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CEO duality and firm performance: A systematic review and research agenda

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Abstract

This paper systematically reviews 314 empirical studies that examine the relationship between board leadership structure and firm performance. The results show that the mixed research findings are due to different firm performance measurements, research designs, sampling practices and approaches of dealing with endogeneity issues. Studies utilizing multiple-country data, multinational companies, small firms or regions covering Africa, the Middle East, Eastern Europe and South America are under-represented. It critiques the methodological weaknesses of some empirical studies and proposes that future researchers should use multiple firm performance measurements, a longitudinal research design and an integrative framework to better control the direct and moderating factors. Future researchers may advance the robustness of research by using multiple theoretical lenses to consider how various governance factors moderate the relationship between board leadership structure and firm performance, particularly the different ownership structures, managerial discretion contexts and national institutional factors.

KEYWORDS

CEO duality, board leadership structure, corporate governance, firm performance, systematic review

INTRODUCTION

Many modern corporations suffer from agency problems because ownership and control are often separated. The role of the board of directors is to mitigate these agency problems, endorse the company's strategy and ensure accountability to stakeholders. The board of directors plays an essential role in corporate governance; it safeguards shareholders' interests and enhances firm performance. Two important board positions are the chairperson and the chief executive officer (CEO), which can be held by one person, referred to as a CEO duality leadership structure, or a separate board leadership structure.

The relationship between board leadership structure and firm performance has been widely examined in literature (Dalton et al., 1998; Kang & Zardkoohi, 2005), yet the empirical evidence on the nature of this relationship has been inconclusive with disparate claims and

competing theoretical frameworks. The methodologies employed in existing research, such as measures and statistical techniques, are robust in some studies, yet under-developed in others. A few meta-analysis (e.g., Dalton et al., 1998; Van Essen et al., 2012) and review papers (e.g., Kang & Zardkoohi, 2005; Krause et al., 2014) reconcile the mixed empirical evidence from different perspectives. Krause et al. (2014) adopt a narrative and qualitative approach and analyse the outcomes of CEO duality on various thematic topics. They offer new theoretical, contextual and methodological directions for researchers to explore. However, with a sample of only 48 papers, it is quite limited in scope. Similarly, Kang and Zardkoohi (2005) review only 30 key empirical studies on duality–performance relationship, and Van Essen et al. (2012) focus only on studies of Asian companies up to 2009. An up-to-date systematic review on this topic does not exist, so we do not have a global perspective of the development and advances in empirical studies

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for the past few decades. This means that underdeveloped areas or theories for new research are unknown. The time is ripe for a comprehensive review of existing empirical studies to identify developments in the past few decades and how to advance future research in this area.

From an agency theory perspective, CEO duality symbolizes greater ‘insider control’ in which a powerful CEO who is also a chairperson weakens board oversight. This may imply a negative relationship with firm performance. Due to the concerns of weak board monitoring under a CEO duality leadership structure, increasingly, policy makers and stock exchanges in different countries, as well as activist shareholders of Goldman Sachs and JP Morgan Chase, have called for separation of the CEO duality position (Krause et al., 2014). As a result, evidence shows that the percentage of Standard & Poor 500 companies choosing to have a CEO duality leadership structure has reduced from 65% in 2007 to 41% in 2021 (Spencer Stuart, 2021). The environment of board leadership has therefore changed, and there is a need to synthesize disparate findings and review previous studies in order to chart advances in the field. The findings of this review paper will enable company directors, shareholders and policy makers to obtain a global perspective of the performance effect of CEO duality in different countries and regions and, therefore, enhance their decision making.

Given the continued interest from scholars, shareholders and policy makers, and the abundance of empirical studies with mixed findings, there is a need for a systematic review to synthesize previous empirical studies and offer new directions, so that future research provides robust research findings to guide policies. This study has the following objectives:

1. To systematically review empirical studies that examine the relationship between board leadership structure and firm performance, in terms of research findings and research designs.
2. To synthesize, reconcile and interpret inconsistencies in empirical studies’ research findings relating to their research designs.
3. To offer new, or improved, theoretical and methodological approaches, so that future research can better inform businesses, shareholders and policy makers.

Unlike Krause et al. (2014), and inspired by Kang and Zardkoohi (2005), this paper conducts a systematic review by searching journal papers through electronic databases: ABI, Business Source Complete, Emerald Insight, Sage Premier and Scopus. Adopting a new and unique angle, this systematic review provides further evidence and insights to advance research, in terms of rigor of research design and theoretical underpinnings in board-performance studies. We offer three contributions to the field of corporate governance. First, this is the first

systematic review on the CEO duality–performance relationship, and it provides a thorough review of the developments of empirical studies over the past three decades. It adopts an objective and systematic approach to code the detailed features of each paper. This enable a more concrete understanding of the characteristics and advancements of the existing empirical studies, so that researchers understand what has been done in the past and what needs to be done in future. Second, deriving from critiques of previous studies, this paper investigates how researchers can improve their research designs to address various important methodological issues and to advance the robustness of research in corporate governance. Third, this paper offers valuable insights that will guide future research, to expand on new or less explored theoretical and contextual grounds (e.g., moderating roles of individual characteristics, other governance factors, managerial discretion contexts and national institutional factors).

THEORETICAL BACKGROUND AND EMPIRICAL EVIDENCE

This section discusses the important theories that guide the CEO duality–performance relationship in the literature and the main empirical evidence therein. Agency theory argues that mechanisms should be in place to either align the interests of principals and agents, or to monitor the behaviour of agents, so that agents utilize their delegated power to generate higher returns for the principals (Jensen & Meckling, 1976). Agency theory believes that CEO duality weakens board control and promotes CEO entrenchment. Therefore, CEO duality has negative implications for firm performance. On the other hand, stewardship scholars assume that managers are diligent stewards of the company. A CEO duality leadership structure removes ambiguity in the decision-making process and may improve firm performance (Donaldson & Davis, 1991; Finkelstein & D’Aveni, 1994).

Resource dependency theory (Boyd, 1995) argues that the competing views of agency and stewardship regarding duality could be integrated via a contingency model. The benefits of duality (i.e., the stewardship rationale) would outweigh the costs (i.e., the agency rationale) in markets that would require a strong CEO with fast and strategic decision making. CEO duality has a positive effect on performance under some industry conditions, such as, high complexity or resource scarcity (Finkelstein & D’Aveni, 1994; Peng et al., 2007). Rhoades et al. (2001) argue that it is important to study under which situations two heads are better than one, as the firms’ internal and external governance environments shall be considered as contingencies that affect the CEO duality–performance relationship. From an integrative institutional perspective, Krenn (2016) develops a framework and considers

the influence of cultural and economic forces in shaping corporate governance at the firm and national levels. Institutional environments are nationally distinct and more scholars acknowledge that ‘institutions matter’ (Aguilera & Jackson, 2003) since institutions have the capability to modify basic principal–agent relationship.

In summary, the contingency approach considers external environment and contingency factors, and institutional theory considers wider institutional factors. It is important to integrate organizational, contingency and institutional dynamics that affect the board–performance relationship.

Regarding the existing empirical evidence, three review papers by Zahra and Pearce (1989), Finegold et al. (2007) and Krause et al. (2014) provide no evidence of a systematic relationship between CEO duality and firm performance. All conclude that the extant research reveals mixed results. For five meta-analysis papers, Dalton et al. (1998), Van Essen et al. (2012), Bergh et al. (2016) and Mutlu et al. (2018) also show a non-significant relationship, and Rhoades et al. (2001) indicate a negative relationship. Kang and Zardkoohi (2005) suggest that the effect of board leadership structure on firm performance is dependent on a firm’s external and internal conditions. The general presumption of the benefit of a separate board leadership structure is the independent check on the behaviour of the CEO, thus improving the quality of board monitoring and firm performance (Dahya, 2009). As the empirical evidence is mixed, more research needs to be done to better understand the features of different board leadership structures in different institutional environments, and to give clearer guidance to policy makers.

REVIEW METHOD

Systematic review differs from narrative review by adopting a scientific, objective and replicable process. It minimizes bias to enhance legitimacy and reliability (Becheikh et al., 2006). We adopted the following procedure to identify empirical studies of a quantitative nature that examined the relationship between board leadership structure and firm performance:

1. We used two keyword search strings to extract papers. The first string is ‘CEO duality’, ‘CEO’, ‘chief executive officer’, ‘board structure’, ‘board composition’, ‘board’ and ‘corporate governance’, which captures the main variables of interest. The second string is ‘performance’ to capture those relevant studies which examined various measurements of firm performance. We searched the ABI, Emerald Insight, Business Source Complete, Sage Premier and Scopus electronic databases. These keyword strings were searched in the abstract, title and keywords fields. In these papers, firm performance is the dependent variable. CEO duality, measured as a dummy variable, is either the independent variable or the control variable.
2. The following inclusion criteria were applied. The search showed that financial profitability ratios and Tobin’s Q are the most popular firm performance measurements. To make an analysis on a set of comparable studies, we considered journal papers that use financial profitability ratios (e.g., return on assets [ROA], return on equity [ROE], return on capital employed, etc.) and/or market-based performance indicators to measure firm performance. Market-based performance indicators as a proxy for firm value are Tobin’s Q or market-to-book ratio. Tobin’s Q is defined as the market value of a firm’s assets divided by their replacement value. Market-to-book ratio is the market value of a firm’s equity capital divided by its book value. A Tobin’s Q greater than 1 means that the company is doing well because it earns a higher rate of return than the replacement cost of the company. We considered only quality journal papers written in English.
3. The following exclusion criteria were applied. We excluded studies that examine other firm outcomes (e.g., growth or stock returns) or use subjective organizational performance scales to measure firm performance. There are very few of these studies. Stock returns are determined by firm specific, wider economic and market factors, some of which are outside the control of the board of directors (e.g., news from external sources), according to efficient market hypothesis. The literature of board studies is well established. New knowledge is achieved mainly through rigorous, peer-reviewed research (Bird et al., 2002). To enable a critical assessment of the relevant literature of adequate quality, we excluded working papers and conference papers as these papers are work in progress, we also excluded book chapters and dissertations.
4. We searched each database using the above keywords. Initially, we located 3498 papers. We excluded 2722 non-relevant studies, leaving 776 papers. We further excluded 297 duplicates and 43 papers that adopted other firm performance measurements. The databases subscribe to a wide range of journals, some of which

TABLE 1 Paper selection process

Studies	Total	No. of studies
Total number of studies in the initial search		3498
Excluding non-relevant studies	2722	776
Excluding duplicates	297	
Excluding papers with other firm performance measurements	43	436
Excluding papers with quality issues	122	
Final number		314

are open access journals. These journals may not have robust peer review systems and the quality of papers published in these journals vary. As the inclusion criterion is ‘quality journal papers’, we screened among those relevant journal papers and excluded 122 papers with quality issues (e.g., issues with data, model, outliers, etc.), among which 58 papers have issues with outliers. It is essential that our systematic review is built upon the results of credible studies. Quality assessment is the appraisal of a study’s internal validity and the degree to which its design and analysis have minimized biases or errors (Oxman, 1994). Shen et al. (2015) indicate the importance of considering the influence of outliers, as their empirical results are different when including or excluding outliers. Not dealing with outliers in firm performance variables is a common issue for researchers in board-performance studies.

5. Finally, we included 314 journal papers in the review, published between 1991 and June 2021, and spanning 30 years of history. Table 1 provides a summary of the paper selection procedure.

From these papers, we extracted the information of country and year coverage, industry, firm size, firm performance measurements, estimation methods and research design. We distinguished these papers according to sub-categories of these variables. For firm performance measurements, firm size and research design, we allocated them into two categories. We coded industry and estimation methods into three categories. We also coded sampling technique and theoretical approaches employed in each paper. The systematic coding of each paper forms the foundation of our analysis for this review paper. We then counted the number of papers that correspond to those categories of features.

The next section presents the review results. We present the country coverage in Table 2 and the methodological differences in Table 3. As Table 3 contains the most significant data, these data are analysed more thoroughly. We synthesize mixed empirical findings, critique the deficiencies of some previous studies and offer

suggestions to improve. The moderating factors and institutional effects are analysed in Table 4. An integrated conceptual framework is presented in Figure 1 and discussed. Future research directions and theoretical implications are forwarded.

REVIEW RESULTS

Summary statistics

Disciplinary coverage

Kang and Zardkoohi (2005) summarize 30 empirical studies from 1978 to 2003 on the duality–performance relationship. Building on their ideas, this paper summarizes previous studies published between 1991 and June 2021 of 314 journal papers in Table 2. This review paper contains more up-to-date studies. First, we present (a) the most important scientific journals, (b) most cited papers/authors, (c) research areas and (d) temporal distribution of articles. We use the 2018 Chartered Association of Business Schools (CABS) journal ranking guide to identify the most important scientific outlets. The most important journals are the *Strategic Management Journal* and the *Journal of Corporate Finance*. Quite a few papers were published in these two journals because board leadership structures are directly related to a firm’s strategy and performance. These two journals have high citation factors, according to Scopus. The *Strategic Management Journal* is more widely cited than the *Journal of Corporate Finance*. Wintoki et al. (2012) is the most cited paper and has been cited 953 times in Scopus.

We classify research areas based on the subject area classification of Scopus while considering the relevance to the topic. Scopus classifies two broad subject areas: business, management and accounting; and economics, econometrics and finance, with subcategories in each subject area. Strategic management and corporate governance are the most relevant subject areas for the research of board–performance relationship. We divide all journal papers into the following subcategories: business,

TABLE 2 The country coverage of empirical studies

No. of studies										CEO duality-performance relationship
Developed economies				Developing and transitional economies				All economies		
Total	USA	Europe	Australia Canada etc.	Total	China	Asia (other than China)	Middle East Africa etc.	Multiple countries	Grand total	
80	40	20	20	63	33	22	8	16	159 (50.6%)	None
23	17	4	2	20	4	10	6	4	47 (15%)	Negative
11	7	1	3	11	5	4	2	2	24 (7.6%)	Positive
48	27	8	13	23	5	12	6	13	84 (26.8%)	Mixed
162	91	33	38	117	47	48	22	35	314	

management, strategy and management, accounting, finance, corporate governance and economics. To code a journal's subject area, we use the 2018 CABS journal ranking guide as a reference.

The CABS journal rankings are between 1* and 4*; the higher, the better. One-hundred and forty-four papers (46%) were published by 3* or 4* ranking journals, while 94 papers (30%) were published by 1* or 2* ranking journals, and 76 papers (24%) were published in unranked journals. This shows that nearly half of the papers were published in highly regarded and reputable journals that publish original and well executed research. In terms of discipline, 106 papers (34%) were published in finance journals, 98 papers (31%) in management journals and 35 papers (10%) in corporate governance journals. There were 24 and 23 papers published in accounting or strategy and management journals, respectively, accounting for 15% of the papers. The remaining papers (10%) were published in business and economic journals. Board leadership structure has been a prominent issue in management and finance studies because scholars have been interested in examining the financial outcomes of different board leadership structures. There is also a change of temporal distribution of articles in different decades. In the 1990s and 2000s, about 36.5% of papers were published in finance journals, and 29% were published in management journals. However, in the most recent decade, 22% of papers were published in finance journals, and 44% of papers were published in management journals. It suggests that recently, scholars were tackling more interesting management issues in board-performance studies.

Next, we present the review results. Table 2 is divided into four categories: 159 studies showing a non-significant result, 47 showing a significant negative relationship, 24 showing a significant positive relationship and, finally, 84 studies showing mixed results.

Geographical coverage

Table 2 shows that half of the studies (159) reveal a non-significant result, with profitability ratios and market-

based indicators roughly equally distributed. More studies (26.8%) show mixed results, compared with studies revealing a negative or positive relationship. For the single-country studies, 162 are in developed economies, and 117 are in developing or emerging economies. Only 35 are comparative studies or sampling multiple-country data. Studies utilizing multiple-country data are under-represented. Further clarification and richer findings would emerge from comparative studies. North America, Asia and Europe are the most researched continents. The United States has the largest number of studies with 91, followed by China with 47 studies. The United States and China are the two largest economies and also have the largest number of studies. Many authors (e.g., Zahra & Pearce, 1989) have called for more emphasis on boards outside the United States. Three hundred and fourteen papers cover 82 countries, representing wide geographical areas in all continents. South America is covered in two papers. African and Middle Eastern countries are sampled by 13 and 14 papers, respectively. There is only one single-country study, covering Romania in the Eastern Europe region. More studies covering Eastern Europe, Africa, the Middle East and South America are needed. Institutional development is weaker in these regions compared to other parts of the world. Hence, more research in these regions can help us to better understand the governance and institutional development at firm and country levels. Table 3 shows more information about the characteristics of the previous studies.

Features of empirical studies

Time range and firm performance measurements

Regarding the year of publication, 17 papers were published between 1991 and 2000, 86 papers between 2001 and 2010 and 211 papers between 2011 and June 2021. More papers were published in each recent decade. The data period ranges from 1975 to 2019, spanning 45 years of history. Among 314 papers, 149 papers use

TABLE 3 Summary statistics of the features of empirical studies that examine the CEO duality–performance relationship

Year range	No.	Firm performance	No.	Industry	No.	Research design	No.
1991–2000	17	Profitability ratio	149	Non-financial	142	Cross-sectional	37
2001–2010	86	Tobin's <i>Q</i>	83	Financial	33	Panel data	277
2011–2020	211	Both	82	Both	139		
Firm size	No.	Control	No.	Estimation method	No.	Theoretical perspective	No.
Large	292	Internal	303	<i>t</i> test/ANOVA	10	Agency theory	262
Small and medium	7	External	233	OLS	196	Stewardship theory	83
Both	15	Both	231	GMM/2SLS	108	Resource dependence theory	82
						Institutional theory	13

only profitability ratios, and 83 papers use only Tobin's Q or market-to-book ratio to measure firm performance. Eighty-two papers employ both profitability ratios and Tobin's Q or market-to-book ratio to measure firm performance.

The weakness of accounting or market-based performance measurements has been discussed by Rebeiz (2015). Accounting returns communicate past firm performance, are sensitive to financial leverage and are vulnerable to manipulation by management. Conversely, market returns are derived from expectations of the marketplace and assume the market is efficient, which might not be the case. They are subject to macro-environmental variables, which are beyond the control of managers, thus it may blur the board–performance relationship. For some studies with mixed results, CEO duality has different implications with different firm performance measurements. For example, Brick and Chidambaran (2010) show that CEO duality is negatively related to ROA, though the relationship is not significant with Tobin's Q .

This review paper shows that profitability ratios are more popular than market-based indicators to measure firm performance. ROA and ROE are the most adopted profitability ratios. In each decade, the proportion of studies using both measures increased. Different performance measurements may affect the estimated duality–performance relationship. Due to the weaknesses of accounting or market-based performance measurements, it is advised that researchers use multi-dimensional measurements of firm performance, so that the research findings have more useful implications for investors and regulators.

Sample choice and sampling practices

In terms of industry choice, 142 papers sample all industries excluding the financial industry, while 33 papers sample financial firms, and 139 papers sample all industries including the financial sector. The majority of papers focus on large companies, but overlook multinational companies (MNCs). Large companies are sampled by 292 papers (93%), mostly public listed companies (PLCs). Only seven papers (2%) sample small or medium companies (SMEs). The remaining 15 papers (5%) sample both large companies and SMEs. Due to ease of access to secondary data of PLCs, it is no surprise that most papers sample PLCs. Only one paper samples MNCs despite Luo's (2005) call for future research to examine how first-tier directors monitor second-tier boardrooms and evaluate their performance in MNCs. The gap in research into board structure of MNCs suggests a lack of perspective and an imbalance of researchers' views.

As financial firms are governed by special government regulations, their operations and leverages are different. The sampling practice of excluding financial firms can reduce the noise factor from that industry. This

review paper shows that the sampling practices of sampling large companies or PLCs have not improved over the years. Findings from large companies might not be generalizable to most organizations. SMEs are under-represented and MNCs have been overlooked. MNCs are different from large domestic companies as they have governance structures at the headquarter and subsidiary levels. MNCs need to balance between headquarter governance and subsidiary operations. Future research could examine board-governance at multiple levels in MNCs and this would diagnose multi-tier agency relationships across different regions and the impact on firm performance.

Regarding sampling practice, 168 papers (54%) sample all companies, such as all PLCs of a certain stock market index, while 137 papers (44%) choose a limited sample, using a stratified or random sampling technique. Seven papers adopt a convenience sampling technique. Cornett et al. (2007) and Tuggle et al. (2010) sample American PLCs from a similar time period, yet reveal different findings. Cornett et al. (2007) sample Standard & Poor 100, the large-cap companies, and show that CEO duality is not related to ROA, yet Tuggle et al. (2010) reveal a negative association with ROA and ROE. The difference might be due to sample choices, as they use different sampling techniques. The large companies might have different characteristics to the 178 selected listed firms in Tuggle et al. (2010). This finding suggests that it is better to sample the whole population of listed firms, so that research findings are generalizable and have more meaningful implications to investors and regulators.

Research design

Thirty-seven papers sample only 1-year cross-sectional data, and the remaining 277 papers use panel data for analysis. The impact of board leadership structure on firm performance is not static. Researchers need to pay attention to the time lag between board attributes and firm performance. The present firm performance may not be a consequence of its current corporate governance mechanisms (Rebeiz, 2015). Some scholars have shown that the duality–performance relationship is not static cross-sectionally over the years. For example, Grove et al. (2011) show that CEO duality is negatively related to ROA in 2006 and 2007, but the relationship is not significant in 2008 and across average of 3 years. What holds for 1 year might not hold for next year; as a result, the research implications for those studies that only sample 1 year's data might be limited. Gove and Junkunc (2013) indicate the issue of cross-sectional approaches to measure CEO duality as board leadership structure changes over time. Improving the research design can help researchers to build research on solid grounds and provide a more comprehensive view of the reality.

Model design and variables

Some internal factors are controlled in 303 papers while external factors are controlled in 233 papers. Two hundred and thirty one papers control both external and internal factors that influence firm performance in their models. The need to control relevant factors is reinforced by Rebeiz (2015). Rebeiz (2015) indicates that firm performance is determined by a complex network of interlinked variables from different disciplines: risk, leadership, macro-economic variables and external governance mechanisms, such as market disciplinary forces. This review shows that some corporate governance researchers restrict their models to corporate governance variables and omit some fundamental variables from other disciplines, such as management, finance and economics. Capon et al. (1990) list 200 variables that could determine financial performance. One variable, R&D, accounted for a significant percentage of the variance in financial performance. The variable of capital expenditure can affect firm performance as the investment in capital is related to the discounted future value of the firm (Lang et al., 1989), yet many studies included in this review paper do not control the effect of R&D or capital expenditure. Other less employed variables such as ownership structure can also be used to control the performance effect. Shleifer and Vishny (1997) indicate that block-holder ownership is an influential mechanism in corporate governance, and this has implications on overall firm performance and value.

The upper-echelon theory argues that directors' characteristics affect firms' outcomes (Hambrick & Mason, 1984). Serra et al. (2016) show that the competence and experience of CEOs affect firm performance positively. Johnson et al. (2013) suggest that the board composition is a critical factor to impact firm outcomes and they review more than 300 papers on directors' demographics, social capital and human capital. The CEO's age, tenure, gender, financial experience and social ties to other firms are relevant factors that affect firm outcomes, yet this view shows that these internal factors are largely ignored by previous researchers.

This review paper reveals that a greater proportion of studies control both internal and external factors in each successive decade. Few corporate governance researchers have a narrow focus and omit some important variables from their models. Researchers are recommended to adopt a holistic view to examine the effect of a corporate governance variable while controlling other factors in an integrative framework. Improving the model design can help to present a comprehensive review while controlling the confounding factors. Future researchers could improve the model design to include other essential and fundamental variables that affect firm performance, such as ownership structure, capital expenditure, R&D and CEO characteristics. Failure to control these variables causes omitted variable bias and may affect estimated

results. It is essential for corporate governance scholars to improve the model design and advance research in future.

Estimation method

Ten papers use *t* test or ANOVA method to compare firm performance differences between companies with different leadership structures. All 10 papers use old data from the last century. One hundred and ninety-six studies use various regression models, such as pooled OLS or panel data fixed effects models. Ninety-two studies use advanced regressions such as system generalized method of moment (GMM) or two-stage least squares (2SLS) to tackle the endogeneity issues. There are three sources of potential endogeneity in corporate governance–performance relationships: unobserved heterogeneity, simultaneity and dynamic endogeneity, as indicated by Wintoki et al. (2012). A method to tackle the endogenous nature of the governance–performance relationship is to use instrumental variables and 2SLS models, or system GMM to address the dynamic endogeneity relationship when the current board structure is determined by the firm's past performance (Wintoki et al., 2012). Nguyen et al. (2015) show that CEO duality has a positive relationship with Tobin's *Q* in fixed-effects and pooled OLS regressions, yet the relationship is no longer significant in system GMM regression. Wintoki et al. (2012) caution that some estimations without considering the dynamic nature of the relationship might be biased.

The review paper shows that 34% of studies employ advanced regression techniques. A higher proportion of papers use advanced regression techniques in each successive decade. The estimation methods affect the estimated CEO duality–performance relationship. More studies are needed to address the endogeneity concerns of the relationship as rigorous research design will produce unbiased research findings. This will have a greater social impact and guide policies.

Theoretical approach

In terms of theoretical approach, a dominant number of studies, 262 (83%), use agency theory as the theoretical basis. Eighty-three papers (26% each) consider the influence of stewardship theory and resources dependency theory on the behaviours and outcomes of agents respectively. Only 13 papers consider the influence of institutional factors on the board–performance relationship and stakeholder theory is only mentioned in 14 papers.

The studies included in this review paper have been guided mostly by agency theory, which is still the dominant theory in corporate governance research. The scholars examine the monitoring role of different board

leadership structures, as managers may have self-serving objectives. However, agency theory cannot provide a comprehensive review of the multifaceted board–performance relationship. Managers may have behaviours and motives beyond self-interest, therefore, goal conflicts might not exist when ownership and control are separated (Muth & Donaldson, 1998). Davis et al. (1997) propose that people displaying higher intrinsic factors are more likely to form a principal–steward relationship. Hence, some researchers adopt the angle of other theories.

Regarding whether researchers adopt a single or multiple theoretical approach, 131 papers adopt a single over-arching theory as the foundation for their research, typically agency theory and 154 papers adopt multi-theory lenses. Eighty-five papers utilize two theoretical approaches, and 46 papers utilize three theoretical approaches, most commonly the angle of agency theory, stewardship theory and resource dependency theory as these three theories are the most common theories that guide the studies on board of directors. Contingency theory, upper echelon theory and human/social capital theory are mentioned in 11, 10 and 9 papers, respectively. Managerial power/hegemony theory and transaction costs are each mentioned in four papers, while managerial discretion is considered in only one paper.

The review paper shows that upper echelons theory and managerial discretion theory, which are overlooked by researchers, might offer further insights into board leadership. Originally focused on top management teams, upper echelons theory has been applied to the board of directors (Finkelstein et al., 2009). It states that organizational outcomes are determined partially by managerial characteristics (Hambrick & Mason, 1984), and therefore, CEO' demographics, social capital and human capital affect the firm's strategy, direction, resource acquisition and outcome. Hambrick and Finkelstein (1987) focus on three forces that affect managerial discretion: managerial characteristics, internal organizational factors and the task environment. Earlier, this review showed that a small proportion of papers have not controlled the external factors in their models, implying the failure to consider how the environmental factors affect CEO's discretion and firm performance. For those papers that consider internal factors, most of them have not controlled CEO characteristics in their models. Picone et al. (2021) show that the performance of international strategies managed by overconfident CEOs is highly volatile as they take on high risks. Future research could examine CEO duality–performance relationship by exploring the influence of CEO characteristics and varying managerial discretion contexts. This approach will help address the methodological and theoretical weaknesses of some previous empirical studies and advance research in future. Multi-theory frameworks can better explain the degree

of agency conflicts and outcomes in different contexts than a single theoretical lens.

Further analysis

To draw more insights from previous empirical studies, we conducted further analysis to examine moderators on CEO duality–performance relationship and institutional effects in multiple-country studies.

Factors moderating CEO duality–performance relationship

In Table 2, of those studies that reveal mixed results, some adopt the contingency approach. The research approaches adopted by those researchers provide directions for future research. We identified 61 papers that used interaction models to examine the moderating effect, with CEO duality as a moderator or the main variable. Fan et al. (2019) indicate that CEO duality negatively moderates the relationship between board-CEO friendship ties and firm value as board monitoring is weak. Table 4 panel A summarizes some studies that identify moderators of the CEO duality–performance relationship: negative role of ownership concentration (Singh et al., 2017), positive role of board independence (Duru et al., 2016), as well as debt level (Chen & Nowland, 2010), and cash flow (Chen & Nowland, 2010; Chi & Lee, 2010).

Studies in Table 4 and other relevant papers reveal some themes to direct new research of underdeveloped areas on this topic. Large or block owners may be more capable of monitoring management (Shleifer & Vishny, 1997); therefore, the necessity to separate the CEO duality position is reduced. On the other hand, large block shareholders may have greater ability to accumulate private benefits against the interest of other minority investors. This can impose damage on firm performance and value (Shleifer & Vishny, 1997). Singh et al. (2017) indicate that institutional concentration plays a negative role in moderating duality–performance relationship. Studies that consider the moderating effect of different ownership structures such as block shareholding, family ownership and state ownership in different institutional contexts might reveal interesting findings. This can reveal when the large shareholders can strengthen or weaken board control.

Shleifer and Vishny (1997) indicate that a big concern for shareholders is that managers may waste shareholders' funds by investing in value-destroying projects. When the company generates large amounts of free cash flow, agency costs are more severe (Jensen, 1986). Chi and Lee (2010) measure agency conflicts as free cash flow and find that it exerts a negative moderating role in the duality–performance relationship. This

indicates that in companies with high cash flow, the agency cost of a CEO duality leadership structure is higher. More research could further investigate the board–performance relationship under situations when agency costs are higher.

Hambrick and Finkelstein (1987) define managerial discretion as a manager’s latitude of action that induces agency behaviour. CEO duality leadership structure gives a CEO more discretion in decision making (Finkelstein & D’Aveni, 1994) and weakens board control (Boyd, 1995). The board of directors is a crucial internal control mechanism for mitigating moral hazard problems. Lewellyn and Fainshmidt (2017) indicate that a board leadership structure is compensated for, or reinforced by, other types of power and discretion contexts where the CEO is embedded. This paper reinforces a contingency review of

board leadership structure through managerial discretion perspective.

Institutional effect on board–performance relationship in cross-national settings

Next, we analyse the research focus of those 36 studies that sample companies from multiple countries to reveal any extra insight they offer compared to those single country studies in Table 4 panel B. While these papers have various points of focus, only five papers consider the influence of institutional factors. Nguyen et al. (2015) show that national governance systems affect the governance–performance relationship for firms. Ownership concentration has a more positive effect on firm

TABLE 4 Moderators on CEO duality–performance relationship and institutional effect

Panel A			
Moderators on CEO duality–performance relationship			
Author	Moderator	Duality–performance relationship	Findings
Singh et al. (2017)	Ownership concentration	Negative	Ownership concentration negatively moderate the duality–performance relationship.
Chen and Nowland (2010)	The cash flow rights of the largest shareholder, control wedge, family involvement, debt level	Negative	The duality–performance relationship is negative in family-owned firms; when the largest shareholder has high cash flow rights or has no control wedge; family get more involved; or the company has less debt.
Chi and Lee (2010)	Free cash flow levels	Positive	Free cash flows exert a negative moderating role on duality–performance relationship.
Duru et al. (2016)	Board independence	Negative	Board independence has a positive role in moderating duality–performance relationship.
Lewellyn and Fainshmidt (2017)	Other types of CEO power and discretion arising from the organizational and industry contexts in which the CEO is embedded.	Contingency	The effectiveness of a dual or separate leadership structure is contingent upon other types of power and discretion arising from the organizational and industrial contexts in which the CEO is embedded.
Panel B			
Institutional effect on board–performance relationship in cross-national settings			
Author	Moderator/mediator	Effect	Findings
Nguyen et al. (2015)	National governance quality	Moderator	The national governance systems affect governance–performance relationship in firms. The positive influence of ownership concentration on firm performance is stronger in Vietnam than Singapore.
García-Meca et al. (2015)	Institutional factors	Moderator	Gender diversity is positively associated with firm performance in counties with a common law system and stronger investor protection. Institutional factors have a positive moderating role.
Van Essen et al. (2012)	Strategic preference R&D	Mediator	Lacking a direct duality–performance relationship, this relationship is mediated by the strategic preferences of firms.
Bergh et al. (2016)	Top management team (TMT)	Mediator	The duality–performance relationship is not significant. The boards influence firm performance through mediating the TMT’s attributes by shaping the structure and composition of the TMT.

performance in Vietnam than Singapore. García-Meca et al. (2015) reveal a positive moderating role of institutional factors on the board diversity–performance relationship. Gender diversity has a more positive effect on firm’s performance in countries with a common law system and stronger investor protection. This review paper shows that institutional effect on duality–performance relationship has been ignored. The likelihood of agency abuses and the benefits of stewardship may vary in different countries (Boyd et al., 1997). The moderating role of institutional factors could be investigated further on cross-national studies examining board–performance relationship.

For the extensive cross-national studies, there has been lack of consideration of national governance factors of the country where the firm operates (Schiehll & Martins, 2016). This review paper shows that most of previous studies sample PLCs in one country; comparative or multiple-country studies are lacking. Agency theory does not consider how institutional environments affect the effectiveness of corporate governance mechanisms (Aguilera & Jackson, 2003). More studies utilizing multiple-country data are needed. Those studies could apply a multi-theory framework and further explore the institutional effect on the board–performance relationship in different institutional settings.

An integrative framework

Through this review, an integrative multi-theory framework on the duality–performance relationship is

developed and displayed in Figure 1. The internal contingency factors, such as CEO, board characteristics and ownership concentration, affect the duality–performance relationship as well as firm performance directly. The contingency factors and discretion contexts, within which the managerial power is embedded, moderate the relationship between CEO duality and firm performance. Monitoring or incentive-based governance mechanisms exist to curb managers’ opportunistic agency behaviour and motivate them to work towards the goals of the firm. Petrou and Procopiou (2016) show that increasing CEO shareholding has a negative effect on earnings management, though the moderating role of CEO duality further aggregates the earnings management problem. Therefore, conflicting forces are at play. The moderating effects differ according to the predications of different theories, such as agency theory, stewardship theory or contingency theory. Future research shall identify these moderating governance factors that reinforce or constrain managerial discretion and reveal the agent or steward relationship at play.

There are various antecedents to a CEO duality leadership structure. According to Vancil’s succession framework (1987), the CEO is awarded the CEO duality position if the previous year’s firm performance was good. As a firm grows bigger, there might be a need to split the CEO duality position. Formal and informal institutions, such as legal framework and code of governance, affect the formation of board leadership structures, as well as the duality–performance relationship. Institutional factors, such as rule of law and investor protection, affect the latitude of managerial actions and motivations.

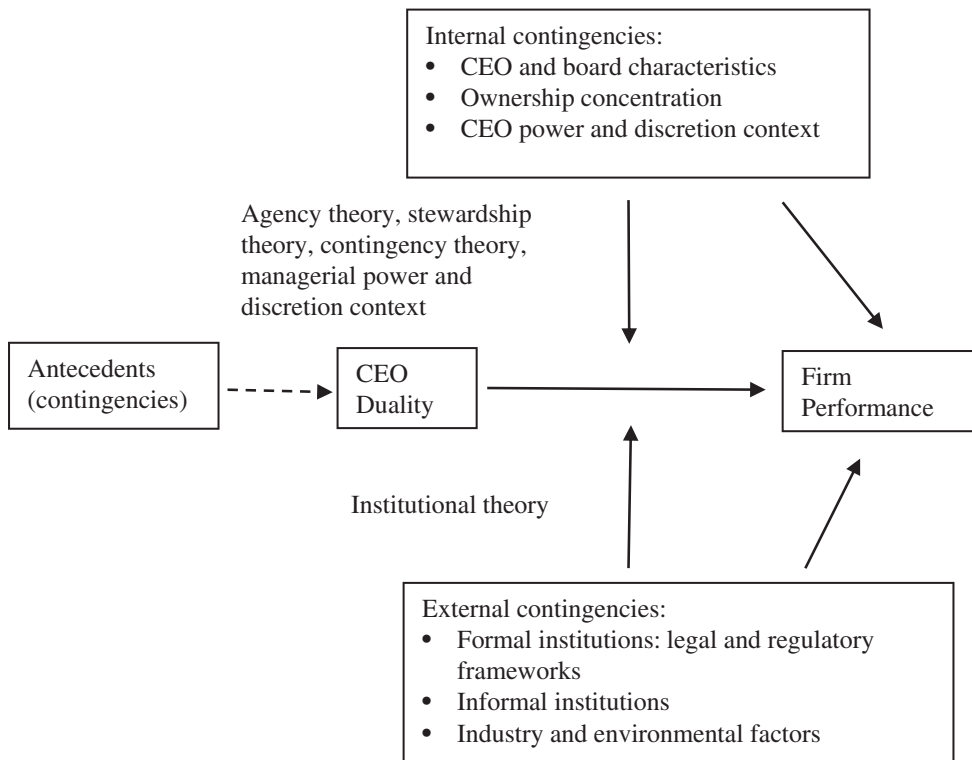


FIGURE 1 An integrative framework of CEO duality with firm performance

Crossland and Hambrick (2007) suggest that managerial discretion differs among countries as a result of disciplinary powers of formal and informal national institutions. There has been little research examining CEO duality through an institutional framework, so future research could draw on institutional theory.

This framework develops and focuses on the moderating effects on the duality–performance relationship. The mediating effect has been largely ignored in literature. Agency theorists conduct research based on the premise that the board of directors influences firm performance by means of monitoring the top management team (TMT), yet there are views that boards influence firm performance through mediating the TMT's attributes by shaping the structure and composition of the TMT (Bergh et al., 2016). Therefore, the board of directors can affect firm performance through different channels, directly and indirectly. The link between leadership structure and firm performance occurs concurrently with other factors, including the board, TMT, firm and industry specific factors. Van Essen et al. (2012) show that strategic preferences of firms, such as the level of R&D investment, mediate the duality–performance relationship. The literature on board process has been sparse and our understanding of the intervening board process has been insufficient (Wan & Ong, 2005). Little is known about how the board affects the TMT's decisions and the mediating effect can be further examined in future.

Key recommendations on methodological issues and theoretical advances

In summary, the review of existing empirical studies shows that studies covering multiple-countries or regions in Africa, Eastern Europe, South America and the Middle East are under-represented. SMEs and MNCs are under-represented, and the findings from large firms might not be generalizable to most organizations. The trend over the last three decades has been to use multiple firm performance measurements, control both internal and external factors, and use advanced regression techniques. Most of previous empirical studies on the CEO duality–performance relationship have not paid sufficient attention to the endogeneity issues of antecedents of CEO duality, the external and internal managerial discretion contexts, and the complexity of board processes. There has been growing, though insufficient, research attention to the factors that moderate or mediate the CEO duality–performance relationship. The mixed research findings are due to different firm performance measurements, research designs, sampling practices and approaches of dealing with endogeneity issues. Researchers shall improve sampling practices by controlling the confounding industry factors, utilizing panel data research design and sampling the population of companies in a stock market.

Future studies on board leadership structure could enter the new domains of upper echelons theory and managerial discretion theory to investigate the influence of CEO demographic factors and varying managerial discretion contexts at individual, organizational, industry and national institutional levels. The direct and indirect channels through which the board of directors influences firm performance (e.g., TMT, R&D investment, capital expenditure, ownership, or other firm specific factors) could be further explored. Future research could identify and examine the role of various contingency factors that might moderate the duality–performance relationship, particularly the different ownership structures, managerial discretion contexts at different levels and national institutional factors. This will reveal the convergence or divergence of interests in different contexts. More comparative or multiple-country studies could examine how institutions affect the board–performance relationship, integrating institutional theory, in a multi-theory framework. By adopting a holistic multi-theory view and controlling more of the direct and indirect factors in an integrative framework, future research findings would have more meaningful implications for investors, companies and regulators.

CONCLUSION

This paper has reviewed 314 empirical studies that examine the relationship between board leadership structure and firm performance. It shows that studies covering multiple-country data, MNCs, SMEs or regions in the Middle East, Africa, Eastern Europe and South America are under-represented. There have been advancements in research design in the past 30 years as more researchers use multiple firm performance measurements, advanced regression techniques and better designed models. The inconclusive research findings are due to different firm performance measurements, research designs, sampling practices and approaches of dealing with endogeneity issues.

This paper adds original contribution to literature by critically analysing the methodological weaknesses of some previous empirical studies and offering valuable suggestions for researchers to address various methodological issues and improve the research design. It recommends that future research should use a longitudinal research design, employ multiple theoretical lenses and firm performance measurements in an integrative framework, better controlling the direct and moderating factors. Thus, the rigorous research findings will have more meaningful implications for investors, companies and regulators. Researchers are advised to improve sampling practices by controlling the confounding industry factors and sampling the population of companies in a stock market. A promising new avenue for future research is to examine board governance at parent and subsidiary

levels in MNCs to evaluate multi-tier agency relationships and the impact on firm performance.

This paper also offers new grounds for research and suggests that researchers employ a multi-theory framework. The present literature has not sufficiently emphasized institutional theory and how institutions modify principal–agent relationship. Studies utilizing multiple-country data could examine the institutional effect on board–performance relationship. Upper echelons theory and managerial discretion lenses could be used to explore the influence of CEO demographic factors and varying managerial discretion contexts at individual, organizational, industry and national institutional levels. Future research could examine various governance factors that might moderate the duality–performance relationship, particularly the different ownership structures, various managerial discretion contexts and national institutional factors.

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