of 3.57 and a tolerance of 0.280, indicating a moderate correlation with other variables but still within an acceptable range. This value implies that related party transactions have some association with other governance indicators but remain sufficiently independent. The mean VIF across variables is 2.69, suggesting acceptable levels of

multicollinearity overall. This indicates that while some variables show moderate correlation, multicollinearity should not severely impact the reliability of coefficient estimates in this model. These results confirm that each variable provides reasonably unique information to explain variance in the dependent variable, supporting the model's robustness.

e) Empirical Model

The System Generalized Method of Moments (System GMM) estimator, introduced by Arellano and Bover (1995) and later refined by Blundell and Bond (1998), is a powerful econometric technique specifically developed for panel data analysis, particularly where endogenous relationships and dynamic processes are involved. System GMM is an extension of the Difference GMM estimator (Arellano and Bond, 1991) and is widely used in research where lagged dependent variables are included as regressors to capture dynamic effects. In many studies, past values of a dependent variable can affect its future values, necessitating the inclusion of lagged dependent variables as predictors. System GMM allows for this by creating a system of equations that accounts for both levels and differences in the data. System GMM uses internal instruments derived from lagged variables, thus helping to address endogeneity. By generating instruments from lagged values of endogenous variables, System GMM effectively handles endogenous relationships. This feature is essential in dynamic models where current values of independent variables are influenced by past outcomes (Bond, 2002). Unlike Difference GMM, System GMM combines level and difference equations to maximize available information, leading to more efficient estimates (Arellano & Bover, 1995).

Moreover, System GMM's use of internal instruments avoids the need for external instruments, which are often difficult to justify or obtain. This feature is critical in panel studies on firm performance, where variables like board characteristics or ownership structures can be instrumented by their lagged values, thereby providing a methodologically sound approach to causal inference (Roodman, 2009).

The following model is developed using firm performance as a dependent variable

$$LnROA_{it} = \beta_0.Y_{it-2} + \beta_1.LnBS_{it} + \beta_2.CEO_{it} + \beta_3.LnGD_{it} + \beta_4.$$
$$LnPO_{it} + \beta_5.LnRPT_{it} + \beta_6.LnLEV_{it} + \beta_7.LnSize_{it} + \beta_8.LnAge_{it} + \epsilon_{it}$$

$$LnTobin's\,Q_{it} = \beta_0.Y_{it-2} + \beta_1.LnBS_{it} + \beta_2.CD_{it} + \beta_3.LnGD_{it} + \beta_4.PO_{it} + \beta_5.LnRPT_{it} + \beta_6.LnLev_{it} + \beta_7.LnSize_{it} + \beta_8.LnAge_{it} + \epsilon_{it}$$

4) Empirical Results and Discussion

This table summarizes the results of a System GMM analysis, the effect of board size on ROA is negative (-0.741) but statistically insignificant, suggesting no conclusive impact on ROA. For Tobin's Q, however, the coefficient is positive (0.352) and significant, suggesting a positive association with market performance. The coefficient for CEO duality is positive for both ROA (0.012) and Tobin's Q (0.017) but insignificant, implying that dual roles may not have a significant effect on firm performance in this sample. Gender diversity positively impacts both ROA and Tobin's Q. The coefficients are 0.028 for ROA and 0.015 for Tobin's Q, both significant at the 1% level, suggesting that higher gender diversity on the board positively affects both accounting- and market-based performance. Promoter ownership has a positive coefficient for both ROA (0.243) and Tobin's Q (0.176), though neither is statistically significant, indicating a potential but inconclusive effect of promoter ownership on firm performance. Related party transactions show a negative impact on both ROA (-0.053) and Tobin's Q (-0.015), with statistical significance at the 10% level for ROA and 5%

for Tobin's Q. This suggests that related party transactions might be detrimental to firm performance, particularly on the market side. The constant term is positive and highly significant for both ROA (1.082) and Tobin's Q (0.986), suggesting a strong baseline level of performance when all other factors are neutral. AR (1) and AR (2) tests assess autocorrelation in the residuals. The AR (1) test shows significance, which is typical, while the AR (2) test is not significant (p-values 0.267 and 0.173 for ROA and Tobin's Q, respectively), suggesting no second-order autocorrelation and validating the use of the GMM model. Sargan and Hansen Tests are overidentification tests to assess the validity of instruments. Both tests are insignificant for ROA and Tobin's Q (p-values above 0.1), indicating that the instruments used in the model are valid.

Table 5: Regression Results

	ROA (1)	**Tobin's Q (2)**
L	.334*** (0.002)	.472*** (0.027)
L2	.346*** (.007)	.261*** (0.013)
LnBS	-.741 (.084)	.352 (.007)
CD	.012 (.024)	0.017 (.015)
LnGD	0.028*** (.031)	.015*** (.005)
LnPO	.243 (.062)	.176 (.043)
LnRPT	-.053* (.051)	-.015** (.094)
LnLev	.251* (.067)	.464*** (.052)
LnAge	.059** (.032)	.069* (.007)
LnSize	.421*** (.061)	.359* (.008)
Constant	1.082*** (.029)	.986*** (.113)
AR (1) test (p-value)	.024	.017
AR (2) test (p-value)	.267	.173
Overidentification statistics		
Sargan test (p-value)	.182	.351
Hansen test (p-value)	.417	.362

**** p<.01, ** p<.05, * p<.1,* (St.Err.in parenthesis)

A larger board may lead to inefficiencies due to coordination challenges, decision-making delays, and potential conflicts among directors, which can dilute the board's oversight effectiveness. Board size is negatively but insignificantly related to firm performance, thus accepting the hypothesis H1. Studies

like those by Yermack (1996) and Eisenberg, Sundgren, & Wells (1998) suggest that larger boards often face coordination problems that reduce effectiveness in governance, thus impacting performance negatively but sometimes insignificantly in specific contextuality (Positive but Insignificant Relationship with Firm Performance). CEO duality exhibits a positive yet insignificant relationship, indicating that combined leadership roles may not notably impact performance and therefore, we accept the hypothesis H2. This dual role can empower the CEO with unified leadership but may also reduce oversight. The insignificant relationship suggests that while duality can centralize authority and streamline strategies, it might not strongly influence firm performance in this context, possibly due to regulatory or cultural checks on CEO power. Gender diversity demonstrates a positive and significant association, highlighting its relevance for both market and accounting performance metrics and hence rejecting the null hypothesis H3. The significant relationship aligns with resource dependency theory, suggesting that gender diversity enhances access to diverse resources and insights. Research by Carter, Simkins, & Simpson (2003) and Adams & Ferreira (2009) emphasizes that gender-diverse boards contribute positively to firm outcomes through enhanced decision-making, bringing valuable viewpoints that may better represent stakeholder interests.Promoter ownership, while positive, does not significantly influence firm performance due to which we supported the null hypothesis. Promoter ownership may align interests between owners and the company by reducing agency issues, as promoters often have long-term stakes. However, an insignificant relationship may indicate that this alignment is not strong enough to substantially drive performance, possibly due to the concentration of control or potential expropriation concerns in emerging markets.The negative and significant effect of related party transactions further underscores the importance of monitoring and regulating these transactions to protect shareholder value and therefore we accept our null hypothesis H5. Related party transactions (RPTs) often indicate potential conflicts of interest and can lead to expropriation of resources by insiders, which may harm firm performance. This negative relationship may reflect concerns over RPTs being used for self-dealing rather than in the best interest of the firm.

a) Robustness Results

In your robustness check using OLS alongside System GMM, the consistency of results strengthens the validity and reliability of your findings. The fact that OLS results align with System GMM results for each variable suggests that the observed relationships are not model-specific but rather inherent to the data and underlying corporate governance dynamics in your sample. This consistency reduces concerns about methodological biases or specification errors, supporting the robustness of your interpretations. Studies in corporate governance often use both OLS and System GMM for robustness checks. According to Arellano and Bond (1991), the GMM estimator is particularly useful in dynamic panel contexts with potential endogeneity. However, when findings hold across both GMM and simpler methods like OLS, it is an indicator of the robustness and replicability of those results (Arellano & Bond, 1991; Baltagi, 2008).

$$LnROA_{it} = \beta_0.LnBS_{it} + \beta_1.CD_{it} + \beta_2.LnGD_{it} + \beta_3.LnPO_{it} + \beta_4.LnRPT_{it} + \beta_5.LnLEV_{it} + \beta_6.LnSize_{it} + \beta_7.LnAge_{it} + \epsilon_{it}$$

$$LnTobin's\ Q_{it} = \beta_0.LnBS_{it} + \beta_1.CD_{it} + \beta_2.LnGD_{it} + \beta_3.LnPO_{it} + \beta_4.LnRPT_{it} + \beta_5.LnLev_{it} + \beta_6.LnSize_{it} + \beta_7.LnAge_{it} + \epsilon_{it}$$

Table 6: Robustness Checks

Variables	ROA	Tobin's Q
LnBS	2.364 (1.052)	3.631 (.982)
CD	.781* (.035)	.592 (.182)
LnGD	.302** (.125)	.481*** (.223)
LnPO	.253 (.326)	.181** (.291)
LnRPT	-.426* (.591)	.394** (.483)
LnLev	.562 (1.035)	.647 (1.293)
LnSize	-.782** (3.563)	-.956 (3.492)
LnAge	.226 (1.562)	.361 (1.260)
Constant	.261 (.226)	.304 (.543)

5) Summary and Conclusion

Findings reveal a complex landscape of governance effects, suggesting limited benefits to increasing board size beyond a certain point. While some studies argue that larger boards bring diverse expertise, it appears that, in this context, any positive effects are outweighed by these disadvantages, rendering the relationship with firm performance insignificant. The stewardship theory supports this positive link, suggesting that CEOs with dual roles might act in the firm's best interest. However, empirical findings vary, as noted by studies such as those by Finkelstein & D'Aveni (1994) and Boyd (1995), which report mixed impacts on firm performance due to duality. Gender diversity on boards contributes to a variety of perspectives and can improve decision-making quality, innovation, and governance, which positively impacts performance. Agency theory provides a mixed view on this relationship between promoter ownership and firm performance. Studies like those by Shleifer & Vishny (1986) suggest that while concentrated ownership can enhance alignment, it does not always guarantee higher firm performance, as observed in research by Morck, Shleifer, & Vishny (1988). Conversely, related party transactions display a negative and significant relationship, underscoring potential governance risks associated with these transactions. Agency theory views RPTs as potential mechanisms for managerial self-interest that may erode firm value. Research by Jian & Wong (2010) and Cheung, Rau, & Stouraitis (2006) documents similar negative impacts of RPTs on performance, suggesting these transactions could harm firm value in emerging markets especially. The study contributes to the growing body of literature on corporate governance in emerging markets by providing insights that can inform future policy and regulatory improvements aimed at strengthening board structures and protecting minority shareholders. In conclusion, this research highlights the importance of corporate governance reforms in India and provides evidence-based recommendations for policymakers and practitioners seeking to optimize governance structures for enhanced firm performance in a competitive global environment.

6) Limitations

While this study provides valuable insights into the relationship between CG attributes and firm performance in India, there are several limitations to consider. First, the sample is restricted to IT firms in the BSE 500 index, which may limit the generalizability of the findings to limited sectors. The unique regulatory and market environment in India may also constrain the applicability of these results to other emerging markets with different legal and cultural frameworks. Second, the study focuses on a select set of governance variables board size, CEO duality, gender diversity, promoter ownership, and related party transactions which, while significant, may not capture the full scope of governance factors affecting firm performance. Future research could explore additional variables, such as board tenure or managerial ownership, to gain a more comprehensive understanding of governance influences. Finally, the reliance on publicly available data from Prowess IQ and the BSE introduces potential limitations due to reporting practices or data omissions. Despite these limitations, this study contributes to the literature by offering a focused, empirically rigorous examination of governance factors in the post-Companies Act 2013 Indian context.

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