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Does board of directors affect financial performance? A study of the Jordanian companies

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The purpose of this study was to examine the impact of the board of directors on the economic performance of Jordanian companies listed on the Amman stock exchange (ASE) by measuring the board of administrators using a variety of indicators, including board size, board independence, and CEO duality. Economic performance is measured by going back on property and returning on equity. During the study period (2015–2020), 186 industrial corporations were examined. The study found that the indexed organizations at ASE during the years 2015–2020 showed full-size financial overall performance in accordance with Jordan's improving understanding of and application of the board of directors' traits. This study found that board size and independence had a substantial influence on financial performance. Based on the findings, the study recommends that the codes be evaluated on a regular basis and that corporations be instructed to examine corporate governance principles through legislation and regulations to encourage enterprises to follow these rules. Furthermore, board members' experience, devotion, and independence are reviewed on an ongoing basis. Stock exchanges should also conduct seminars and workshops for company managers and decision-makers to enhance understanding of effective corporate governance, especially its importance. The correlation coefficient shows a negative relationship between Board size and Board Independence with ROA, while board size and CEO duality are positive correlation with ROE. On The other side the regressions test of the effect of the variables on financial performance ratios (ROA and ROE) shows that there is a significant effect of board size and board independence on ROA and ROE. While CEO duality has an insignificant effect on both ratios ROA and ROE.

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1. Introduction

Corporate Governance is a pressing problem because of its vast position in fostering the economic increase and progress of countries (Wong, 2022). The loss of powerful Corporate Governance notably contributes to the downfall of, in any other case, a successful organization. Various research and remarkable sources, along with OECD (2009), Gompers et al. (2003), Claessens et al. (2002), continually endorse that robust Corporate Governance extensively boosts organizational overall performance. The prosperity of a nation's economic system is intricately tied to the performance of its corporations. Hence, the underdevelopment discovered in many growing international locations connected to insufficient Corporate Governance practices. Consequently, current literature places tremendous emphasis on powerful Corporate Governance as a pivotal element influencing the developmental demanding situations confronted by way of international locations like Jordan. It argued that the board of directors in Jordan became characterized using susceptible disciplinary features of company devices primarily because of the poor mechanisms movement that governed the BoDs composition, negative standards of attention of

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an actual unbiased director, and susceptible guiding principles to adjust the balance between non-executive and government administrators (Kyere & Ausloos, 2021). Furthermore, there is a lack of attention to board governance in Jordan, such as the formation of committees, the recruitment of independent directors, and CEO duality (Uyar et al., 2021; Matar & Nauimat, 2014). The mechanism movement and implementation of board governance remain bad, and for this reason, the potential of boards for powerful tracking will become bad. This in turn had a terrible effect on the selection playing sports well known performance of the companies in question (Puni & Anlesinya, 2020; Matar & Nauimat 2014; Khatib & Nour, 2021).

Based on the discussion above on how important the Board of Directors is to the success of any firm, numerous aspects are considered when comparing the overall performance of the company in relation to the Board of Directors in Jordan. Due to the unsatisfactory stage of a few shareholders in resolving the poor nature and susceptible performance fame of the firms in question, it has grown to be an exceptional situation regarding the ability of Bodes, positively affecting the overall performance of the organization. Moreover, several shareholders have improved their focus on the effectiveness of the board to function properly through the supply of greater shareholder returns, capital funding enchantment, and overall enhancement of the company to perform at its peak. According to this viewpoint, current research is critical for determining the potential effects of BoDs on the performance characteristics of some Jordanian-indexed firms.

The novelty and contributions of this study lie in its examination of the specific context of Jordanian companies regarding the relationship between the board of directors and financial performance. While there is existing literature on this topic, much of it focuses on Western or global contexts. By narrowing the scope to Jordanian companies, this study provides insights that are directly applicable to the local business environment, considering cultural, regulatory, and economic factors unique to Jordan. Additionally, by focusing on financial performance as the outcome variable, the study contributes to understanding the practical implications of board composition and governance structures in a tangible and measurable way. The findings of this research can inform both academic discourse and practical decision-making within Jordanian companies, offering valuable guidance for optimizing board effectiveness and enhancing financial performance within the specific socio-economic landscape of Jordan.

2. Literature review

The industrial sector is exhibiting an enhanced receptiveness to novel products and services, driven by the concomitant acceleration of globalization and technological advancements. Conversely, financial regulatory authorities on a global scale are endeavoring to comprehensively analyze this evolving landscape and manage the ensuing complexities (Uwuigbe & Fakile, 2012). The realm of corporate governance accorded paramount importance within the context of Jordan, and it serves as a pivotal mechanism for cultivating a corporate ethos characterized by conscientiousness, transparency, and openness. In this scholarly discourse, the paper proffers a succinct elucidation of the historical underpinnings of corporate governance mechanisms operative within industrial companies listed on (ASE)

By ensuring the powerful usage of organizational assets, facilitating capital access, and bolstering investor self-assurance, a hit company governance must inherently safeguard shareholders' fee (Denis & McConnell, 2003). This entails each inner organizational framework and external market dynamics; an agency's adaptability to external factors is substantially fashioned by using its control technique and the efficacy of its governance setup (Gregory & Simms, 1999). Certain scholars (along with Rwegasira, 2000; Nenova, 2009) have contended that robust company governance acts as a barrier against managers' misuse of organization sources, thereby promoting better decision-making and efficient management. Consequently, this leads to the advanced allocation of agency resources and, ultimately, enhanced performance. According to Salehi et al. (2020), implementing strong corporate governance frameworks enables organizations to reduce the expenses associated with equality. Jantadej and Wattanatorn (2020) argue that corporate governance is critical for protecting shareholder wealth and reducing information gaps with other parties, such as loan holders. This alignment coincides with a reduction in debt financing costs. A board of directors is a chosen group of individuals who are designated to represent investors. This board functions as a regulatory organization, meeting on a regular basis to develop corporate governance and administration initiatives. In the context of the stock market, every publicly traded firm must have a board of directors. For this study, the variables of interest include board size, board independence, and CEO duality.

Board size refers to the total number of directors in an organization for each fiscal year, including non-executive, corporate, and outside directors, as well as executive members such as the CEO and Chairman. According to agency theory, effective decision-making and problem solving are heavily influenced by the composition of the board of directors. Smaller boards are more likely to act and make judgments about the CEO's underperformance, as well as to participate in fewer talks and reach faster choices. Directors show greater commitment, sincerity, and participation when their boards are small (Pucheta-Martínez & Gallego-Álvarez, 2020; Ali, 2020).

The impact of board size on company success varies depending on the firm's characteristics and the country in which it operates. Given the more collective information that the board would eventually own, having a large board is advantageous. As a result, larger boards help to improve the company's success. According to Ferreira and Otley (2009), raising the overall number of non-executive directors has a stronger positive impact on a company's financial performance than increasing the

number of executive directors. While a large board has benefits, it can also be problematic, and the potential issues are determined by the board's specific functions as well as its effectiveness in the organizational and legal environments. Large boards result in higher coordination costs and increase freeride difficulties. Coordination costs arise from the problems of scheduling board meetings and achieving consensus during meetings, which may contribute to slower and less effective decision-making. Board cohesion is destabilized when members may not have a common purpose or reach an agreement based on executives' diverse perspectives. Increased board size beyond a certain point may result in inefficiencies that outweigh the initial benefits of having a larger pool of directors to draw from, resulting in decreased profits for the company. The board's size is calculated using the number of directors in the company, which is an important indicator of its effectiveness. An increase in the number of BOD members projected to improve the BOD's efficacy in giving adequate assistance in reducing agency expenses caused by inefficient firm management, hence improving the firm's financial outcomes (Qadorah & Fadzi, 2018; Roffia et al., 2022; Lew et al., 2018).

According to Kyereboah-Coleman and Biekpe (2005), having a larger board of directors increases a company's financial success. One probable explanation is that the board is made up of members who are more experienced and capable of making key decisions, making it more difficult for a strong CEO to influence the board's decisions. The outcome may improve governance, particularly managerial efficiency, and financial performance. Dalton and Dalton (2005) suggest that, in addition to networking opportunities and access to corporate resources, larger boards can benefit the company by providing direction and advice. Expanding the BOD to include people from various backgrounds, talents, genders, and races allows for a more diversified makeup.

According to Gill and Mathur (2011), larger organizations have lower financial performance. Considered the degree of BOD efficiency in supervising the function of the board of directors and decreasing firm financial performance. Firm financial performance has a favorable relationship with board size (Zureigat et al., 2014; Zureigat et al., 2023). Kumar and Singh (2013) argue that higher boards are less efficient at supervising duties than lower boards. Larger board sizes have less variability in corporate value and are negatively related to the firm's financial success. Thus, contradictory data published regarding the impact of board size on company financial performance indicators. However, the resource dependence theory offers a different interpretation, arguing that having a larger number of members on the Board of Directors may result in increased experience and expertise, potentially improving organizational performance (Dhamadasa et al., 2014). Prior empirical investigations have revealed varied outcomes, including both positive and negative associations. Others found a negative association in empirical studies, indicating that smaller board sizes are associated with better performance. It stated that higher board of directors' sizes make organizational management and decision-making less efficient, which is consistent with the findings of Adebayo et al. (2013). Smaller boards allow for speedier and more frequent meetings, faster decision-making, and fewer disagreements, especially with the CEO. The duration of a corporation's board of directors has a significant impact on its overall economic performance. Yermack (1996) found that smaller forums are more successful at monitoring managerial actions. This scrutiny can lead to improved financial performance by preventing managerial opportunism. Monitoring and Accountability: A large board can enhance corporate governance and accountability. Bhagat and Black (2002) demonstrate that the availability of larger forums is associated with improved firm performance. A large board can form additional committees and subcommittees to supervise unique aspects of the firm, ensuring greater management and threat control. Costs and Inefficiency: Keeping a huge board can be expensive, especially for smaller organizations. A large board might result in increased expenditure on board salaries and management. Adams and Ferreira (2007) propose that board size may also have an inverted U-shaped relationship with organizational value, with the optimal board size maximizing total performance. Pucheta-Martínez and Gallego-Álvarez's (2020) study found that board size, independence, and female directors have an advantageous effect on company performance. CEO duality additionally has a positive impact. Some studies, however, have found no association between the impact of board qualities and financial performance. Saleh et al. (2020) suggested that the unbiased board of members, the board's size, and the number of foreign members have no bearing on the company's financial performance. One possible explanation for this minor association is a lack of autonomy and suitable professional ability. Stakeholder Interests: The specific business and stakeholder objectives can play an important role in determining the best board length. For example, companies with higher regulatory requirements may benefit from larger forums with the expertise to manage complex compliance challenges, whereas start-ups in fast-paced industries may prefer smaller, nimble forums. Real-world Examples: Several real-world examples demonstrate the impact of board length on financial performance. For example, Apple Inc. has traditionally had a smaller board, allowing for faster decision-making and recognition. This method helped it achieve financial success. In comparison, General Electric previously had a larger board that faced criticism for inefficiency and its role in the company's troubles. Several more studies have found a beneficial relationship between BoD size and performance. For example, Naseem et al. (2017) found that a larger board of directors is associated with higher organizational performance and corporate social responsibility. The term independent directors refer to directors who are not hired by the company and have no material link with it. These directors serve as the board's monitors. They are also known as outsiders or outside directors. Board independence is defined by the percentage of directors who are autonomous to the board size, whereas directors who are insiders are those who are involved in the day-to-day operations of the company. They work on a full- in the organization and are accountable for achieving operational and strategic goals. For instance, the CEO symbolizes an internal director. According to Peng (2004), the impact of independence of boards on company performance is not particularly substantial, with the effect ranging from inconsequential to positive contingent upon the metric of firm performance. Klein (1998) also finds no significant association between board subcommittee structure and

business profitability. However, John and Senbet (1998) claim that having a greater number of non-executive directors makes a board more independent. Board Independence In order to play a facilitative role, corporate boards must take measures, not only in their structural composition but also in their nominating procedures, to protect against the possibility of undue influence from experts and executive officers over the board's governance activities and decisions. The concept of board independence, as articulated by Naseem et al. (2017), pertains to a state in which a preponderance, if not the entirety, of board members do not maintain affiliations with the corporation, except in their capacity as directors. These affiliations may encompass familial ties to the company's founders, substantive employment relationships, or pivotal roles within the organization. Board independence, which refers to the diploma to which an agency's board of directors is unfastened from conflicts of hobby and is capable of making selections within the satisfactory pastimes of shareholders, performs a vital role in shaping an organization's financial overall performance. Independent forums are frequently visible as a cornerstone of right company governance, and their impact on financial overall performance is a subject of sizable instructional research and actual-international relevance. Here is how board independence affects economic overall performance with references to relevant research:

- Enhanced Monitoring and Accountability: Independent forums better positioned to monitor a company's management decisions. They are less likely to have personal or financial relationships with the government crew, lowering the possibility of conflicts of interest. A comprehensive study conducted by Yermack (1996) revealed that businesses with more independent boards have stronger financial performance, mostly due to more effective tracking of executive decisions.

- Improved Decision-Making: Independent directors bring a varied set of talents, reports, and reviews to the boardroom. Core et al. (1999) discovered that board independence improves economic performance by increasing the quality of decision-making. Independent directors can challenge the established quo and provide valuable insights, ultimately leading to more viable strategic alternatives.

- Mitigation of Agency difficulties: Agency difficulties that arise because of a mismatch of interests between managers and shareholders can be resolved by independent boards. Shleifer and Vishny (1997) discovered that board independence could help connect management goals with shareholder goals, resulting in improved financial overall performance.

- Independent forums reduce the risk of corporate scandals by discouraging unethical or fraudulent sporting activity. They serve as safeguards against business scandals. Gompers et al. (2003) emphasize the importance of board independence in minimizing the likelihood of corporate malfeasance and the subsequent negative impact on economic performance.

- Investor Confidence and Attractiveness: Firms with impartial forums frequently revel in higher degrees of investor consideration and confidence. This self-assurance can translate into a greater attractive funding possibility, doubtlessly leading to a higher inventory price and better entry to capital. Studies along with “The Market for Corporate Control” by Jensen and Ruback (1983) emphasize how governance mechanisms, together with board independence, affect a company's splendor to traders.

- Compliance and Regulation: Regulatory of our bodies and stock exchanges in numerous international locations mandate a minimal level of board independence for listed agencies. Companies that adhere to those guidelines may additionally experience stepped forward financial performance because of multiplied credibility and compliance with enterprise standards.

According to Cotter et al. (1997), outside directors play an important role in protecting shareholders' interests through sound decision-making. Some writers have discovered that there is no significant relationship between the proportion of non-executives and firm performance (Bhagat & Black, 2002). It established that the correct mix of internal and external members determines a board’s success. However, there is limited research on the factors influencing ideal board composition (Weisbach, 2002). Daadaa (2020) confirmed that separating the roles of general manager and chairperson resulted in no significant improvement in company performance. According to research, board membership and independence need to be justified. García-Ramos and Díaz (2021) did a fuzzy set qualitative comparison investigation on 295 Southern European firms from 2001–2010 and discovered a correlation between firm financial success and board features such as size and independence. The imperative of board independence becomes increasingly critical within specific business sectors in both developed and emerging markets. This heightened importance is driven by the fact that a predominantly independent board is highly inclined to prioritize the best interests of shareholders as its foremost concern. Such a configuration is more likely to foster individual decision-making and concurrently mitigate potential conflicts of interest that may manifest (Makhlouf et al., 2017). It is noteworthy that the relationship between the independence of the Board of Directors (BoD) and a firm's performance exhibits diverse outcomes, with some studies demonstrating adverse effects, while others indicate a positive impact. However, drawing from the resource dependence theory, it posited that both board committees and individual directors possess the capacity to conduct a more thorough analysis of an organization's challenges and facilitate expedited and reliable decision-making. Furthermore, independent directors are anticipated to offer impartial oversight and execute professional auditing duties (Lutfi et al., 2014; Chandren et al., 2021). In a parallel vein, the stewardship theory lends support to the

rationale for board independence, predicated on the assumption that directors' enhanced experience equips them to contribute to superior governance (Elsayed et al., 2022). Various empirical investigations, consisting of the ones undertaken by means of Affes and Jarboui. (2023) and Naciti (2019), concur that heightened Board of Directors (BoD) independence is undoubtedly correlated with improved organizational overall performance, mainly in the monetary area of publicly indexed organizations. Notably, Chu et al. (2019) conducted an inquiry into the effect of BoD independence on the likelihood of economic institute financial disaster and created a sturdy association.

CEO duality refers to a situation in which the identical character serves as both the Chief Executive Officer (CEO) and the Chair of the Board of Directors inside a business enterprise. This association may have a large effect on a corporation's financial overall performance. Research and research have explored the connection between CEO duality and financial outcomes, providing insights into the capability consequences of this governance shape. Lack of Accountability and Oversight: CEO duality can cause a lack of impartial oversight and duty. When the CEO additionally holds the location of Chair, it may lessen the effectiveness of the board in tracking and challenging government choices. An observation with the aid of Fama and Jensen (1983) highlights the capability damaging consequences of CEO duality on corporate overall performance due to reduced oversight. CEO duality denotes the exercise wherein the Chief Executive Officer (CEO) simultaneously serves as both the agency's president and holds the management position of the Board of Directors because the Chairman. In essence, it signifies the CEO taking up a dual function, functioning as each the "CEO" and the "Chairman of the Board". This phenomenon undeniably exerts a multifaceted influence on the firm, with potential consequences that may be either adverse or favorable (Wang et al., 2019). There exist compelling justifications for segregating these two positions to enhance the overall stability of the company. The presence of the CEO in both roles engenders a conflict of interest since the CEO is, in essence, participating in decisions regarding their own compensation. Moreover, this dual role allows the CEO to wield significant influence over the board's actions, thereby fostering the potential for the misuse of their leadership position. Here is how CEO duality affects economic performance with references to relevant research:

- Conflicts of Interest: The combination of CEO and Chair roles can create conflicts of hobby. A CEO who additionally chairs the board can be much less likely to project their very own choices or to act within the great pursuing of shareholders while the ones pursuits war with their own. Such conflicts can lead to suboptimal selection making. Research by Shivdasani and Yermack (1999) demonstrates that CEO duality can negatively influence economic performance.

- Risk-Taking and Innovation: CEO duality can also affect the extent of danger taking and innovation inside a corporation. Some studies, including Faleye et al. (2011) endorse that companies with CEO duality may be less inclined to take risks or put money into progressive strategies, doubtlessly impacting long-term economic performance.

- Market Reaction and Investor Confidence: CEO duality can impact how traders understand a business enterprise. When CEO duality is present, traders may additionally understand a higher level of threat and reduced transparency. Empirical studies via Kini and Williams (2000) unearth that CEO duality is related to poor inventory fee reactions, indicating that traders may also react negatively to this governance structure.

- Compliance and Best Practices: Many company governance codes and pointers endorse isolating the roles of CEO and Chair to decorate governance practices. Companies that observe these best practices might also experience higher compliance and alignment with enterprise requirements, which could undoubtedly affect investor self-assurance and financial performance.

- Firm Size and Industry Influence: The effect of CEO duality might also vary depending on the size of the firm and the enterprise wherein it operates. Smaller firms and industries with decreased regulatory scrutiny can be much less suffering from CEO duality than large, more regulated organizations.

The impact of CEO duality on firm financial performance as measured by ROA, Tobin's Q, and sales growth of Ghana Stock Exchange-listed enterprises. Their findings found that different individuals should be designated as chairman and CEO, which decreases predicted conflict between management and board members, resulting in a beneficial effect on the performance of non-financial enterprises in Ghana (Qadorah & Fadzi, 2018). Shrivastav and Kalsie (2016), claim that the governance of a company's board is substantially affected if the incumbent CEO also serves as the board chairperson. This implies that the same person will frequently establish the schedule for the board's meetings and still dominate the problems brought up during board sessions. Additionally, where the CEO serves as chairman of the board, she/he may influence nomination and appointment of applicants against board seats, which eventually increases the possibility that novel board hired persons must be dependent on administration despite that they are ''outsiders'', hence lacking independence of the board. Furthermore, the main role of the board is to decide who to appoint as CEO. Hence, if there is a double role of CEO and chairman, which will not make an effective board decision in replacing poorly performing managers. This is for the fact that the poor performance of those managers is linked to their connivance with the CEO. The preceding discussions find support in the framework of agency theory since they raise questions about the potential for an individual holding conflicting positions within the organization to render impartial decisions and whether their personal interests might become entwined with the decision-

making process, thereby affecting the organization's oversight. Consequently, CEO duality has the capacity to augment the authority of the CEO, and if wielded inappropriately, it may diminish the effectiveness of board monitoring (Ali, 2020). However, the stewardship theory presents a contrasting viewpoint, contending that a CEO who occupies both positions is likely to expedite decision-making and reduce the protraction of decision processes. For instance, prior research has indicated a noteworthy adverse impact of CEO duality on firm performance (Mubeen et al., 2020; Wang et al., 2019). In a separate study conducted by Wang et al. (2019), the findings demonstrated that CEO duality, or its absence, had no discernible effect on organizational performance. To reach the study purposes by examined the effect of corporate governance factors affecting the financial performance and according to above mention justifications, the following hypotheses will target at identifying the impact of the board of directors on the economic performance of Jordanian companies:

H_1: *Board size has a significant positive relationship with the firm performance in listed companies in Jordan.*
H_2: *Board independence has a significant positive relationship with the firm performance in listed companies in Jordan.*
H_3: *CEO duality has negatively correlated with the firm performance in listed companies in Jordan.*

3. Method

This research employs quantitative methodologies, employing regression-based evaluation on secondary panel records within the context of the ASE business quarter. Its number one aim is to research the connections among three key elements: board size, board independence, and CEO duality and the overall performance of companies listed in Jordan. The conceptual framework proposed for this observation involves three variables, encompassing the three board of director's characteristics variables and the corporations' overall performance. The examine model elucidates the examine variables: Board of Director's Characteristics serve as the unbiased variable, encompassing various elements, while monetary overall performance stands as the structured variable. Firms' performance is gauged through return on assets and return on equity. CEO duality is assessed as a dummy variable taking the cost of one if the chairman would not keep the CEO role, and zero otherwise. Board length is quantified by way of the overall count number of board of administrators' individuals. Board independence is calculated as the ratio of independent contributors within the board.

ASE financial and annual reports for the companies listed there serve as the primary source of the data. The selected listed companies are only those with comprehensive and accurate data for the entire period, which is a five-year period from 2015 to 2020. Analysis of panel data will be impacted if any companies have any missing data, hence they are all omitted. 40 businesses from the excluded manufacturing industry are listed because of this criterion.

Various researchers (Shah et al., 2011; Matolcsy & Wright, 2011; Yasser et al., 2011) have explored and assessed corporation performance via a variety of metrics. In their evaluation of organization overall performance, Matolcsy and Wright (2011) took into consideration indicators inclusive of return on assets (ROA), return on fairness (ROE), modifications in the market cost of capital, and adjustments inside the marketplace cost of equity (adjusted for risk and rewards). Yasser et al. (2011) measured business overall performance, the use of profit margin (PM) and return on fairness (ROE). Shah et al. (2011) utilized Tobin's Q (which elements in Market Value of Equity + Book Value of Debt/Total Assets in Book Value) and the ratio of Market Value of Capital to Book Value of Equity to gauge corporations' performance from a marketplace perspective. They also used Return on Equity (ROE) and Return on Investing (net profits + interest) / (fairness + total debt) to evaluate performance from a financial reporting standpoint. Bhagat and Black (1999) evaluated the firm overall performance-based variable using the Tobin's Q method at the side of numerous measures together with Returns on Resources, Turnaround Ratio, Margin of Operations, Revenue consistent with worker, and modifications in Assets, Sales, Operational Income, Employees, and Cash Flows. These metrics have been pivotal for the strategic achievement of the agency and formed the focus of the look at. Consequently, the studies aimed to research performance signs like Return on Assets (ROA) and Return on Equity (ROE) to evaluate the groups' economic performance. Return on Assets (ROA) is the net profit as a percentage of total belongings. Computed by a way of dividing EBIT by means of the common e-book price of all belongings, ROA illustrates how correctly an enterprise generates profits from its property. Return on Equity (ROE) is the internet profit expressed as a percentage of shareholders' fairness. It highlights the profitability of an enterprise in phrases of generating returns from the funds invested through shareholders. The ROE information for every coverage company acquired from annual reports, calculated the usage of the formula: (Shareholders' Equity/Net Income) × 100%. Net income pertains to the complete monetary yrs. before preferred stockholder payments however before dividends to commonplace stockholders. Notably, shareholders' equity excludes desired stocks (Pangestuti, et al., 2021; Zureigat et al., 2023).

Finally, to respond to the purposes of the present study and hypothesis, the multivariate regression model is shown below that allows to determine the degree of incidence of the Board of Directors of directors in the performance of Jordanian companies:

$$Financial\ Performance_{it} = \beta_0 + \beta_1\ BSIZ_{it} + \beta_2\ BIND_{it} + \beta_3\ CEO\ duality_{it} + \epsilon_{it}$$

$$ROA_{it} = \beta_0 + \beta_1\ BSIZ_{it} + \beta_2\ BIND_{it} + \beta_3\ CEO\ duality_{it} + \epsilon_{it}$$

$$ROA_{it} = \beta_0 + \beta_1\ BSIZ_{it} + \beta_2\ BIND_{it} + \beta_3\ CEO\ duality_{it} + \epsilon_{it}$$

4. Results

The statistical descriptions are provided in Table 1 using data acquired from 186 manufacturing and sectors enterprises listed on (ASE) from 2015 to 2020. The corporate performance, which is measured using ROA and ROE. With a range of -85.7% to 36.0%, Table 1.1's mean ROA value is 1.26%. The accounting efficiency measure's mean ROE is 0.10 percent.

Table 1

Statistical descriptions

	N	Minimum	Maximum	Mean	Std. Deviation
Board size (BSIZ)	186	0.00	19	9.5	2.94
Board Independence (BIND)	186	0.10	1.00	0.55	0.17
CEO duality	186	0.00	1.00	0.50	0.50
ROA	186	-85.71	36.07	- 24.82	11.53
ROE	186	-105.04	50.85	-27.095	17.89

The acronyms BSIZ (for "Total Number of Board Size," BIND (for "Board Independence," and CEO (for a dummy variable) are used. If the CEO and chairman roles are merged, the value is 1, otherwise it is 0. Net income is multiplied by the total assets of the company to calculate return on assets (ROA). Return on equity, or ROE, is calculated by dividing net income by the firm's total equity.

The findings supplied in Table 1 screen show that the common board length (BSIZ), with a variety from 0 to a maximum of 19, is recorded at 9.5 participants. A previous examination in Jordan performed with the aid of Alabdullah (2016) found that the average board length for Jordanian enterprises is eight.95 members. The average board independence (BIND), ranging from zero% to one hundred%, is calculated at approximately fifty six%. These records propose a vast adherence to the 2009 corporate governance policies of Jordan, which endorse a predominantly impartial board break free management. These consequences align with preceding research conducted in Jordan (Alabdullah et al., 2014). The descriptive records concerning CEO duality suggest that, on average, around 49% of Jordanian listed corporations comply with a twin management shape, signifying that approximately eighty three of the studied agencies, almost a fifth of the whole, maintain both the CEO and chairman positions. This statistics indicates that almost all of Jordanian corporations comply with company governance pointers advocating for the separation of the CEO and chairperson roles.

Table 2
Correlation coefficients

	Board size	Board Independence	CEO duality	ROA	ROE
Board size	1				
Board Independence	-0151*	1			
CEO duality	0.099	0.140	1		
ROA	-0.229**	-0.227**	0.032	1	
ROE	0.238**	-0.224**	0.017	0.857**	1

*. The 0.05 level (2-tailed) of significance for correlation is met.
**. At the two-tailed significance level of 0.01, correlation is significant.

The Pearson correlations shown in Table 2 indicate that (ROA) and (ROE) have the strongest correlation, or 0.857. The correlation matrix of the current study contains zero or less correlation coefficients between any of the independent variables. This implies that the multicollinearity of the regression model is unimportant.

Table 3
Models 1-2

Variable / Indicator	Model 1 (ROA). Pooled OLS		Model 2 (ROE). Pooled OLS	
	Coefficient	P-value	Coefficient	P-value
Const	0.974	0.331	0.470	0.639
Board size	2.634	0.009***	0.325	0.006***
Board Independence	-2.746	0.007***	-2.651	0.009***
CEO duality	0.566	0.572	0.618	0.746
R-squared	0.092		0.094	

* 0.1 level of significance ** 0.05 level of significance *** noteworthy at the 0.01 level

As shown in Table 3, the regression analysis reveals that the ROA model's R Square is 9.2%. Considering this, it is shown that the factors are responsible for 9.2% of the variation in ROA. Also seen here are how well the model accounts for the differences in ROA among Jordanian listed companies. The ROE model can account for 9.4% of the variation in firm performance as measured by ROE, as seen in Table 2, R-Square value of 9.4%. According to the high level of importance of the model, the ROE model seems to significantly explain the variation in performance of Jordanian firms. The results in Table 3 support the claim that improving organizational performance is a goal of the board of directors' practices used in the current study. The outcomes of the hypothesis testing for two models are shown in the next section, along with the correlation between the variables.

5. Discussion

Three theories developed on the relationship between the board of directors and company performance: CEO duality, board independence, and board size. The results of the analysis of each facet of board characteristics and their effect on company performance are broken down below. The number one hypothesis establishes a connection between board size (BSIZ) and employer performance. The regression analysis results, displayed in Table 3, observe the relationship between board length (BSIZ) and the return on asset (ROA) version, revealing a substantial correlation (t = 2.634, p = 0.009) between board size and go back on belongings. These locating underscores the extensive effect of the board of administrators' size at the performance of Jordanian companies, suggesting that board length serves as a hallmark of a strong return on belongings. Similarly, the Return on Equity (ROE) model demonstrates a robust and fantastic correlation between board size and ROE (t = 2.796, p = zero.006). These outcomes endorse that, for Jordanian corporations, an accelerated board length contributes to a higher go back on fairness. These findings imply that large board sizes positively affect the Return on Equity (ROE) for Jordanian corporations. This means that companies with an additional range of board individuals tend to perform higher. The perception that massive boards carry out more effectively is supported through the high quality and good-sized affiliation between board length and ROE (Naseem et al., 2017). Moreover, the agency 's statement that a bigger board is horrific for company overall performance is empirically supported via several studies (e.g., Shah et al., 2013).

The findings of the regression look at show that board independence and Return on Assets (ROA) have a big and damaging association (t = -2.746, P = 0.007), as shown in Table 3. This result meets our predictions and suggests that a less self-reliant board's oversight feature may also have a widespread impact on commercial enterprise overall performance by increasing the effectiveness of monitoring and managing obligations (Makhlouf et al., 2017). Table 3 regression effects, which used the Return on Equity (ROE) version, display that there may be, alternatively, a widespread affiliation among board independence and ROE (t = -2.651, P = zero.009). This suggests that organizations with fewer directors who are impartial in their control generally do better than people with a higher percentage of unbiased directors. Table 3 shows a positive and negligible correlation with CEO dualism and ROA (t = 0.566, P = 0.572). The results demonstrate that the CEO's and chairman's collaboration does not improve the firm's success. Although there was a positive correlation between the CEO duality and the ROE model, it was not statistically significant (t=0.325, p=0.746). The findings support earlier studies, such as that by Wang et al. (2019), which found no connection between role duality and business success.

3. Conclusion

The purpose of this study was to examine the impact of the board of directors on the economic performance of Jordanian companies listed on the Amman stock exchange (ASE), addressing a study hole particularly relevant to small, open economies. We have used the ROA and ROE of firms performance and board size, board independence and CEO duality as board of directors indicators. Controlling for a typical set of financial factors, the effect of board of directors indicators was evaluated using a sample of 186 industrial corporations during the study period (2015–2020). The study has found that board size and independence had a substantial influence on financial performance. Based on the findings, the study recommends that the codes be evaluated on a regular basis and that corporations be instructed to examine corporate governance principles through legislation and regulations to encourage enterprises to follow these rules. Overall, our findings have demonstrated the significance of governance metrics for business performance and provide various recommendations for how firms might enhance their board efficiency and effectiveness. The study's shortcomings are as follows: The study only included industrial businesses listed on the Amman Stock Exchange, so future studies can be scaled. Second, the study did not adequately quantify the impact of macroeconomic conditions on firm financial performance, which is something that should be investigated further.

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