

CEO Duality and Firm Performance: The Moderating Roles of CEO Informal Power and Board Involvements

Abstract

Purpose: This study draws on the resource dependence theory to synthesize the conflicting arguments as well as commonalities of the agency and stewardship perspectives on the relationship between CEO duality and firm performance.

Design/methodology/approach: Multiple regression analysis is used to analyze the data collected from a sample of 212 large scale publicly listed companies representing 20 sectors in the Colombo Stock Exchange in Sri Lanka.

Research Findings/Insights: Results show, in support of agency theory, that CEO duality exerts a negative effect on firm performance when the CEO is equipped with additional informal power. Conversely, CEO duality exhibits a positive effect on firm performance when board involvements are high, a finding that supports the commonalities of the resource dependence and stewardship theoretical perspectives.

Theoretical/Academic Implications: Our study expands the theoretical underpinning of corporate governance research by identifying the performance implications of CEO duality within the broad context of the resource provision of the board of directors and the informal power of CEOs.

Practitioner/Policy Implications: By examining the governance practices and concepts in an Asian developing economy, our study provides insight into the power dynamics between the CEO and the board of directors in managerial contexts that are largely different from those in Western countries.

Keywords: CEO duality, Board involvements, CEO informal power, Resource dependence theory

Paper type: Research paper

1. Introduction

CEO duality, a situation in which one person holds both the CEO and the Chairman positions, has become an alarming issue following the recent failures of corporate giants in the early 2000s (Aktas *et al.*, 2018; Duru *et al.*, 2016; Krause *et al.*, 2014; Yang and Zhao, 2014). Interestingly, among ten business giants that were confronted with corporate scandals, eight had CEO duality. While this finding has given the term a negative connotation, there is no consensus among researchers on how to interpret the evidence. Instead, largely due to contradictory assumptions underlying the agency and stewardship perspectives, the effect of CEO duality or non-duality on firm performance has been controversial both in academia and practice (e.g., Aktas *et al.*, 2018; Krause *et al.*, 2014; Boyd, 1995; Finkelstein and D'Aveni, 1994).

Overall, the empirical evidence on the relationship of CEO duality and firm performance has proven inconclusive (e.g., Duru *et al.*, 2016; Yang and Zhao, 2014). Boyd (1995) summarized seven prominent corporate governance studies and realized that only two showed a negative impact whereas the other five showed positive or insignificant effects. Harris and Helfat (1998) found that out of thirteen researches, only three indicated negative effects while ten exhibited either positive or no effects. In addition, a substantial body of literature demonstrated that CEO duality is insignificantly related to firm performance (e.g., Benz and Frey, 2007; Daily and Dalton, 1992; Dalton *et al.*, 1999).

These findings reveal that “both agency theory (in favor of CEO non-duality

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3 structure) and stewardship theory (in support of CEO duality structure) may be (only)
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5 valid under certain conditions” and that “existing theories might need to be treated as
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7 complementary viewpoints, each of which draws upon a part of the whole picture”
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9 (Elsayed, 2010, p. 80). Accordingly, an examination of the contexts where the concerns
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11 of both agency and stewardship theories can be identified becomes valuable.
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17 With the exception of a few studies (e.g., Boyd, 1995; Finkelstein and D’Aveni,
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19 1994), the literature thus far has paid little attention to contextual factors that may help
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21 explain inconsistent results stemming from the conflict between the agency and
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23 stewardship theories (Kim *et al.*, 2009). A criticism of previous research is that its
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25 primary concern is “measuring the effect of duality on performance,” rather than
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27 “building a theoretical basis for understanding this relationship” (Boyd, 1995, p. 302).
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29 Another observation is that corporate governance research can be advanced when
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31 potentially contradictory theories can be simultaneously examined under specific
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33 contexts (Finkelstein and D’Aveni, 1994). The research also can be advanced when
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35 contingent factors that may interact with CEO duality and thus exercise influence on
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37 firm outcomes can be identified (Elsayed, 2010; Kim *et al.*, 2009; Krause *et al.*, 2014;
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39 Muth and Donaldson, 1998).
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49 To examine the moderating influence of contextual factors on the performance
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51 implications of CEO duality, we turn to the resource dependence theory which focuses
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53 on the relative power of the CEO and the power dynamics between the CEO and the
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55 board of directors (e.g., Krause *et al.*, 2015; Lynall *et al.*, 2003). Research has suggested
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3 that the resource dependence perspective is advantageous for understanding the
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5 contingency contexts of boards and agency issues (Hillman *et al.*, 2009).
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9 To explore the relative power of the CEO, we focus on CEO informal power because
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11 it is an essential, yet underexplored, factor that can strengthen the effects of CEO
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13 duality (Finkelstein and D'Aveni, 1994). To examine the power dynamics between the
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15 CEO and the board of directors, we highlight the role of various board involvements,
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17 since a focus on the resource provisions of the board balances the emphasis of
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19 previous studies on its monitoring role (Daily *et al.*, 2003; Krause *et al.*, 2015)). Indeed,
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21 due to the limited results obtained from the agency theory, research has suggested
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23 that "rather than focusing predominantly on directors' willingness or ability to control
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25 executives, in future research scholars may yield more productive results by focusing
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27 on the assistance directors provide in bringing valued resources to the firm and in
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29 serving as a source of advice and counsel for CEOs" (Hillam *et al.*, 2009, p. 1410).
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40 To further characterize the informal power of CEOs, we highlight their family
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42 ties, a critical business concern in the Eastern context (Corbetta and Salvato, 2004), and
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44 their participation in board subcommittees, a widely-recognized Western governance
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46 issue (Jackling and Johl, 2009). Prior research has proposed the need to identify such
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48 additional involvement, including CEO "appointments," as potential sources of
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50 power (Greve and Mitsuhashi, 2007, p. 1216). Our study responds to this call, in part,
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52 by focusing on family control, a common business practice especially in the Asian
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54 context. CEOs with family ties have managerial and symbolic roles that contribute to
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3 their implicit and explicit power over the board, and allow them considerable freedom
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6 to set their own agenda and decide on resource allocations and strategic decisions
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9 (Finkelstein and Hambrick, 1989). In addition, our study also considers their
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11 membership in subcommittees, since this involvement can directly advance their
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13 influence over board decisions. A CEO who holds a position on the board will possess
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15 more power through interacting with internal and external actors (cf., Finkelstein and
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17 D'Aveni, 1994). Research has also shown that a CEO's multiple board appointments
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20 can affect a firm's value (Ferris *et al.*, 2003; Harris and Shimizu, 2004).
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25 As to board involvements, we evaluate the board's shareholdings (Kim *et al.*,
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27 2009) and frequency of board meetings (Jackling and Johl, 2009; Vafeas, 1999) because
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29 these factors explicate the degree to which boards are motivated to participate in
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31 business operations. Prior studies have recognized the importance of board vigilance
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33 (Finkelstein and D'Aveni, 1994) and board shareholdings (Kim *et al.*, 2009). A board
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35 with a great number of shares in a company has significant interests in the firm and
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37 thus is more likely to perform a vigilant role (Finkelstein and Hambrick, 1989). In
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39 addition, the frequency of board meetings can influence a firm's resource capacity and
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41 ultimately its financial performance by expanding the cognitive bases of CEOs and
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43 extending the advice and counsel channels of the firm (cf., Smith *et al.*, 1994). Thus, a
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45 significant indicator of board activities is the frequency of board meetings (Vafeas,
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55 1999).

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57 In a nutshell, this study aims to integrate the resource dependence perspective
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59 with the agency and stewardship theories in order to identify the contexts where CEO
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3 duality may advance or diminish firm performance. Such a multitheoretic approach
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6 recognizes the conflicting as well as “the commonalities of the theoretical
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8 perspectives,” and further suggests that agency concerns can be interpreted by board
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10 practices (Lynall *et al.*, 2003, p. 428) and CEO informal power (Boyd, 1995).
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14 To examine these issues, we collected data from 212 publicly-listed firms in Sri
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16 Lanka. The examination of corporate governance issues in a non-Western country is
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18 important, because “the underlying conditions for companies to adhere with good
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20 corporate governance principles vary with institutional and country differences”
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22 (Holm and Scholer, 2010, pp. 32-33). Moreover, the recognition of contextual factors
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24 in CEO duality research is especially promising in the Asian context, because “the
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26 process by which the CEO affects firm performance has not yet been addressed in the
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28 literature” (Bruton and Lau, 2008, p. 654). Interestingly, few studies which have been
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30 carried out in the Sri Lankan context investigating this phenomenon have also arrived
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32 conflicting findings. For instance, although Azeez (2015) revealed that the separation
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34 of the two posts of CEO and chairman has a significant positive relationship with the
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36 firm performance, Dharmadasa *et al.* (2014) found no significant relationship between
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38 these two variables.
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49 Our study expands the theoretical underpinning of corporate governance
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51 research by identifying the performance implications of CEO duality within the broad
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53 context of the board of directors’ ability to provide resources and the CEO’s informal
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55 power. By examining the theory and practice of corporate governance in a developing
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57 economy, the study also advances the generalizability of governance research (Bruton
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3 and Lau, 2008; McCarthy and Puffer, 2008).

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6 The remainder of the paper is organized as follows. The next section discusses the
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8 theoretical background and literature review. Section three proposes hypotheses of
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10 the study. Section four discusses the methods followed by the results presented in the
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12 section five. The final section concludes the paper by highlighting the theoretical and
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14 practical contribution, and directions for future research.
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22 **2. Theoretical Background**

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24 Research has proposed that neither agency nor stewardship theory can clearly
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26 determine the outcomes of CEO duality (Boyd, 1995). Moreover, both agency and
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28 stewardship theories overlook the dynamic nature of corporate governance and thus
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30 fail to reveal the underlying governance mechanisms (Elsayed, 2010). Our study
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32 intends to fill these gaps by employing the resource dependence theory to explore
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34 moderating mechanisms on the effects of CEO duality, and thus synthesize the
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36 findings of these two theoretical perspectives.
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43 **2.1 Agency Theory and the Need for Complementary Perspectives**

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45 The agency theory argues that separating the CEO and chairman positions
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47 enhances the transparency and accountability of firm decisions, which increases
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49 shareholders' trust and ultimately firm performance (Adams *et al.*, 2005; Gillan, 2006;
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51 Kroll *et al.*, 2008). This perspective favors CEO non-duality because a dual-position
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53 CEO may become a "self-serving, economically rational" person (Corbetta and
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55 Salvato, 2004, p. 357), especially when the CEO has family ties or board committee
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3 appointments. In this regard, it is worthwhile noting that, while there may be many
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5 reasons for a firm to choose CEO duality, no evidence thus far shows that CEO duality
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7 is intentionally designed with the purpose of optimizing firm performance (Iyengar
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9 and Zampelli, 2009). Under circumstances in which CEO duality is present, the agency
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11 perspective relies heavily on the monitoring functions of board of directors and
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13 expects the board to mitigate the potentially negative effects of power imbalance
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15 (Finkelstein and D'Aveni, 1994).
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22 Notwithstanding the potential for managerial abuse under CEO duality, such a
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24 negative interpretation of duality has been questioned because business practices and
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26 empirical findings show that such abuses tend not to occur, or their occurrence cannot
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28 be presumed. In fact, duality may encourage a CEO to be a “self actualizing, collective
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30 serving” person (Corbetta and Salvato, 2004, p. 357; Boyd, 1995). Thus, the quest for
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32 integrating other theories into the agency perspective to explain the impact of CEO
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34 duality on firm performance has gained momentum. Davis *et al.* (1997, p. 20-21) have
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36 proposed that “although agency theory addresses manager-principal interest
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38 divergence, additional theory is needed to explain what, if anything, causes interests
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40 to be aligned.” In addition, Corbetta and Salvato (2004, p. 356) suggest that, although
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42 agency theory is a suitable mechanism for illustrating organizational relationships in
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44 efficient ways, “what is missing is a conceptual lens to explain behaviors aimed at
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46 maximizing potential performance within organizations in which a pro-
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48 organizational attitude coexists with self-serving motives.” An integrated
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50 consideration of agency theory and other perspectives, such as the well-recognized
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3 stewardship and resource dependence theories, can help explain previous opposing
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6 results and expand the applicability of the agency theory (Dalton *et al.*, 2003).
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9 The adoption of agency theory can be justified by the features of institutional and
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11 regulatory framework within which the companies govern in Sri Lanka. For instance,
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13 it has a properly laid down system which promotes private sector investments
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15 through the Colombo Stock Exchange. Further, the Companies Act and the other
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17 regulations, and codes of corporate governance in Sri Lanka are largely based on those
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19 of international laws, regulations and codes of best practice in corporate governance
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21 (Wijethilake *et al.*, 2015). Furthermore, Sri Lanka was a colony from the early 16th
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23 century until 1948, when it gained independence from the British. Hence, corporate
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25 governance in Sri Lanka have been closely associated with the colonial ties and
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27 economic spheres (Ekanayake, 2011). For example, most of the laws and regulations
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29 related to the governing of companies are based on those of the British.
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39 On the other hand, nature of the ownership of the companies in Sri Lanka
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41 supports the adoption of the stewardship theory. For instance, a considerable number
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43 of Sri Lankan companies have family ties and concentrated share ownerships
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45 (Wijethilake *et al.*, 2015). This could influence the informal power of the CEO, and the
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47 involvement of the board via larger shareholdings.
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55 **2.2. An Evaluation of the Stewardship Theory**

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Contrary to the conceptualizations of agency theory, stewardship theory defines situations where executives are not concerned for their own interests, but rather behave as stewards in advancing the benefits of the entire organization (Davis *et al.*, 1997). While agency theory promotes a control-oriented perspective, an involvement-oriented standpoint encourages empowerment, decentralised decision making and interactive management style (Davis *et al.*, 1997; Van Thiel, 2016). More specifically, stewardship theory emphasises on practices and processes that enable and inspire instead of monitoring and controlling.

As per the conflicting opinion suggested by the stewardship theory, which establishes that the integration of the CEO and chairman roles would improve performance, CEO duality is a positive instrument to exploit firm information in an effective way as the CEO is well conscious of organisational functions (Davis, Schoorman, & Donaldson, 1997; Donaldson & Davis, 1991). This distinctive feature is an answer in settings where information asymmetry arises between the CEO and the chairman. This perspective proposes that CEO duality can “facilitate effective action by the CEO, and consequently lead to higher performance” (Boyd, 1995, p. 304). Proponents of the stewardship theory also maintain that goal alignment and trustworthiness between principal and agent considerably decreases the potential of selfish conduct. Accordingly, this minimizes forceful supervising, which may be observed as an indication of mistrust, resulting resistance between principal and agent (Van Thiel, 2016).

Here again, a number of scholars have expressed serious reservations about these

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3 arguments. A fairly recent study has maintained that “stewardship and stakeholder
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5 theory remove some restrictive assumptions of the agency approach, yet do not
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7 provide a comprehensive research framework that links corporate governance with
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9 the broader context of different organizational environments” (Agruilera *et al.*, 2008,
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11 p. 478). Because CEO duality and non-duality do not show significant differences in
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13 long-term firm performance, an oblique favor of duality is largely inadequate (Baliga
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15 *et al.*, 1996). Instead, identifying the contexts where stewardship or agency perspective
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17 can function well is potentially more insightful (Eddleston and Kellermanns, 2007).
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19 Chrisman (2019) argues that although the stewardship theory is used as an alternative
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21 to agency theory, the theory does not provide clear presumptions on bounded
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23 rationality and pre employment scenarios as neglect of such matters decreases its
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25 realism and relevance. Accordingly, underlying assumptions of stewardship theory
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27 should to be revisited to increase its realism and relevance (Chrisman, 2019).
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40 ***2.3 The Role of the Resource Dependence Theory***

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42 The foregoing discussion of CEO duality does not go so far as to determine the actual
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44 situations in which specific theories might apply; rather, it outlines mixed results that
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46 stem from conflicting theories. Thus, our study addresses the resource dependence
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48 theory to explicate the dynamics between the CEO and the board of directors in an
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50 attempt to shed light on the different contexts in which specific theories might
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52 function to advantage.
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Research has shown that, although resource dependence theory is “less commonly used to study boards than agency theory, empirical evidence to date suggests that it is a more successful lens for understanding boards” (Hillman et al., 2009, p. 1408). The advantage of resource dependence theory pertains to its ability to help “illuminate boards’ composition in both the collective and formalization stages of the organizational life cycle, when CEOs have dominant power” (Lynall *et al.*, 2003, p. 427). In contrast to the agency perspective, the resource dependence theory proposes that resource provision, rather than monitoring, is the key function of a board (Hillman and Dalziel, 2003; Krause *et al.*, 2016). Corporate boards are chosen “to maximize the provision of important resources to the firm” and each director is expected to “bring different linkages and resources to a board” (Lynall *et al.*, 2003, p. 418). Accordingly, the frequency of board meetings and directors’ equity holdings can be considered as a resource provision, rather than actions of scrutiny and enforcement (Dalton *et al.*, 2003). Similarly, a CEO with informal power such as family relationships and board committee appointments may expand a company’s network and cognitive resources and thus become an impetus of the firm (cf., Eddleston and Kellermanns, 2007).

While the resource dependence theory has been the dominant approach to understand the existence of active boards for many years (Pfeffer and Salancik, 1978), it is acknowledged that more recently the social network theory has supplemented the contribution of resource dependence theory (Westphal, 1999; Carpenter and

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3 Westphal, 2001). Social network theory recognizes important board roles as
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6 networking, cohesion and exchange of information, door-opening, legitimacy, and
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8 communication in internal relations (Gulati and Westphal, 1999; Westphal, 1999;
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11 Carpenter and Westphal, 2001).

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14 As the resource dependence theory views the board as an administrative body
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16 that connects the organisation and with its external environment, this approach is
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18 more suitable to understand the board behaviour in the Sri Lankan context as
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20 compared to social network theory. In particular, this is important given the nature of
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22 Sri Lankan national and business culture mainly dominated by Asian values and
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24 beliefs, and the emerging nature of most of the business establishments. Further,
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26 viewing the board's role from the resource dependence perspective can be
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28 rationalized as it reduces organization's reliance on external stakeholders or help to
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30 defend the organisation from various external pressures.
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41 **3. Hypotheses**

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43 The effect of CEO duality on firm performance remains inconclusive. Our study
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45 intends to shed light on the conflicting results by examining the moderating effects of
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47 CEO informal power and various board involvements.
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51 ***3.1 Moderating Effects of CEO Informal Power***

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53 The informal power of executives is not "necessarily associated with formal structure"
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55 (Peiro and Melia, 2003, p. 19). Research has shown that the power of CEOs generated
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57 from informal mechanisms plays the most significant role among the factors that
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3 contribute to firm performance (Finkelstein and D'Aveni, 1994).
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5 6 *3.2 CEOs with family ties* 7

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9 Family ties refer to appointments in which the appointment member is related to the
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11 founder of the firm or acts as a representative of family share ownerships (Anderson
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13 *et al.*, 2003). Finkelstein (1992) posited that executives who are closely related to the
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15 founder can exercise control over the board. Again, Barkema and Pennings (1998)
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17 found that when CEOs have informal power acquired through family ties, they have
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19 greater opportunities to dominate the board. They can also affect the composition of
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21 board members (Lynall *et al.*, 2003) and thus shrunk the board's monitoring process.
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23 Consequently, in accordance with the agency perspective, scholars argue that in
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25 situations where family ties exist, the greater the CEO duality, the more likely it is that
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27 the CEO will shape firm strategies to advance personal interests (Greve and
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29 Mitsuhashi, 2007; Beavers, 2017). Supporting this argument is the study of Anderson
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31 and Reeb (2004), who found that firms with strong founding-family ownership have
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33 considerably worse performance than non-family firms. Bennesen *et al.* (2007) also
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35 found that family successions of CEO have a large negative causal impact on firm
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37 performance. Moreover, Finkelstein and D'Aveni (1994) showed that when CEOs
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39 possess more informal power, they tend to build an entrenchment in order to protect
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41 their individual interests.
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55 Nonetheless, Mooney *et al.* (2007) revealed that, compared to the appointment of
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57 non-family CEOs whose failure rate could be up to 55%, the failure rate of family-
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59 appointed CEOs did not exceed 34%. Anderson and Reeb (2003) found family firms
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3 perform better than nonfamily firms. Also, they revealed that when family members
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5 serve as CEO, performance is better than with outside CEOs. However, Villalonga and
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7 Amit (2006) revealed that family ownership creates value only when the founder
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9 serves as CEO of the family firm or as Chairman with a hired CEO (i.e., when
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11 descendants serve as CEOs, firm value is destroyed). Anderson *et al.* (2003) found that
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13 founding family ownership leads to a lower cost of debt financing. In contrast to
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15 agency theory, the stewardship and resource dependence perspectives indicate that
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17 family participation can provide a firm with unique resources such as social capital
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19 and interpersonal network—resources that can create value for a firm and ultimately
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21 improve financial performance (Eddleston and Kellermanns, 2007). Research has
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23 identified family participation as a critical resource of a firm, because it can advance
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25 honor and altruism “that encourages family members to place the firm's objectives
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27 ahead of their own” (Eddleston and Kellermanns, 2007, p. 547). These results indicate
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29 that CEO duality can help a firm achieve better performance when family ties are
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31 involved, because family appointed CEOs will consider not only their in-role but also
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33 extra-role duties and be motivated to relinquish opportunistic concerns (Davis *et al.*,
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35 1997).
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49 The foregoing arguments have presented different and opposing perspectives on
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51 the effect of a CEO's family representation. Accordingly, this study develops the
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53 following competing hypotheses.
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57 *Hypothesis 1a: As indicated by the agency theory, a CEO's family ties will worsen the*
58 *relationship between CEO duality and firm performance.*
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3 *Hypothesis 1b: As indicated by the stewardship and resource dependence theories, a CEO's*
4 *family ties will improve the relationship between CEO duality and firm performance.*
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7 **3.3. The participation of CEOs in board subcommittees**

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10 The extent to which a CEO can acquire certain power by holding memberships in
11 board committees is identified as CEO busyness (Jackling and Johl, 2009). According
12 to the agency perspective, when dual-appointed CEOs hold more positions, they have
13 more opportunities to dominate the boards and thus diminish the function of the
14 boards (Finkelstein, 1992). A growing body of research has criticized CEOs' board
15 participation, because it can make the decisions of board subcommittees lose
16 transparency and accountability (Finkelstein and D'Aveni, 1994). As this criticism
17 holds, the non-independent pressure of CEOs on independent board decisions can be
18 detrimental to corporate outcomes. Research argued that "CEOs often have access to
19 sources of power that allow them to manipulate their pay at the expense of (other)
20 shareholders," a typical case when a CEO holds more positions on board
21 subcommittees (Barkema and Pennings, 1998, p. 980). Research also supports this
22 view by showing that while duality alone does not have a direct impact on the stock
23 market, once CEO acquires another title in the board, the stock market reacts adversely
24 (Worrell *et al.*, 1998). Further, CEOs with a number of committee appointments need
25 to reallocate their time, which can distract them from routine functions and strategic
26 focus, and lead to poor performance.
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56 Conversely, the stewardship and resource dependence perspectives assert that a
57 dual-position CEO with more board appointments will have more opportunities to
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3 engage with the external environment, which can create more avenues to access
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5 resources and thus increase firm values (cf., Jackling and Johl, 2009). The internal and
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7 external networks created through the active involvement of CEOs in board decisions
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9 can spontaneously advance their experiences and breadth of perspectives, which then
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11 enhance a firm's adaptability (Lynall *et al.*, 2003). Research has shown that directors
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13 with multiple appointments have a positive impact on corporate performance (Ferris
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15 *et al.*, 2003; Harris and Shimizu, 2004; Masulis and Mobbs, 2011; Masulis and Mobbs,
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17 2014). In a similar vein, the effectiveness of CEOs holding several positions on
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19 independent board subcommittees can be advanced because these CEOs tend to view
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21 themselves as stewards of firm performance (cf., Barkema and Pennings, 1998).
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31 *Hypothesis 2a: As indicated by the agency theory, a CEO's participation in board*
32 *subcommittees will worsen the relationship between CEO duality and firm performance.*
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35 *Hypothesis 2b: As indicated by the stewardship and resource dependence theories, a CEO's*
36 *participation in board subcommittees will improve the relationship between CEO duality*
37 *and firm performance.*
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40 **3.4 Moderating Effects of Board Involvements**

41
42 As per the agency theory, the role of the board is to monitor management in order to
43
44 ensure that shareholders' interests are secured (Shleifer and Vishny, 1997).
45
46 Accordingly, Finkelstein and D'Aveni (1994) define board vigilance as a motivation
47
48 and incentive to effectively monitor and discipline CEOs. Their study argues that
49
50 board vigilance can oversee the risks associated with management and strategic
51
52 decisions, and thus help a dual-position CEO advance firm performance. A case in
53
54 point is the Enron scandal and bankruptcy of the Enron corporation, which may have
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3 been avoided had its board been more agile (Gillan and Martin, 2007). However,
4
5
6 greater board control over a CEO's functions can hurt firm performance by adversely
7
8
9 affecting the CEO's willingness and motivation to generate strategic options in the
10
11 focal company (McDonald and Westphal, 2010). Research has suggested that "the
12
13 greater the power of the board in relation to its existing CEO, the greater the likelihood
14
15 of change in CEO characteristics when succession occurs" (Zajac and Westphal, 1996,
16
17 p. 69). It follows that when the efficiency of the board's involvement outweighs the
18
19 agency cost brought by opportunistic behaviors, the adverse effect of CEO duality on
20
21 firm performance, as proposed by agency theory, will be altered. The focus on the
22
23 power dynamics between the CEO and the board, as advocated by the resource
24
25 dependence theory, can look into the effectiveness of CEO duality from both the
26
27 controlling and collaborative viewpoints (Sundaramurthy and Lewis, 2003), and thus
28
29 synthesize the agency and stewardship perspectives.
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37 38 **3.5 Board Shareholdings** 39

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41 A board with high equity ownership will be greatly motivated to get involved in the
42
43 company's decisions and help build a firewall to reject actions that may hurt firm
44
45 performance (Kim *et al.*, 2009). Finkelstein and D'Aveni (1994) maintain that a non-
46
47 shareholding board tends to allow its CEO to make firm decisions based on individual
48
49 initiatives. Conversely, boards with a large shareholding will closely monitor the
50
51 agenda-setting of CEOs and take appropriate measures to protect the interests of
52
53 shareholders, which ultimately will affect the duality or non-duality structure of the
54
55 CEO position (Elsayed, 2010). Board ownership is also an indication of the level of
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1
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3 stewardship toward the firm. Sundaramurthy and Lewis (2003, p. 398) highlight the
4
5
6 prominence of equity ownership among executives and the board in promoting firm
7
8
9 performance. They reason that executive ownership “reduces goal conflicts and
10
11
12 avoids increasing risk differentials,” while it also “fosters firm identifications and long
13
14
15 term relations.” A board with minority equity holdings is less likely to monitor CEO’s
16
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18 opportunistic behaviors, which will then incline toward the pursuit of personal
19
20
21 interests at the expenses of shareholders’ benefits (Lasfer, 2006; Hoskisson *et al.*, 2002).

22
23 To summarize the arguments that have been made, we propose that a board with
24
25
26 a high level of ownership will be more motivated to exercise its role in monitoring
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28
29 management and providing resources to the firm. Consequently, regardless of
30
31
32 whether the issue is considered from the agency or stewardship perspective, we
33
34
35 expect board shareholdings to drive CEO duality in a direction that advances firm
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37
38 value.

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41 *Hypothesis 3: Board shareholdings will positively moderate the relationship between CEO*
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43 *duality and firm performance. Specifically, the relationship between CEO duality and firm*
44
45 *performance will be improved when board shareholdings are high.*

46 47 48 **3.6 Frequency of Board Meetings**

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51 Among board activities, board meetings play a significant role because they allow
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53
54 board members to make collective decisions and initiate appropriate measures to
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56
57 implement strategic decisions and thereby mitigate CEO dominance. The resource
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59
60 dependence theory asserts that frequent board meetings can prompt the board to
exercise its functions in relation to corporate activities and provide the board with a
mechanism to correct potentially adverse actions brought by CEO duality (Jackling

1
2
3 and Johl, 2009). A dual-position CEO may tend to control the board agenda by holding
4
5 few board meetings (Finkelstein and D'Aveni, 1994). The board of directors can
6
7 exercise appropriate management control and scrutinize poor performance by
8
9 holding frequent board meetings and thus increase corporate performance (Jackling
10
11 and Johl, 2009).

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17 Research has concluded that, by exercising both controlling and collaborative
18
19 strategies (Sundaramurthy and Lewis, 2003), boards can advance the links between a
20
21 dual-position CEO and board members through the frequency of their meetings. In
22
23 this way, they can also advance the relations between a firm and external stakeholder,
24
25 and thus increase the firm's information-processing capacity and internal and external
26
27 social capital (cf., Muth and Donaldson, 1998), all of which can create benefits for the
28
29 firm.
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36 *Hypothesis 4: The frequency of board meetings will positively moderate the relationship*
37 *between CEO duality and firm performance. Specifically, the relationship between CEO*
38 *duality and firm performance will be improved when the frequency of board meetings is*
39 *high.*
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45 **4. Methods**

46 **4.1 Research Design and Sample Selection**

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48 The sample of this study was drawn from publicly-listed companies in the Colombo
49
50 Stock Exchange (CSE) of Sri Lanka in 2009. As a developing economy in Asia, Sri
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52 Lanka provides the corporate governance literature with a different institutional
53
54 context and thus is expected to add new insights into previous Western-focused
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3 studies (Bruton and Lau, 2008). All listed corporations in the CSE are required to
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5
6 follow the listed rules and amended corporate governance guidelines introduced by
7
8
9 the CSE, Securities and Exchange Commission (SEC), and Institute of Chartered
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11 Accountants of Sri Lanka (ICASL). We excluded eighteen firms who were in financial
12
13 predicament in 2007-2009. Specifically, we excluded those companies that were
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15 temporarily delisted in the stock exchange, failed to submit annual reports for a given
16
17 period of time, lacked sufficient study information, or registered or went bankrupt
18
19 during our study period.
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25 In total, 212 listed companies were finally selected, representing 100% of the
26
27 active firms in the CSE during the fiscal years. The 212 firms were spread over 20
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29 industries. 31 firms (14.6%) were in banking and finance, 28 (13.21%) were in hotels
30
31 and travelling and another 28 (31.21%) were in manufacturing. Average firm age was
32
33 29.96 years, while the average number of full-time employees was 1,790 persons. Table
34
35 1 illustrates the summary of our firms' industry characteristics.
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Insert Table 1 about here

48 **4.2 Measures**

49 *Independent and Dependent Variables*

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53 *CEO duality:* Data were collected from the annual reports of the publicly-listed
54
55 companies in the 2008/2009 fiscal year. CEO duality is a binary variable; a firm with
56
57 duality was coded "1" while non-duality was coded "0" (Boyd, 1995; Finkelstein and
58
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1
2
3 D'Aveni, 1994).

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5
6 *Earnings per share (EPS)*: EPS was used to assess firm performance because it can
7
8 largely explain the functions performed by executives and boards. Previous research
9
10 has used this measure to examine the effect of CEO duality on firm performance
11
12 (Iyengar and Zampelli, 2009).
13
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16 17 18 19 *Moderating Variables*

20
21
22 *CEO informal power*: Family ties and participation in board subcommittees were used
23
24 to capture CEO informal power. We measured the family ties of CEOs by whether the
25
26 CEO was a family member or relative of the founder with same last name or family
27
28 name (Finkelstein, 1992). If the CEO was a family member, code "1" was assigned,
29
30 and otherwise code "0." Participation in board subcommittees was assessed by a
31
32 CEO's membership representation in audit, nomination, or remuneration committees
33
34 (Finkelstein and D'Aveni, 1994; Jackling and Johl, 2009). If a CEO participated in one
35
36 of these subcommittees, code "1" was assigned; otherwise, it was code "0."
37
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44
45 *Board involvements*: Board shareholdings and the frequency of board meetings
46
47 were used to evaluate board involvements. The former was measured by the
48
49 percentage of a board's total shares divided by the company's outstanding shares
50
51 (Kim *et al.*, 2009). The frequency of board meetings was measured by the number of
52
53 board meetings held during the 2008/2009 financial year (Jackling and Johl, 2009).
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60 *Control Variables*

1
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3 To guard against spurious results, several executive-level and firm-level variables
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5
6 were also controlled in the model. The evaluation of executive-level controls included
7
8
9 CEO tenure and the number of board members, board subcommittees, and executive
10
11
12 team members. CEO tenure was measured as the number of years that a CEO was
13
14
15 employed by the firm (Kim *et al.*, 2009). Research has shown that long-tenure CEOs
16
17
18 are more likely to have poor performance (Berrone and Gomez-Mejia, 2009). The
19
20
21 number of board members, including independent, non-executive, and executive
22
23
24 directors, was also controlled in order to avoid the bias presented by the influence of
25
26
27 different types of directors on the informal power and decision making of CEOs.
28
29
30 Moreover, from the boards' viewpoint, controlling these variables allowed a
31
32
33 distinction to be made between the resource provision of the board and its monitoring
34
35
36 and controlling activities (Henry, 2009; McDonald and Westphal, 2010). The number
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38
39 of independent directors was calculated as the total number of outside directors
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41
42 (Finkelstein and D'Aveni, 1994). To avoid the influence of the chairman's busyness on
43
44
45 CEO duality and CEO busyness, we controlled for the former by taking into account
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47
48 the chairman's multi-directorships in board subcommittees. The number of board
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50
51 subcommittees was also controlled, because it may confound the effects of the
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54 frequency of board meetings. The availability of board subcommittees was measured
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56
57 as the total of audit, remuneration, and nomination committees that were reported
58
59
60 under the governance statement in the annual report (Reeb and Upadhyay, 2010).
Finally, the number of executive team members (i.e., executive team size), including
CEO and senior executives who report directly to the CEO, was controlled because it

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2
3 has a significant effect on firm performance (Lin and Shih, 2008).
4
5

6 For firm-level controls, we include firm age, firm size, prior performance, firm
7
8 slack, and industry segments. Firm age and firm size, which captured organizational
9
10 maturity (Matta and Beamish, 2008), were calculated as the natural logarithm of a
11
12 firm's founding years and the number of full-time employees (Ahmed *et al.*, 2006).
13
14 Prior performance, measured by the natural logarithms of EPS in the 2007/2008 fiscal
15
16 year, was controlled since it directly influences a CEO's perception of firm
17
18 performance and the board of directors' involvement (Finkelstein and D'Aveni, 1994;
19
20 Kim *et al.*, 2009). The logarithmic form of analysis was applied to reduce
21
22 heteroscedasticity (Finkelstein and D'Aveni, 1994). Firm slack was measured by firm
23
24 leverage and current ratio, in which leverage was calculated as long-term debt divided
25
26 by total assets (Ahmed *et al.*, 2006) while current ratio was calculated as current assets
27
28 divided by current liabilities (Jaggi and Gul, 2001). Finally, industry was controlled by
29
30 being classified into three segments (i.e., of manufacturing, service and others), since
31
32 research has shown that CEO duality varies with industry characteristics (Boyd, 1995;
33
34 Finkelstein and D'Aveni, 1994).
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46 **4.3 Analyses**

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49 A hierarchical regression analysis was applied to examine our theoretically-derived
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51 hypotheses. In the first step, control variables were entered into the model. The effect
52
53 of CEO duality was tested in the second model while moderators were examined in
54
55 the third model. Finally, the two-way interaction terms were assessed in model four.
56
57
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59 To test the interaction effects, we mean-centered our independent and moderating
60

1
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3 variables and created four multiplicative terms so as to reduce the likelihood of
4
5 multicollinearity (Aiken and West, 1991). We also used the variance inflation factor
6
7 (VIF) to evaluate the effects of multicollinearity. Results showed that VIFs for the
8
9 independent variables ranged from 1.1 to 4.0, while for the interaction terms they
10
11 ranged from 1.2 to 1.7, indicating that multicollinearity was largely unlikely to bias
12
13 the regression results. Table 2 presents the descriptive statistics and the
14
15 intercorrelation coefficients of our variables. Significant correlations between the
16
17 studied variables provide preliminary evidence for further examinations.
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26 Insert Table 2 about here
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30 **5. Results**

31 *Hypothesis 1a and 1b*

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33 Table 3 presents the regression results. As shown in model 4, the coefficient for the
34
35 interaction between duality and family ties is negatively significant ($\beta = -.139$, $t = -2.01$,
36
37 $p < .05$). Thus, hypothesis 1a is supported, and hypothesis 1b is unsupported. A CEO's
38
39 family ties tend to worsen the relationship between CEO duality and firm
40
41 performance, a result that is consistent with the agency prediction. Figure 1 depicts
42
43 the interaction plot which supports the interpretation. Consequently, we maintain that
44
45 it is unwise to appoint a CEO who has family ties to the firm to take the board chair
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47 position.
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58 Insert Table 3 about here
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Insert Figure 1 about here

Hypothesis 2a and 2b

Model 4 in Table 3 also showed that the coefficient for the interaction between duality and participation in board committees is negatively significant ($\beta = -.141$, $t = -2.17$, $p < .05$). Therefore, hypothesis 2a is supported, and hypothesis 2b is unsupported. A CEO who holds positions on board subcommittees will adversely affect the relationship between CEO duality and firm performance, as the agency theory proposes. Figure 2 presents the interaction plot which confirms this prediction. We conclude that the stewardship and resource dependence perspectives are not valid when a dual-position CEO also participates in subcommittees.

Insert Figure 2 about here

Hypothesis 3

Hypothesis 3 predicted that board shareholdings would positively moderate the effect of CEO duality on firm performance. As hypothesized, the interaction term between shareholdings and duality in Model 4 is positively significant ($\beta = .128$, $t = 2.17$, $p < .05$). As Figure 3 shows, plotting the interactions terms further supports the clarification. Accordingly, this study affirms that the equity holdings of boards of directors can support duality to improve firm performance.

Insert Figure 3 about here

Hypothesis 4

Hypothesis 4 predicted that frequency of board meetings would positively moderate

1
2
3 the effect of CEO duality on firm performance. As expected, the regression coefficient
4
5 for the interaction term in Model 4 is positively significant ($\beta = .133$, $t = 1.94$, $p < .10$), a
6
7 finding that supports hypothesis 4. Plotting the interaction terms in Figure 4 depicts
8
9 this finding. As shown, the frequency of board meetings can support duality to
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11 improve firm performance.
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21 Insert Figure 4 about here
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24 *5.2 Post Hoc Checks: Control, Independent, and Moderating Variables*

25
26 Although we do not focus on their direct effects, we are interested in the effects of
27
28 executive-level and firm-level factors on firm performance, especially since our
29
30 research may be among the first of the few studies in this country that explore various
31
32 determinants of ultimate firm performance.
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36
37 Model 1 examined the effects of control variables, which can explain a total of
38
39 37% of the variances in firm performance. CEO tenure, the number of executive and
40
41 non-executive directors, and debt ratio showed negative effects on firm performance,
42
43 while executive team size, current ratio, and past performance showed positive
44
45 effects.
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49
50 Model 2 tested the direct relationship between CEO duality and firm
51
52 performance. The result showed that CEO duality has a positive yet insignificant
53
54 relationship with firm performance ($\beta = .075$, $t = 1.20$). Nonetheless, CEO duality
55
56 positively affected firm performance in Model 3 ($\beta = .183$, $t = 1.98$, $p > .05$) and Model 4
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3 ($\beta = .294, t = 2.72, p < .01$) when the moderators were included in the model. These results,
4
5
6 combined with the significantly positive effects of board shareholdings and frequency
7
8 of board meetings in Model 3, revealed that even though CEO duality itself has little
9
10 impact on firm performance, it can bring value to a firm when the CEO has the
11
12 resource support of the board of directors.
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20 **6. Discussion**

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22 The central objective of this study was to examine the moderating effects of CEO
23
24 informal power and board involvements on the relationship between CEO duality and
25
26 firm performance in an attempt to explain the conflicting as well as the commonalities
27
28 of the results obtained by the agency and stewardship perspectives. Specifically, we
29
30 drew on the resource dependence theory to resolve the apparent discrepancy between
31
32 these two theoretical orientations, thereby eliminating the 'black box' in the duality-
33
34 performance relationship.
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41 In line with prior literature, we found that no significant relationship exists
42
43 between CEO duality and firm performance. Thus, identifying the contexts that can
44
45 determine the effectiveness of duality or non-duality becomes imperative. In this
46
47 sense, the literature is correct in maintaining that neither the agency nor stewardship
48
49 model can properly predict the duality-performance relationship (Boyd, 1995).
50
51 Nonetheless, an examination of this relationship from a contingency perspective can
52
53 bring significant insights to the issue regarding CEO duality and corporate
54
55 governance (Muth and Donaldson, 1998). More specifically, our study has expanded
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3 the theoretical underpinning of corporate governance research by introducing the
4 resource dependence theory to integrate the opposing arguments of the agency and
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the theoretical underpinning of corporate governance research by introducing the resource dependence theory to integrate the opposing arguments of the agency and stewardship perspectives. By examining the CEO duality issue in Sri Lanka, our study has also extended the theoretical applications of corporate governance to countries where governing mechanisms are largely incomplete.

6.1 Theoretical Implications

This study has significant implications for the agency and stewardship theories. The results indicate that CEO duality is favored under high board involvement, while non-duality is preferred when the CEO has family ties or board subcommittee appointments. Specifically, both the CEO's family involvement and participation in board subcommittees has a weakening effect on the duality-performance relationship. This finding supports the agency position by showing that duality is negatively associated with firm performance in situations where informal power also exists. Our finding also indicates that the separation of management and ownership is the key in current business. If a CEO holds too much power, either formally or informally, he/she is more likely to pursue individual interests, which will hurt firm performance. Thus, CEO appointments should be a strategic issue in family or non-family businesses, because they can greatly impact a firm's market value.

Conversely, a high level of board involvement contributes to the positive effect that CEO duality can have on firm performance, since the board is equipped to provide the resources required to advance firm value. As our study results indicate, in situations where board involvement is considerably high, the advantages of CEO

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3 duality outweigh non-duality, a finding that supports the study of Finkelstein and
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5
6 D'Aveni (1994) who found that board vigilance was positively associated with CEO
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8
9 duality. Specifically, when board members are proactively involved in strategic
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11
12 decision-making, agency abuses are reduced and agency costs minimized by the
13
14 board's resource provisions.
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16
17 These findings are interesting because resource dependence theory plays a major
18
19 role in distinguishing between the benefits and concerns of both duality and non-
20
21 duality. When the resource dependence theory is integrated only with the
22
23 stewardship theory (hypotheses 1b and 2b), the duality-performance relationship is
24
25 adversely affected. However, when resource dependence theory is integrated with
26
27 agency and stewardship theories (hypotheses 2 and 3), the duality-performance
28
29 relationship is advanced. Thus, as the resource dependence perspective shows,
30
31 providing resources to the firm through various avenues can benefit or hurt
32
33 performance; the power attributions of executives hold the key. The performance
34
35 implications of CEO duality can be examined by considering the relative power of the
36
37 CEO and the power dynamics between the CEO and the board of directors.
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46 **6.2 Practical Implications**

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48
49 This study has also generated several implications that have relevance for
50
51 practitioners. First, it should be noted that CEO duality or non-duality is not built into
52
53 the CEO's official position. Therefore, it is unwise, and indeed impossible, to
54
55 determine whether duality outperforms non-duality simply from a structural
56
57 perspective. Whether to adopt duality or non-duality requires taking into account
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3 other types of power and resources that CEOs and boards may possess. Second, with
4
5 respect to corporate board structure, a premium should be put on the resource
6
7 provisions and involvement of the board so that increased firm performance can be
8
9 achieved. Agency problems often occur when key decision makers other than the CEO
10
11 have minimal or no financial interests or involvement in the consequences of their
12
13 decisions (Boyd, 1995; Fama and Jensen, 1983). Finally, from the policy-making
14
15 standpoint, internal corporate policies should be strengthened so that directors can be
16
17 more involved in corporate decisions and actions.
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25 Overall, the findings convey a clear warning to companies where CEO is
26
27 equipped with additional informal power. As shown, economic performance of such
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29 companies is more likely to be negatively affected by such practices. Yet, how the
30
31 board performs their fiduciary duties in these companies has a major implication on
32
33 their long-term performance. Companies in Sri Lanka need to understand the power
34
35 dynamics between CEO and board of directors to minimize negative consequences
36
37 (see Uddin *et al.*, 2017). This is particularly important as the ownership of most of the
38
39 companies is concentrated as compared to that of companies in the western advanced
40
41 economies.
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50 **6.3 Limitations and Suggestions for Future Research**

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52 This study uses a multitheoretical approach that makes use of the resource
53
54 dependence theory to resolve the theoretical and empirical conflicts between the
55
56 agency and stewardship perspectives. Such an integrated examination is beneficial
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3 “because depending on just one single perspective is more likely to result in
4 misleading conclusions about the structure as a whole” (Elsayed, 2010, p. 80).
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8 However, the integration of these three theories does not reveal the whole scope of
9 progress in corporate governance. Future research can advance the governance
10 research by combining other points of view. For example, an integrated consideration
11 of social network theory, stakeholder theory, and institutional theory may help
12 resolve other controversial issues by identifying the boundary conditions that favor
13 CEO duality or non-duality.
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25 Secondly, care should be taken to interpret results presented in the study as it
26 only reports a sample of 212 companies in one-year period. It is suggested that future
27 studies may consider a relatively larger size of sample with multiple years as well as
28 different measurements of variables. Thirdly, although the sample was collected from
29 all publicly-listed companies in an Asian developing economy, which increases the
30 applicability of corporate governance research, the generalization of findings requires
31 that studies be conducted in other countries where managerial mechanisms and
32 environments are similar to our study context. It may also be worthwhile to compare
33 such applications between countries. Indeed, corporate governance research can be
34 expanded by comparing different viewpoints in diverse institutional contexts
35 (Aguilera *et al.*, 2008).
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54 Finally, as Bruton and Lau (2008) suggested, it is advisable to conduct a
55 multilevel analysis rather than just a firm-level examination, since this will reveal the
56 extent to which corporate governance applications vary in developed and developing
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3 countries.
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6 In summary, an integrated analysis of the resource dependence, agency, and
7
8 stewardship perspectives, which identifies the contexts where CEO duality can
9
10 function well and where non-duality is preferred, has offered critical insights for a
11
12 diverse range of research topics and business practices. Our study highlights board
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14 involvement as a facilitator and informal executive power as an inhibitor of the
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16 positive effects that CEO duality can have on firm market-based performance.
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TABLE 1
Descriptive Information of Study Sample

Industry Segments	Firms		Market Capitalization	Market Turnover Rate	CEO Duality (%)
	Total	Sample			
Trading	9	7	1.0	22.27	63
Hotels and Travels	32	28	7.4	12.59	53
Plantations	18	18	2.3	20.79	44
Services	6	5	0.3	3.86	80
Banking and Finance	33	31	16.8	9.00	13
Diversified holdings	13	12	15.7	10.87	58
Beverage Food and Tobacco	18	17	12.4	8.25	41
Chemicals and Pharmaceuticals	9	9	1.1	34.41	33
Constructions and Engineering	3	3	0.8	15.06	67
Footwear and Textiles	3	23	0.5	10.40	0
Health care	6	6	2.7	3.23	50
Information Technology	1	1	0.1	56.91	0
Investment Trusts	7	6	0.8	11.46	83
Land and Property	20	18	2.1	15.12	52
Manufacturing	32	28	6.9	17.79	32
Motors	6	6	2.7	85.66	33
Oil Palms	5	5	2.5	3.40	100
Power and Energy	3	3	2.3	15.87	0
Stores Suppliers	5	5	0.5	7.75	40
Telecommunication	2	2	21.4	28.81	0
Total/Average	231	212	5%	19.68%	43%

TABLE 2
Means, Standard Deviations, and Correlations

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Earning Per Share (08/09)	6.15	19.13	1																			
2. Earning Per Share (07/08)	7.19	13.46	.51	1																		
3. CEO Duality	.44	.50	.06	-.09	1																	
4. CEO - Family Ties	.52	.50	.01	-.13	.76	1																
5. CEO - Committee Participation	.43	.50	-.03	.04	.10	-.04	1															
6. Board Shareholdings	10.46	20.13	.12	.05	-.09	.06	-.06	1														
7. Freq. of Board Meetings	6.82	3.27	.13	.17	-.21	-.17	.11	.14	1													
8. CEO Tenure	2.05	.95	.07	.18	.07	.14	.03	.10	-.05	1												
9. # of Executive Directors	2.76	1.68	.01	.14	.06	.13	-.08	.14	.05	.06	1											
10. # of Non-Executive Directors	4.99	2.26	-.09	.04	-.24	-.18	-.05	.11	.29	-.09	-.39	1										
11. # of Independent Directors	2.61	1.40	.04	.02	-.18	-.12	-.02	-.02	.30	-.15	.07	.53	1									
12. # of Board Committees	1.58	.85	.15	.17	-.17	-.14	-.14	.11	.19	.00	.03	.40	.46	1								
13. Executive Team Size	15.10	7.99	.12	.11	-.12	-.16	.09	-.03	.34	.11	.05	.18	.21	.15	1							
14. Chairman Busyness	.50	.501	-.02	-.14	-.03	-.08	.47	-.05	.14	.02	-.11	-.06	.01	-.04	.18	1						
15. Firm Age	3.40	.62	.16	.13	.13	.17	.04	.07	-.04	.16	.10	-.20	.02	.06	.07	.09	1					
16. Firm Size	7.49	1.16	.01	.23	-.34	-.28	.03	-.07	.25	-.09	.06	.34	.26	.30	.19	-.06	-.14	1				
17. Current Ratio	3.64	9.73	.16	-.05	.19	.16	.02	-.10	-.17	-.01	-.05	-.20	-.06	-.08	-.07	.01	.14	-.24	1			
18. Debt Ratio	147.73	376.79	-.19	.11	-.14	-.24	.16	-.04	.38	-.05	-.01	.23	.11	.10	.33	.02	-.05	.21	-.05	1		
19. Industry - Manufacturing	.19	.39	-.04	-.08	.08	.11	.20	.07	.27	.06	-.15	.16	.15	-.03	.18	.21	.09	-.28	.10	.20	1	
20. Industry - Service	.61	.49	-.02	.06	.06	.01	-.08	-.11	-.24	-.09	.16	-.15	-.13	-.09	-.15	-.27	-.02	.24	-.03	-.09	-.61	1

n= 212. Standardized correlation coefficients $\geq .14$ in the table were significant at $p < .05$. (2-tailed)

TABLE 3
Results of Regression Analyses

Variables		Model 1	Model 2	Model 3	Model 4	
Control	CEO tenure	-.044	-.047	-.033	-.007	
	# of Executive directors	-.153*	-.158*	-.224**	-.264***	
	# of Non-executive directors	-.215*	-.214*	-.288***	-.320***	
	# of Independent directors	.085	.091	.118	.146†	
	# of Board subcommittees	.113	.113	.089	.077	
	Executive team size	.180**	.181**	.157*	.160*	
	Chairman busyness	-.030	-.011	-.002	.090	
	Firm age (log)	.031	.026	.018	.018	
	Firm size (log)	-.032	-.013	.001	-.041	
	Past firm performance(log)	.502***	.507***	.491***	.448***	
	Current ratio	.143*	.136*	.163**	.201***	
	Debt ratio	-.278***	-.273***	-.303***	-.299***	
	Industry - manufacturing	-.067	-.080	-.041	-.013	
	Industry - service	-.032	-.043	-.061	-.068	
	Independent	CEO duality		.075	.183*	.294**
	Moderating	CEO - family ties			-.094	-.150
		CEO - subcommittee participation			-.055	-.080
Boards' shareholdings				.163**	.194**	
Freq. of board meetings				.188**	.250***	
Interaction	CEO duality x CEO - family ties				-.139*	
	CEO duality x CEO - subcommittee participation				-.141*	
	CEO duality x board shareholdings				.128*	
	CEO duality x freq. of board meetings				.133†	
R ²		37.1	37.6	42.9	47.4	
Adjusted R ²		32.6	32.8	37.2	41.0	
F		8.30***	7.86***	7.59***	7.37***	
Δ R ²		.371	.005	.053	.045	
F for Δ R ²		8.30***	1.43	4.50**	4.05**	

n= 212. Standardized coefficients are reported.

†p< .10, *p< .05, **p< .01, ***p< .001

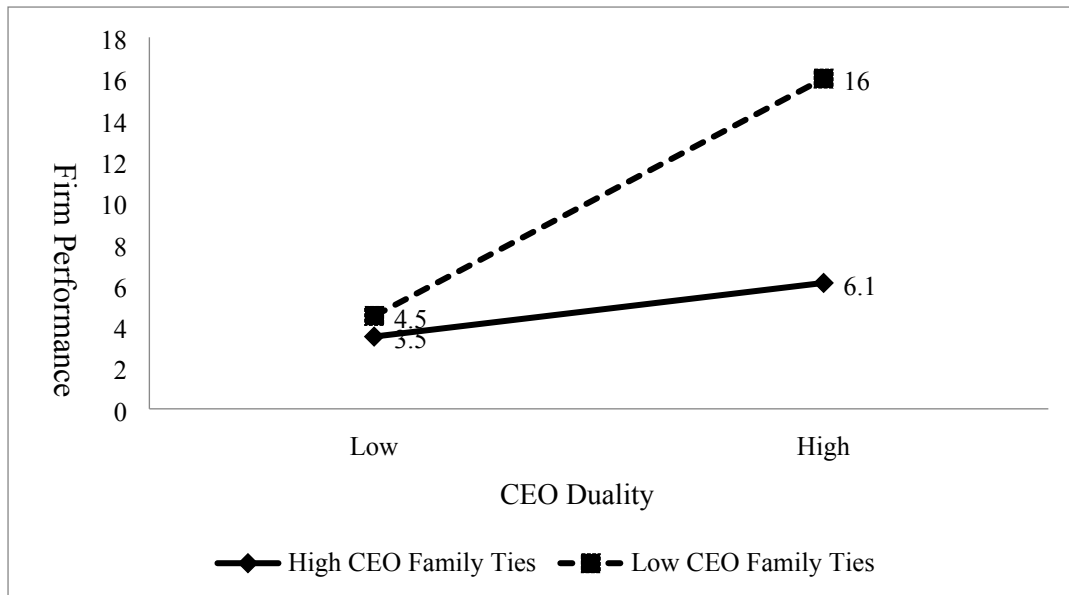


FIGURE 1
Two-way interaction between CEO duality and CEO family ties on firm performance

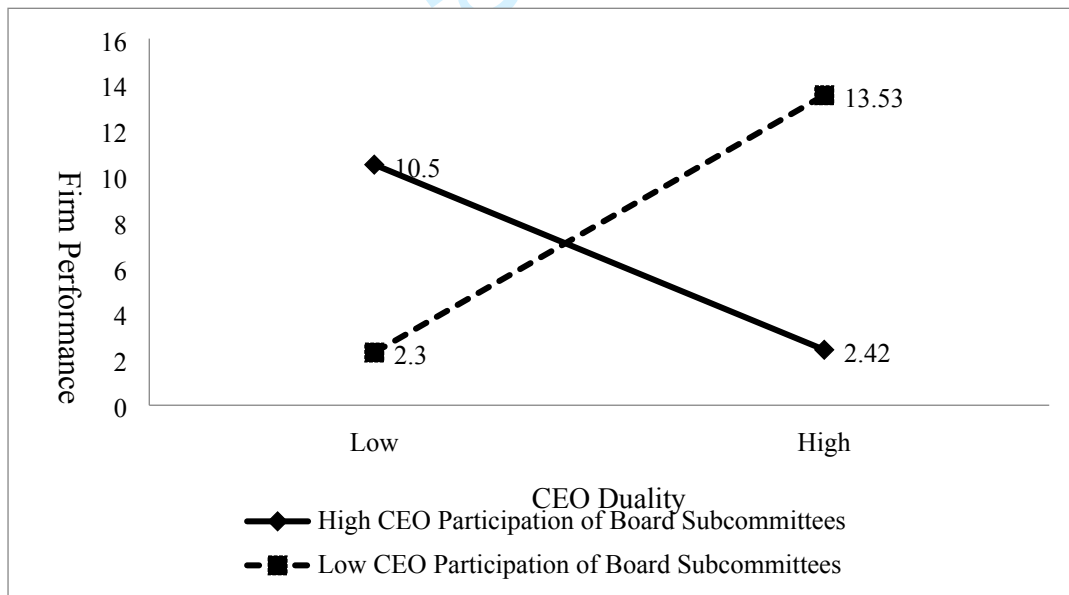


FIGURE 2
Two-way interaction between CEO duality and CEO participation in board subcommittees on firm performance

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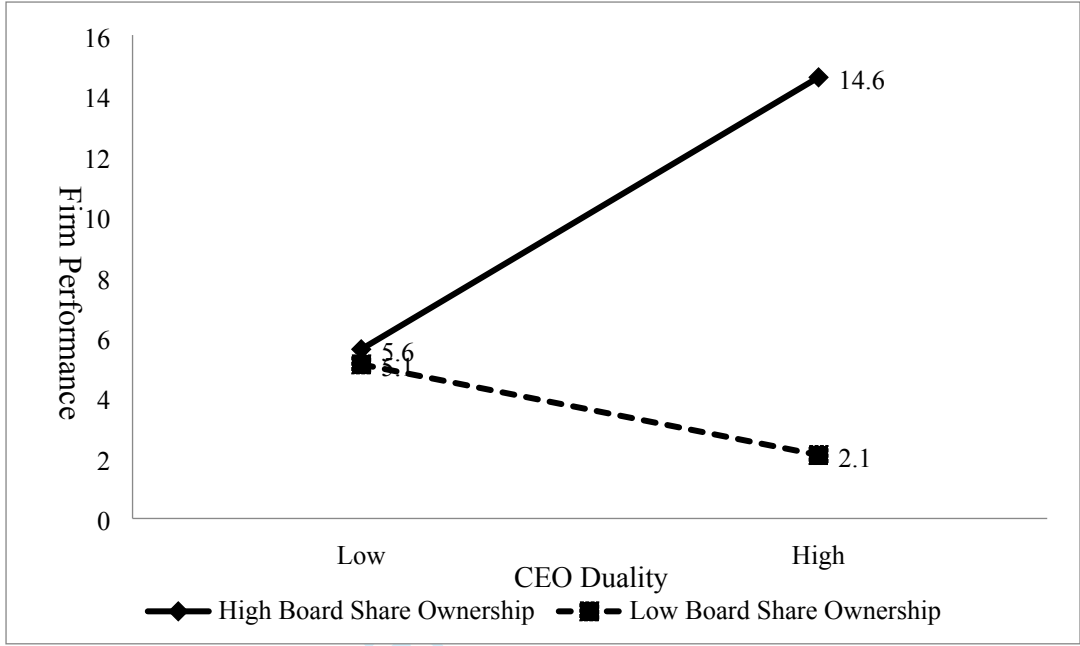


FIGURE 3
Two-way interaction between CEO duality and board shareholdings on firm performance

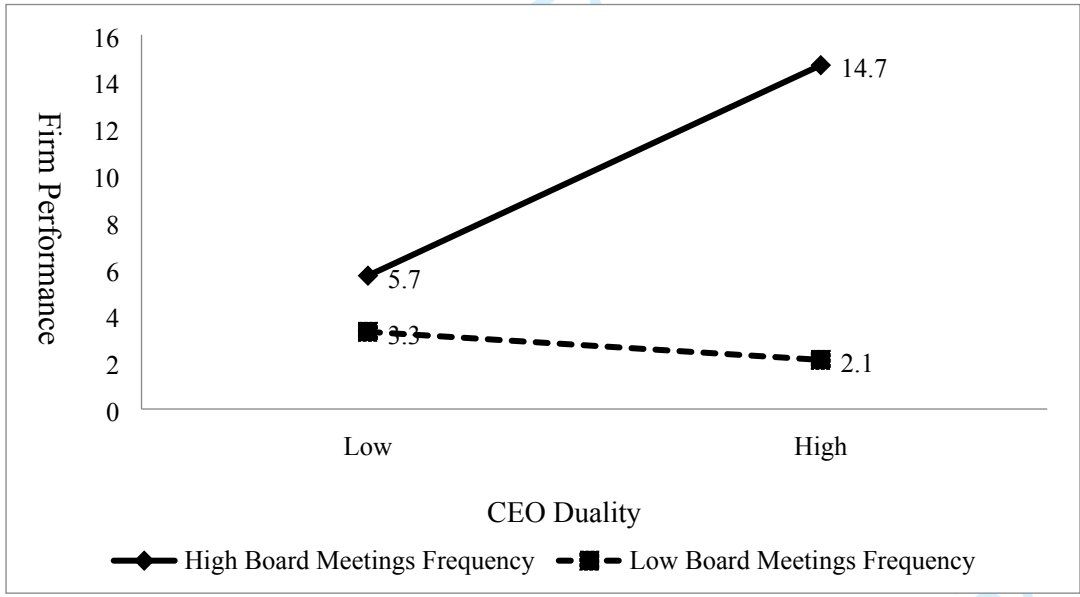


FIGURE 4
Two-way interaction between CEO duality and board meetings frequency on firm performance