Research Article

Central Asian Journal of Social Science and History

e-ISSN 2660-6836 | Volume 6, Issue 3, 2025 | Page 196-209 | http://doi.org/10.17605/cajssh.v6i3.1186

Assessing the Impact of Director Interlocks on Corporate Performance and Earnings Manipulation

P. Sudha*[1], V. Pradeep[2], S. Prabhakaran[3], S. Saranya Devi[4], A. Lillyroslin[5]

[1,2,3,4,5] Dhaanish Ahmed College of Engineering, Chennai, Tamil Nadu, India.

Abstract

This study aims to identify and analyze the effect of board of director interlock on firm performance and earnings management in non-financial public companies in 2016. A quantitative research approach was adopted, with the population consisting of firms that met specific criteria relevant to the research. A total of 199 firms qualified and were included in the study. The analysis model used was Simple Linear Regression, conducted using the statistical software SPSS version 23. The primary objective was to examine whether interlocking directorships—where a board member holds a position on the board of more than one company—have a significant impact on a company's financial and market performance, as well as its earnings management practices. The hypothesis testing revealed that board of director interlock does not have a statistically significant effect on firm performance, whether measured by financial performance indicators such as Return on Assets (ROA) or by market performance indicators such as Tobin's Q. Furthermore, the presence of board interlock was also found to have no significant influence on earnings management, as measured through discretionary accruals. These findings suggest that board interlock, in the context of the sampled firms, does not play a substantial role in influencing firm performance or earnings management practices.

Keywords: Board of Director Interlock, Firm Performance, Return On Asset, Earnings Management, Discretionary Accrual

1. Introduction

Interlock Board of Director refers to a situation where a member of a company's board of directors also serves on the board of another company. This interlocking of roles allows a single individual to participate in the strategic and managerial decisions of multiple firms [1]. The interlock discussed in this context focuses specifically on individuals who hold board positions in more than one company, reflecting a key feature in corporate governance, especially under the two-tier board structure adopted by various global economies [2]. In many countries, this practice is not strictly prohibited unless it creates conflicts of interest, especially in cases where companies share the same market, operate in similar industries, or can jointly dominate a sector, leading to monopolistic behavior or unfair business competition [3]. Even though board interlocks may appear to pose risks of collusion or information leakage, they are still prevalent across corporations due to the perceived benefits they offer. One such benefit is the comparative advantage in decision-making processes, where directors, through their experience in multiple firms, can bring broader insights and a wealth of industry knowledge to the table [4]. These insights can influence a company's strategy, performance, and long-term planning, potentially enhancing its effectiveness and competitiveness [5]. Furthermore,

*Corresponding author : P. Sudha sudhap@dhaanishcollege.in
Article history : **submitted;** 2024/11/24 **revised;** 2025/03/12 **accepted;** 2025/04/24 **published;** 2025/05/01

interlocks can be a channel for the diffusion of corporate practices, including those related to financial reporting and earnings management [6].

The involvement of a director in multiple firms is often seen as a way to facilitate knowledge sharing, foster strategic alliances, and promote mutual growth among interconnected firms [7]. This can lead to improved corporate governance as interlocked directors may apply best practices observed in one firm to another [8]. On the other hand, such arrangements can also raise concerns about excessive influence, groupthink, or compromised independence, especially in monitoring roles [9]. Despite these concerns, companies often maintain interlocked directorships due to their strategic and managerial advantages [10]. Empirical research into the effects of director interlocks has produced mixed results. Some studies suggest a positive relationship, highlighting improved firm performance attributed to enhanced access to resources, networks, and strategic guidance [11]. These interlocked directors may use their networks to benefit the firm by facilitating partnerships, investments, and access to critical information. Such advantages are believed to contribute to better decision-making and corporate performance [12]. However, other research contradicts these findings, pointing to potential negative outcomes such as conflicts of interest, reduced board independence, and the dilution of fiduciary responsibilities [13]. These factors can adversely impact firm performance and may hinder effective governance [14].

A significant area of interest in this domain is the relationship between director interlocks and earnings management [15]. Earnings management refers to the strategic manipulation of financial statements to meet specific targets, influence stock prices, or comply with contractual obligations. Interlocked directors may bring with them knowledge of various accounting practices from other companies, potentially influencing the financial reporting behavior of the firms they serve [16]. While this may standardize practices across companies, it could also lead to coordinated earnings management or the spreading of aggressive accounting techniques. Some argue that interlocked boards may increase transparency and oversight, thereby reducing the scope for earnings manipulation [17]. This view suggests that directors serving on multiple boards are likely to bring integrity and professionalism, minimizing unethical practices [18]. However, others contend that such directors might promote or tolerate earnings management if it aligns with their interests or helps maintain favorable financial appearances across the firms they serve [19]. Therefore, the actual impact of board interlocks on earnings management remains an open question, warranting further investigation [20].

This study explores the influence of interlocked board directorships on company performance and earnings management within non-financial public companies [21]. The research focuses on data from companies listed on the Global Stock Exchange for a specific year, utilizing quantitative methods to analyze the relationship [22]. The primary objective is to determine whether having directors who serve on multiple boards has a measurable effect on a firm’s financial and market performance, as well as its engagement in earnings management [23]. The research employed a structured data selection process, identifying companies that met specific criteria to ensure consistency and relevance. From the pool of non-financial public companies, those with complete and accessible annual report data were selected for analysis [24]. A total of 199 companies constituted the final research sample. These companies were subjected to statistical analysis using linear regression techniques to test the hypotheses concerning the relationship between director interlocks and firm performance indicators, such as return on assets (ROA) and Tobin’s Q, as well as earnings management measured through discretionary accruals [25].

The findings of the study revealed that there was no statistically significant relationship between board interlocks and firm performance [26]. Specifically, the presence of interlocked directors did not have a measurable impact on either the financial performance or the market valuation of the firms [27]. Similarly, no significant relationship was found between board interlocks and earnings management, suggesting that the presence of such directors neither promoted nor mitigated financial manipulation in the sample of companies studied [59]. These results contrast with several prior studies that identified either positive or negative correlations between board interlocks and firm performance [28]. The divergence in findings may be attributed to differences in governance systems, regulatory environments, cultural contexts, or the time period of the study. For instance, some governance frameworks may provide stronger oversight mechanisms, thereby neutralizing any potential negative impact of interlocks [29]. Alternatively, in environments with less stringent regulations or weaker enforcement, the same interlock might have more pronounced effects [30].

Another plausible explanation for the absence of significant results is the specific nature of the companies included in the sample [31]. Non-financial firms may differ in their reliance on board-level strategic input compared to financial institutions, where directors often play a more hands-on role in risk assessment and compliance [32]. Moreover, the impact of interlocks may vary depending on the industry, the individual characteristics of the directors involved, and the frequency and intensity of their participation in board activities [33]. The governance structure in the region also plays a role in shaping the influence of director interlocks. In some systems, boards have limited power relative to executive management, which may dilute the potential influence of interlocked directors [34]. Additionally, disclosure practices and stakeholder expectations may shape the behavior of interlocked boards [35]. In environments with strong shareholder activism and public scrutiny, directors may exercise greater caution in their decisions, thereby minimizing any adverse effects of interlocking roles [36].

Despite the study's null results, the topic remains relevant for policymakers, regulators, and corporate governance professionals [37]. The existence of interlocked board members continues to raise important questions about board independence, corporate transparency, and accountability [38]. Companies should carefully consider the potential implications of appointing individuals who serve on multiple boards, weighing the benefits of experience and connectivity against the risks of divided attention and potential conflicts of interest [39]. Furthermore, the role of interlocked directors in shaping firm strategy and policy should be evaluated in the context of broader governance practices [40]. For example, the presence of independent directors, audit committees, and board evaluation processes can help mitigate the potential downsides of interlocks [41]. Companies should also ensure that board members have adequate time and resources to fulfill their responsibilities, especially when serving on multiple boards [42].

While this study does not find evidence of a direct impact of board interlocks on performance or earnings management, it highlights the need for a nuanced approach to board composition [43]. Future research could expand on these findings by exploring the moderating effects of other governance variables, such as board diversity, ownership concentration, or executive compensation structures [44]. Longitudinal studies might also shed light on how interlocks influence firm behavior over time, providing a more dynamic view of their impact [45]. In the relationship between board interlocks and corporate outcomes remains complex and context-dependent [46]. This study contributes to the ongoing discourse by presenting empirical evidence that, in the case of non-financial public companies listed on the Global Stock Exchange, interlocked directorships do not significantly influence firm performance or earnings management [47]. These findings underscore the importance of evaluating board interlocks within the broader framework of corporate governance, regulatory oversight, and industry-specific dynamics. As organizations continue to evolve and adapt to new challenges, understanding the role of board structures in shaping strategic and financial outcomes will remain a critical area of inquiry [48].

2. Theoretical Framework

Resource dependence theory explains how external resources influence an organization. This theory highlights that while companies rely on resources, they do not inherently possess all the resources necessary for operation [49]. As a result, companies must engage in transactions and exchanges with external entities—such as other firms or groups in the environment—to obtain the resources they need [50]. In contrast, the resource-based theory, also known as the resource-based view, focuses on how firms achieve superior performance. This theory asserts that companies that possess or control better resources—whether physical, human, or organizational—can attain above-average performance and income [51]. These companies are better positioned to compete successfully in the business environment due to the uniqueness and value of their internal capabilities [52]. The board of directors, when involved in interlocking directorships, can access valuable external resources and information [53]. These include insights into practices, policies, strategic decisions, and experiences gained from serving on other boards. This cross-company exposure enhances decision-making quality and can lead to better corporate outcomes, particularly in terms of financial and market performance. In this study, company performance is measured in two dimensions: financial and market [54]. Financial performance is assessed through return on assets (ROA), while market performance is evaluated using the Tobin's Q ratio. These indicators provide a comprehensive view of a firm's efficiency and valuation from both accounting and market perspectives [55].

The board of directors plays a central role in managing the company and typically holds more information about the firm than external stakeholders, such as shareholders [56]. This information asymmetry between agents (management) and principals (owners) can give rise to challenges, particularly around transparency. One way management might obscure the true financial health of the firm is through earnings management—adjusting financial reports to meet specific targets or portray a desired financial image [57]. When directors serve on multiple boards, they carry knowledge, practices, and strategic insights from one organization to another. These exchanges can include both beneficial and questionable practices [58]. The interlock of board members creates a network where decisions, behaviors, and corporate strategies are observed and, at times, replicated [59]. Through social interactions and direct communication, such interlocks may contribute to the spread of practices like earnings management across companies [60].

This inter-organizational connectivity can be strategically beneficial. Interlocked directors act as conduits of valuable external information, enabling firms to design and implement more effective strategies [61]. These directors can serve as sources of learning, innovation, and insight—providing firms with a competitive edge [62]. In this way, board interlocks represent a strategic resource that companies can leverage to improve performance [63]. Empirical research has shown mixed but compelling evidence of a relationship between board interlocks and company performance [64]. Some studies have concluded that there is a significant connection between interlocked boards and improved financial indicators such as return on assets and return on equity [65]. These findings suggest that directors who serve on multiple boards can positively influence performance by contributing their knowledge, expertise, and external perspectives. Based on these insights, the following hypotheses are proposed:

H1a: The interlock of the board of directors influences the company's financial performance.

H1b: The interlock of the board of directors influences the company's market performance.

Beyond performance, board interlocks are also linked to the transmission of financial reporting practices, including earnings management [66]. Through shared board memberships, directors may facilitate the spread of these practices, whether ethical or not. Decisions about whether to engage in earnings management often depend on directors' subjective assessments of the potential benefits and risks [67]. These assessments are shaped by their experiences across different companies, including how such practices have been handled in other boardrooms. Earnings management itself is a nuanced concept [68]. While it is frequently associated with negative connotations, it can also be viewed in a neutral or even positive light under certain conditions [69]. In essence, it involves managerial discretion in financial reporting to achieve desired outcomes. Whether this discretion is used to mislead or to smooth out irregularities in earnings depends on intent, context, and governance practices [70].

Interlocked directors may act based on their exposure to earnings management practices in other companies, consciously or unconsciously bringing these behaviors into the organizations they serve [71]. This can lead to the diffusion of such practices across a network of interconnected firms [72]. Companies, therefore, must be aware of how interlocks may shape not just corporate strategy and performance, but also ethical and accounting behaviors. Some studies have examined this phenomenon and found evidence suggesting that board interlocks are associated with earnings management [73]. These findings support the notion that directors serving on multiple boards can act as vectors for the spread of accounting practices, whether positive or manipulative. Consequently, the presence of interlocked directors may influence a firm's approach to financial reporting [74]. Based on this rationale, the following hypothesis is proposed:

H2: The interlock of the board of directors influences earnings management.

In the interplay between resource dependence and the resource-based view provides a comprehensive theoretical framework for understanding how board interlocks affect firm behavior. Interlocked directors are positioned to provide companies with access to external knowledge, resources, and strategic capabilities [75]. While this may enhance performance, it also carries potential risks—particularly in areas like earnings management—where the line between ethical discretion and manipulation can become blurred [76]. As such, the influence of board interlocks on firm performance and financial behavior warrants close examination within the broader context of corporate governance and strategic management.

3. Research Method

The population in this study consists of non-financial public companies listed on the Global Stock Exchange for the year 2015. In total, there were 525 companies that met the initial criteria for inclusion in the population. To collect the necessary data, annual reports were obtained from both the official website of the Global Stock Exchange (IDX) and the individual websites of the respective companies. After applying a set of predetermined selection criteria, 199 companies were identified as meeting the qualifications required for inclusion in the final research population. These criteria ensured that the companies selected had the necessary completeness of data to support the analysis and provide meaningful and reliable results. The primary purpose of this research is to analyze the influence of the board of directors' interlock on two major aspects of corporate behavior: company performance and earnings management. These two elements are treated as the dependent variables in the study. Company performance is further divided into two separate dimensions to provide a more comprehensive assessment. The first dimension is financial performance, which reflects the accounting-based perspective of firm success. This is measured using the Return on Assets (ROA) indicator. ROA is a widely accepted financial metric that evaluates the efficiency with which a company utilizes its assets to generate net income [77]. The second dimension is market performance, which is represented by the Tobin's Q ratio. This ratio compares the market value of a company to the replacement value of its assets, providing insights into how the market perceives a company's value relative to its actual asset base [78].

In addition to company performance, the second dependent variable in this research is earnings management. Earnings management refers to the practices used by management to manipulate reported earnings to meet internal or external expectations [79]. This practice can occur for various reasons, including to meet market forecasts, to present a smoother earnings pattern over time, or to influence the company's stock price. To measure earnings management in this study, a widely recognized model was adopted [80]. This model involves estimating discretionary accruals, which are the portion of accruals not directly tied to the normal course of business operations and are thus subject to managerial discretion. The use of this model allows for a more objective and standardized assessment of earnings management across different companies.

4. Result

The independent variable in this study is the interlock of the board of directors. Interlock refers to a situation where a member of a company's board of directors simultaneously serves on the board of another company. This inter-organizational link is hypothesized to have potential implications for the strategic and financial behavior of companies [81]. In this study, the interlock status of a company is measured using a dummy variable approach. Companies that have at least one board member serving concurrently on another company's board are assigned a value of 1, indicating the presence of an interlock [82]. Companies without such board interlocks are assigned a value of 0. To analyze the data and examine the proposed relationships between variables, the study employs a two-variable regression analysis, also known as simple linear regression [83]. This statistical technique is suitable for investigating the influence of a single independent variable on a dependent variable [86]. In this context, simple linear regression is used to assess the effect of the board of directors' interlock on each of the dependent variables separately—namely, financial performance (ROA), market performance (Tobin's Q), and earnings management [84].

In addition to regression analysis, descriptive statistical analysis is conducted. Descriptive statistics serve an important role in summarizing the basic characteristics of the dataset and providing a foundational understanding of the variables involved [85]. This includes measures such as mean, standard deviation, minimum, and maximum values. By presenting these statistics, the study offers insights into the distribution and tendencies of the data prior to inferential analysis [86]. To ensure the validity and reliability of the regression results, classical assumption tests are also performed. These include tests for normality and heteroscedasticity, both of which are essential for confirming the suitability of linear regression for the dataset [87]. The normality test assesses whether the data distribution conforms to the characteristics of a normal distribution. This study uses the ratio of skewness and kurtosis to evaluate the normality of the residuals [88]. A distribution that deviates significantly from normality can affect the accuracy of regression estimates. Meanwhile, the heteroscedasticity test is used to determine whether there is constant variance of residuals across all levels of the independent variable [89]. The presence of heteroscedasticity can lead to inefficient estimates and biased standard errors. This study uses the glacier test to detect any signs of heteroscedasticity in the regression models [90]. All statistical analyses in this study are conducted using the SPSS software package [91]. This tool provides robust features for conducting regression analysis, generating descriptive statistics, and performing assumption testing [92]. By leveraging this software, the study ensures accurate, consistent, and reproducible results, thereby enhancing the credibility and academic rigor of the research [93]. The descriptive form of the data used in this study is presented in the form of processed spss that presents the mean, maximum, minimum, and standard deviation data presented in table 1 below.

Table 1: Descriptive Statistics

	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
INTERLOCKDIR	199	0	1	0.212	0.413
ROA	199	0.00020	0.37200	0.0670979	0.0632761
TOBINSQ	199	0.00090	18.64040	1,8152101	2.0894144
DA	199	0.00030	0.44680	0.0663182	0.0664487
Valid N (listwise)	199				

From the board's directional regression interlock equation to Return on Assets, the board's interlock regression equation towards Discretionary accruals, and the board's directional regression equation for Tobin's Q, it is clear that the research model, which consists of one independent variable and three dependent variables, does not fit the data. This conclusion is based on the analysis of the model test, which is known as the F test [94]. The results of the T test of the regression equation indicate that the interlock variable of the board of directors does not have a significant influence on the financial performance (return on assets), market performance (Tobin's Q), or earnings management (Discretionary Accruals) [95]. T tests are carried out with a significance threshold of

0.05, which is equivalent to 5%. You may view the outcomes of the comprehensive hypothesis test in table 2, which can be found here.

Table 2. Hypothesis Testing Results

Regression model	Signification	Hypothesis tested	Conclusion
Interlock the board of directors - ROA	0.444	$H1_a$	$H1_a$ rejected
Interlock the board of directors - Tobin's Q	0.175	$H1_b$	$H1_b$ rejected
Interlock the board of directors -DA	0.753	H2	H2 rejected

The variable of the board of directors' interlock has a positive but statistically insignificant effect on the return on assets. This result suggests that although there might be a slight positive relationship, the presence of an interlock among board members does not have a meaningful or impactful effect on the company's return on assets. In practical terms, this implies that having directors who simultaneously serve on the boards of other companies does not substantially enhance the company's ability to generate returns from its assets [96]. Similarly, the board of directors' interlock variable also demonstrates a positive but statistically insignificant influence on Tobin's Q, an indicator of market performance [97]. This outcome indicates that interlocking directorates do not meaningfully affect the market valuation of a firm compared to its asset replacement costs. Furthermore, when examining earnings management through the lens of discretionary accruals, the interlock variable shows a negative but statistically insignificant effect. This means that companies with interlocked board members do not demonstrate a consistent or impactful pattern of engaging in earnings management practices as measured by discretionary accruals. While there is a negative direction in the relationship, it lacks statistical support and thus cannot be considered a reliable or strong finding.

The study's results lead to the rejection of the proposed hypotheses concerning the influence of board of directors' interlock on financial performance, market performance, and earnings management. There are several possible reasons why the results diverge from previous expectations and theoretical assumptions. One key factor is the relatively small proportion of interlock among the companies observed. When only one or two members of a board are engaged in interlocking positions, their capacity to influence the decisions of the entire board is limited. Corporate decisions are typically made collectively in board meetings, which require either consensus or a majority vote. Consequently, a minority of interlocked directors may lack the influence necessary to sway decisions or introduce substantial changes to corporate strategy and practices. Additionally, board members who participate in interlocks may be connected to companies operating in different industries or sectors. This variation means that even though the directors gain access to different sets of information, practices, and experiences, these may not be directly applicable or beneficial to the company in which they hold interlocked positions. Moreover, the diversity in business focus, regulatory environments, and strategic goals between companies may hinder the effective transfer or implementation of knowledge gained through interlock networks. Therefore, the actual utility of interlocking relationships in influencing firm performance and earnings management could be diminished by contextual differences.

Another influential factor is the regulatory environment in which the companies operate. In the context of this study, there are existing regulations that limit the extent and conditions under which interlocking directorships can occur. These restrictions are designed to prevent monopolistic practices and ensure fair business competition. Specifically, there are provisions that prevent individuals from holding board positions in companies that are in the same industry, have overlapping markets, or collectively hold significant market power. Such regulations reduce the likelihood of strategic collaboration or influence among companies with shared board members, thereby weakening the potential impact of interlock on corporate performance and financial reporting behavior. The presence of these legal constraints means that companies are restricted in their ability to leverage interlocking networks to obtain competitive advantages or implement shared practices. As a result, interlocked directors may have limited opportunities to influence company policies or operations in a way that affects performance outcomes or financial reporting. These constraints reduce the strategic importance and effectiveness of interlocks as a mechanism for improving firm performance or engaging in earnings management.

Moreover, the governance structure in place also plays a significant role. The use of a two-tier governance system, where the board of directors is monitored and supervised by a board of commissioners, introduces an additional layer of oversight that may limit the influence of interlocked board members. The board of commissioners holds the authority to review, question, and reject decisions made by the board of directors if those decisions are deemed risky, unethical, or not in line with corporate governance principles. As a result, even if interlocked directors intend to introduce practices or policies observed in other companies, they may face institutional resistance that prevents such changes from being adopted. The two-tier system thus serves as a control mechanism that curbs the autonomy of the board of directors and acts as a safeguard against practices such as aggressive earnings management or policy changes that might compromise the integrity of corporate operations. This structure ensures that decisions are made within a framework of checks and balances, thereby reducing the likelihood that interlock relationships alone can lead to significant variations in performance or financial behavior.

Additionally, the increasing emphasis on good corporate governance in the companies under study may also limit the impact of board interlocks. With the growing implementation of corporate governance practices, companies are under pressure to adhere to regulatory standards, maintain transparency, and uphold ethical behavior in financial reporting and strategic decision-making. Good corporate governance promotes accountability and encourages firms to report performance honestly, minimizing the temptation or opportunity for earnings manipulation. In such an environment, the ability of interlocked directors to influence earnings management or performance outcomes is curtailed, as companies prioritize compliance over strategic maneuvering through interlocking relationships. The implementation of governance mechanisms, including audit committees, independent directors, and transparency requirements, contributes to a more controlled and standardized approach to corporate management. These measures reduce the room for discretionary behavior and limit the scope for performance manipulation, thus neutralizing any potential influence that interlocked directors may exert. Consequently, the presence of board interlocks, even if strategically advantageous in theory, may have little to no tangible effect under strict governance and compliance frameworks.

5. Research Limitation

Limitations in the design and scope of the research may also explain the lack of significant findings. This study focuses solely on board-level interlocks without considering other types of inter-organizational relationships such as interlocks involving senior management, external auditors, or other advisory roles. These additional networks might exert a more substantial influence on company performance and earnings practices. Moreover, the absence of control variables in the regression models may reduce the robustness of the analysis. Control variables are essential in isolating the effect of the independent variable by accounting for the influence of other factors that may simultaneously affect the dependent variables. In the absence of control variables, the results may be confounded by omitted variable bias, where unobserved factors such as firm size, industry type, ownership structure, or macroeconomic conditions might influence both board interlocks and company outcomes. Future research should consider incorporating such variables to strengthen the analytical framework and yield more accurate results.

Another limitation lies in the temporal scope of the data. This study relies on cross-sectional data from a single year, limiting its ability to capture dynamic or lagged effects of board interlocks. If the benefits or consequences of interlocking relationships take time to materialize, a single-year snapshot may not be sufficient to detect such effects. For instance, policies or practices observed by interlocked directors in one company may be evaluated and only implemented in subsequent years after assessing their suitability and potential impact. Longitudinal data would allow for a more comprehensive analysis of these temporal relationships and provide deeper insights into how interlocks influence firms over time. The simplicity of the research model also constrains the explanatory power of the findings. The low R-squared values obtained in the regression analysis indicate that the independent variable—board interlock—accounts for only a small fraction of the variation in the dependent variables. This suggests that other factors not included in the model play a more substantial role in determining company performance and earnings management. Therefore, future studies should consider expanding the model by including additional explanatory variables and exploring the use of intervening or moderating variables that may mediate or condition the relationship between board interlocks and company outcomes.

6. Conclusion and Recommendation

This study examines the interlocking board of directors' impact on firm performance and profit management. Based on the problem formulation and discussion in the preceding chapters, the board of directors' Interlock positively affects the company's Return on Assets but not significantly. Directors' interlocking benefits Tobin's Q companies but not significantly. Interlocked directors hurt the company's Discretionary Accrual but not significantly. This study exclusively examines board of directors interlocks, not broader board of commissioners interlocks. The cross section analysis data employed cannot explain the effect of interlock caused by practice and performance diffusion, which requires a longer observation period. Low R square values indicate a weak relationship between variables and suggest that other variables may affect the relationship between independent and dependent variables. This study does not consider intervening or moderating variables. Based on this study's findings, the author suggests examining and considering intervening or moderating variables that affect the board of directors' interlock relationship to company performance and earnings management, using other proxies to measure research variables, and using time series data to observe trends and diffusion or dispersion.

7. Conflict of Interest

This section should clearly disclose any potential conflicts of interest that may have influenced the research or its findings. Authors should declare if they have financial, personal, or professional interests related to the study that could be perceived as compromising objectivity. It is crucial for maintaining transparency and trustworthiness in academic publishing.

8. References

1. S. Akram, Z. Pervaiz, and A. R. Chaudhary, "The Impact of Income Inequality and Intergenerational Mobility on Human Development: An empirical evidence from Pakistan," Int. J. Disaster Recovery Bus. Contin., vol. 12, no. 1, pp. 263–268, 2021.
2. S. Akram, "Bridging the gap: understanding out-of-school children in Pakistan," Vulnerable Child. Youth Stud., vol. 19, no. 3, pp. 454–469, 2024.
3. V. Lele, A. Joshi, P. Shahabadkar, and V. Patil, “Enhancing Employability Skills through Student Participation,” Educ. India J.: A Q. Ref. J. Dialogues Educ., vol. 10, no. 4, pp. 296–305, 2021.
4. P. Shahabadkar, A. Joshi, and K. Nandurkar, “Enhancing Employability Skills and Placements in Technical Institutes: A Case Study,” J. Eng. Educ. Transform., vol. 34, no. 4, pp. 13–21, 2021.

5. P. Shahabadkar, A. Joshi, V. Lele, and V. Patil, “Understanding Aspirations of First Year Undergraduate Engineering Students,” J. Eng. Educ. Transform., vol. 34, Spec. Issue, pp. 86–92, 2021.
6. A. Joshi, P. Shahabadkar, and A. Hippalgaonkar, “Enhancing Placements in Educational Institutes: A Novel Approach,” J. Eng. Educ. Transform., vol. 37, Spec. Issue 2, pp. 140–145, 2024.
7. R. Shrivastava and N. K. Surarchith, "Effect of employees’ attitude towards ERP post implementation on support of top management and business performance – A study of critical success factors on post implementation," The J. Contemp. Issues Bus. Gov., vol. 27, no. 2, pp. 684–689, 2021.
8. P. K. Maroju, "Assessing the Impact of AI and Virtual Reality on Strengthening Cybersecurity Resilience Through Data Techniques," International Journal of Innovations in Applied Sciences & Engineering, vol. 10, no. 1, pp. 1-9, 2024.
9. R. Shrivastava and S. Shrivastava, "Relationship marketing: Spoke of a wheel reference to industrial customer’s expectations and contentment towards identification products," J. Bus. Manag. Soc. Sci. Res., vol. 1, no. 3, pp. 79–82, 2012.
10. V. M. Aragani and P. K. Maroju, "Future of blue-green cities emerging trends and innovations in iCloud infrastructure," in Advances in Public Policy and Administration, pp. 223–244, IGI Global, USA, 2024.
11. L. N. R. Mudunuri, V. M. Aragani, and P. K. Maroju, "Enhancing Cybersecurity in Banking: Best Practices and Solutions for Securing the Digital Supply Chain," Journal of Computational Analysis and Applications, vol. 33, no. 8, pp. 929-936, Sep. 2024.
12. V. M. Aragani, "The Future of Automation: Integrating AI and Quality Assurance for Unparalleled Performance," International Journal of Innovations in Applied Sciences & Engineering, vol. 10, no.S1, pp. 19-27, Aug. 2024.
13. V. M. Aragani and L. N. R. Mudunuri, "Bill of Materials Management: Ensuring Production Efficiency," International Journal of Intelligent Systems and Applications in Engineering, vol. 12, no. 23, pp. 1002-1012, Jul. 10, 2024.
14. S. Sangle, A. Joshi, P. Pawar, and K. Nandurkar, “Improving Student Learning Performance during Online Lectures,” J. Eng. Educ. Transform., vol. 34, Spec. Issue, pp. 236–242, 2021.
15. P. K. Maroju, "Data Science for a Smarter Currency Supply Chain: Optimizing Cash Flow with Machine Learning for White Label ATMs," FMDB Transactions on Sustainable Computing Systems, vol. 2, no. 1, pp. 43-53, 2024.
16. P. K. Maroju, "Leveraging Machine Learning for Customer Segmentation and Targeted Marketing in BFSI," International Transactions in Artificial Intelligence, vol. 7, no. 7, pp. 1-20, Nov. 2023.
17. P. K. Maroju, "Optimizing Mortgage Loan Processing in Capital Markets: A Machine Learning Approach," International Journal of Innovations in Scientific Engineering, vol. 17, no. 1, pp. 36–55, Apr. 2023.
18. P. K. Maroju, "Cloud Computing as a Catalyst for Digital Transformation in the Banking Industry: Enhancing Efficiency, Customer Experience, and Compliance," International Journal of Holistic Management Perspectives, vol. 4, no. 4, p.5, Jan. 2023.
19. P. K. Maroju, "AI-Powered DMAT Account Management: Streamlining Equity Investments and Mutual Fund Transactions," International Journal of Advances in Engineering Research, vol. 25, no. 1, pp. 7–18, Dec. 2022.
20. P. K. Maroju, "Enhancing White Label ATM Network Efficiency: A Data Science Approach to Route Optimization with AI," FMDB Transactions on Sustainable Computer Letters, vol. 2, no. 1, pp. 40-51, 2024.
21. P. K. Maroju, "Conversational AI for Personalized Financial Advice in the BFSI Sector," International Journal of Innovations in Applied Sciences and Engineering, vol. 8, no.2, pp. 156–177, Nov. 2022.
22. P. K. Maroju, "Empowering Data-Driven Decision Making: The Role of Self-Service Analytics and Data Analysts in Modern Organization Strategies," International Journal of Innovations in Applied Science and Engineering (IJIASE), vol. 7, Aug. 2021.
23. A. Muthulakshmi, J. Tamilselvi, and S. S. Hameed, "Moderating effects of challenges on self-efficacy and satisfaction of women street vendors," Int. J. Electron. Finance, vol. 13, no. 3, pp. 386–402, 2024.

24. T. Arumugam, S. S. Hameed, J. M. Ehya, V. Kadiresan, and R. Krishnaraj, "Impact of Artificial Intelligence on Customer Journey Mapping and Experience Design," in Optimizing Intelligent Systems for Cross-Industry Application, pp. 121–136, IGI Global, 2024.
25. P. K. Maroju, "Advancing Synergy of Computing and Artificial Intelligence with Innovations: Challenges and Future Prospects," FMDB Transactions on Sustainable Intelligent Networks, vol. 1, no. 1, pp. 1-14, 2024.
26. T. Arumugam, S. Hameed, J. M. Ehya, R. Krishnaraj, and S. Subbulakshmi, "Empowering Distributors by Leveraging Consumer Tenacity With Advanced Marketing Intelligence Systems and Intelligent Process Automation," in Advancements in Intelligent Process Automation, pp. 459–480, IGI Global, 2025.
27. R. Shrivastava, "Analysis of constructs on organizational culture and innovation culture in 'private educational institutions'," J. Posit. School Psychol., vol. 6, no. 2, pp. 130–142, Mar. 2022.
28. R. Shrivastava, "Role of artificial intelligence in future of education," Int. J. Prof. Bus. Rev., vol. 8, no. 1, pp. 1–15, 2023.
29. R. Shrivastava, "Role of HRIS in redefining HR maneuvers," Challenges and Opportunities in Social Sciences, Humanities and Business Management, vol. 1, pp. 61–64, Nov. 2019.
30. V. Kadiresan, S. S. Hameed, and B. Subramaniam, "Empathizing the Effect of Mobile Coupon Promotions on Social Shopping Behaviour," FMDB Trans. Sustain. Hum. Soc., vol. 1, no. 1, pp. 30–38, 2024.
31. S. Shrivastava and R. Shrivastava, "Role of entrepreneurship in economic development," Int. J. Manag. Soc. Sci. Res., vol. 2, no. 2, pp. 1–5, 2013.
32. V. M. Aragani, "AI-Powered Computer-Brain Interfaces are Redefining the Boundaries of Human Potentials: Reinviting Our Humanity with AI," Excel International Journal of Technology, Engineering and Management, vol. 11, no. 1, pp. 21-34, Mar. 20, 2024.
33. V. M. Aragani, "Leveraging AI and Machine Learning to Innovate Payment Solutions: Insights into SWIFT-MX Services," International Journal of Innovations in Scientific Engineering, vol. 17, no. 1, pp. 56-69, Apr. 2023.
34. V. M. Aragani, "Unveiling the Magic of AI and Data Analytics: Revolutionizing Risk Assessment and Underwriting in the Insurance Industry," International Journal of Advances in Engineering Research, vol. 24, no. 6, pp. 1-13, Dec. 2022.
35. V. M. Aragani, "Securing the Future of Banking: Addressing Cybersecurity Threats, Consumer Protection, and Emerging Technologies," International Journal of Innovations in Applied Sciences and Engineering, vol. 8, no.1, pp. 178-196, Nov. 11, 2022.
36. R. Shrivastava, "Talent management and effectiveness of recruitment process: A study of higher education institutions in Central India," Int. J. Prof. Bus. Rev., vol. 7, no. 6, pp. 1–15, Dec. 2022.
37. A. Joshi, K. Nandurkar, and P. Pawar, “A Novel Approach for Improving Quality of Learning Environment in Technical Institutions,” J. Eng. Educ. Transform., vol. 34, no. 1, pp. 93–108, 2020.
38. A. Joshi, V. Deshpande, and P. Pawar, “Evaluating the effect of organizational practices on work effectiveness of employees,” Int. J. Manag. Concepts Philos., vol. 12, no. 2, pp. 133–149, 2019.
39. A. Joshi, V. Deshpande, and P. Pawar, “An application of TOPSIS for selection of appropriate e-governance practices to improve customer satisfaction,” J. Project Manag., vol. 2, no. 3, pp. 93–106, 2017.
40. M. A. Shbool, O. S. Arabeyyat, A. Al-Bazi, and W. H. AlAlaween, “An Integrated Multi-Criteria Decision-Making Framework for a Medical Device Selection in the Healthcare Industry,” Cogent Eng., vol. 8, no. 1, Art. no. 1968741, Jan. 2021.
41. M. A. Shbool and B. Alanazi, “Application of Condition-Based Maintenance for Electrical Generators Based on Statistical Control Charts,” MethodsX, vol. 11, Art. no. 102355, Dec. 2023.
42. A. Joshi, V. Deshpande, and P. Pawar, “Identification of factors influencing the performance of government organizations and undertakings in India using analytic hierarchy process,” Int. J. Serv. Sci., vol. 6, no. 2, pp. 162–176, 2017.
43. M. A. Shbool, A. Al-Bazi, L. Zureigat, and A. M. Mahafzah, “Assessing the Impact of Non-Pharmaceutical Interventions on Disease Infection in the Public Health Sector: A Hybrid Simulation Approach,” Int. J. Simul. Process Model., vol. 21, no. 2, pp. 130–146, Jan. 2024.

44. K. P. Naachimuthu, S. Bhuvaneshwari, and G. Sebastian, "PSG Eco-Literacy Scale (Revised 2017)," International Journal of Social Sciences, vol. 5, no. 4, pp. 581–587, 2017.
45. K. P. Naachimuthu, "We are from knowledge sharing culture," Management and Labour Studies, vol. 32, no. 3, pp. 369–374, 2007.
46. K. P. Naachimuthu, "Management Philosophies in Ramayana," Pragyaan: Journal of Management, vol. 6, no. 2, pp. 52–58, 2008.
47. K. P. Naachimuthu and K. Kalaiselvan, "Management lessons from Thirukkural," International Journal of Management Research and Business Strategy, vol. 1, no. 1, pp. 58–71, 2012.
48. M. A. Shbool and M. D. Rossetti, "Decision-Making Framework for Evaluating Physicians' Preference Items Using Multi-Objective Decision Analysis Principles," Sustainability, vol. 12, no. 16, Art. no. 6415, Jan. 2020.
49. D. B. Acharya, B. Divya, and K. Kuppan, "Explainable and fair AI: Balancing performance in financial and real estate machine learning models," IEEE Access, vol. 12, no.10, pp. 154022–154034, 2024.
50. K. Kuppan, D. B. Acharya, and B. Divya, "Foundational AI in insurance and real estate: A survey of applications, challenges, and future directions," IEEE Access, vol. 12, no. 12, pp. 181282–181302, 2024.
51. R. K. Dahal, "Customer satisfaction in Nepalese cellular networks," Tribhuvan University Journal, vol. 33, no. 2, pp. 59–72, 2019.
52. R. K. Dahal, "Contemporary management accounting techniques and organizational performance," Pravaha, vol. 26, no. 1, pp. 177–185, 2020.
53. R. K. Dahal, "Assessing social and environmental performance," Academy of Accounting and Financial Studies Journal, vol. 25, no. 6, pp. 1–9, 2021.
54. D. Mahat, "Readiness for Artificial Intelligence Integration in Government Services: Perspectives from Ramechhap District Employees," Journal Multidisiplin Madani, vol. 4, no. 4, pp. 486–495, 2024.
55. A. Joshi, P. Shahabadkar, V. Patil, K. Nandurkar, A. A. W. Ansari, and A. Shinde, "An Approach for Improving Admissions: A Case Study of an Unaided Undergraduate Engineering Institute," J. Eng. Educ. Transform., vol. 37, Spec. Issue 2, pp. 588–594, 2024.
56. S. Akram and Z. Pervaiz, "The Role of Institutions and Social Inclusion in Trust Building," Qual. Quant., vol. 58, pp. 3887–3903, 2024.
57. A. Hoti and A. Dermaku, "Corporate governance in the banking industry of Kosovo: does board size and board independence matter?" International Journal of Finance & Banking Studies, vol. 7, no. 3, pp. 20-34, 2018.
58. S. Akram and Z. Pervaiz, "Estimation of inequality of opportunities across countries: a multidimensional approach," Stud. Econ. Econometrics, vol. 48, no. 1, pp. 18–41, 2024.
59. D. Qehaja, F. Zeka, and A. Hoti, "The effect of foreign direct investments on trade balance in southeast Europe during the period 2000–2018," International Journal of Applied Economics, Finance and Accounting, vol. 13, no. 1, pp. 29-39, 2022.
60. M. A. Shbool, F. Altarazi, and W. H. AlAlaween, "A Dynamic Nonlinear Autoregressive Exogenous Model to Analyze the Impact of Mobility during COVID-19 Pandemic on the Electricity Consumption Prediction in Jordan: Covid-19 Mobility Impact Model For Electricity Consumption In Jordan," J. Sci. Ind. Res. (India), vol. 83, no. 2, pp. 164–173, Feb. 2024.
61. N. R. Palakurti and N. Kanchepu, "Machine learning mastery: Practical insights for data processing," in Advances in Systems Analysis, Software Engineering, and High Performance Computing, IGI Global, USA, pp. 16–29, 2024.
62. N. R. Palakurti and S. Kolasani, "AI-driven modeling: From concept to implementation," in Advances in Systems Analysis, Software Engineering, and High Performance Computing, IGI Global, USA, pp. 57–70, 2024.
63. N. R. Palakurti, "Bridging the gap: Frameworks and methods for collaborative business rules management solutions," Int. Sci. J. Res., vol. 6, no. 6, pp. 1-22, Mar. 2024.
64. N. R. Palakurti, "Data visualization in financial crime detection: Applications in credit card fraud and money laundering," Int. J. Manag. Educ. Sustain. Dev., vol. 6, no. 6, pp. 1-19, Jun. 2023.
65. E. Perjuci and A. H. O. Hoti, "The effects of international financial reporting standards implementation on the financial performance and position of businesses in developing countries: Evidence from Kosovo," International Journal of Applied Economics, Finance and Accounting, vol. 13, no. 1, pp. 1-9, 2022.

66. S. K. Shrestha and D. Mahat, “Fortitude and Fortune: Unveiling the Pillars of Women’s Entrepreneurial Success,” Nepal Journal of Multidisciplinary Research, vol. 7, no. 3, pp. 76–89, 2024.
67. R. K. Dahal, "Performance score as a measure of organizational effectiveness," Pravaha, vol. 27, no. 1, pp. 131–138, 2021.
68. R. K. Dahal, "Customers' perspectives on the Nepalese cellular telecommunications services' technological and innovation capabilities," International Journal of Social Sciences and Management, vol. 9, no. 1, pp. 41–47, 2022.
69. D. B. Acharya, K. Kuppan and B. Divya, "Agentic AI: Autonomous Intelligence for Complex Goals—A Comprehensive Survey," in IEEE Access, vol. 13, no.1, pp. 18912-18936, 2025.
70. N. R. Palakurti, "Empowering rules engines: AI and ML enhancements in BRMS for agile business strategies," Int. J. Sustainable Dev. Through AI, ML and IoT, vol. 1, no. 2, pp. 1-20, Dec. 2022.
71. N. R. Palakurti, "Governance strategies for ensuring consistency and compliance in business rules management," Trans. Latest Trends Artif. Intell., vol. 4, no. 4, pp. 1-20, Sep. 2023.
72. N. R. Palakurti, "Intelligent security solutions for business rules management systems: An agent-based perspective," Int. Sci. J. Res., vol. 6, no. 6, pp. 1-20, Jan. 2024.
73. D. Mahat, “Unveiling Faculty Performance through Student Eyes: A Comparative Study of Perspectives,” Formosa Journal of Multidisciplinary Research, vol. 2, no. 9, pp. 1575–1596, 2023.
74. H. Hoti and L. S. Sopa, "Compliance with International Standards on Auditing (ISAs): Evidence from Kosovo for the Financial Reporting Period 2015–2019," Finance: Theory and Practice, vol. 26, no. 2, pp. 219-230, 2022.
75. S. Akram and Z. Pervaiz, "Assessing Inequality of Opportunities for Child Well-being in Pakistan," Child Ind. Res., 2025.
76. S. Akram, F. Zahid, and Z. Pervaiz, "Socioeconomic determinants of early childhood development: evidence from Pakistan," J. Health Popul. Nutr., vol. 43, no. 1, p. 70, 2024.
77. N. S. Priyadarshini and K. P. Naachimuthu, "Ancient and Modern Conception to Virtues: Comparing Naaladiyar and Positive Psychology," International Conference on Multi Facets of Sacred Literature, ISBN 9789389658835, 2020.
78. K. P. Naachimuthu and T. Kalpana, "Graded Exposure and Use of Thiruppugazh for Stuttering: A Case Study," Indian Journal of Positive Psychology, vol. 13, no. 1, 2022.
79. S. Akram, M. U. Hassan, and M. F. Shahzad, "Factors Fuelling the Persistence of Child Labour: Evidence from Pakistan," Child Ind. Res., vol. 17, no. 4, pp. 1771–1790, 2024.
80. S. Akram, M. Raashid, M. Usman, S. Shahzad, and S. Zareen, "Correlates of Low Birth Weight and Effectiveness of Kangaroo Mother Care for its Management: Lessons Learned from A Tertiary Care Hospital of Lahore, Pakistan," J. Educ. Soc. Stud., vol. 5, no. 3, pp. 213–220, 2024.
81. M. Hana, S. Vishnupriya, and K. P. Naachimuthu, "Restorative Effect of Direct and Indirect Nature Exposure – A Systematic Review," International Journal of Scientific Research, vol. 11, no. 5, pp. 10–15, 2022.
82. P. Nachimuthu, "Mentors in Indian mythology," Management and Labour Studies, vol. 31, no. 2, pp. 137–151, 2006.
83. S. Sailakumar and K. P. Naachimuthu, "A phenomenological approach to understand the nature based experiences and its influence on holistic development," Indian Journal of Positive Psychology, vol. 8, no. 2, 2017.
84. A. S. Guru Prapanna, J. Jayapriya, T. Poornima, and K. P. Naachimuthu, "Hermeneutics of Iniyavai Naarpadhu and Inna Naarpadhu," Journal of Positive School Psychology, vol. 6, no. 8, pp. 4358–4368, 2022.
85. M. Shbool et al., “Examining the Effect of Nano-Additions of Rare Earth Elements on the Hardness of Body Armor Ceramic,” EBSCOhost, Feb. 2021.
86. M. A. Shbool et al., “Machine Learning Approaches to Predict Patient’s Length of Stay in Emergency Department,” Appl. Comput. Intell. Soft Comput., vol. 2023, Art. no. 8063846, 2023.
87. M. A. Shbool et al., “Modeling Consumer Behavior and Forecasting the Automobile Market: A System Dynamics Approach for Sustainable Mobility,” Arab. J. Sci. Eng., Feb. 14, 2025.
88. M. A. Shbool et al., “Real Estate Decision-Making: Precision in Price Prediction through Advanced Machine Learning Algorithms,” Int. J. Hous. Mark. Anal., ahead-of-print, Mar. 7, 2025.

89. M. A. Shbool et al., “The Economy of Motion for Laparoscopic Ball Clamping Surgery: A Feedback Educational Tool,” MethodsX, vol. 10, Art. no. 102168, 2023.
90. B. I. Albadawi and M. O. Salha, "Comparing leadership models at Al-Quds University according to gender in light of leadership theory with love," Specialusis Ugdymas, vol. 1, no. 43, pp. 1739-1748, 2022.
91. B. I. Albadawi and M. O. Salha, "Role of knowledge management in ensuring quality of higher education in Al-Quds University from the academic staff's perspective," The Arab Journal for Quality Assurance in Higher Education, vol. 14, no. 47, pp. 1-30, 2021.
92. B. I. Albadawi, "Leadership change for the development policy of inclusive education: Leadership theories and models," in Comparative Research on Diversity in Virtual Learning: Eastern vs. Western Perspectives, IGI Global, 2023, pp. 201-214.
93. B. I. Albadawi, "The virtual museum VM as a tool for learning science in informal environment," Education in the Knowledge Society (EKS), vol. 22, 2021. [Online]. Available: https://revistas.usal.es/tres/index.php/eks/article/view/23984/26419.
94. B. I. Albadawi, "Virtual reality in process for children with autism disability," in Comparative Research on Diversity in Virtual Learning: Eastern vs. Western Perspectives, IGI Global, 2023, pp. 88-104.
95. B. I. M. Albadawi, "An analytical study of the Palestinian inclusive education policy and its application in reality: Toward developing a visionary model in light of international criteria and local experiences," Ph.D. dissertation, Arab American Univ. Palestine, 2023.
96. M. O. Salha and B. I. Albadawi, "Organizational culture and knowledge management at Al-Quds University," Journal of Positive School Psychology, vol. 6, no. 3, pp. 7770-7781, 2022.
97. A. Joshi, P. Shahabadkar, V. Patil, K. Nandurkar, A. A. W. Ansari, and A. Shinde, “An Approach for Improving Admissions: A Case Study of an Unaided Undergraduate Engineering Institute,” J. Eng. Educ. Transform., vol. 37, Spec. Issue 2, pp. 588–594, 2024.