The Moderating and Mediating Effects of Corporate Governance on Firm Performance

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Abstract: The study explores the moderating and mediating roles of corporate governance on the relationship between Chief Executive Officer (CEO) duality and firm performance. The findings, based on a sample of 1,974 publicly listed firms in Taiwan, provide robust support for the mediating model. The effect of CEO duality on firm performance shrinks upon the addition of independent directors to the model. The results do not, however, support the moderating model. Previous studies have not adequately considered the role of corporate governance in studying the association between Chief Executive Officer duality and firm performance. The study contributes to the existing literature by providing a comprehensive understanding of the moderating and moderating roles of corporate governance on the relationship between CEO duality and firm performance.

Key-Words: Agency theory, Corporate governance, Chief executive officer, Firm performance, Stewardship theory

1 Introduction

The ongoing global crisis has made corporate governance issues more important to the business and society. Corporate governance defines the structure of rights and responsibilities of the board and management and the related parties that have a stake in a firm. Corporate governance mechanism in the operation of a firm is perceived as a vital role in guiding company's daily business. Well-functioned corporate governance mechanisms are important indicators in making investment decisions for foreign investors [19]. Companies in countries around the world must adhere to basic common principles of good practice in all areas of corporate governance in order to attract foreign investment.

One of the corporate governance issues that has been widely debated is Chief Executive Officer (CEO) duality. The agency theory argues that separating the two roles of CEO and board chairman facilitates more effective monitoring and control of the CEO and may outperform those with CEO duality [23]. On the contrary, the stewardship theory suggests that Chief Executive Officer (CEO) duality, defined as one person serving both as a firm's CEO and board chairman, establishes strong, unambiguous leadership and may make better and efficient decisions [12]. Therefore, CEO duality is associated with firm performance positively [2] [21]. A third stream of studies provides evidence indicating that there is no significant relationship between CEO duality and firm performance [3] [9].

Boyd (1995)[5] proposes that these inconsistencies among previous studies may be resolved by integrating agency and stewardship perspectives on CEO duality. The mixed findings suggest further research is needed. Previous studies have not considered the mediating and moderating effect of corporate governance. This study is therefore motivated to explore the mediating and

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moderating effects of independent directors from the perspectives of stewardship theory and agency theory. Accordingly, the purpose of this study is to provide further insight into the most important role of independent directors in the mechanism of corporate governance and to find if the direct relationship between CEO duality and firm performance is further mediated or moderated by the level of independent directors.

This paper contributes to the literature in two ways. First, to the best of our knowledge, this is the first paper to examine the moderating and mediating effects of corporate governance mechanism on the relationship between CEO duality and firm performance. Particularly, the empirical results provide valuable insights into the aspect of mediating and moderating roles of independent directors and present empirical support for the requirement to include independent directors to the board. Second, the results enhance our understanding of the role of independent directors in corporate governance mechanisms that better serve organizational functioning in the capital markets.

The remainder of this research is organized as follows. The second section outlines the characteristics of the corporate governance system in Taiwan. In the subsequent section, we carry out a literature review and the related theories that enable us to propose a set of hypotheses. The methodology and sample characteristics are then defined. The final section sets out the empirical evidence, as well as our analysis and discussion of the results.

2. Corporate Governance in Taiwan

In 1997, a number of scandals and corruption within Asian financial market have led to severe Asian financial crises. The lack of corporate governance has been one of the major causes of the Asian financial crisis [20]. The Asian crisis in 1997, together with the corporate scandals, such as Barings, WorldCom and Enron, have highlighted the need for corporate governance reform at an international level [27]. Accordingly, the Organisation for Economic Cooperation and Development (OECE) proposed that common international standards of corporate governance are essential and issued the OECD Corporate governance principles as guidance to the countries worldwide [20].

The Asian financial crises provide lessons for Taiwan to recognize the importance of corporate governance. Over the past decade, Taiwan has made every effort to improve its corporate governance system. Within Asia, according to the newly released white paper by the Asian Corporate Governance Association (ACGA), Taiwan ranks in the top half for the overall quality of its corporate governance regime [1].

Financial Supervisory Commission (FSC), the top regulatory authority for the Taiwan capital market, has embarked on a series of reforms designed to make corporate governance environment stronger since 1998 [24]. These reforms include amending the Companies Act and Securities and Exchange Act to incorporate tighter corporate governance mechanisms, the disclosure requirement of Certified Public Accountant (CPA) professional fees and the disclosure of remuneration of directors and supervisors in annual reports. The Securities and Exchange Act regulates public offering, issuing, and trading of securities and is the primary corporate governance legal framework. The Corporate Governance Best-Practice Principles for Listed Companies are designed to ensure the protection of investors, maintain a fair, efficient and transparent capital market. It defines the roles and responsibilities of boards of directors and supervisors, and the rights of shareholders. Listed companies are advised to promulgate their own corporate governance principles in accordance with the Principles. The Companies Act particularly binds rules to protect present and future shareholders and creditors. The Securities and Exchange Act, together with the Company Act and the Corporate Governance Best-Practice Principles for Listed Companies, form the basis of corporate governance legal framework.

3. Theory and Hypotheses Development

In the past several decades, research on the performance consequences of CEO duality has been extensive but characterized by inconsistent findings [11][14][22][23]. The mixed findings suggest that further research is needed. The following section discusses agency theory and stewardship theory and the hypotheses tested in the study.

3.1 Agency Theory versus Stewardship Theory

Agency theory addresses the relationship between a principal (i.e., owner or shareholder), an agent, and the contract that binds them [17]. It is argued that agency problems emerge from the conflicts between the principal and the agent, which stem from the divergent interests of majority and minority shareholders [18][26]. From the perspective of agency theory, CEO duality signals "the absence of separation of decision management and decision control" [13]. Under the situation of CEO duality, the board will not be able to monitor and evaluate the CEO effectively. This will cause more agency problems and eventually lead to poor firm performance [22][23]. Therefore, the following hypothesis is developed:

Hypothesis Ha1: CEO duality is negatively associated with firm performance.

On the contrary, the stewardship theory takes a broader view of human behavior, proposing that individuals are motivated not only by self-interest, but also by service to others, altruism, and generosity [11]. Accordingly, from the viewpoint of CEO duality, the stewardship theory proposes that CEO duality creates an important unity of command at the top of the firm and therefore helps to avoid confusion among managers as to who is the boss and facilitates more timely and effective decision-making [14]. Hence, the following hypothesis is developed:

Hypothesis Ha2: CEO duality is positively associated with firm performance.

3.2 Independent Director as a Mediator

With the increased awareness of corporate governance, the board of directors has received much attention. One of the most critical components of board of directors' reform has shifted in expectations of the role of independent directors [6]. The Securities and Exchange Act requires that the listed companies appoint independent directors in accordance with its articles of incorporation. At least two seats of independent directors are required in the board but no less than one-fifth of the total number of the board (Article 14-2, the Securities and Exchange Act, 2010). Independent directors are required to possess professional knowledge and there are restrictions on their shareholdings and the positions they may concurrently hold. They are required to maintain independence within the scope of their directorial duties, and may not have any direct or indirect interest in the company.

By introducing the independent directors to the board, it is believed that the board will receive tighter monitoring and control as well as the management, which will alleviate the agency problem. The empirical evidence from previous research examining the relationship between CEO duality and firm performance is inconclusive. It may be helpful to explore the contingency role of corporate governance on the link between CEO duality and firm performance. Therefore, it necessitates the study to test the mediating and moderating effects of independent directors on the relationship between CEO duality and firm performance. The independent director is labeled as a mediator. The mediating effect is illustrated as Figure 1.

Accordingly, the following hypothesis is developed:

Hypothesis Ha3: The relationship between CEO Duality and firm performance is mediated by the independent director.

3.3 Independent Director as a Moderator

While the relationship between CEO duality and firm performance may be mediated by the level of the independent directors, there may exist a moderate effect on the relationship between CEO duality and firm performance. The independent director may serve as a moderator to the extent that it accounts for the relation between CEO duality and firm performance. The moderating effect is captured by the product of CEO duality and independent director as shown in Figure 2. Therefore, the fourth hypothesis is developed as follows:

Hypothesis Ha4: The relationship between CEO duality and firm performance is moderated by the independent director.

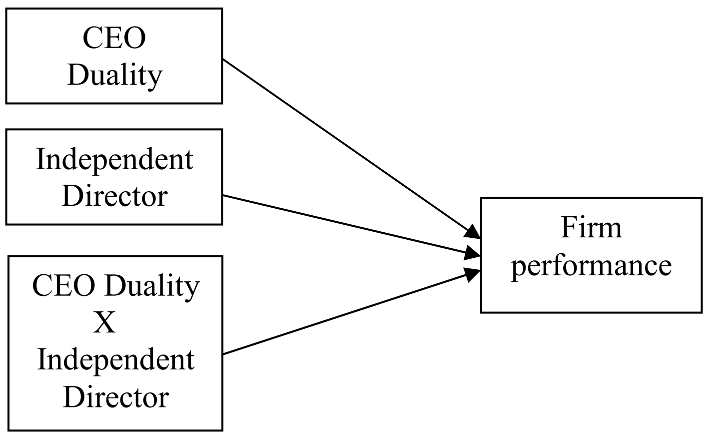

Figure 2. The Moderator Model

4. Research Methodology

The sample was drawn from the companies listed on the Taiwan stock exchange (TWSE) for the period of 2007-2009. The data were obtained from the database of Taiwan Economic Journal and the annual reports. A total number of 1,974 listed companies were used in the study for the period of 2007-2009.

Firm performance is a multidimensional phenomenon and has been measured with both accounting-based and market-based indicators in previous studies [8]. It is proposed that accounting-based measures reflect the current operation performance of a firm, while market-based measures reflects investors' perceptions of the firm's potential performance [7]. The purpose of the study is to assess the impact of independent director on the relationship of CEO duality and firm performance. It focuses on firm's operational performance rather than market valuation as the market valuation is often subject to forces beyond management control, while operational performance is more under management control [15][16]. Furthermore, accounting-based measures are more likely to link to CEO compensation [16]. Accordingly, return on asset (ROA) was selected as the proxy for firm performance as it is a widely used accounting measure of firm performance [9][14][25]. We calculated ROA as net income divided by the average of assets.

CEO duality is a dummy variable with the value of "1" if one person serves both as CEO and board chair, with the value of "0:" otherwise. The variable of Independent director is operationalized as the percentage of the number of independent directors to the total number of the board. Previous literature has documented the effects of firm size and financial leverage on firm performance. The impact of these variables may be particularly significant in the CEO duality context. Therefore, we include firm size and financial leverage in our analysis as control variables to reduce the influence of confounding factors. The company size is measured by the logarithm of corporate total assets, while the financial leverage is measured by the debt ratio, which is calculated as the total liabilities divided by total assets.

The regression models are therefore given as follows:

Model 1:

$$ROA_i=\beta_0+\beta_1 DUAL_i+\beta_1 FL_i+\beta_2 SIZE_i+\varepsilon_i \quad (1)$$

Model 2:

$$IND_i=\beta_0+\beta_1 DUAL_i+\beta_2 FL_i+\beta_3 SIZE_i+\varepsilon_i \quad (2)$$

Model 3:

$$ROA_i=\beta_0+\beta_1 IND_i+\beta_2 FL_i+\beta_3 SIZE_i+\varepsilon_i \quad (3)$$

Model4:

$$ROA_i=\beta_0+\beta_1 DUAL_i+\beta_2 IND_i+\beta_3 FL_i+\beta_4 SIZE_i+\varepsilon_i \quad (4)$$

Model 5:

$$ROA_i=\beta_0+\beta_1 DUAL_i+\beta_2 IND_i+\beta_3 DUAL_i{*}IND_i+\beta_4 FL_i +\beta_5 SIZE_i+\varepsilon_i \quad (5)$$

where

ROAi represents return on asset of company *i*
DUALi represents CEO duality of company *i*
INDi represents the percentage of independent directors of company *i*
FLi represents financial leverage of company *i*.
SIZEi represents company size of company *i*

4.1 Test of Mediation Effects

A variable may be considered a mediator to the extent to which it carries the influence of a given independent variable (CEO duality) to a given dependent variable (firm performance). The effect of mediation is tested by following Baron and Kenny's (1986) procedure:

In testing the mediation effect, the following conditions have to be met:

(1) The independent variable (CEO duality) has an effect on the dependent variable (firm performance). (Estimate and test path (C) in Figure 1, i.e. Model 1,). This step establishes that there is an effect that may be mediated.
(2) The independent variable has an effect on the mediator (the independent director). (Estimate and test path (a') as shown in Figure 1, i.e. Model 2,). This step essentially involves treating the mediator as if it were an outcome variable.
(3) The mediator (the independent director) has an effect on the dependent variable (firm performance). (Estimate and test path (b') as shown in Figure 1. i.e. Model 3)
(4) The effect of the independent variable (CEO duality) on the dependent variable (firm performance) is diminished after controlling for the effects of the mediator. (Estimate and test path (c') as shown in Figure 1, i.e. Model 4,)

If all conditions are satisfied and the influence of the independent variable on the dependent variable becomes insignificant in the presence of the mediator, the effects of the independent variable are “completely” mediated by the mediator. If the influence of the independent variable remains significant in the presence of the mediator, the effects of the independent variable are “partially” mediated. There is no mediation effect if any of the above conditions are not satisfied [4].

5. Results and Discussion

Descriptive statistics are conducted on the sample to screen data characteristics and distributions. Descriptive statistics of all variables are displayed in Table 1, including Min, Max, Mean, Standard Deviation, and Variance. Correlation Coefficients are provided in Table 2. CEO duality occurred in 25.7% of the sample companies with a standard deviation of 0.437. The average percentage of independent directors to the board members is 11.2% with a standard deviation of 0.157.

Table 1. Descriptive Statistics (N=1,974)

	Min	Max	Mean	S.D.	Variance
ROA	-88.51	53.34	8.441	10.424	108.658
DUAL	.00	1.00	.257	.437	.191
IND(%)	.00	.60	.112	.157	.025
FL(%)	1.27	99.13	35.564	16.889	285.222
SIZE	12.26	20.54	15.737	1.283	1.645

Table 2. Correlation Coefficient Analysis

	ROA	FL	SIZE	DUAL
ROA	1.000			
FL	-.259**	1.000		
SIZE	.164**	.112**	1.000	
DUAL	-.126**	.005	-.114**	1.000
IND	.236**	-.071**	-.038	-.045*

**Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

Regression analyses were conducted to access the mediating effect of independent directors on the relationship between CEO duality and firm performance. The results are presented in Table 3.

In order to test the mediation effect, the four above mentioned criteria (models) are evaluated. The first step to evaluating the mediation effect shows that the independent variable (CEO Duality) has a significant effect on the dependent variable (ROA) as shown in Table 3, Mode1. The result shows a negatively significant relationship at the p<0.001 level. Therefore, the hypothesis 1 is supported, while hypothesis 2 is rejected.

The second step for mediation evaluation is to show the direct relationship between independent variable (CEO duality) and the mediator (the independent director) is significant. The result indicates a significant and at the p<0.001 level as showed in Table 3, Model 2.

The third step is to examine if the mediator variable (the independent director) affect the dependent variable (ROA). The result showed in Table 3, Model 3 indicates that the independent director is significantly related to the dependent variable (ROA) at the p<0.001 level.

The final step in testing for arbitrating effect needs to evaluate the original direct effect (c) and (c') as illustrated in Figure 1. The result indicates that the independent variable (CEO duality) is significantly related to the dependent variable (ROA). However, the standardized coefficient of CEO is changed from -0.103 to -0.093, indicating that the effect of the independent variable (CEO duality) on the dependent variable (ROA) is mediated partially. Therefore, the hypothesis 3 is supported.

Table 3. Coefficients of Regression Models

	Model 1 ROA	Model 2 IND	Model 3 ROA	Model 4 ROA	Model 5
FL	-0.279***	-0.067**	-0.266***	-0.264***	-0.264***
SIZE	0.184***	-0.036	0.203***	0.192***	0.192***
CEO	-0.103***	-0.049*		-0.093***	-0.093***
IND			0.225***	0.220***	0.220***
*CEO *IND*					0.001
R^2	0.116	0.008	0.394	0.164	0.164
Adj R^2	0.114	0.007	0.154	0.162	0.162
F	85.779***	5.461***	120.642***	96.334***	77.028***
N	1,974	1,974	1974	1,974	1,974

Significance Levels: * p < 0.05; ** p < 0.01; *** p < 0.001

This study indicates that there is a negative relationship between CEO duality and firm performance. The evidence is in congruenced with the agency theory, indicating that CEO duality is associated with firm performance positively. However, with the introduction of independent directors to the board, the effect of the CEO duality on the firm performance shrinks upon the addition of the mediator to the model. The negative effects on firm performance are mediated, towards supporting the stewardship theory. The results are consistent with the current trend in the development of corporate governance practices of separating the two positions of board chairman and CEO.

The results of mediation test signifying that the independent director mediates the relationship between CEO duality and firm performance. The implication of the result provides support for the need to include independent directors to the board. With the introduction of independent directors, the agency problem is likely to be alleviated. Furthermore, the results are in line with the current trend of corporate governance to reinforce the responsibilities of independent directors. Finally, higher level of independent directors may promote higher level of board monitoring and control and may foster the alignment of CEO and stockholder interests and, as a result, improve firm performance.

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