

**THE MEDIATING EFFECT OF CSR REPORTING ON THE RELATIONSHIP
OF BOARD STRUCTURE AND FINANCIAL PERFORMANCE:
A CASE OF THE STOCK EXCHANGE OF THAILAND**

**อิทธิพลส่งผ่านของความรับผิดชอบต่อสังคมและสิ่งแวดล้อมที่มีต่อ
ความสัมพันธ์ระหว่างโครงสร้างผู้ถือหุ้นและผลการดำเนินงาน:
กรณีศึกษาตลาดหลักทรัพย์แห่งประเทศไทย**

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บทคัดย่อ

จุดประสงค์ของการวิจัยนี้คือการวิเคราะห์อิทธิพลส่งผ่านของความรับผิดชอบต่อสังคมและสิ่งแวดล้อมขององค์กรในความสัมพันธ์ระหว่างสัดส่วนโครงสร้างของคณะกรรมการ (ขนาดของคณะกรรมการ, การควมรวมตำแหน่งของผู้จัดการใหญ่และประธานกรรมการในคนเดียวกัน ความถี่ของการเข้าประชุมของคณะกรรมการตรวจสอบและผลประกอบการทางธุรกิจของบริษัท (ผลตอบแทนผู้ถือหุ้น) ข้อมูลได้ถูกรวบรวมจากกลุ่มตัวอย่างบริษัทที่ไม่เกี่ยวข้องกับธุรกิจการเงินและบริษัทอสังหาริมทรัพย์ที่จดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทยในช่วงปี 2559 (n=359) การสร้างโมเดลสมการโครงสร้างถูกนำมาใช้เพื่อทดสอบความสัมพันธ์ การวิเคราะห์นี้ได้แสดงให้เห็นว่าขนาดของคณะกรรมการและความถี่ของการเข้าประชุมของคณะกรรมการตรวจสอบมีผลต่อการรายงานความรับผิดชอบต่อสังคมและสิ่งแวดล้อม ในขณะที่การควมรวมตำแหน่งของผู้จัดการใหญ่และประธานกรรมการในคนเดียวกันและการรายงานความรับผิดชอบต่อสังคมและสิ่งแวดล้อมได้ส่งผลกระทบต่อผลตอบแทนผู้ถือหุ้นของบริษัท การวิเคราะห์ผลกระทบดังกล่าวแสดงให้เห็นถึงผลกระทบของคณะกรรมการและความถี่ในการเข้าร่วมประชุมของคณะกรรมการตรวจสอบมีอิทธิพลส่งผ่านเพียงบางส่วนหรือทั้งหมดต่อการรายงานความรับผิดชอบต่อสังคมและสิ่งแวดล้อมขององค์กร ดังนั้น การศึกษานี้รวมถึงผลกระทบที่มีอิทธิพลต่อการรายงานความรับผิดชอบต่อสังคมและสิ่งแวดล้อมในสัดส่วนโครงสร้างของคณะกรรมการและผลประกอบการทางธุรกิจของบริษัท

คำสำคัญ: โครงสร้างผู้ถือหุ้น บรรษัทภิบาล การเปิดเผยความรับผิดชอบต่อสังคม ผลการดำเนินงาน

Abstract

The purpose of this research is to study the mediating effect of corporate social reporting (CSR) on the relationship between board structure characteristics (board size, CEO duality, and audit committee meeting frequency) and the firm's financial performance (return on equity). Data was collected from a sample of non-financial and property firms on the Stock Exchange of Thailand (SET) during the 2016 reporting year (n = 359). Structural equation modelling was used to test relationships. The analysis showed that board size and audit committee meeting frequency had an effect on CSR reporting, while CEO duality and CSR reporting had an effect on the firm's ROE. The effects analysis showed that the effects of board size and audit committee meeting frequency were partially or fully mediated by CSR reporting. Thus, this study concludes that there is a mediating effect of CSR reporting on some board structure characteristics and the firm's financial performance.

Keywords: board structure, corporate governance, CSR disclosure, financial performance

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Introduction

This research examines the relationships of two conceptually related but distinct management concepts – corporate governance and corporate social responsibility – on the financial performance of publicly listed firms in Thailand. Both corporate governance and corporate social responsibility address the responsibilities of the firm, but these responsibilities include different concepts and are implemented in the firm in different ways (Aggarwal 2011).

Corporate governance is a set of mechanisms and practices intended to protect the interests of shareholders and ensure good management of the firm (Thomsen, & Conyon 2012). Following agency theory, corporate governance is an oversight and control mechanism which is designed to reduce information asymmetries between shareholders of the firm and owners (Shleifer, & Vishny 1997). Corporate governance mechanisms such as board structure, ownership structure, and executive compensation provide the control and oversight required to effectively control the management of the firm and produce desired results (Nuhu, & Ahmad 2017). Corporate social responsibility (CSR) takes the broader view of stakeholder theory, which argues that the firm has much broader responsibilities to society than just their own stakeholders (Rasche, et al 2017).

There are specific corporate governance requirements that firms must meet in order to list publicly on the Stock Exchange of Thailand (SET), which comply with the Organization for Economic Cooperation and Development (OECD) Principles of Corporate Governance (Stock Exchange of Thailand 2013). In contrast, CSR is a voluntary practice in Thailand, although many firms do engage in at least some CSR practices (Onozawa 2013). Thus, there are both commonalities and differences in CG and CSR.

The purpose of this study is to examine the relationships of corporate governance mechanisms, CSR disclosure, and the financial performance of publicly listed firms in Thailand. The scope of corporate governance mechanisms has been limited for application in this study to board structure characteristics.

Literature Review

Board structure and CSR disclosure

Board structure refers to the structural characteristics of the firm's board of directors, including characteristics such as the board size, board independence, meeting frequency, choice of sub-committees and their meeting frequency, gender and age diversity, expertise and knowledge, CEO duality, and multiple other characteristics (Azim, 2012; Fauzi, & Locke, 2012). The board structure is one of the elements of corporate governance of the firm (Mallin, 2013). CSR disclosure refers to the disclosures undertaken by the firm which report to their stakeholders and the general public on CSR goals, strategies, and implementation details and outcomes of their CSR programs (Rasche, et al ., 2017).

Several authors examined board size as a corporate governance mechanism that could influence CSR disclosure (Allegrini, & Greco 2013; Esa, & Anum Mohd Ghazali 2012; Giannarakis 2014; Jizi, et al 2014; Rahman, & Bukair 2013; Said, et al 2009). These studies generally found a positive relationship of board size to CSR disclosure, as measured using a variety of CSR disclosure scores. The only exception was the study of Rahman and Bukair (2013).

CEO duality has shown a mixture of relationships to firm performance and to management practices (Allegrini, & Greco, 2013; Giannarakis, 2014; Jizi, et al ., 2014; Khan, Muttakin, & Siddiqui, 2013; Rahman, & Bukair, 2013; Said, et al ., 2009). While some authors have found positive effects, others have found negative effects and frequently there is no effect shown. In fact one of the fundamental problems with CEO duality in research is that findings routinely conflict for reasons that are poorly understood (Krause, Semadeni, & Cannella, 2014). Thus, even though CEO duality has been a topic of management and firm performance research for some time,

nevertheless there is a lack of clear evidence on the effect of CEO duality on any particular aspect of management practice (Krause, et al ., 2014). The present study provides more information to fill this gap.

Audit committee meeting frequency or other characteristics are poorly studied, only a few studies identified audit committee characteristics like meeting frequency as a factor in CSR disclosure (Allegrini, & Greco 2013; Jizi, et al 2014; Khan, et al 2013). These studies showed either meeting frequency or simple presence of an audit committee meeting positively affected CSR disclosure.

Board structure and firm performance

Many studies have studied the effect of board structure on firm performance (Fauzi, & Locke 2012; Kyereboah-Coleman, & Biekpe 2006; Ameer, et al 2010; Shukeri, et al 2012; Yasser, et al 2011; Ibrahim, & Samad 2011; Kajola 2008; Azim 2012; Guest 2009; Al-Matari, et al 2012; Brick, & Chidambaran 2010). However, these studies have shown mixed effects, either showing negative or insignificant effects or different effects depending on financial measures. Thus, it is uncertain what the effect would be in this case

CEO duality is mixed in its effect on firm performance. One common finding was that CEO duality had a negative relationship to market measures, but had a positive or insignificant relationship to accounting measures (Azim 2012; Kyereboah-Coleman, & Biekpe 2006; Rashid, et al 2010; Rashid 2010; Brick, & Chidambaran 2010). However, one study reversed this finding (Ibrahim, & Samad 2011). Other studies did not find a significant relationship between the two variables (Shukeri, et al 2012; Yasser, et al 2011).

Findings on audit committees and firm performance are also mixed. One study did not find a significant relationship (Al-Matari, et al 2012). Others found at least a partial relationship, for example to some performance measures or during some time periods (Azim 2012; Brick, & Chidambaran 2010; Fauzi, & Locke 2012).

CSR disclosure and firm performance: Direct and mediating effects

A review of the literature on the effects of CSR on the value of the firm indicates that while in general, there is a positive effect of CSR on the firm's market value (though not necessarily its profitability), there is conflicting evidence and inconsistencies in the literature (Malik 2015). While CSR practices generally are known to contribute to the firm's value, this broad finding still offers room for expansion in terms of specificity of findings and understanding of environmental variables that could influence the relationship (Malik 2015).

One of the remaining gaps in the literature is whether CSR disclosure practices play a mediating role in the relationship between corporate governance mechanisms and firm performance. The role of CSR disclosure as an intervening variable in this relationship has rarely been studied. Previous studies are summarized in Table 2 (Section 2.6.1). These studies show inconsistent findings on the potential mediating relationship of CSR reporting in the relationship between corporate governance structures and firm performance (Giannarakis, 2014; Said, et al ., 2009; Siregar, & Bachtiar, 2010). While no authors have examined this effect directly, there is a theoretical potential that such a mediating effect could exist, since CSR disclosures are one of the main types of voluntary disclosure through which corporate governance policies and practices become visible (Aguilera, Williams, Conley, & Rupp, 2006; Khan, et al ., 2013; Said, et al ., 2009). These authors have shown that corporate governance practices within the firm influence CSR disclosure, although they did not carry the research through to determine whether corporate governance practices influence the firm's performance directly. This effect stems from the role of CSR disclosure as an information proxy about the firm's management and corporate governance practices (Jizi, et al ., 2014). Since there is also evidence that both CSR disclosure and board structure practices could potentially influence the firm's performance, it is worth considering the role of CSR disclosure as a potential intervening variable here.

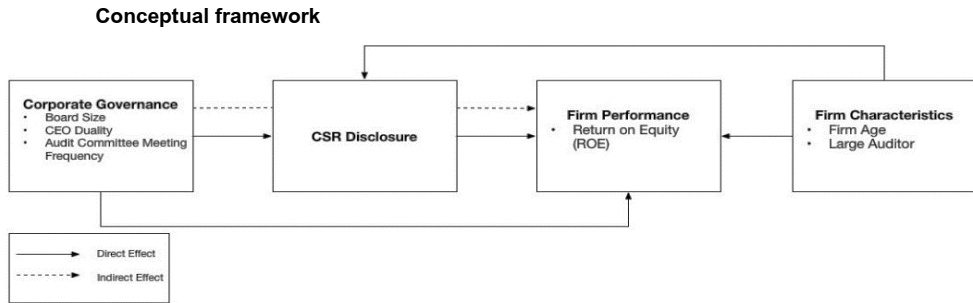


Figure 1: Conceptual framework of the study

Methods

Data was collected from all firms listed on the SET during the 2016 reporting year, excluding the following: financial and insurance firms, real estate and property development firms, and firms undergoing regulatory action or who had not filed their Form 56-1 on time. Financial, insurance and real estate firms were excluded because they have different regulatory compliance requirements and asset holding requirements, which effectively changes their performance characteristics. The resulting sample size was $n = 359$ firms. Data was hand-collected from the mandatory disclosure (Form 56-1). Form 56-1 is the mandatory annual financial reporting and disclosure document required by the Stock Exchange of Thailand (SET) as a condition of listing (Stock Exchange of Thailand, 2017). The form is routinely used as a source of public information about listed firms in Thailand, including research into the firm's CSR practices and firm performance characteristics (Meeamol, Rodpetch, Rueangsuwan, & Lin, 2011; Srisuphaolarn, 2013). As the official record and disclosure of firm performance, the Form 56-1 is the most accurate available public information for Thai listed firms, making it an appropriate choice of data source for this study.

Variables were operationalized as shown in Table 1. All variables were unidimensional. The CSR Disclosure index was constructed using a content analysis approach, based on quantitative counts of CSR is disclosure types (Cochran, & Wood, 1984; Kamal, & Deegan, 2013). Data for the index was based on the form 56-1.

Analysis was conducted in SPSS AMOS. A structural equation modelling (SEM) approach was used. Model fit criteria (table 2) were used to evaluate the goodness of fit prior to analysis (Kline 2011; Byrne 2010). The direct relationships of the study were tested as a series of seven hypotheses, with regression coefficients and significance used as the basis for this data. Significance was accepted at $p < .05$. The mediation analysis was performed using the ratio of indirect effects to total effects (IE/ TE ratio), with an effects ratio of $> .100$ accepted as evidence for a substantial mediating effect.

Table 1 Summary of variables

Variable	Definition	Operationalization
Board Size (BSIZE)	The total number of members serving on the board of directors.	Number of members serving in 2016.
CEO Duality (CEODUAL)	The same individual holds the CEO and Chairperson of the Board roles.	Dummy variable: 0 = CEO and Chairperson are different 1 = CEO and Chairperson are the same
Audit Committee Meetings (AC)	The frequency of audit committee meetings.	Number of audit committee meetings reported in 2016.
Firm Age (AGE)	The number of years the firm has been listed on the SET.	Age in years

Table 1 (Continued)

Variable	Definition	Operationalization
Large Audit Firm (BIG4)	The firm uses one of the Big Four audit firms (PWC, EY, KPMG, or Deloitte)	Dummy variable: 0 = firm does not use Big 4 auditor 1 = firm does use Big 4 auditor
CSR Disclosure (CSRSD)	An index of the quantity and quality of the firm's voluntary CSR disclosure.	Quantitative content analysis of annual reports in the form 56-1. The lines devoted to CSR were counted (Cochran, & Wood, 1984; Kamal, & Deegan, 2013)
Return on Assets (ROE)	The firm's profitability in relation to its equity.	$\frac{\text{Net Profits}}{\text{Total Equity}}$

Table 2: Summary of model fit criteria (Adapted from Byrne (2010) and Kline (2011))

Indicator	Lower/ Upper Bound of Acceptance
Chi-square (χ^2)	$p > .05$
Root mean square error of approximation (RMSEA)	$\leq .01$: Excellent $\leq .05$: Good $\leq .08$: Acceptable $> .08$: Poor
Comparative Fit Index CFI)	$\leq .90$: Poor $> .90 < .95$: Acceptable
Normed Fit Index (NFI)	$\geq .95$: Good

Findings

Descriptive statistics and tests of SEM assumptions

Descriptive statistics are shown in table 3. Descriptive statistics showed no missing values and outlier detection did not identify any significant outliers. Variables ACMEET and ROE were not consistent with a normal distribution, but the decision was made to leave these variables in place rather than attempt to respecify.

Correlations (Table 4) and covariances (Table 5) were also acceptable.

SEM has several assumptions about the data and characteristics, including that the data has no outliers, that the data displays multivariate normality, that no data is missing, that constructs are unidimensional, and that relationships are linear (Byrne, 2010; Kline, 2011). Pre-screening and cleaning of data was used to remove points with missing data and outliers. Unidimensionality of constructs was initially evaluated using Cronbach's alpha, with a minimum value of $\alpha = 0.8$ (Hair, Black, Babin, & Anderson, 2016). The Mahalanobis distance was then calculated to evaluate multivariate normality ($MD = 18.92, p < .001, df = 5$). This value was lower than the critical value (20.52), indicating that there were no multivariate outliers after the initial outlier screening. Therefore, the assumptions of SEM are met adequately.

Table 3: Descriptive statistics of the variables

	Minimum	Maximum	Mean		Std. Deviation	Skewness	Kurtosis
			Statistic	Std. Error			
BSIZE	5	21	10.38	.131	2.481	.888	1.029
CEODUAL	.00	1.00	.2145	.02169	.41104	1.397	-.049
ACMEET	1.00	25.00	5.9749	.18563	3.51723	2.499	7.891
BIG4	0	1	.65	.025	.478	-.627	-1.616
AGE	3	103	28.5	1.082	13.042	1.338	-.212
LnCSR	1.70	4.47	3.4615	.02294	.43468	-.215	.498
ROE	-57.05	149.25	9.7125	1.08369	20.53303	1.772	11.243

Table 4: Final structural model: Correlations

			Estimate
ACMEET	<-->	BSIZE	.126
CEODUAL	<-->	BIG4	-.003
AGE	<-->	BSIZE	-.018
CEODUAL	<-->	AGE	.976

Table 5: Final structural model: Standardized residual covariances

	BSIZE	BIG4	AGE	CEODUAL	ACMEET	LnCSR	ROE
BSIZE	.013						
BIG4	1.224	.000					
AGE	-2.833	-.777	.068				
CEODUAL	-2.884	-.738	.037	.003			
ACMEET	.070	.498	-1.157	-.990	.000		
LnCSR	.350	.306	-.683	-.661	.169	.116	
ROE	.201	.111	-.176	-.167	.256	.088	.028

Structural equation model

The final structural model (Figure 2) showed sufficiently good absolute and relative goodness of fit measures compared to the thresholds (Table 2). Regression and effects analysis (Table 6) can be interpreted as follows.

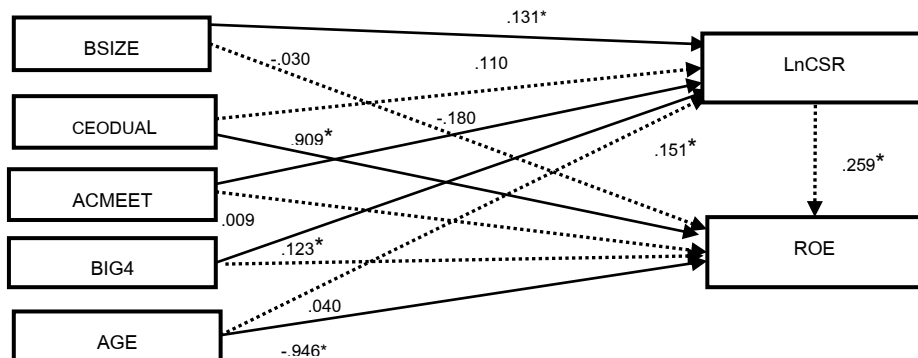


Figure 2: Final structural model and goodness of fit

Regression on LnCSR. The first stage of the regression model examines regression effects on the LnCSR variable (CSR reporting). The standardized regression equation for this relationship is:

$$LnCSR = .131X_{ACMEET} + .110X_{CEODUAL} - .180X_{AGE} + .123X_{BIG4} + .151X_{BSIZE}$$

Thus, the strongest effect came from Age (negative effect), followed by BSIZE (positive effect), ACMEET (positive effect), BIG4 (positive effect), and CEODUAL (positive effect). The p-values from the t-tests indicate that only a few of these variables were significant in the regression, including ACMEET (p = .011), BIG4 (p = .016), and BSIZE (p = .004). Non-significant regression effects were seen for CEODUAL (p = .637) and AGE (.440).

Regression on ROE. The second regression included the variables in LnCSR, along with LnCSR itself. The regression equation for this relationship is shown below. The regression effects were strongest for Age (negative), followed by CEODUAL (positive), LnCSR (positive), BIG4 (positive), BSIZE (negative), and ACMEET

(positive). The t-test significances showed that only CEODUAL ($p < .001$), AGE ($p < .001$) and LnCSR ($p < .001$) were significant factors in ROE. BSIZE ($p = .549$), ACMEET ($p = .856$), and BIG4 ($p = .426$) were not significant factors in this regression.

$$ROE = .009X_{ACMEET} + .909X_{CEODUAL} - .946X_{AGE} + .040X_{BIG4} - .030X_{BSIZE} + .259X_{LnCSR}$$

Effects analysis (mediation). Finally, the mediation analysis is based on the IE/ TE ratio for the relationships on ROE. The IE/ TE ratios showed that there was some level of indirect effects for all of the variables within the model. However, only the ROE ← BSIZE relationship (IE/ TE = 4.33) was fully mediated. Other relationships had some level of partial mediation, which were (in order of magnitude): ROE ← ACMEET (IE/ TE = .791); ROE ← BIG4 (IE/ TE = .444); ROE ← AGE (IE/ TE = .047); and ROE ← CEODUAL (IE/ TE = .031). Thus, while the other relationships had a relatively high level of mediation, the AGE and CEODUAL relationships were only lightly mediated. These mediations fell below the level of IE/ TE = .100, indicating a mediation effect that is so small it probably would not influence any observable outcome (Hair, et al., 2016).

Table 6: Regression and effects analysis

	Unstandardized Estimate	S.E.	C.R.	P	R ²	Standardized Estimate Direct Effects	Indirect Effect	Total Effects	Proportion of Indirect Effect to Direct Effects Mediation
LnCSR ← ACMEET	.016	.006	2.538	.011*	6.6%	.131	.000	.131	.000
LnCSR ← CEODUAL	.116	.246	.472	.637		.110	.000	.110	.000
LnCSR ← AGE	-.188	.243	-.772	.440		-.180	.000	-.180	.000
LnCSR ← BIG4	.111	.046	2.400	.016*		.123	.000	.123	.000
LnCSR ← BSIZE	.026	.009	2.915	.004*		.151	.000	.151	.000
ROE ← BSIZE	-.252	.420	-.599	.549	11.8%	-.030	.039	.009	4.33
ROE ← CEODUAL	45.350	11.347	3.997	***		.909	.029	.937	.031
ROE ← ACMEET	.053	.294	.181	.856		.009	.034	.043	.791
ROE ← BIG4	1.709	2.148	.796	.426		.040	.032	.072	.444
ROE ← AGE	-46.674	11.227	-4.157	***		-.946	-.047	-.993	.047
ROE ← LnCSR	12.272	2.435	5.040	***		.259	.000	.259	.000

Hypothesis outcomes for the study are summarized in Table 7.

Table 7: Summary of hypothesis outcomes

Hypothesis	Statement	Evidence	Hypothesis Accepted?
1	Board size has a positive effect on CSR disclosure.	$\beta = .151, p = .004$	Yes
2	CEO duality has a [positive] effect on CSR disclosure.	$\beta = .110, p = .637$	No
3	Audit Committee Meeting has a positive effect on CSR disclosure.	$\beta = .131, p = .011$	Yes
4	Board size has a positive effect on firm performance through CSR disclosure.	IE/ TE = 4.33	Yes*
5	CEO duality has a positive effect on firm performance through CSR disclosure.	IE/ TE = .031	No
6	Audit Committee Meeting has a positive effect on firm performance through CSR disclosure.	IE/ TE = .791	Yes**
7	Board size has positive effect on firm performance.	$\beta = -.030, p = .549$	No

Notes: * Full mediation ** Partial mediation

Table 7 (Continued)

Hypothesis	Statement	Evidence	Hypothesis Accepted?
8	CEO duality has positive effect on firm performance.	$\beta = .909, p < .001$	Yes
9	Audit Committee Meeting has positive effect on firm performance.	$\beta = .009, p = .856$	No
10	CSR disclosure positively influences firm performance.	$\beta = .259, p < .000$	Yes

Conclusions

In conclusion, this research has achieved its purpose of examining the mediating effect of a firm's CSR disclosure strategy on the relationship of the firm's board structure to its financial performance. The findings do have some implications for both academics and policymakers. Perhaps most importantly, the findings point out how much is *not* understood about the effects of corporate governance on the firm and its performance. Although corporate governance practices are often presented as good practice or even as required regulatory compliance activities (Mallin, 2013; Nuhu, & Ahmad, 2017; Shleifer, & Vishny, 1997; Thomsen, & Conyon, 2012), the literature review and the findings of this study have demonstrated that in fact these practices may not be empirically supported. For example, several previous studies have shown that board structure characteristics may have mixed, negative or insignificant effects on the performance of the firm (Al-Matari, et al ., 2012; Ameer, et al ., 2010; Azim, 2012; Krause, et al ., 2014; Kyereboah-Coleman, & Biekpe, 2006; Rahman, & Bukair, 2013; Rashid, 2010). These studies have suggested that the effect of corporate governance on the firm performance is not straightforward, but instead is a complex and difficult relationship that may not easily be quantified. This study did demonstrate a partial mediating effect of CSR disclosure, which was suggested (although not proved) by previous research into the role of CSR disclosure as an information proxy for the firm's internal management. However, there are still a lot of unanswered questions about the role of CSR disclosure as such an information proxy and other factors that could potentially influence the firm's performance. Thus, the findings of this study and those that have come before it demands a re-evaluation of the current practice of corporate governance and how this practice affects the firm. This type of re-evaluation would ensure that practices in use are both ethical and empirically consistent with corporate governance goals.

There are key theoretical and managerial implications from the findings of the study. The main theoretical limitation has been discussed above: theories that relate corporate governance, CSR, and firm performance may be limited or inaccurate in terms of what they propose for the effects of corporate governance. Rather than considering corporate governance as an unmitigated positive effect on the performance of the firm, there should be more effort made to evaluate corporate governance characteristics to understand how specific aspects of corporate governance on the performance of the firm. The main managerial implication of the study is that the effects of corporate governance on firm performance are complicated and difficult to predict. While this may seem like an obvious observation, it is important to understand because the firm cannot necessarily influence the firm's performance by manipulating variables like board structure. Therefore, firms should establish corporate governance procedures and policies that support internal goals such as oversight and transparency and effective fiduciary management, rather than using the board structure to attempt to deliberately manipulate the firm's performance.

This study does have limitations including its geographic coverage, time horizon and the exclusion of some industries. It has also only considered a limited number of board structure characteristics, which was necessary to restrict the scope of the study and to make sure that the model could be measured effectively. Thus, this study does not necessarily reflect all possible influence of board structure on CSR disclosure or firm performance. Furthermore, because the study was cross-sectional and included a limited number of firm-years of

data, it is possible (perhaps even likely) that the effects observed here may change over time. However, it provides sufficient evidence for a CSR disclosure mediation effect that this effect should be studied in more detail to fully understand how CSR disclosure affects the firm.

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