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ORIGINAL ARTICLE

The moderating role of organizational sub-sectors on the relationship between CEO duality and nonprofit performance

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Abstract

Although the chief executive officers (CEOs) are the primary figures in nonprofit organizations (NPOs), there is limited literature on the impact of their characteristics and roles on NPOs' performance, particularly the influence of CEO duality and its outcomes. This study investigates the correlation between CEO duality and NPO performance, with a specific focus on the moderating role of organizational sub-sectors. Organizational sub-sectors in this context refer to two types of NPOs: those operating in multiple sub-sectors and those operating in a single sub-sector. A total of 296 CEOs participated in the survey, resulting in a response rate of 67.51%. Using multiple regression analysis within SPSS, the study demonstrates that CEO duality enhances NPO performance and provides support for the proposed moderating role. Specifically, the study suggests that CEO duality has a more pronounced positive effect on NPOs operating in multiple sub-sectors compared to those with a single sub-sector. These findings are consistent with stewardship theory and hold both theoretical and practical implications for governance policies and strategic decision-making.

Keywords Nonprofit organizations · CEO duality · Performance · Stewardship theory · Organizational sub-sectors · Yemen

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1 Introduction

The concept of CEO duality, defined as the practice of an individual serving as both board chairman and CEO (Yoon, 2024), and its impact on the performance of NPOs, has been controversial for several years. This has drawn attention from academics, as duality gives CEOs the ability to pursue their interests at the expense of the NPOs' interests (Leblanc, 2020). CEO duality is widespread among NPOs (e.g., Wei, 2021; Beisland et al., 2019; Hasan et al., 2019; Berardi et al., 2016; Pham, 2015; Beard, 2012; Harris, 2011; Manderlier et al., 2009) and may be more pronounced in environments experiencing political crises (Afif, 2016). However, there has been minimal focus on testing the effect of CEO duality and its consequences in politically unstable environments.

The key factor of CEO duality in the governance and performance of NPOs is the notion of CEO power (Bruni-Bossio & Kaczur, 2022; Wei, 2021; Yoon, 2024). Two conflicting perspectives discuss CEO power resulting from duality: stewardship and agency perspectives. While stewardship advocates assume that CEOs will use this power to serve their NPOs' interests more vigorously, agency supporters argue that CEOs will use this power to serve their personal interests at the expense of the NPOs' interests (e.g., Galema et al., 2009, 2012; Hasan et al., 2019; Pham, 2015; Wei, 2021). This conflict between the two theories is valuable for boards to understand CEO duality as having both advantages and disadvantages, necessitating examination of both viewpoints before committing. It also provides a compelling incentive for CEO duality studies.

Although some researchers have recognized the critical role of CEOs and positioned them as the most powerful figures in the governance of NPOs (Jones, 2022; Wei, 2021; Galema et al., 2009; Heimovics et al., 1995), the examination of CEO duality as a source of power and its impact on NPOs' performance has been very limited. The essence of nonprofit governance lies in how power is distributed and exercised (Andersson & Renz, 2021), so our understanding of nonprofit governance remains incomplete without a nuanced comprehension of power and its consequences. Recent studies in multiple countries (e.g., Wei, 2021; Uyar et al., 2021; Garcia-Rodriguez et al., 2021; Hasan et al., 2019; Bellante et al., 2018; Berardi et al., 2016; Pham, 2015) on CEO duality and NPO performance show mixed findings. Furthermore, these studies have been conducted in relatively stable environments and have focused on specific nonprofit industries, such as hospitals, arts, colleges and universities, and microfinance institutions, utilizing various financial indicators of NPO performance.

This study represents an initial empirical investigation into the ramifications of CEO duality within Yemeni NPOs. Yemen ranks among the least developed nations globally and is currently embroiled in a severe humanitarian crisis due to ongoing conflict, with a pressing need for assistance among a majority of its citizens (World Bank, 2021, 2020; Bin-Nashwan, 2018). Given the minimal involvement of the Yemeni government, the role of NPOs assumes greater significance. Unlike their counterparts in other countries, Yemeni NPOs operate within a politically constrained environment with limited opportunities for resources, relying heavily on relationships cultivated by their leaders with foreign funding foundations and donors (Col-

burn, 2021; USAID, 2020). These circumstances have exacerbated the prevalence of CEO duality and heightened the influence wielded by CEOs (USAID, 2013, 2019, 2020). Consequently, investigating the consequences of CEO duality in politically unstable environments may offer valuable insights.

By investigating CEO duality as a proxy to measure CEO power in NPOs, this study seeks to contribute to the nonprofit literature by focusing on all nonprofit industries, as recommended by Mwenja and Lewis (2009), to provide a comprehensive overview of NPO performance. Nonprofit scholars have also suggested that performance measures in NPOs should not only revolve around financially related goals but should also be based on NPO achievements in accomplishing strategic objectives and, ultimately, their mission (Melis & Nawaz, 2023; Ndoro, 2012). This study seeks to extend the existing nonprofit literature by incorporating such recommendations.

Besides investigating CEO duality's effect on NPOs' performance, the study examines the moderating effect of NPO characteristics, specifically organizational sub-sectors. The moderating impact of organizational sub-sectors has been ignored in the nonprofit literature. This study argues that NPOs operating in multiple sub-sectors require a higher degree of decision making, especially in terms of short-term decisions, compared to NPOs with a single sub-sector. Power centralization provides CEOs with a clear direction, enabling them to make quicker decisions in highly uncertain situations (Papadakis, 2006). CEO duality offers the CEO unity of command and the ultimate autonomy to make timely decisions that serve the best interests of the organizations (e.g., Singh & Sharma, 2024; Ali et al., 2022; Büchner et al., 2014; Donaldson & Davis, 1991; Prybil et al., 2010). Consequently, the speed of decision-making is likely to increase when a single decision-maker possesses the power and other relevant resources needed to determine and implement a course of action in the best interests of the NPO. Therefore, the positive impact of CEO duality on performance is expected to be significantly greater for NPOs operating in multiple sub-sectors than for those with a single sub-sector.

2 Literature review on CEO duality

2.1 Governance theories

Two major competing perspectives on governance dominate the discussion of the CEO duality-performance relationship: stewardship and agency theory. These theories revolve around the benefits (unity of command) and costs (agency problems) associated with CEO duality. Agency theorists argue that CEO/chairperson duality is not the desired form for effective governance. The fundamental purpose of the board is to safeguard the organization's interests through a robust governance structure. Management involvement should not escalate to the point where it compromises this purpose (Williamson, 1985; Hsieh et al., 2008). According to this view, combining power and influence by giving CEOs a significant position on the board might exacerbate the agency problem (Singh & Sharma, 2024; Uyar et al., 2021). Thus, agency theorists contend that the effectiveness of the board's monitoring and control roles could be compromised if the CEO also serves as the chairperson (Donaldson &

Davis, 1991; Meme, 2012; Rechner & Dalton, 1991). This is because CEO duality poses a challenge to the board's ability to function as an effective monitor (Epstein & McFarlan, 2011).

Additionally, Jobome (2006) argued that nonprofit boards would be less effective in controlling the actions of CEOs with dual positions, as these CEOs are more likely to become entrenched. Berg and Smith (1978) also contended that CEOs with dual positions may select board members whose attitudes align with their own, potentially leading to actions that serve the CEO's interests, which may conflict with those of the NPO. Furthermore, agency theorists argued that organizations aim to ensure board independence and reduce agency costs by establishing a governance structure with separate positions for the board chairperson and CEO (Uyar et al., 2021; Naciti, 2019; Donaldson & Davis, 1991; Fama & Jensen, 1983a, b). Thus, from the agency perspective, CEO duality is expected to negatively influence NPO performance (Pham, 2015).

Stewardship theory has been proposed as a rival perspective to agency perspective (Sjöstrand & Svensson, 2022). Unlike agency theory, according to Caers et al. (2006), stewardship theory questions the assumption that the relationship between the principal (owner/founder) and agent (executive management) will consistently involve agency conflicts. Stewardship theorists argue that individuals are self-directed, seeking recognition, self-actualization, and social standing (Davis et al., 1997; Gelles, 2000; Zahra et al., 2008). According to this perspective, placing monitoring and control mechanisms with CEOs would discourage self-motivated individuals from being productive and proactive in maximizing the organization's interests (Pham, 2015). Thus, stewardship theory rejects the notion of a negative impact of CEO duality on NPO performance.

In addition, stewardship theorists emphasize that CEO duality provides the CEO with unity of command and ultimate autonomy to make timely decisions that serve the organization's best interests (e.g., Büchner et al., 2014; Donaldson & Davis, 1991; Prybil et al., 2010). For instance, they argue that CEO duality gives the CEO a clear direction and enables quick responses to critical external events for the organization's success. Furthermore, stewardship scholars highlight that a dual leadership structure may enhance performance by allowing CEOs to implement consistent strategies, exert complete power over their organizations, foster better communication with the board, and reduce information costs transferred between the board and executives (Desai et al., 2003; Anderson & Anthony, 1986; Brickley et al., 1997; Stoeberl & Sherony, 1985). Therefore, stewardship theory posits a positive influence of CEO duality on organization's performance.

2.2 Empirical evidence and hypotheses

From an academic perspective, the CEO duality's influence on NPO performance has been a subject of controversy. However, empirical evidence is largely inconclusive, offering mixed findings. Previous nonprofit studies (e.g., Wei, 2021; Hasan et al., 2019; Bellante et al., 2018) have partially supported the arguments of stewardship theory, with no support for agency theory. On the contrary, other studies have concluded that CEO duality has no significant effect on nonprofit performance (e.g.,

Uyar et al., 2021; Garcia-Rodriguez et al., 2021; Berardi et al., 2016; Pham, 2015). Most of these earlier studies focused on specific nonprofit industries (such as hospitals, arts, colleges and universities, and microfinance institutions) and utilized various financial indicators to assess NPO performance.

In line with stewardship theory, several empirical studies on nonprofits (Wei, 2021; Hasan et al., 2019; Bellante et al., 2018; Beard, 2012; Galema et al., 2012) have reported a positive influence of CEO duality on financial performance indicators. These indicators encompass total revenues, public support, return on assets, operational costs, and net income. Conversely, other studies (Uyar et al., 2021; Garcia-Rodriguez et al., 2021; Berardi et al., 2016; Pham, 2015; Harris, 2011) have found no significant effect of CEO duality on financial metrics such as total margin, operating margin, free cash flow, program expenses, revenues from the public, and total revenues.

Given the altruistic principles NPOs are established upon (Lambert & Lapsley, 2023), scholars contend that nonprofit CEOs exhibit traits of good stewardship, trustworthiness, unselfishness, and altruism (Ugur & Heermans, 2024; Melis & Nawaz, 2023; Ndoro, 2012; Walters, 2020; Wilson, 2016). Ugur and Heermans (2024) and Melis and Nawaz 2023) argued that the altruism exhibited by CEOs can potentially influence stakeholders' perceptions, laying the foundation for instigating pivotal motivational behaviors that foster an ethical organizational climate and drive favorable outcomes. Furthermore, the capacity of altruistic CEOs to raise funds may be socially enhanced, as individuals often associate with others who share similar values. Researchers have discovered evidence supporting the positive impact of CEOs' altruistic tendencies on donations and the performance of NPOs (Melis & Nawaz, 2023; Kim & Han, 2020). Although studies on nonprofits in the context of Yemen are limited, Afif (2016) also supported the altruistic nature of nonprofit CEOs. His findings indicated no significant influence of CEO tenure and CEO duality on CEO pay. Consequently, Afif (2016) concluded that nonprofit CEOs do not seem to exploit their longer tenure and dual role to maximize personal interests, aligning with the core tenets of stewardship theory. In this context:

H1 The performance of NPOs (NPOs with multiple and single sub-sectors) is positively correlated with CEO duality.

NPOs operate in diverse sub-sectors, encompassing education, religious charities, health, development, social services and relief, human rights, charitable works, and more. Many NPOs function across multiple sub-sectors, offering a variety of goods and services (Sepulcri et al., 2023; Laurett et al., 2020; Pressgrove & Waters, 2019; Afif, 2016). However, the operation within a single or multiple domains (organizational sub-sectors) introduces additional complexities (Park, 2020; Bryan, 2019; Bradshaw, 2009; De Andrés-Alonso et al., 2009). This study argues that NPOs operating in multiple sub-sectors tend to have more complex operations compared to those focused on a single sub-sector. Thibault et al. (1993), for instance, confirmed that NPOs with multiple programs face complications related to funding, the size of their client base, support group appeal, and volunteer engagement. In contrast, NPOs with fewer programs tend to exhibit simpler organizational structures accompanied by lower levels of formalization (Cornforth & Simpson, 2002; Stone & Wood, 1997). Decision-making in such organizations is likely to be centralized during board meet-

ings, where control is easily achieved due to the manageable number of programs (Tucker et al., 2005). Consequently, NPOs operating in multiple sub-sectors necessitate a higher degree of decision-making, particularly for short-term decisions, compared to NPOs focused on a single sub-sector (Thibault et al., 1993).

The heightened decision-making requirements in NPOs operating in various sub-sectors necessitate limited centralization of power and increased participation in decision-making to expedite the process. Power centralization provides CEOs with a clear direction and enables swift decision-making in highly uncertain situations (Lachance & Parent, 2024; Janssen & Van der Voort, 2020; Büchner et al., 2014; Donaldson & Davis, 1991). This aligns with the stewardship theory argument concerning CEO duality. As discussed earlier, stewardship theorists highlight that CEO duality furnishes the CEO with unity of command and ultimate autonomy to make timely decisions in the best interests of the organizations (e.g., Singh & Sharma, 2024; Hammad, 2023; Ahmad, 2023; Ketokivi & Mahoney, 2022; Pham, 2015; Büchner et al., 2014; Donaldson & Davis, 1991). Therefore, a positive effect of CEO duality on performance may be significantly more pronounced for NPOs operating in multiple sub-sectors than those with a single sub-sector.

Another crucial point for expediting decision-making is the argument that dissonance and disagreements among decision-makers (board members) can disrupt the decision-making process and impede the pace of decisions (Renz et al., 2020; Zorn et al., 2020; Trujillo, 2018; Sawadogo-Lewis et al., 2018; Mintzberg et al., 1976; Eisenhardt, 1989). Aggarwal et al. (2012) discovered that the number of members on an NPO's board increases with the number of its programs, a logical response to organizational complexity. However, a larger board also introduces costs in the form of heightened disagreements and dissonance among members (Renz et al., 2020). This issue is likely to escalate with an increasing number of board members, as indicated by previous nonprofit studies. For instance, Uyar et al. (2021) and Koufopoulos et al. (2009) found that larger nonprofit boards result in reduced effectiveness. Similarly, Pucheta-Martínez and Gallego-Álvarez (2019) and O'Regan and Oster (2005) concluded that board size is negatively correlated with the monitoring role of the board. In NPOs operating in multiple sub-sectors, it is plausible that the speed of decision-making increases when a single decision-maker possesses the power and necessary resources to determine and implement a course of action. In line with this:

H2 The positive impact of CEO duality on performance is more pronounced for NPOs operating in multiple sub-sectors compared to those with a single sub-sector.

While our primary focus is on the direct impacts of CEO duality on the performance of all NPOs operating in a single or various sub-sectors, it is worthwhile to examine such effects within each type of NPO to confirm the results of the second hypothesis. This is particularly noteworthy as our study could be the first of its kind in Yemen to investigate the CEO duality-performance relationship. A comparative investigation across both types could offer valuable insights into the potential disparity between them, as governance research can benefit from examining diverse perspectives within distinct institutional settings (Aguilera et al., 2008). In such an investigation, the moderating impact of NPO type (H2) implies that CEO duality has a positive influence on the performance of NPOs operating in various sub-sectors and

a non-significant or less positive influence on the performance of NPOs with a single sub-sector (Guillet et al., 2013). Thus, we hypothesize that:

H3 CEO duality has a positive impact on the performance of NPOs with multiple sub-sectors.

H4 CEO duality has a non-significant or less positive impact on the performance of NPOs with a single sub-sector, in comparison with NPOs operating in multiple sub-sectors.

3 Methodology

3.1 Sample and data collection

There are approximately 8,472 registered NPOs throughout Yemen in 2021. The current political crisis and resource constraints have made it difficult, if not impossible, to cover all 22 governorates in Yemen. Thus, five governorates were strategically chosen to construct the sample (namely: Aden, Sana'a, Al Hudaydah, Ta'izz, and Hadhramout), as each governorate has representative and distinctive characteristics regarding geographic locations and diversity of civic activity (World Bank, 2020, 2013). Following the guidelines of Israel (2009) and Krejcie and Morgan (1970), the appropriate sample size is 477. The data were collected using a web-based questionnaire distributed to CEOs of officially registered NPOs.

The survey instrument was designed based on previous literature (e.g., Wei, 2021; Hasan et al., 2019; Brown, 2005). The instrument underwent pretesting with five CEOs, and subsequent revisions were made based on their feedback. All chosen CEOs were extended voluntary invitations to participate in the study, and upon their consent, a link to the web-based questionnaire was sent to them. Recognizing the sensitivity of the study topic in Yemen, complete anonymity was ensured for participants and their NPOs to alleviate concerns and foster a higher response rate. A total of 296 analyzable questionnaires were collected, yielding a response rate of 62%.

Among the 296 CEOs, two-thirds of the respondents (64%) were over 40 years of age. Approximately 60% of the CEOs had more than ten years of working experience and a bachelor's degree or higher. This indicates that the respondents possessed appropriate experience, knowledge, and educational qualifications to respond to the questionnaire and provide insights into their NPOs. The sample characteristics also indicated that most NPOs operate in more than one sub-sector. The majority operated in education (165 NPOs), development (140 NPOs), and healthcare (123 NPOs). Additionally, 52, 36, and 3 NPOs operated in social services and relief, religion, and human rights, respectively.

3.2 Measures

The performance of NPOs, the dependent variable, was measured using a five-item modified scale drawn from the work of Brown (2005). These items assess the extent to which NPOs have successfully achieved their missions, as NPOs' success is defined by their ability to fulfill missions and objectives (Wei, 2021). The items were mea-

sured using a 5-point Likert scale, with 1 being strongly disagree and 5 being strongly agree. Table 1 presents the five items that achieved an acceptable Cronbach's alpha, indicating their internal consistency reliability (Onwuegbuzie & Daniel, 2002). CEO duality is the independent variable in this study, represented as a dummy variable that equals 1 if the CEO is also the board chair and 0 otherwise (Wei, 2021; Hasan et al., 2019; Berardi et al., 2016). The moderating variable is organizational sub-sectors (OS) in which the NPO operates. Organizational sub-sectors in this context refer to two types of NPOs: those operating in multiple sub-sectors and those operating in a single sub-sector. The study assigns 1 for NPOs operating in multiple sub-sectors and 0 for NPOs operating in a single sub-sector. The study incorporates an interaction term (Duality×OS) of the independent variable and the moderator variable in the main model to examine the moderating effect of organizational sub-sectors.

Given that numerous factors may affect the performance of NPOs and it is impractical to incorporate all of them, the study seeks to be as comprehensive as possible by introducing control variables that seem to be related to performance at three different levels: the organizational level (organizational attributes), the board level (board characteristics), and the individual level (CEO characteristics).

At the organizational level, the study includes two control variables: NPO size and NPO age. NPO size is measured by the number of employees, while NPO age is calculated based on the number of years since the NPO was incorporated. Small and young NPOs face obstacles that large and older NPOs do not have to endure (Hou & Lampe, 2015; Hodge, 2006). The relative size of employees supporting the NPO is important because it may indicate the stability of the NPO. Generally, an NPO with more employees will be organized in a way that enables successful management of a larger group. Additionally, an NPO with more employees will have access to more intellectual resources compared to an NPO with fewer employees. Concerning the age of the NPO, it is argued that developing resource streams for newly established NPOs may be the organization's primary focus, frequently at the expense of providing services. Attracting highly qualified board members for relatively young NPOs can also be challenging, as potential members may hesitate to serve on the board of a less-established and younger NPO (Crittenden, 2000; Bradshaw et al., 1992; Zahra & Pearce, 1989).

Table 1 Reliability analysis results (N=296)

Variable	Items	Code	Cronbach's alpha
NPO performance	"The majority of clients (customers) served experienced marked improvements as a result of the programs and services provided by the organization".	NP 1	0.862
	"The number of programs and services offered by the organization increased over the last year".	NP 2	
	"The quality of programs and services offered by the organization has improved".	NP 3	
	"Generally, clients and consumers are satisfied with the programs and services provided by the organization".	NP 4	
	"Overall, the organization has been successful in meeting its objectives".	NP 5	

Board size is also involved as a control variable to consider potential influences of board attributes, assessed by the number of board members. Previous nonprofit studies have yielded mixed findings regarding the impact of board size on NPOs' performance. For example, Callen et al. (2010) and De Andrés-Alonso et al. (2009) suggested that a larger board size is less effective in monitoring CEOs and NPOs, while others (Olson, 2000; Callen et al., 2010; Siciliano, 1996) found that a larger board size increases NPOs' donations.

Finally, we include three factors to control for the potential influences of CEO characteristics: CEO's gender, tenure, and founder status. CEO gender is measured as a dummy variable, with 1 indicating male and 0 indicating female. In male-dominated societies such as Yemen, CEO gender is expected to influence NPOs' performance. CEO tenure represents the number of years the CEO has served in the current NPO position. Since the years of CEO's service in the position offer the CEO the power and time to influence the board, CEO tenure is expected to positively affect duality (Hill & Phan, 1991). Similarly, duality can be influenced by CEO founder status, as it increases CEO power (Sheikh, 2019). CEO founder status is measured as a dummy variable that equals 1 if the CEO is the founder of the NPO and 0 otherwise.

3.3 Analyses

Before testing the hypotheses, we screened and prepared the data. To do this, several diagnostic tests were conducted, including tests for reliability, normality, common method variance (CMV), multicollinearity, and non-response bias. We employed multiple regression analysis to evaluate the hypotheses. Conducting this analysis involved four models. Control variables, CEO duality, and organizational sub-sectors were entered into the first model, followed by the second model with the interaction term of CEO duality and organizational sub-sectors. The last two models explore the effects of CEO duality on NPOs' performance, specifically within each NPO type. These two models encompass two separate sub-datasets: (1) NPOs operating in multiple sub-sectors only (third model) and (2) NPOs with a single sub-sector only (fourth model). All these tests were conducted using SPSS software, version 26.

4 Findings

4.1 Descriptive analysis and screening data

Firstly, the study conducts descriptive statistics of the data. Table 2 presents the descriptive statistics for three continuous variables: NPO performance, board size, and CEO tenure. The overall mean score of NPO performance is 3.01, which is not very high, indicating that nonprofit CEOs do not engage in self-bias. This result

Table 2 Descriptive statistics of continuous variables (N=296)

Variable	Min	Max	Mean	Std. Dev
NPO performance	1.20	5.00	3.01	1.13
Board size	3	13	6.33	2.82
CEO tenure	1	12	3.96	2.18

also suggests that most participants believe that their NPOs perform slightly well. The average board size of NPOs is approximately 6 members, ranging from 3 to 13 members. This suggests that NPOs in Yemen adhere to legal regulations, as the law mandates a minimum board size of three members. CEO tenure ranges from 1 to 12 years, with an average of approximately 4 years. This implies that CEOs typically possess accumulated knowledge and a career background related to their organizations. However, the minimum CEO tenure of 1 year indicates the presence of some newly appointed Yemeni CEOs. On the other hand, the maximum CEO tenure of 12 years suggests that some Yemeni CEOs are more likely to become entrenched in their positions.

The study also performs a frequency analysis for other categorical variables, as shown in Table 3. Starting with the size of NPOs, the majority fall into the small and medium-sized categories, accounting for 33.78% and 34.12%, respectively. Large NPOs make up 16.90%, while micro-organizations constitute 15.20%. The vast majority of NPOs (91.22%) are over 5 years old, indicating maturity and substantial experience that offers valuable support for empirical investigation. Additionally, our sample include 170 NPOs operating in multiple sub-sectors and 126 NPOs operating in a single sub-sector. For CEO characteristics, the majority of CEOs are male (94.26%), not founders of their NPOs (59.12%), and also serve as the board chair (53.72%). This suggests that male board chairs predominate in Yemeni NPOs, which is unsurprising in societies with a male-dominated culture, such as Yemen. The high rate of CEO duality (53.72%) in Yemeni NPOs is also not surprising. USAID (2013, 2019, 2020) reported that few Yemeni NPOs have well-established management structures with a clear separation of duties between executive management and board chairman.

Next, we perform several diagnostic tests to screen and prepare the data for the main analysis. The data are normally distributed, since all variables exhibit kurtosis

Table 3 Descriptive statistics for categorical variables ($N=296$)

Variables	Categories	*N*	%
NPO size (number of employees)	Less than 4	45	15.20
	4–9	100	33.78
	10–19	101	34.12
	More than 19	50	16.90
NPO age (Years)	Less than 6	26	8.78
	6–10	106	35.81
	11–15	72	24.32
	16–20	70	23.65
	More than 20	22	7.44
CEO gender	Male	279	94.26
	Female	17	5.74
CEO founder status	CEO is founder	121	40.88
	CEO is not founder	175	59.12
CEO duality	CEO is also the board chair	159	53.72
	CEO is not the board chair	137	46.28
Organizational sub-sectors	NPOs operating in one sub-sector	126	42.57
	NPOs operating in multiple sub-sectors	170	57.43

values within the acceptable range of ±3 (Kline, 2016) and skewness values within the ±10 (Kline, 1998). A t-test also indicates that non-response bias is not a concern, with p-values exceeding 0.05 (Pallant, 2013). Additionally, multicollinearity is not an issue in this study, as the Tolerance values for all variables exceed 0.10, and the VIF values are less than 10 (Hair et al., 2014; Sekaran & Bougie, 2013). For the common method variance test, the study uses Harman's single-factor analysis. The results reveal that the largest factor accounted for only 36.75% of the total variance, which is less than the recommended threshold of 50% (Podsakoff et al., 2003). Finally, the study's intercorrelation coefficients, shown in Table 4, reveal significant correlations among variables, supporting further investigation and progression to the next stage of data analysis.

4.2 Main analysis and discussion

Table 5 presents the multiple regression findings for all models. The F-values are significant for all models ($p<0.01$), indicating the significance of the model fits. R-squared values are also acceptable for all models (Hair et al., 2016). The inclusion of the interaction term of CEO duality and organizational sub-sectors in model 2 raises the R^2 from 57.8 to 58.4%, signifying a statistically significant increase in explanatory power. Although this change in R^2 as a result of the interaction term is small, it gives a clear sign of the moderating effect played by organizational sub-sectors (Hair et al., 2006). In short, the regression results support our hypotheses.

Our first hypothesis predicts a positive impact of CEO duality on nonprofit performance. As presented in model 1 of Table 5, CEO duality's coefficient is significantly positive at the 0.01 level ($\beta=330$, $t=3.314$, $p=0.001$). Thus, hypothesis 1 is supported. This result aligns with the altruistic nature of nonprofit CEOs (Ugur & Heermans, 2024; Lambert & Lapsley, 2023; Ndoro, 2012; Walters, 2020), prior nonprofit literature (e.g., Wei, 2021; Hasan et al., 2019; Bellante et al., 2018; Beard, 2012; Galema et al., 2012), and the stewardship theory argument. Under this theory, CEO

Table 4 Pearson correlation ($N=296$)[a]

Variables		1	2	3	4	5	6	7	8	9	10
1	NPOPER	1									
2	Duality	0.430**	1								
3	OS	-0.070	0.037	1							
4	Duality×OS	0.297**	0.633**	0.587**	1						
5	NPOSIZE	0.622**	0.274**	0.025	0.234**	1					
6	NPOAGE	0.676**	0.378**	-0.048	0.236**	0.645**	1				
7	BOSIZE	0.557**	0.452**	-0.041	0.280**	0.408**	0.539**	1			
8	CEOTEN	0.168**	0.119*	0.056	0.109	0.142*	0.201**	0.183**	1		
9	CEOGEN	-0.008	-0.120*	-0.140*	-0.106	-0.030	-0.059	-0.019	-0.102	1	
10	FOUNDER	0.060	0.083	0.049	0.097	0.133*	0.075	0.031	0.107	0.031	1

* and ** represent significance levels of 0.05 and 0.01, respectively

[a] NPOPER represents a NPOs' performance; Duality is CEO duality; OS represents organizational sub-sectors; Duality×OS is an interaction term of CEO duality and organizational sub-sectors; NPOSIZE represents NPO size; NPOAGE is NPO age; BOSIZE is board size; CEOTEN is CEO tenure; CEOGEN is CEO gender; FOUNDER is founder status of CEO

Table 5 Models predicting NPO performance[a]

Significant level: $P<0.01$***, $P<0.05$**, $P<0.10$*

[a] Duality is CEO duality; OS represents organizational sub-sectors; Duality×OS is an interaction term of CEO duality and organizational sub-sectors; NPOSIZE represents NPO size; NPOAGE is NPO age; BOSIZE is board size; CEOTEN is CEO tenure; CEOGEN is CEO gender; FOUNDER is founder status of CEO

Variables	Model 1	Model 2	Model 3	Model 4
Duality	3.314***	0.948	3.535***	1.304
OS	-1.397	-2.436**		
Duality×OS		2.022**		
NPOSIZE	5.868***	5.736***	4.285***	4.094***
NPOAGE	5.794***	5.825***	6.551***	1.854*
BOSIZE	3.935***	3.916***	3.246***	2.060**
CEOTEN	0.431	0.433	-0.845	1.263
CEOGEN	0.925	0.749	-0.018	1.116
FOUNDER	-0.561	-0.606	-0.516	-0.424
R^2	0.578	0.584	0.687	0.456
Adjusted R^2	0.566	0.571	0.673	0.424
F. Value	49.15***	44.58***	50.70***	14.13***
N	296	296	170	126

duality provides the CEO with unified command and ultimate autonomy for timely decisions, fostering organizational success by offering clear direction and enabling swift responses to external events (e.g., Hammad, 2023; Büchner et al., 2014; Donaldson & Davis, 1991; Prybil et al., 2010). Consequently, the CEO taking on the board chair position in NPOs seems like a wise choice.

The study next examines the second hypothesis concerning the moderating influence of organizational sub-sectors. Specifically, it posits that NPOs operating in multiple sub-sectors derive greater benefits from CEO duality compared to those with a single sub-sector. The findings of model 2 confirm this hypothesis, showing that the coefficient of the interaction term is significantly positive at the 0.05 level ($\beta=0.355$, $t=2.022$, $p=0.044$). This result aligns with a synthesis of arguments from previous literature (e.g., Sjöstrand & Svensson, 2022; Njora, 2021; Thibault et al., 1993; Eisenhardt, 1989; Mintzberg et al., 1976) and stewardship theory concerning the importance of decision-making processes. Given these arguments, CEO duality enhances decision speed by providing clear direction and facilitating swift responses to challenges, particularly encountered by NPOs with diverse sub-sectors.

The main aim of the last two hypotheses (H3 and H4) is to uncover valuable insights and confirm the moderating effect of organizational sub-sectors, as tested in the second hypothesis. Focusing on a sample of NPOs operating in multiple sub-sectors ($N=170$), the third hypothesis tests the influence of CEO duality on NPO performance. The findings presented in model 3 indicate a positive correlation between CEO duality and the performance of NPOs with multiple sub-sectors at the 0.01 significance level ($\beta=0.427$, $t=3.535$, $p=0.001$). The CEO duality-performance relationship was also examined in a relatively small sample of 126 NPOs operating in a single sub-sector (fourth hypothesis). The results, as shown in model 4, reveal a non-significant relationship ($\beta=0.217$, $t=1.304$, $p=0.195$). These results within each NPO type confirm the outcome of our second hypothesis, indicating the presence of a moderating effect. NPOs operating in multiple sub-sectors demonstrate improved performance when CEOs assume dual roles, whereas NPOs operating in a single sub-sector exhibit consistent performance irrespective of CEOs holding dual roles. These findings distinctly indicate that the predominantly positive impact of CEO duality

on NPOs' performance, as revealed in this study, stems primarily from NPOs with multiple sub-sectors, rather than those with a single sub-sector.

The results may substantiate our study's proposition that CEOs with a dual structure possess greater freedom and power to make critical decisions, particularly in the short term, thereby exerting a more positive influence on the performance of NPOs operating in multiple sub-sectors compared to those with a single sub-sector. This indicates that the varying levels of operational complexity in the two types of NPOs play a significant and influential role in NPOs' performance concerning CEO duality. CEOs endowed with increased freedom and power facilitate effective and swift short-term decision-making, a quality particularly crucial for the highly complex operational systems of NPOs with multiple sub-sectors. Moreover, by leveraging the dual roles, CEOs of NPOs operating in multiple sub-sectors can adeptly address challenges in their distinct environments with efficiency (Remington, 2023; Coule & Bain, 2021). This viewpoint finds support in the arguments of power centralization and stewardship theory, emphasizing the acceleration of decision-making. Decision speed amplifies when a singular decision-maker possesses the power and other pertinent resources necessary to formulate and implement a course of action (Bruni-Bossio & Kaczur, 2022; Büchner et al., 2014; Donaldson & Davis, 1991; Prybil et al., 2010).

In contrast, our study reveals a statistically non-significant effect of CEO duality on the performance of NPOs operating in a single sub-sector. This implies that the arguments of power centralization and stewardship theory do not find support in NPOs operating in a single sub-sector. This can be attributed to the fact that NPOs operating in a single sub-sector offer limited services compared to those with multiple sub-sectors. This suggests that operational complexity does not necessarily demand singular leadership for efficiency (Park, 2020; Bryan, 2019; De Andrés-Alonso et al., 2009). The pace of change and environmental instability resulting from the current political crisis in Yemen could provide additional explanations for our findings Colburn, 2021). These circumstances often lead to frequent shifts in customer demands and operational practices (Kirby, 2020). Consequently, a singular decision-maker could hold a more prominent role in the diverse operations typical of NPOs operating in multiple sub-sectors compared to those with a single sub-sector (Park, 2020; Bryan, 2019).

The findings of our study align with expectations within the Yemeni context, supporting the altruistic nature upon which NPOs are founded. Given Yemen's traditional Islamic governance, altruism emerges as a deeply ingrained personal characteristic, holding significant relevance in society (Zarghi & Bolghan-Abadi, 2021). The Yemeni social, cultural, and religious milieu fosters altruistic behavior, with Islamic teachings regarding altruism emphasizing sincerity of faith (Al-Ghazali, 2018). An altruistic CEO, viewing altruism as an expression of faith, may also be an active philanthropist (Lambarraa & Riener, 2015). Consequently, this CEO's personal disposition may manifest in genuine concern for the NPO's philanthropic mission and a commitment to effectively pursue it by managing its resources efficiently and selflessly. Moreover, Islam emphasizes a heightened sense of accountability, rooted in principles of trust, responsibility, and vicegerency (Rakhmat, 2022). Human beings, from Islamic perspective, are considered vicegerents of Allah on earth, entrusted

with the welfare of their families and society as an act of worship (ibadah). This sense of accountability may inspire CEOs to embody qualities such as good stewardship, trustworthiness, unselfishness, and altruism (Ugur & Heermans, 2024; Melis & Nawaz, 2023). Consequently, Yemeni CEOs appear unlikely to exploit their power, including their dual roles, to further personal interests.

5 Conclusion, implications, limitations and future research

While some researchers have acknowledged the crucial role of CEOs, positioning them as the most powerful figures in the governance of NPOs (Jones, 2022; Wei, 2021; Galema et al., 2009; Heimovics et al., 1995), the exploration of CEO duality as a source of power and its impact on NPOs' performance has been very limited. Given the diverse missions of NPOs leading to varied organizational structures influencing governance approaches (Hallock, 2002), this study represents a vital initial step in investigating the CEO duality-performance relationship, particularly moderated by specific NPO characteristics, specifically organizational sectors. The research findings indicate that CEO duality positively influences the NPO performance. Additionally, the study provides evidence for the moderating effect of organizational sub-sectors, revealing that the beneficial impact of CEO duality is more significant in NPOs that function across multiple sub-sectors compared to those confined to a single sub-sector.

The present study holds several noteworthy implications. For theoretical implications, our research contributes significantly to the theoretical understanding of nonprofit governance, particularly in nations with underdeveloped governance structures like Yemen. Specifically, this study validates the relevance of stewardship theory and broadens its application in the context of CEO duality research. The findings indicate that CEO duality positively influences NPO performance. Even when considering organizational sub-sectors as moderators, the results still tacitly support stewardship theory, highlighting the unique characteristics of the nonprofit sector and the specific types of NPOs. This is based on industry-specific arguments that emphasize the importance of short-term decision-making (Remington, 2023; Coule & Bain, 2021). Additionally, the research bolsters the case for CEO duality as a strategic choice, challenging those who oppose this viewpoint to provide contrary evidence. In terms of practical implications, nonprofit founders can certainly take the findings into account when defining the roles of CEOs on boards of trustees. The results suggest that the decisions of nonprofit founders should factor in whether their NPOs operate in multiple sub-sectors or a single sub-sector. For instance, nonprofit founders might consider assigning CEOs dual roles for NPOs operating in multiple sub-sectors, but not necessarily for those in a single sub-sector. Moreover, these findings may offer valuable insights to CEOs in their decision-making processes when considering whether to accept or decline the position of board chair.

Several limitations in our study merit attention. Firstly, the study sample consists of NPOs in Yemen, a country with a strong Muslim religious background. Therefore, careful interpretation is necessary when generalizing the findings to other contexts. Secondly, our study did not consider the moderating influence of certain crucial orga-

nizational characteristics, such as NPO size and age. These factors may potentially act as confounding variables between CEO duality and NPO performance. Future research could enhance the model by including these factors. Finally, this study represents an initial investigation into nonprofit governance in Yemen. To validate our findings, further research is necessary in similar managerial systems and contexts. Comparative studies employing various methodologies could provide valuable insights, as examining diverse perspectives within distinct institutional settings can significantly enrich governance research.

Author contributions Ameen Bin Afif, Dr. Zuaini Ishak, and Dr. Norfaiezah Sawandi were involved in the conception and design of this paper. Ameen Bin Afif performed the analysis and interpretation of the data. All authors contributed to drafting the paper. Dr. Zuaini Ishak and Dr. Norfaiezah Sawandi critically revised the paper. All authors participated in discussions and contributed to the final approval of the manuscript. They all agree to be accountable for all aspects of the work.

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Data availability The participants of this study did not give written consent for their data to be shared publicly, so due to the sensitive nature of the research supporting data is not available. However, the questionnaire used in this study is available from the corresponding author, Ameen Bin Afif, upon reasonable request.

Declarations

Conflict of interest No potential conflict of interest.

References

Afif, A. A. A. (2016). *Determinants of CEO pay: An examination of the Hadrami charitable foundations*. Universiti Utara Malaysia.

Aggarwal, R. K., Evans, M. E., & Nanda, D. (2012). Nonprofit boards: Size, performance and managerial incentives. *Journal of Accounting and Economics*, *53*(1), 466–487.

Aguilera, R. V., Filatotchev, I., Gospel, H., & Jackson, G. (2008). An organizational approach to comparative corporate governance: Costs, contingencies, and complementarities. *Organization Science*, *19*(3), 475–492.

Ahmad, M. I. (2023, January). The Sustainability of State-Owned Power Utility Company and the Role of Board of Directors. In *2023 IEEE International Conference on Emerging Trends in Engineering, Sciences and Technology (ICES&T)* (pp. 1–6). IEEE.

Al-Ghazali, M. (2018). *Darkness from the West*. Nahdet Misr Publishing House.

Ali, S., Naseem, M. A., Jiang, J., Rehman, R. U., Malik, F., & Ahmad, M. I. (2022). How and when CEO duality matter? Case of a developing economy. *Sage Open*, *12*(3), 21582440221116113.

Anderson, C. A., & Anthony, R. N. (1986). *The New Corporate directors*. Wiley.

Andersson, F. O., & Renz, D. O. (2021). Who really governs? Nonprofit governance, stakeholder theory and the dominant coalition perspective. *Research handbook on nonprofit governance* (pp. 196–219). Edward Elgar Publishing.

Beard, A. C. (2012). *No money, no mission'—financial performance, leadership structure and budgeting in nonprofit performing arts organizations*. New York University.

Beisland, L. A., Ndaki, P., D., & Mersland, R. (2019). Influence of ownership type and CEO power on residual loss: Evidence from the global microfinance industry. *Nonprofit and Voluntary Sector Quarterly*, *48*(5), 998–1022.

Bellante, G., Berardi, L., Machold, S., Nissi, E., & Rea, M. A. (2018). Accountability, governance and performance in UK charities. *International Journal of Business Performance Management*, *19*(1), 55–74.

Berardi, L., Rea, M. A., & Bellante, G. (2016). How board and ceo characteristics can affect Italian and Canadian nonprofit financial performance. *Governance and performance in public and non-profit organizations* (Vol. 5, pp. 131–157). Emerald Group Publishing Limited.

Berg, S. V., & Smith, S. K. (1978). CEO and board chairman: A quantitative study of dual vs. unitary board leadership. *Directors and Boards*, *3*(1), 34–39.

Bin-Nashwan, S. A. (2018). The Role of Non-governmental Organizations in the Reduction of Poverty: Case of NAHD Developmental Foundation. In *11th Annual Poverty and Social Protection Conference (9–11 March)* (pp. 57–66).

Bradshaw, P. (2009). A contingency approach to nonprofit governance. *Nonprofit Management and Leadership*, *20*(1), 61–81.

Bradshaw, P., Murray, V., & Wolpin, J. (1992). Do nonprofit boards make a difference? An exploration of the relationships among board structure, process, and effectiveness. *Nonprofit and Voluntary Sector Quarterly*, *21*(3), 227–249.

Brickley, J. A., Coles, J. L., & Jarrell, G. (1997). Leadership structure: Separating the CEO and chairman of the board. *Journal of Corporate Finance*, *3*(3), 189–220.

Brown. (2005). Exploring the association between board and organizational performance in nonprofit organizations. *Nonprofit Management and Leadership*, *15*(3), 317–339.

Bruni-Bossio, V., & Kaczur, M. (2022). The power-structure model of non-profit governance. *Corporate Governance: An International Review*, *30*(4), 442–460.

Bryan, T. K. (2019). Toward a contingency model for the relationship between capacity and effectiveness in nonprofit organizations. *Nonprofit and Voluntary Sector Quarterly*, *48*(4), 885–897.

Büchner, V. A., Schreyögg, J., & Schultz, C. (2014). The impact of the board's strategy-setting role on board-management relations and hospital performance. *Health care Management Review*, *39*(4), 305–317.

Caers, R., Bois, C., Jegers, M., Gieter, S., Schepers, C., & Pepermans, R. (2006). Principal-agent relationships on the stewardship-agency axis. *Nonprofit Management and Leadership*, *17*(1), 25–47.

Callen, J. L., Klein, A., & Tinkelman, D. (2010). The contextual impact of nonprofit board composition and structure on organizational performance: Agency and resource dependence perspectives. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, *21*(1), 101–125.

Colburn, M. (2021). A New Path Forward: Empowering a Leadership Role for Yemeni Civil Society. Yemen: *Sana'a Center For Strategic Studies*. https://sanaacenter.org/publications/main-publications/13021.

Cornforth, C., & Simpson, C. (2002). Change and continuity in the governance of nonprofit organizations in the United Kingdom. *Nonprofit Management & Leadership*, *12*(4), 451–470.

Coule, T., & Bain, C. (2021). *Organizing logics, nonprofit management and change: Rethinking power, persuasion and authority*. Routledge.

Crittenden, W. F. (2000). Spinning straw into gold: The tenuous strategy, funding, and financial performance linkage [Electronic version]. *Nonprofit and Voluntary Sector Quarterly*, *29*(1), 164–182.

Davis, Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management Review*, *22*(1), 20–47.

De Andrés-Alonso, P., Azofra-Palenzuela, V., & Romero-Merino, M. E. (2009). Determinants of nonprofit board size and composition: The case of Spanish foundations. *Nonprofit and Voluntary Sector Quarterly*, *38*(5), 784–809.

Desai, A., Kroll, M., & Wright, P. (2003). CEO duality, board monitoring, and acquisition performance: A test of competing theories. *Journal of Business Strategies*, *20*(2), 137–156.

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). Making fast strategic decisions in high-velocity environments. *Academy of Management Journal*, *32*(3), 543–576.

Epstein, M. J., & McFarlan, F. W. (2011). *Joining a nonprofit board: What you need to know*. Wiley.

Fama, E. F., & Jensen, M. C. (1983a). Agency problems and residual claims. *The Journal of law and Economics*, *26*(2), 327–349.

Fama, E. F., & Jensen, M. C. (1983b). Separation of ownership and control. *The Journal of law and Economics*, *26*(2), 301–325.

Galema, R., Lensink, R., & Mersland, R. (2009). Do Powerful CEOs have an impact on Microfinance Performance? *Available at SSRN 1441985*.

Galema, R., Lensink, R., & Mersland, R. (2012). Do powerful CEOs determine microfinance performance? *Journal of Management Studies*, *49*(4), 718–742.
Garcia-Rodriguez, I., Romero-Merino, M. E., & Santamaria-Mariscal, M. (2021). The role of boards in the financial vulnerability of nonprofit organizations. *Financial Accountability & Management*, *37*(3), 237–261.
Gelles, E. (2000). The role of the economic sector in the provision of care to trusting clients. *Nonprofit Management and Leadership*, *10*(3), 233–249.
Guillet, B. D., Seo, K., Kucukusta, D., & Lee, S. (2013). CEO duality and firm performance in the US restaurant industry: Moderating role of restaurant type. *International Journal of Hospitality Management*, *33*, 339–346.
Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate Data Analysis* (6th ed.). Pearson International Edition.
Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate data analysis* (17th ed.). Pearson New International Edition.
Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. SAGE Publications, Inc.UK.
Hallock, K. F. (2002). Managerial pay and governance in American nonprofits. *Industrial Relations: A Journal of Economy and Society*, *41*(3), 377–406.
Hammad, M. (2023). Power to the CEO? Sources of CEO Power and its influences on Strategic choices and Firm Performance. *Junior Management Science*, *8*(4), 827–844.
Harris. (2011). *University boards and performance*. Temple University.
Hasan, T., Quayes, S., & Khalily, B. (2019). Role of governance on performance of microfinance institutions in Bangladesh. *Eurasian Economic Review*, *9*(1), 91–106.
Heimovics, R. D., Herman, R. D., & Jurkiewicz, C. L. (1995). The political dimension of effective nonprofit executive leadership. *Nonprofit Management and Leadership*, *5*(3), 233–248.
Hill, C. W., & Phan, P. (1991). CEO tenure as a determinant of CEO pay. *Academy of Management Journal*, *34*(3), 707–717.
Hodge, M. M. (2006). *Nonprofit board effectiveness, funding source, and financial vulnerability*. University of Central Florida.
Hou, Y., & Lampe, C. (2015, April). Social media effectiveness for public engagement: Example of small nonprofits. In *Proceedings of the 33rd annual ACM conference on human factors in computing systems* (pp. 3107–3116).
Hsieh, J., Curtis, K. P., & Smith, A. W. (2008). Implications of stakeholder concept and market orientation in the US nonprofit arts context. *International Review on Public and Nonprofit Marketing*, *5*, 1–13.
Israel, G. (2009). *Determining sample size, Institute of Food and Agricultural Sciences*. University of Florida.
Janssen, M., & Van der Voort, H. (2020). Agile and adaptive governance in crisis response: Lessons from the COVID-19 pandemic. *International Journal of Information Management*, *55*, 102180.
Jobome, G. O. (2006). Management pay, governance and performance: The case of large UK nonprofits. *Financial Accountability & Management*, *22*(4), 331–358.
Jones, L. P. (2022). *The Ripple of Influence: The New ROI for Nonprofit Human Service CEOs* (Doctoral dissertation, University of Massachusetts Global).
Ketokivi, M., & Mahoney, J. T. (2022). *Efficient Organization: A Governance Approach*. Oxford University Press.
Kim, H. H., & Han, E. (2020). The application of the theory of planned behavior to identify determinants of donation intention: Towards the comparative examination of positive and negative reputations of nonprofit organizations CEO. *Sustainability*, *12*(21), 9134.
Kirby, P. (2020). Karl Polanyi and the Contemporary Political Crisis. *Karl Polanyi and the Contemporary Political Crisis*, 1-256. https://www.torrossa.com/it/resources/an/5209381.
Kline, R., B (1998). *The new psychometrics: Science, psychology, and measurement* (1st ed.). Psychology.
Kline, R., B (2016). *Principle and practice of structural equation modeling* (4th ed.). Guilford Byrne.
Koufopoulos, D. N., Georgakakis, D. G., & Gkliatis, I. P. (2009). Board and organisational performance in healthcare non-profit public organisations: The Greek perspective. *International Journal of Business Governance and Ethics*, *4*(4), 330–348.
Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607–610.

Lachance, E. L., & Parent, M. M. (2024). The impact of external factors on decision making in non-profit sport oganizations. *Sport Business and Management: An International Journal*. https://doi.org/10.1108/SBM-09-2023-0113/full/html. https://www.emerald.com/insight/content/doi/.

Lambarraa, F., & Riener, G. (2015). On the norms of charitable giving in Islam: Two field experiments in Morocco. *Journal of Economic Behavior & Organization*, *118*(1), 69–84.

Lambert, V., & Lapsley, I. (2023). Charities, altruism and becoming business-like: Tensions and contradictions. *Qualitative Research in Accounting & Management*, *20*(4), 569–592.

Laurett, R., & do Paço, A. M. F. (2020). Entrepreneurship in nonprofit organizations: a systematic review of the literature. *International Review on Public and Nonprofit Marketing*, *17*, 159–181. & do Rosario Leitão Dinis

Leblanc, R. (2020). *The handbook of board governance: A comprehensive guide for public, private, and not-for-profit board members*. Wiley.

Manderlier, A., Bacq, S., Giacomin, O., & Janssen, F. (2009). *The Impact of South Asian Microfinance Institution's Corporate Governance Mechanisms on their Social and Financial Performance: An exploratory study*. No. UCL-Université Catholique de Louvain).

Melis, A., & Nawaz, T. (2023). The impact of CEOs' personal traits on organisational performance: Evidence from faith-based charity organisations. *Journal of Business Ethics*, *190*(4), 919–939.

Meme, L. K. (2012). *The relationship between corporate governance and performance of international non-governmental organizations in Somalia*. University of Nairobi.

Mintzberg, H., Raisinghani, D., & Theoret, A. (1976). The structure of unstructured decision processes. *Administrative Science Quarterly*, *21*, 246–275.

Mwenja, D., & Lewis, A. (2009). Exploring the impact of the board of directors on the performance of not-for-profit organizations. *Business Strategy Series*, *10*(6), 359–365.

Naciti, V. (2019). Corporate governance and board of directors: The effect of a board composition on firm sustainability performance. *Journal of Cleaner Production*, *237*, 117727.

Ndoro, G. (2012). *Executive compensation and firm performance: Evidence from the UK charities*. University of Nottingham.

Njora, J. N. (2021). *The Relationship between corporate governance practices and performance of micro finance institutions in Kenya* (Doctoral dissertation, Strathmore University).

O'Regan, K., & Oster, S. M. (2005). Does the structure and composition of the board matter? The case of nonprofit organizations. *Journal of Law Economics and Organization*, *21*(1), 205–227.

Olson, D. E. (2000). Agency theory in the not-for-profit sector: Its role at independent colleges. *Nonprofit and Voluntary Sector Quarterly*, *29*(2), 280–296.

Onwuegbuzie, A. J., & Daniel, L. G. (2002). A framework for reporting and interpreting internal consistency reliability estimates. *Measurement and Evaluation in Counseling and Development*, *35*(2), 89–103.

Pallant, J. (2013). *SPSS survival manual. A step by step guide to data analysis using SPSS* (5th ed.). McGraw-Hill Education (UK).

Papadakis, V. M. (2006). Do CEOs shape the process of making strategic decisions? Evidence from Greece. *Management Decision*, *44*(3), 367–394.

Park, S. (2020). Size matters: Toward a contingency theory of diversity effects on performance. *Public Performance & Management Review*, *43*(2), 278–303.

Pham, A. N. (2015). *CEO duality and performance of not-for-profit hospitals*. Walden University.

Podsakoff, P. M., Mackenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879–903.

Pressgrove, G., & Waters, R. D. (2019). Defining the concepts: What is the Nonprofit Sector? *Public Relations Theory: Application and Understanding*, *113*.

Prybil, L. D., Peterson, R., Brezinski, P., Zamba, G., RoachJr, W., & Fillmore, A. (2010). Board oversight of patient care quality in community health systems. *American Journal of Medical Quality*, *25*(1), 34–41.

Pucheta-Martínez, M. C., & Gallego-Álvarez, I. (2019). An international approach of the relationship between board attributes and the disclosure of corporate social responsibility issues. *Corporate Social Responsibility and Environmental Management*, *26*(3), 612–627.

Rakhmat, A. (2022). Islamic ecotheology: Understanding the Concept of Khalifah and the ethical responsibility of the Environment. *Academic Journal of Islamic Principles and Philosophy*, *3*(1), 1–24.

Rechner, P. L., & Dalton, D. R. (1991). CEO duality and organizational performance: A longitudinal analysis. *Strategic Management Journal*, *12*(2), 155–160.

Remington, C. R. (2023). Decision-making in nonprofit organizations. *Global Encyclopedia of Public Administration, Public Policy, and Governance* (pp. 3016–3021). Springer International Publishing.
Renz, D., Roza, L., & Simons, F. J. (2020). Challenges in corporate foundation governance. *Handbook on Corporate Foundations: Corporate and Civil Society Perspectives*, 17–37.
Sawadogo-Lewis, T., Cane, R. M., Morgan, R., Qiu, M., Magaço, A., Ngale, K., & Roberton, T. (2018). Reaching substantive female representation among decision-makers: A qualitative research study of gender-related experiences from the health sector in Mozambique. *PloS One*, *13*(11), e0207225.
Sekaran, U., & Bougie, R. (2013). *Research methods for business: A skill-building approach* (6th ed.). John Wiley & Sons Ltd.
Sepulcri, L. M. C. B., & Mainardes, E. W. (2023). Elements that compose the non-profit BRAND orientation in an emerging country. *International Review on Public and Nonprofit Marketing*, *20*(1), 85–123.
Sheikh, S. (2019). An examination of the dimensions of CEO power and corporate social responsibility. *Review of Accounting and Finance*, *18*(2), 221–244.
Siciliano, J. I. (1996). The relationship of board member diversity to organizational performance. *Journal of Business Ethics*, *15*(12), 1313–1320.
Singh, R. K., & Sharma, S. K. (2024). Performance and CEO duality in Indian public banks: A moderating role of board independence. *Journal of Accounting in Emerging Economies*, *14*(2), 253–272.
Sjöstrand, V., & Svensson, K. A. (2022). *CEO duality's effect on firm performance: A comparison between the agency-and stewardship theory*. Dissertations. https://www.diva-portal.org/smash/get/diva2:1672597/FULLTEXT01.pdf.
Stoeberl, P. A., & Sherony, B. C. (1985). Board efficiency and effectiveness. In E. Mattar, & M. Balls (Eds.), (Eds.) *Handbook for corporate directors*. McGraw-Hill.
Stone, M. M., & Wood, M. M. (1997). Governance and the small, religiously affiliated social service provider. *Nonprofit and Voluntary Sector Quarterly*, *26*(supplement), S44–S61.
Thibault, L., Slack, T., & Hinings, B. (1993). A framework for the analysis of strategy in nonprofit sport organizations. *Journal of Sport Management*, *7*(1), 25–43.
Trujillo, C. A. (2018). The complementary role of affect-based and cognitive heuristics to make decisions under conditions of ambivalence and complexity. *Plos One*, *13*(11), e0206724.
Tucker, J. S., Cullen, J. C., Sinclair, R. R., & Wakeland, W. W. (2005). Dynamic systems and organizational decision-making processes in nonprofits. *The Journal of Applied Behavioral Science*, *41*(4), 482–502.
Ugur, Z. B., & Heermans, G. F. (2024). Understanding Altruism of Nonprofit workers: The roles of motivation types. *Nonprofit and Voluntary Sector Quarterly*, 08997640231222241.
United States Agency for International Development (USAID) (2020). *2019 Civil Society Organization: Sustainability Index for the Middle East and North Africa*. https://www.usaid.gov/.
United States Agency for International Development (USAID) (2019). *2018 Civil Society Organization Sustainability Index for the Middle East and North Africa*. https://www.usaid.gov/.
United States Agency for International Development (USAID) (2013). *The 2013 CSO Sustainability Index for the Middle East and North Africa*. https://2012-2017.usaid.gov/middle-east-civil-society/2014.
Uyar, A., Kuzey, C., Kilic, M., & Karaman, A. S. (2021). Board structure, financial performance, corporate social responsibility performance, CSR committee, and CEO duality: Disentangling the connection in healthcare. *Corporate Social Responsibility and Environmental Management*, *28*(6), 1730–1748.
Walters, M. L. (2020). *The social exchange dance: Nonprofit CEO perceptions of board chairs and organizational impacts* (Doctoral dissertation, Capella University).
Wei, Q. (2021). CEO power and nonprofit financial performance: Evidence from Chinese philanthropic foundations. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, *32*(2), 460–476.
Williamson, O. E. (1985). *The economic institutions of capitalism: Firms, markets, relational contracting*. New York, 61–75.
Wilson, K. R. (2016). *Steward leadership in the nonprofit organization*. InterVarsity.
World Bank (2020). *Yemen Dynamic Needs Assessment: Phase 3* (2020 Update): World Bank.
World Bank. (2013). *Yemen Civil Society Organizations in Transition: A mapping and Capacity Assessment of Development Oriented Civil Society Organizations in five governorates*. World Bank.
World Bank. (2021). *Social Protection at the humanitarian-development Nexus: Insights from Yemen*. World Bank.
Yoon, N. (2024). How much does Nonprofit Board Governance Matter? Role of Interlocking directorates, Executive Power, and women on boards in executive compensation. *Review of Public Personnel Administration*, *0734371X*, 231221505.

Zahra, S. A., & Pearce, J. A. (1989). Boards of directors and corporate financial performance: A review and integrative model. *Journal of Management*, *15*(2), 291–334.

Zahra, S. A., Hayton, J. C., Neubaum, D. O., Dibrell, C., & Craig, J. (2008). Culture of family commitment and strategic flexibility: The moderating effect of stewardship. *Entrepreneurship Theory and Practice*, *32*(6), 1035–1054.

Zarghi, M., & Bolghan-Abadi, M. (2021). The altruism trait: The role of religiousness. *Journal of Religion and Health*, *60*(2), 684–691.

Zorn, M. L., DeGhetto, K., KetchenJr, D. J., & Combs, J. G. (2020). The impact of hiring directors' choice-supportive bias and escalation of commitment on CEO compensation and dismissal following poor performance: A multimethod study. *Strategic Management Journal*, *41*(2), 308–339.

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