

DO BOARD COMPOSITION AND MEMBER DYNAMICS INFLUENCE PROFITABILITY? EVIDENCE FROM THE CAPITAL GOODS SECTOR IN SRI LANKA

Dabare, G. N. N. J., Dilhari, W. P. I., Gamage, C. B., and Weerakoon, R. B.
Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka

Received: December 31, 2024

Revised: June 03, 2025

Accepted: June 30, 2025

Abstract

This study examines how board composition and member dynamics influence profitability among listed companies in Sri Lanka's capital goods sector. This sector, characterised by high-stakes decisions involving machinery, equipment, and infrastructure investments, demands important board-level decision-making that significantly impacts a company's operational capacity and financial performance. By examining main board characteristics, including board size, proportion of independent directors, educational background, and gender diversity, from 2015-2023, the study sheds light on the governance factors shaping long-term financial outcomes. Findings suggest that a higher proportion of independent directors improves company performance, while larger board size negatively impacts profitability. In addition, boards with higher female representation correlate with lower profitability, which implies that structural barriers may limit the effectiveness of female board participation.

Keywords: Board Size, Board Independence, Board Education

1 Introduction

Corporate governance (CG) has evolved globally over the recent times into one of the important determinants of organisational performance. CG refers to the way organisations show trust in, exercise power over, and are held to account by their members, stakeholders and wider society (Bob, 2022). As such, robust CG is related to operational effectiveness in addition to stakeholder relations and environmental outcomes.

The importance of CG has been underscored by numerous corporate scandals, such as Enron and WorldCom, exposing the detrimental effects of poor governance on firm performance

Corresponding email: cgamage@kln.ac.lk

(Iwu-Egwuonwu, 2010). On the other hand, research by Lai and Tam (2007) suggests that well-structured boards can prevent financial scandals and improve profitability. In this context, important milestones in corporate governance, such as the United Kingdom's 1992 Cadbury Committee report, which was established in response to headline corporate scandals, highlighted the need for better governance. These initiatives catalyzed global attention, leading to an increased focus on corporate governance and accountability globally.

Developing markets' CG frameworks have also developed in line with this global context. In Sri Lanka, for example, The Institute of Chartered Accountants of Sri Lanka (ICASL)² together with Securities and Exchange Commission Sri Lanka introduced a comprehensive Code of Best Practices on Corporate Governance to institutionalize these principles. Their recent amendments in 2023 emphasize board diversity, while new requirements effective from April 2024 mandate academic or professional qualifications for directors (Securities and Exchange Commission, 2023). These regulatory developments reflect efforts to enhance governance effectiveness and address agency issues not limited to developed markets but across the board globally.

In addition to the above developments, sectorial importance related to the CG developments is also noteworthy. CG's importance in high-stakes decision-making sectors, such as the capital goods sector, could be highlighted more, compared to other sectors, considering the gravity of board-level decisions involving machinery, equipment, and infrastructure investments. The capital goods sector in Sri Lanka, for example, comprising machinery, infrastructure, and heavy equipment industries, plays a pivotal role in the nation's economic development. In 2023, this sector reported the highest revenue among listed entities (Rs. 1,609 billion) and ranked second in profit after tax (Rs. 112 billion).

When it comes to the theoretical framework of CG and firm performance, the foundational perspective for understanding CG dynamics is provided by the Agency Theory. As proposed by Jensen and Meckling (1976), which describes the relationship between shareholders (principals) and managers (agents), the theory highlights the conflicts arising from divergent interests and information asymmetry. These conflicts often lead to self-serving managerial decisions that compromise firm performance. Effective CG mechanisms, such as board

² e.g., 2023 SEC listing rules mandate diversity in experience, skills, age, and gender among directors to promote balanced representation between executive and non-executive members.

oversight, mitigate these agency problems by aligning managerial actions with shareholder interests (Bo & Driver, 2012).

The Stewardship Theory by Davis (1991), at the same time, highlights that managers act as stewards who prioritize organisational goals over personal interests. While theory highlights trust, collaboration, and intrinsic motivation among managers rather than strict monitoring mechanisms, this theory also provides valuable insights into board composition variables (e.g., size, independence, diversity, and education) that impact firm performance.

Therefore, a sound CG system is identified to be of great importance for the efficient control of companies and the enhancement of their performance (Boshkoska, 2015). Strong corporate governance reduces managers' control rights and encourages investment in value-creating projects, which leads to improved operational performance.

Research demonstrates that companies with robust governance structures achieve higher valuations and shareholder returns, while poorly governed firms show weaker performance metrics and lower dividend payouts (e.g., Brown & Caylor, 2004). Sylvester (2019) identified the composition of the board as a crucial component in this regard. Research by Smith and Doe (2009) also identifies six best governance practices, emphasizing balanced executive and non-executive representation, clear leadership roles, and transparent procedures - all fundamental to mitigating the agency problems previously outlined. Building on these governance foundations, research indicates that board effectiveness is further enhanced through diversity in talents, relevant experience, and education to drive business decisions (Tsehaye et al., 2010; Angwaomadoko, 2025). This extends to gender diversity, with evidence supporting female director representation as a key component of modern board composition (Martín & Herrero, 2017). These elements collectively work to address the agency conflicts discussed earlier while promoting the robust governance mechanisms necessary for enhanced firm performance.

However, existing empirical studies on corporate governance and financial performance in this sector still remain fragmented, providing us with the identification of a unique research gap in this space for two main reasons.

First, international and developed market studies Cazorra and Aguilera (2009), Martín and Herrero (2017), and Thompson and Manu (2020) have established links between board diversity and financial outcomes, yet these findings often conflict in developing economies

due to institutional and cultural differences, and these studies do not capture very recent dynamics.

Second, existing developing market studies, although they cover a broader space of board composition and profitability (e.g., Mukhibad et al., 2024), remain insufficiently contextualized for a focused segment where the boards make high-stakes decisions. For example, De Costa and Ajward's (2021) sector-agnostic study using a self-created governance measure, identifies mixed relationships between board governance and profitability in the Sri Lankan context. While their study provides important insights, such generalized approaches may not focus on capturing governance dynamics when unique risk-reward scenarios are at play. On the other hand, emerging market studies such as Tahir et al. (2024) focus on Pakistan's banking sector and find that governance configurations beyond individual factors drive performance. However, their findings are limited by the highly regulated banking environment that constrains board discretion and inadequately reflects governance dynamics in less restricted contexts. This creates a notable gap for studies examining governance impacts in less regulated, high-stakes decision-making sectors.

Our research, therefore, examines the impact of board composition and member dynamics on firm profitability within Sri Lanka's capital goods sector, which is a more appropriate and focused sector for this study, providing insights into high-stakes board-level decisions. In addition, unlike the financial and utilities sectors, the capital goods sector has less stringent regulation, allowing board's greater discretion in decision-making, which can significantly affect firm performance. As the largest sector among the top 100 listed entities, with 18 companies and 160 directors (including 11.3% female representation), our sample represents a significant economic force. These 18 top LMD 100 companies were specifically selected as they constitute the dominant players in the high-stakes decision-making sector with meaningful flexibility in making high-stakes decisions. They ensure the study captures governance practices among the most influential firms for CG implications study.

Our primary research question is whether there is a relationship between profitability and the variables identified by referring to comprehensive literature in relation to the board composition, which includes variables such as board size, board independence, female representation and educational qualifications of the directors. These variables are tested to identify whether they have a relationship with profitability and to suggest recommendations to level up the board composition and simultaneously increase the profitability of the capital

goods sector in Sri Lanka. The research investigates several key aspects of board composition and their impact on profitability within Sri Lanka's capital goods sector. Specifically, it seeks to examine whether board size influences profitability, how the percentage of independent directors affects financial performance, the role of female participation in the board of directors, and the impact of directors' educational qualifications on profitability in this sector.

The study provides a notable contribution to the contemporary emerging market corporate governance literature in several ways. Our main contribution comes in, unlike previous studies that adopt a cross-industry approach or rely on general governance indices, its focus is on a high-stakes industry where board decisions significantly impact firm performance. By isolating this sector, the study provides nuanced insights into governance mechanisms tailored to industries with complex investment requirements.

Second, our sample employs panel regression techniques to analyse data from 2015 to 2023 based on several reasons. Firstly, this timeframe offers access to comprehensive and recent data, which ensures the relevance of our findings. Secondly, this period includes notable events such as the COVID-19 pandemic and the 2022 economic crisis of Sri Lanka, which tested the resilience of firms and governance structures. Furthermore, this period witnessed notable developments in corporate governance, including the SEC's 2023 enhancements to regulations for listed entities, which introduced stricter board composition requirements and transparency standards. Therefore, the study offers valuable insights into how board composition influenced firm profitability amid evolving regulatory landscapes and economic challenges by focusing on this time frame, which provides relevance to the broader context of emerging markets.

Finally, it offers evidence-based recommendations for optimizing board composition to enhance sector profitability by providing actionable insights for regulators and practitioners by identifying governance practices that enhance profitability, which are particularly relevant given the evolving regulatory landscape.

2 Theoretical Framework & Hypothesis Development

2.1 Theoretical Framework

The association between board characteristics and firm performance can be identified through multiple dimensions, such as agency theory, stewardship theory, and agency cost theory.

Below, we link each theory to the variables of board composition, size, independence, diversity, and qualifications.

2.1.1 Agency Theory and Board Characteristics

Agency theory Jensen and Meckling (1976), and Eisenhardt (1989) outlines a conflict of interest between principals (shareholders) and agents (management) in the process of delegation. In line with agency theory, large boards may dilute accountability, independent directors help mitigate agency problems, diversity reduces groupthink and enhances oversight, and better qualifications of directors improve decision quality.

2.1.2 Stewardship Theory and Board Characteristics

Stewardship theory Davis et al. (1997), Donaldson and Davis (1991), and Madison et al. (2016) suggests that managers act as stewards with the skills and knowledge to benefit investors, with corporate governance serving to inspire good stewardship rather than enforce compliance (Almashhadani, 2023). In line with stewardship theory, mid-size boards balance efficiency with collaboration, excessive independence can result in weaker relational trust and push for excessive safety, diversity enhances sustainability and long-term value creation, and expertise is more important than qualifications.

2.1.3 Agency Cost Theory and Board Characteristics

Agency cost theory Jensen and Meckling (1976) highlights how the expenses incurred in monitoring and regulating managerial activity impact firm profitability. In this case, corporate governance is crucial in reducing these costs (Almashhadani, 2023). In line with this theory, overly large boards increase coordination costs, independent directors reduce monitoring costs by providing unbiased oversight, diversity increases coordination costs (e.g., training programs) initially but ultimately reduces agency costs by improving decision-making quality, and directors with qualifications and specialized knowledge lower reliance on external consultants.

These three theories collectively suggest that effective corporate governance is an important component for enhancing firm profitability. The board size, independence, female representation, and qualification are therefore examined in this study as four key dimensions of board composition.

In addition, Resource Dependence Theory (Pfeffer & Salancik, 1978) positions boards who is eligible to span boundaries that help firms access critical external resources through directors'

connections, expertise, and legitimacy. Board diversity significantly enhances resource provision by expanding the range of networks, perspectives, and stakeholder connections available to the firm. External networks formed through board interlocks create channels for information exchange between organizations, reducing uncertainty and providing access to strategic resources that ultimately enhance firm performance.

2.2 Board Size and Corporate Performance

Board size states the number of directors who represent the board of the company (Andradi et al., 2018). The number of board members a firm can accommodate for quality decision-making results in tactical economic judgments that could help the realization of the corporate objectives. Since there is no any ideal board size to be maintained, the problem of selecting an adequate board size remains unsolved even with the guidance of good corporate governance. Further, a lot of the literature with reference to corporate governance recommends having boards of five to fifteen members (Nwankwo & Uguru, 2022). According to Abor and Biekpe (2007), some perceived that larger boards perform well since they have a pool of knowledgeable people involved in rational decision-making and eliminate the space for the CEO to dominate. Alonso and Vallelado (2008) also show similar findings indicating that the larger boards are qualified to add more value to a firm. The results from different studies motivated us to determine the relationship that exists between board size and the profitability of firms.

Therefore, in the consensus of the above, the following hypothesis is proposed:

H₁: There is a positive relationship between board size and profitability.

2.3 Board Independence and Corporate Performance

Generally, there are two types of directors in the company, which could be classified: executive- the ones who possess some executive powers and who could be involved with the active decision-making of the company, and at the same time, non-executive directors have some contractual relationship with the firm. The non-executive directors provide independent advice to the firm (Sylvester, 2019). Similarly, a non-executive director isn't actively involved in the work of the management team (Suganya & Kengatharan, 2017). The proportion of non-executive directors on a board significantly influences company performance, as these members bring valuable external financial and legal expertise from the

market, which translates into positive performance outcomes for the firm (Abor & Biekpe, 2007).

A higher proportion of outside directors on the board tends to improve firm performance, as these external members bring valuable financial expertise and demonstrate a stronger focus on enhancing company profitability. With the exposure from different studies, the relationship that exists between board independence and the profitability of firms is examined with a proposed hypothesis as follows.

H₂: There is a positive relationship between board independence and profitability.

2.4 Female Representation and Corporate Performance

There is a perception that female directors on corporate boards make significant contributions, and businesses can become more competitive by acknowledging women's contributions at the top (Huse & Solberg, 2006). To maintain good corporate governance, women become an essential component. Similarly, female directors convey different viewpoints and ideas among diverse members of the board to stimulate decision-making processes (Zhuang et al., 2018). Similar findings were backed by Pucheta-Martínez and Gallego-Álvarez (2020), highlighting businesses with female directors showing higher financial performance. Therefore, it is important to increase the participation of women in the business. According to Adams and Ferreira (2009) gender diversity in boards has a vital impact on board inputs. Female directors demonstrate higher meeting attendance rates than their male counterparts and are more frequently appointed to oversight committees, particularly in audit, nomination, and corporate governance functions. Based on these results, the research determines the relationship that exists between female representation and the profitability of firms. The proposed hypothesis is as follows:

H₃: There is a positive relationship between female representation and profitability.

2.5 Director Education and Corporate Performance

Board members with strong educational backgrounds reduce the likelihood of poor decisions and enhance strategic decision-making quality, while a diverse mix of relevant expertise helps organisations navigate today's complex business landscape (Johl et al., 2015). Top management teams require two essential competencies: functional expertise in areas like finance, accounting, legal, marketing, and economics, and firm-specific knowledge as emphasized by (Hambrick & Manson 1984, as cited in Johl et al., 2015). The latter

encompasses a comprehensive understanding of the company's operations and internal dynamics. Carpenter (2002) emphasizes that there is a linkage between the educational diversity among board members and the financial performance of companies, which shows a positive relationship for firms with higher levels of internationalization. Based on these results, the relationship that exists between the educational qualifications of board members and the profitability of firms is determined using the following hypothesis;

H₄: There is a positive relationship between the educational qualifications of the board and profitability

3 Data & Methodology

As identified previously, researchers determined that board composition and member demographics have an impact on profitability in the field of CG. Thereby, this research tries to determine board composition and member demographic features' effect on the profitability of the capital goods sector in Sri Lanka, using a sample of 18 companies listed in CSE and data gathered from annual reports from 2015 to 2023, which forms the most recent data in order to observe the current/existing behaviors of the dependent and independent variables. Here, the research questions are studied in a quantitative manner through the analysis of secondary data gathered from annual reports with reference to a selected sample of companies operating in the capital goods sector in Sri Lanka. Additionally, this methodology section explains the research design, the population and the sample, which supports the generalization of the findings to the population and also explains data collection.

Research design elaborates the framework that backs the finding of answers to the established research questions. A regression analysis is conducted to identify the key variables and their relationship with the profitability of the selected sample from the capital goods sector in Sri Lanka. With the hypotheses testing being the purpose of this study in determining board composition and member demographic features affecting the profitability of the capital goods sector, the hypothetico-deductive method is used where a deductive approach and reasoning are used to test the hypotheses against the data gathered from the sample of companies operating in the capital goods sector in Sri Lanka and thereby confirm/ reject the original hypotheses proposed. This quantitative study tests hypotheses derived from agency, stewardship, and agency cost theories by analyzing secondary data to examine board governance relationships.

Regarding data, the capital goods sector dominates among leading listed companies in Sri Lanka, with 23 percent of the LMD 100's combined revenue and 24 percent of shareholders' funds. After the population was identified as companies in the capital goods sector, the most profitable entities that made their way to the top 100 listed companies were used as the subjects from which the data were gathered. A sample of 18 companies is evaluated in this study, and the unit of analysis is particular companies rather than individuals.

The study utilizes secondary data, with financial and governance information primarily collected from the published annual reports of capital goods companies listed on the Colombo Stock Exchange. These annual reports provided detailed information about board composition, including board size, independence, female representation, and financial performance metrics. Additional contextual data and literature were sourced from academic databases, including Google Scholar, JSTOR, Emerald Insight, and Oxford University Press, as well as from statistical publications by the Central Bank of Sri Lanka and LMD 100.

To begin the study, we conducted a series of data consistency tests that ensured the integrity of the dataset covering listed capital goods companies in Sri Lanka from 2015 to 2023. We ensured the completeness of variables (e.g., the total board size, proportion of independent directors, gender representation) that captured the board characteristics as well as consistent coding of the categorical variables across time. In addition, duplicated firm-year entries and records with missing key variables were removed to maintain consistency.

This study uses regression analysis to identify the relationship between the selected four variables of the board composition: number of board directors, independency, and education of the board directors and the proportion of female directors using statistical tools. Researchers measured the profitability of the capital goods companies listed in CSE with an accounting perspective by taking Return on Assets (ROA) as a measure of the dependent variables.

Finally, the following model was used for the estimation

$$RoA_{it} = \beta_0 + \sum_{i=1}^n \beta_i X_{it} + \epsilon_{it} \quad (1)$$

Where, β_0 is the constant; X_i denotes the independent variables of interest, including Board Size, Board Independence, Board Education, and Female Representation; ROA represents the

dependent variable of interest, Firm performance. The error term is denoted by ε_{it} , while i represents the firm and t denotes the time period.

Table 01 presents the measurement methods for all variables used in this study, with related literature that used the measure.

3.1 Method of Measurements

Table 01: Summary Table for Methods of Measurement

Variable	Measurement	Related Literature
Independent		
Board Size (BS)	Number of Directors	Hasan et al. (2019)
Board Independence (BIND)	Proportion of Non-Executive Directors	Hasan et al. (2019)
Educational Qualifications of the Board (EOB)	Share of directors with professional/masters and above qualifications	Carpenter (2002)
Female Representation (FR)	Share of female directors	Tsehay et al. (2010)
Dependent		
Profitability (ROA)	Return on Assets (ROA)	Delima (2021)

Source: Author Compilation

Further to the above, as the dependent variable, we used ROA as the primary profitability metric driven by its alignment with the capital goods sector's characteristics and the study's objectives. ROA directly measures how efficiently a firm utilizes its total assets to generate profits, making it particularly relevant for asset-intensive industries like capital goods, where operational efficiency is critical. In contrast, measures such as Return on Equity (ROE) can be influenced by leverage, which may distort comparisons between firms with varying debt structures. This is, in particular, an issue for infrastructure-heavy sectors. Similarly, Tobin's Q, which relies on market valuations, is less suitable in the context of Sri Lanka as it is a relatively illiquid equity market. In this case, market values may not accurately reflect firm performance. Therefore, ROA provides a clear and consistent measure of operational

effectiveness, ensuring robust analysis of how board composition impacts profitability in this high-stakes sector.

In this entire study, ethics are concerned, and due recognition is given to all the previous researchers and institutions from which the data are being captured. The researchers do not cause any harm/ damage to any of the data subjects through the reuse of the company data gathered, and the researcher follows proper data security processes to protect the data and ensure its accuracy throughout the study.

4 Results

This analysis examines how board structure and director characteristics influence financial performance among Sri Lankan capital goods companies. The analysis includes descriptive statistics, correlation analysis, and multiple regression analysis to test the hypotheses developed in the study.

Descriptive statistics provides a quantitative summary of the main features and patterns within a dataset. It provides an overview of the independent variables (board size, board independence, educational qualifications and female representation) and dependent variable (ROA), as depicted in Table 02.

Table 02: Descriptive Statistics

	BS	BIND	FR	EOB	ROA
Mean	8.852	5.475	0.821	6.667	0.115
Median	9.000	5.000	1.000	7.000	0.100
Maximum	11.000	9.000	4.000	9.000	0.270
Minimum	6.000	3.000	0.000	4.000	0.010
Std. Dev	1.720	1.525	0.739	1.769	0.086
Skewness	-0.306	0.632	1.038	-0.243	0.534
Kurtosis	1.896	1.340	1.500	1.847	1.928
Observations	162	162	162	162	162

Source: Data Analysis Results

The mean board size (BS) is 9 directors with a maximum of 11 and a minimum of 6 in the board, where most of the boards consist of 9 directors. Mean board independence (BIND) shows 6 directors where the boards consist of a maximum of 9 independent Non-Executive

Directors (NEDs) and a minimum of 3 NEDs adhering to the CG best practices in Sri Lanka (Securities and Exchange Commission, 2023). The variable education of the board (EOB) averaged at 7, representing the board's inclusiveness of an average of 7 members with educational qualifications in the board and with a minimum of 4 directors with such qualifications. ROA averaged at 11.5%, whereas the industry's ROA span was between 1% and 27%.

As per the data obtained from the selected 18 companies over the 9-year period from 2015 to 2023, it was observed that there was a declining trend in the board size along with an increasing trend in the number of non-executive directors that comprise the BOD. Further, an increasing trend was observed in female representation/ participation in the BOD, which could be partly attributable to the increasing social discussions/ pressures on gender diversity in the BODs. In relation to the number of directors with educational qualifications, an irregular/mixed trend was observed where, over the period, there have been both inclining and declining trends, along with a similar mixed trend being observed in the profitability measures.

Normality tests ensure that the data follows a normal distribution, which is an assumption of many statistical tests, including correlation and regression (Razali & Wah, 2011), which are tested through Skewness and Kurtosis. The values hovering between -2 and +2 for each variable against these two measures reasonably indicate that the data are normally distributed.

In addition, we show that the correlation analysis measures the strength and direction of the linear relationship between two variables, as shown in Table 03, where the multicollinearity among independent variables will result in less reliable statistical inferences (Schober et al., 2018). The correlation coefficient among two independent variables scoring below 0.75 satisfies the assumption that the variables are not highly correlated, as shown below. Table 03: Correlation Analysis

Variables	BS	BIND	FR	EOB	ROA
BS	1				
BIND	0.7346	1			
FR	-0.0362	0.0204	1		
EOB	-0.3054	-0.2449	0.1479	1	
ROA	0.0519	0.1603	-0.2327	-0.0526	1

In our multiple regression, measures show how each predictor variable uniquely influences the outcome while accounting for the effects of other variables in the model. Panel data regression utilizes both cross-sectional and time series variation. Table 04 presents the study's regression results.

Table04: Regression Analysis

ROA is the dependent variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Const	0.1140***	0.0400	12.85	0.0049
BS	-0.0085**	0.0057	-1.48	0.0393
BIND	0.0141**	0.0054	2.59	0.0105
FR	-0.0229***	0.0072	-3.19	0.0017
EOB	0.0006	0.0146	0.0388	0.9691
F-statistic			4.108	
Prob(F-statistic)			0.003	
R-squared			0.095	
Total Observations (balanced panel)			162	

Source: Data Analysis Results

Based on the above regression analysis, the hypothesis test results could be summarized as follows.

Table 05: Hypotheses and Results

Hypothesis	Result
H ₁ : There is a positive relationship between board size and profitability.	Do not Reject (Negative Relationship)
H ₂ : There is a positive relationship between board independence and profitability.	Do not Reject
H ₃ : There is a positive relationship between female representation and profitability.	Do not Reject (Negative Relationship)
H ₄ : There is a positive relationship between the	Rejected

The H_1 , which tested the relationship between BS and profitability, was identified as significant with a p-value of 0.039 and was identified to have a negative relationship between the two variables, which was evident with $B=-0.008$, suggesting that for an increase in the board size by one member, there will be a minimum possible 0.08% decline in the profitability, holding other factors constant. The results of the study coincide with some of the previous research studies of Pradeep (2023) that identify a negative relationship between board size and profitability, concluding that large-sized boards tend to cause coordination and decision-making inefficiencies, outweighing the benefits from increased monitoring. Further, the research findings are consistent with the idea that when more members represent the boards, it creates a breeding ground for social loafing and free riding, which brings down the company's productivity and, thereby, profitability (Delima, 2021). In the Sri Lankan context, individuals in positions of power, including members of Boards of Directors, may at times exhibit condescending attitudes that can affect open dialogue and collaboration. With the power of decision-making granted to them and the superiority complex they hold, they would remain dogmatic, showing reluctance to be flexible to each other's opinions. As the board size grows, such mutual displays of authoritative behaviours could lead to conflicts and inefficiencies in governance structures and may weaken the board balance. While introducing diversity to the board, expanding the board size could also be crucial; this could also lead to inequalities between board members. Some directors could feel marginalized within the board, and this feeling could lead to conflicts or discomforts within the preexisting power structures. Furthermore, in the local context, frequent inevitable variations in the economic, political, and technological environments would require a governance structure that is both resilient and responsive. Smaller boards are better positioned to adapt to these dynamic changes with greater ease and fewer complications in their decision-making processes. Their streamlined structure helps to respond quickly to emerging changes, whereas adapting changes in larger boards could take more effort and could lead to delayed/ineffective decisions that affect not only the profitability but also the triple bottom line. However, some of the existing research, including Hasan et al. (2015), Johl et al. (2015), and Nwankwo and Uguru (2022), were supportive of the positive relationship between board size and the profitability of the companies, suggesting that the wide range of expertise, skills, perspectives

and professional networks and connections, a larger board brings to the table could boost performance with enhanced decision making.

H₂ determines the expected positive relationship between BIND and profitability. The hypothesis is not rejected with a p-value of 0.01 (at the 5% level) and B=0.014, proving that BIND is a significant driver of profitability and showing that a one percentage point increase in the proportion of non-executive directors on the board is associated with a 0.0141 (1.41%) increase in ROA, holding other factors constant. This positive relationship implies the fresh perspective and the objectivity these directors bring into the company with their lack of affiliation with the company's management, which would lead to better, unbiased strategic choices and ultimately lead to enhanced profitability. This perspective on the relationship between the proportion of NEDs in the BOD and profitability is backed up by Pradeep (2023), Delima (2021), and Suganya and Kengatharan (2017), and this finding was contradictory to the findings of Sylvester (2019), which identified that the proportion of NEDs does not correlate or significantly determine the company's profitability. Research by Ofoeda (2017) found that higher proportions of independent non-executive directors correlate with lower company profitability, challenging conventional corporate governance wisdom that promotes board independence.

An expected positive relationship between FR and profitability was tested through regression analysis under H₃. However, the results showed a significant negative relationship between the two variables with a p-value of 0.0017 and B=-0.0229. This suggests that a one percentage point increase in the share of female directors on the board is associated with a 0.0229 (2.29%) decrease in ROA, holding other factors constant. The study reveals that a higher proportion of female board representation is associated with lower company profitability, which may suggest that the more conservative approach to risk by female directors reduces competitive advantage in business decision-making, though this may not necessarily be the case. We assume that with the increased CG discussions on gender diversity/ female representation in the board, there could be instances where women may be appointed to the board as token representatives, which could lead to their ideas and contributions being marginalized or ignored, leading to losing opportunities for effective decision making with their oversight, ethical decision making, inclusive and collaborative nature, which could lead to lower profitability amidst the presence of women in the board.

In Sri Lanka, a society often characterised by patriarchal norms, males dominate most leadership roles. Though there is an increasing number of female appointments in leadership roles by breaking the glass ceiling, they are still affected by long-standing patriarchal societal structures compared to developed countries. The capital goods industry is mostly male-dominated, dealing with heavy machinery and technological attributes, and lacks a systematic support system to empower women to contribute to the industry. Therefore, even women who break the glass ceiling and reach top positions may still face significant challenges, particularly in male-dominated industries, where the full benefits of diversity may be limited if inclusion goes no further than appointing women to meet representation goals. In addition, gendered upbringing and cultural stereotypes in the Sri Lankan context can also position women in supportive rather than leadership roles, potentially limiting their confidence and contribution to effective, profit-driven decision-making. Therefore, although research carried out in various industries, including Yasser et al. (2017), Sylvester (2019), and Martín and Herrero (2018), shows a positive relationship between female representation in the BOD and profitability, sighting advantages of diverse perspectives and skills female members bring to the board, we find an opposite relationship.

The final hypothesis created tests the positive relationship between EOB and profitability, which turned out to reflect an insignificant relationship between the two variables. The study's findings reject the hypothesis, as board members' educational qualifications do not significantly impact company profitability, aligning with Sylvester's (2019) research. Delima (2021) further supports this by showing that directors can successfully manage companies through experience rather than formal education. Apart from the experience, a diverse range of skills, professional development in terms of adaptability and continuous learning, interpersonal and leadership skills, strategic vision and complementary expertise of the board members could add more value to the profitability of the companies. There has been much research that identifies the need for professional expertise on the board in terms of their industry-specific knowledge and experience that could drive the companies through a route to success (Hasan et al., 2015; Cooper et al., 2015; Nguyen & Huynh, 2023).

5 Conclusion

This study, which was conducted to determine whether the board composition and board member demographics shape the profitability of the capital goods sector in Sri Lanka,

gathered data from 18 top listed companies in CSE, as per LMD100 as the best performing, out of a total of 28 companies in the industry, over the most recent 2015-2023 period.

First, we find a negative association between board size and profitability ($\beta = -0.008$, $p < 0.05$), supporting the argument that larger boards may face coordination challenges and decision-making inefficiencies. Further, this finding is in line with the agency theory and agency post theory. Agency theory predicts organisational complexity and dilution of accountability in larger boards, whereas agency costs theory says that larger boards increase coordination costs. Second, board independence is positively correlated with profitability ($\beta = 0.014$, $p < 0.05$), suggesting that independent directors enhance monitoring effectiveness and strategic decision-making quality. This is again in line with agency and agency cost theory, which says reducing agency and monitoring costs, yet contrasts with stewardship theory, which mentions excessive independence hurts relational trust.

Further, the negative relationship between female representation and profitability ($\beta = -0.023$, $p < 0.01$) suggests that the potential contributions of female board members might not yet be fully realized within the current corporate governance framework. This finding likely reflects institutional and organisational factors that may limit the full utilisation of diverse perspectives and expertise or tokenism rather than any inherent relationship between gender diversity and performance. While this result contradicts the theoretical predictions of agency and agency costs theory, it agrees with agency costs theory, which says that sometimes diversity could increase coordination costs. Finally, the board members' educational qualifications show no significant relationship with profitability.

The findings document how organisational environments must be structured to maximize board members' diverse skills and viewpoints, advancing our understanding of effective board composition. In particular, the research also suggests that female representation in the high-stakes industry may be done as tokenism or with inadequate support for female directors to leverage diversity's potential benefits.

While this study focuses on the capital goods sector, future research could also expand to other sectors and emerging markets to enhance generalizability, provided these sectors feature boards with sufficient flexibility to make high-impact decisions that contribute to profitability. From the practitioners' and regulators' perspectives, the findings have meaningful implications, especially in light of recent SEC developments on board diversity and composition requirements. In line with these regulatory trends, our results suggest that

while initiatives should focus on optimising board size and enhancing board independence, they should also go beyond merely setting minimum diversity requirements. We propose implementing combined capacity building, mentorship and awareness programs to leverage the benefits of diversity and improve board effectiveness. These findings further indicate how future corporate governance reforms and board appointment processes should be guided to foster strategic alignment and stakeholder value. In addition to general guidelines, we recommend outlining sector-specific best practices at the policy level because each industry faces its own governance structures, talent-pipeline dynamics, and cultural barriers. Without such tailored guidance, female representation can be at risk of being reduced to mere tokens under broad requirements, included only to satisfy regulations rather than to harness diverse perspectives for improved decision-making. The research also adds insights to the SEC and ICASL, which have implemented various measures to enhance board effectiveness and structure, aiming to improve corporate performance and shareholder value.

Finally, the results also indicate a need to develop institutional frameworks that better enable diverse board members to contribute effectively to corporate decision-making and value creation.

References

- Abor, J., & Biekpe, N. (2007). Corporate governance, ownership structure and performance of SMEs in Ghana: Implications for financing opportunities. *Corporate Governance: The International Journal of Business in Society*, 7(3), 288–300. <https://doi.org/10.1108/14720700710756562>
- Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, 94(2), 291–309. <https://doi.org/10.1016/j.jfineco.2008.10.007>
- Aguilera, R. V., & Cuervo-Cazurra, A. (2009). Codes of Good Governance. *Corporate Governance: An International Review*, 17(3), 376–387. <https://doi.org/10.1111/j.1467-8683.2009.00737.x>
- Al-Mashhadani, M. H. (2023). Corporate governance and profitability: Some theories and implications. *International Journal of Scientific and Management Research*, 6(9), 228–246. <https://doi.org/10.37502/ijsmr.2023.6916>
- Alonso, A., & Vallelado, E. (2008). Corporate governance in banking: The role of the board of directors. *Journal of Banking & Finance*, 32(12), 2570–2580. https://econpapers.repec.org/article/eeejbfina/v_3a32_3ay_3a2008_3ai_3a12_3ap_3a2570-2580.htm

- Andradi, D. M., Jayasinghe, W. S., Gunathilaka, M. L., Anosha, G. I., Ayesha, G. I., & Herath, M. A. (2018). The relationship between corporate governance best practices and firm performance of Sri Lankan listed companies. Department of Accountancy, University of Sri Jayewardenepura. <https://mgt.sjp.ac.lk/acc/wp-content/uploads/2018/12/Final-Research-KSLLGroup-No-23.pdf>
- Angwaomaodoko, E. A. (2025). Corporate governance and firm performance: Investigating the impact of governance structures on economic outcome. *Path of Science*, 10(12), 1001–1011.
- Bo, H., & Driver, C. (2012). Agency theory, corporate governance, and finance. In M. Dietrich & J. Krafft (Eds.), *Handbook on the economics and theory of the firm* (pp. 105–119). Edward Elgar Publishing. <https://doi.org/10.4337/9781848446489.00019>
- Tricker, B. (2022). The practice of corporate governance. CRC Press. <https://doi.org/10.1201/9781003321132>
- Boshkoska, M. (2015). The agency problem: Measures for its overcoming. *International Journal of Business and Management*, 10(1), 204–209. <https://doi.org/10.5539/ijbm.v10n1p204>
- Brown, L. D., & Caylor, M. L. (2004). Corporate governance and firm performance. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.586423>
- Carpenter, M. A. (2002). The implications of strategy and social context for the relationship between top management team heterogeneity and firm performance. *Strategic Management Journal*, 23(3), 275–284. <https://doi.org/10.1002/smj.226>
- Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management review*, 22(1), 20–47.
- De Costa, M. T. N., & Ajward, A. R. (2021). The impact of board governance on financial performance with the mediating effect of capital structure: Evidence from non-financial listed companies in Sri Lanka. *Journal of Contemporary Perspectives in Accounting and Digitalization*, 4(1), 1–28. <https://doi.org/10.4038/JCPAD.V4I1.11>
- Delima, V. J. (2021). Board structure and financial performance: A special reference to listed companies in Sri Lanka. *IOSR Journal of Business and Management*, 23(12), 52–62. <https://www.mendeley.com/catalogue/dccb7b99-44db-38b7-b935-40dc2e8e9b40>
- Donaldson, L., & Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of management*, 16(1), 49–64.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy Management Review*, 14(4), 532–550.
- Hasan, M. T., Molla, M. S. & Khan, F. (2019). Effect of board and audit committee characteristics on profitability: Evidence from pharmaceutical and chemical industries in Bangladesh. *Finance & Economics Review*, 1(1), 64–76.

- Huse, M., & Solberg, A. G. (2006). Gender-related boardroom dynamics: How Scandinavian women make and can make contributions on corporate boards. *Women in Management Review*, 21(2), 113-130. doi:<https://doi.org/10.1108/09649420610650693>
- Iwu-Egwuonwu, R. C. (2010, August 5). Does corporate governance enhance firm performance? An empirical literature evidence. SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.1653921>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405x\(76\)90026-x](https://doi.org/10.1016/0304-405x(76)90026-x)
- Johl, S. K., Kaur, S., & Cooper, B. J. (2015). Board characteristics and firm performance: Evidence from Malaysian public listed firms. *Journal of Economics, Business and Management*, 3(2), 239–243. <https://doi.org/10.7763/joebm.2015.v3.187>
- Lai, L., & Tam, H. (2007) Independent directors and the propensity to smooth earnings: A study of corporate governance in China. *The Business Review*, 7(1), 328-335
- LMD 100 Digital Edition (2023, December 15). LMD. <https://online.fliphtml5.com/pgkmm/mckw/#p=49>
- Madison, K., Holt, D. T., Kellermanns, F. W., & Ranft, A. L. (2016). Viewing family firm behavior and governance through the lens of agency and stewardship theories. *Family Business Review*, 29(1), 65-93.
- Manawaduge, A. S. (2012). Corporate governance practices and their impacts on corporate performance in an emerging market: The case of Sri Lanka [Doctoral dissertation, University of Wollongong]. University of Wollongong Research Online. <http://ro.uow.edu.au/theses/3676/>
- Martín, C. J. G., & Herrero, B. (2018). Boards of directors: Composition and effects on the performance of the firm. *Economic Research-Ekonomska Istraživanja*, 31(1), 1015–1041. <https://doi.org/10.1080/1331677x.2018.1436454>
- Mukhibad, H., Setiawan, D., Aryani, Y. A., & Falikhatun, F. (2024). Cognitive board diversity and profitability: Evidence from Islamic banks in Southeast Asia. *Asian Journal of Accounting Research*, 9(3), 182–200. <https://doi.org/10.1108/AJAR-12-2023-0305>
- Nguyen, V. C., & Huynh, T. N. T. (2023). Characteristics of the board of directors and corporate financial performance: Empirical evidence. *Economies*, 11(2), Article 53. <https://doi.org/10.3390/economies11020053>
- Nwankwo, J., & Uguru, L. (2022). Impact of board characteristics on the profitability of listed service firms in Nigeria. *Quest Journals Journal of Research in Business and Management*, 10(7), 2347–3002. <https://www.questjournals.org/jrbm/papers/vol10-issue7/Ser-2/1007194204.pdf>
- Ofoeda, I. (2017). Corporate governance and non-bank financial institutions profitability. *International Journal of Law and Management*, 59(6), 854-875.

- Palipana, S. D., Weerasinghe, V. W., Pathum, M. A., Madhawa, W. K., Perera, G. N., & Prabodha, N. W. (2015). Corporate board diversity and performance: Evidence from listed manufacturing and diversified companies in Sri Lanka. *Journal of Accounting Panorama*, 4(2), 1-19.
- Pfeffer, J., & Salancik, G. R. (1978). The external control of organizations: A resource dependence perspective. *Administrative science quarterly*, 23(2), 224-253.
- Pradeep, A. G. (2023). Board characteristics, ownership structures and bank profitability: Evidence from Sri Lanka. *Sri Lankan Journal of Banking and Finance*, 6(1), 61–94. <https://doi.org/10.4038/sljbf.v6i1.41>
- Pucheta-Martínez, M. C., & Gallego-Álvarez, I. (2019). Do board characteristics drive firm performance? An international perspective. *Review of Managerial Science*, 14(6), 1251–1297. <https://doi.org/10.1007/s11846-019-00330-x>
- Razali, N. and Wah, Y. (2011). Power comparisons of Shapiro-Wilk, Kolmogorov-Smirnov, Lilliefors and Anderson-Darling tests. *Journal of Statistical Modeling and Analytics*, 2(1), 21-33. <https://www.scirp.org/reference/ReferencesPapers?ReferenceID=2050949>
- Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesthesia and Analgesia*, 126(5), 1763–1768. <https://doi.org/10.1213/ane.0000000000002864>
- Securities and Exchange Commission. (2023). *Rules and Regulations*. <https://www.sec.gov/corporate-governance/>
- Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *The Journal of Finance*, 52(2), 737–783. <https://doi.org/10.2307/2329497>
- Suganya, S. J., & Kengatharan, L. (2017). Board structure and financial performance of listed finance companies in Sri Lanka. *International Journal of Accounting and Financial Reporting*, 7(2), 292-302. <https://doi.org/10.5296/ijaf.v7i2.12192>
- Sylvester, E. (2019). The impact of board composition on profitability of listed Nigerian firms. *EPRA International Journal of Research and Development (IJRD)*, 4(7), 151–157. <https://eprajournals.com/IJSR/article/1603/download>
- Tahir, S. H., Ghafoor, S., Zulfiqar, M., Sajid, M. A., & Illyas, H. (2024). Navigating board dynamics: Configuration analysis of corporate governance’s factors and their impact on bank performance. *PLOS ONE*, 19(5), e0303456 <https://doi.org/10.1371/journal.pone.0300283>
- Thompson, E. K., & Adasi Manu, S. (2020). The impact of board composition on the dividend policy of US firms. *Corporate Governance: The International Journal of Business in Society*, 21(5), 737–753. <https://doi.org/10.1108/CG-05-2020-0182>
- Top 10 biggest corporate scandals and how they affected share prices. (2018, November 1). IG Analyst. <https://www.ig.com/en/news-and-trade-ideas/top-10-biggest-corporate-scandalsand-how-they-affected-share-pr-181101>

- Zemichael, R. T., & Basazine, S. T. (2010). The impact of board composition on accounting profitability of the firm: A study of large caps in Sweden [Master's thesis, Umeå University]. DiVA. <http://urn.kb.se/resolve?urn=urn:nbn:se:umu:diva-32984>
- Yasser, Q. R., Mamun, A. A., & Rodrigs, M. (2017). Impact of board structure on firm performance: Evidence from an emerging economy. *Journal of Asia Business Studies*, 11(2), 210–228. <https://doi.org/10.1108/jabs-06-2015-0067>
- Zhuang, Y., Chang, X., & Lee, Y. (2018). Board composition and corporate social responsibility performance: Evidence from Chinese public firms. *Sustainability*, 10(8), Article 2752. <https://doi.org/10.3390/su10082752>