Testing Mediator and Moderator Effects of Independent Director on Firm Performance

Wen-Hsi Lydia Hsu, George Yungchih Wang, Yuan-Pai Hsu

***Abstract*—**This study tests the moderator and mediator effects of independent director on firm performance. The direct and indirect effects of independent directors on firm performance were also explored. The findings, based on a sample of 4,229 publicly listed firms in Taiwan for the period of 2006-2011, 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, indicating that the independent director mediates the relationship between CEO duality and firm performance. The results do not, however, support the moderating model, indicating that the independent director does not moderate the relationship between CEO duality and firm performance. Previous studies have not adequately considered the mediating and moderating roles of independent directors 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 independent directors on the relationship between CEO duality and firm performance. The results may assist the existing corporate literature in developing a new corporate governance theory.

***Keywords*—** chief executive officer, firm performance, independent director, mediator, moderator.

I. 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 [28]. 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.

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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 [34]. 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 [16]. Therefore, CEO duality is associated with firm performance positively [3] [32]. A third stream of studies provides evidence indicating that there is no significant relationship between CEO duality and firm performance [4] [12].

Boyd (1995)[6] 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. A direct effect, the influence of CEO duality on firm performance, is presented in previous studies by a single path. Previous studies have mainly examined the direct effect of CEO duality and firm performance. However The effect of corporate governance on firm performance may be indirect. An indirect effect that assesses the impact of CEO duality on firm performance as CEO duality's influence works through one or more intervening variables has not been tested. Indirect effects are generally overlooked in most empirical studies [1]. If an indirect effect does not receive proper attention, the relationship between CEO duality and firm performance may not fully considered. This could be the reason why previous studies have inconsistent results as the effects of CEO duality on firm performance may be conditional on other factors [21].

Previous studies have not considered the mediating or moderating effects of independent director on firm performance. It is important to include mediating and moderating variables in order to put the role of mediator and moderator in a proper context. Independent directors play an important role in the mechanism of corporate governance. Although traditionally independent directors are deemed as a useful mechanism in corporate governance process and have a positive impact on firm performance. However, with the introduction of independent directors in board, it may have negative impact on firm performance. This study is therefore motivated to test the mediator and moderator effects of independent directors on firm performance. We are interested in how the presence of independent directors in a firm affects the relationship between CEO duality and firm performance.

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 independent director 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, which is suggested by the Organisation for Economic and Cooperation Development (OECD). 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.

II. Corporate Governance Settings 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 [31]. 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 [38]. 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 [31].

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 [2].

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 [35]. 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.

III. 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 [14][18][33][34]. 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.

A. 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 [24]. 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 [25][37]. From the perspective of agency theory, CEO duality signals “the absence of separation of decision management and decision control” [17]. 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 [33][34]. 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 [14]. Moreover, stewardship proponents see as pivotal higher level needs, such as self-actualization, through the fulfillment of personal values and aspirations [15]. 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 [18]. In firms with CEO duality, the chairperson is more likely to have the ability and power to affect policy making process and therefore is more capable of impacting corporate strategy [26]. CEO duality in firms with high levels of strategic, or concentrated, ownership supports the argument that CEO duality has positive impact on firm performance [8]. Hence, the following hypothesis is developed:

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

B. 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 [9]. 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 study compares the relationship between CEO duality and firm performance before and after accounting for the role of independent directors. The mediator effect is illustrated as Figure 1.

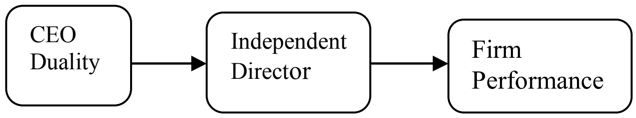

Fig. 1 Independent Director as a Mediator

Accordingly, the following hypothesis is developed:

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

C. 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. From a team production perspective, when an independent director is included in a board, it enables a change in board composition. With such a change, it creates a discontinuity in the board tem dynamics. Independent directors and old board members need socialization into the reconstituted team in order to develop trust and to understand the working style of the board. On the other hand, the inclusion of independent directors in a board constitutes a considerable change in board composition. The change in board composition may have a negative impact on board strategy involvement because the change is dramatic enough to disrupt the working style of board [7]. As a result, from a team production perspective, an introduction of independent directors into the board may reduce team production and therefore affect firm performance [26]. The moderating effect is captured by the product of CEO duality and independent director as shown in Figure 2.

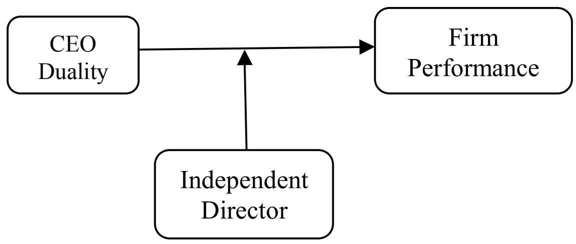

Fig. 2 Independent Director as a Moderator

Therefore, the fourth hypothesis is developed as follows:

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

IV. RESEARCH METHODOLOGY

A. Sample and Data Collection

The hypotheses are examined through a quantitative study. The sample was drawn from the companies listed on the Taiwan stock exchange (TWSE) for the period of 2006-2011. The data were obtained from the database of Taiwan Economic Journal and the annual reports. A total number of 4,229 listed companies were used in the study for the period of 2006-2011.

B. Measurement of Dependent Variable

Firm performance is a multidimensional phenomenon and has been measured with both accounting-based and market-based indicators in previous studies [11]. 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 [10]. 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 [19][20]. Furthermore, accounting-based measures are more likely to link to CEO compensation [20]. Accordingly, return on asset (ROA) was selected as the proxy for firm performance as it is a widely used accounting measure of firm performance [12][18][36]. We calculated ROA as net income divided by the average of assets.

C. Measurement of Independent Variables

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. As to the interaction variable, *CEO duality *Independent directors (CEO*IND)*, it is computed as a product of the two variables of CEO duality and independent directors.

D. Measurement of Control Variables

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. Firm size is a common control variable, due to its reported relationship with firm performance. Firm 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*

E. Test of Mediation Effect

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) approach [5]. This approach works well for the evaluation of a single potential mediating variable [39]. Mediation answers the questions of "how" and "why" an effect takes place [5] The mediation process demonstrates how independent director influence firm performance. The direct testing of mediation effect in the study allows us to more fully consider the true role of independent directors in the context. 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 3, 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 3, 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 3. 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 3, 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 [5].

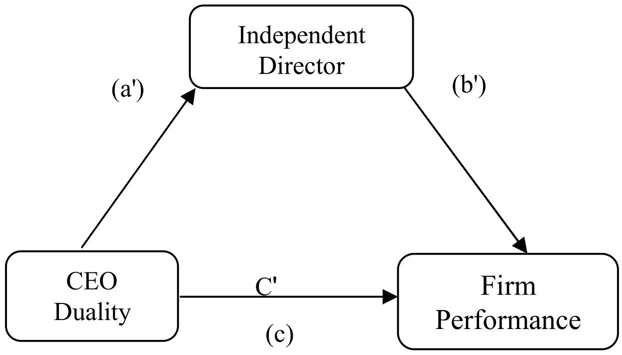

Fig.3. Test of Mediation Effect

F. *Test of Moderation Effect*

Moderation involves a third variable that acts as controlling condition for the effect of one variable on another [23]. According to [5], moderation is defined as the function "which represents the generative mechanism through which the focal independent [predictor] variable is able to influence the dependent variable of interest" (p. 1173) as illustrated in Fig. 4. The moderation effect is examined by the interaction variable, *CEO duality *Independent directors (CEO*IND)*, it is computed as a product of the two variables of CEO duality and independent directors.

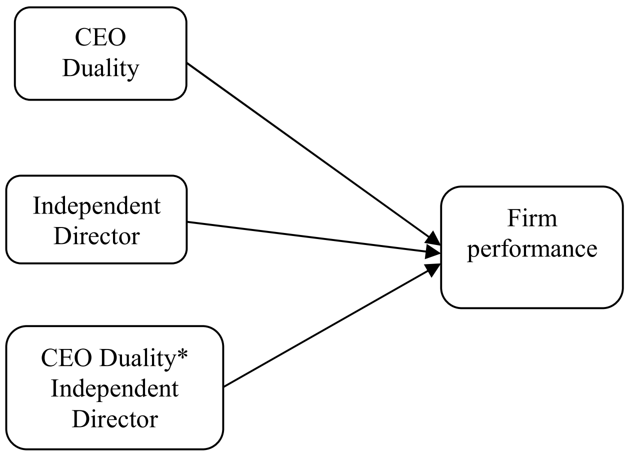

Fig. 4. Test of Moderation Effect

V. RESULTS AND DISCUSSION

A. *Results*

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. CEO duality occurred in 27% of the sample companies with a standard deviation of 0.445. The average percentage of independent directors to the board members is 12.16% with a standard deviation of 0.15994.

Table 1. Descriptive Statistics (N=4,229)

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	4229	-94.6	53.3	8.951	10.0762
DUAL	4229	0	1	0.27	0.445
FL	4229	0.52	99.13	36.0394	17.12074
SIZE	4229	11.70	21.15	15.7253	1.28281
IND	4229	0.00	0.75	0.1216	0.15994

ROA: Return on Asset, DUAL: CEO Duality, FL: Financial Leverage, SIZE: Company Size, IND: Percentage of independent directors

Table 2 shows the correlation coefficients. All the absolute values of coefficients are less than 0.3, indicating low levels of correlation among independent variables we used for the analyses and the dependent variables. Variance Inflation Factors (VIFs) are also calculated. The VIF is widely used measure of the degree of multicollinearity of the independent variable with the other independent variables in a regression model. All VIFs are all less than 2, ranging from 1.009 to 1.029. As a consequence, the regression models are relatively free from potential multicollinearity problems [30].

Table 2. Correlation Coefficient Analysis

	ROA	FL	SIZE	DUAL	IND
ROA	1.000	-0.254**	0.157**	-0.100**	0.230**
FL	-0.254**	1.000	0.131**	-0.006	-0.061**
SIZE	0.157**	0.131**	1.000	-0.099**	-0.044**
DUAL	-0.100**	-0.006	-0.099**	1.000	-0.057**
IND	0.230**	-0.061**	-0.044**	-0.057**	1.000

**Correlation is significant at the 0.01 level (2-tailed).
ROA: Return on Asset, DUAL: CEO Duality, FL: Financial Leverage, SIZE: Company Size, IND: Percentage of independent directors

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, Model1. 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 mediating 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 -0.084 to -0.070, indicating that the effect of the independent variable (CEO duality) on the dependent variable (ROA) is mediated partially. Therefore, the hypothesis 3 is supported.

Model 5 includes the interaction between CEO duality and independent directors to test the moderate effect. The result indicates that CEO duality negatively moderate the relationship between CEO duality and firm performance. However, the result is not significant. Therefore, the hypothesis 4 is not supported.

As evident from Table 3, all models show significant F-signs at the p<0.001 level and adjusted R^2 range from 0.108 (Model 1) to 0.155 (Model 5) with the exception of Model 2.

Table 3. Coefficients of Regression Models

	Model 1 ROA	Model 2 IND	Model 3 ROA	Model 4 ROA	Model 5 ROA
FL	-0.279***	-0.056***	-0.267***	-0.267***	-0.266***
SIZE	0.185***	-0.043***	0.202***	0.194***	0.195***
CEO	-0.084***	-0.061***		-0.070***	-0.052***
IND			0.223***	0.218***	0.233***
CEO IND*					-0.033
R^2	0.108	0.009	0.151	0.156	0.156
Adj R^2	0.108	0.008	0.150	0.155	0.155
F	171.068***	12.555***	249.8***	194.53***	156.307***
N	4,229	4,229	4,229	4,229	4,229

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

ROA: Return on Asset, DUAL: CEO Duality, FL: Financial Leverage, SIZE: Company Size, IND: Percentage of independent directors

B Discussion

The purpose of the study is to explore the mediating and moderating effects of independent directors on the relationship between CEO duality and firm performance. Our findings have both implications for theory and for practice and they provide support for the inclusion of independent directors in board. We have contributed to the debate about CEO duality and firm performance by investigating how independent directors affect the relationship between CEO duality and firm performance. Extant research has rarely investigated the mediating or moderating roles of independent directors on firm performance.

Consistent with our prediction, the findings of the study indicate 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 negatively. 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.

As illustrated in Fig. 5, the dependent variable (firm performance) was regressed on the independent variable (CEO duality) yielding the coefficient corresponding to Path c in Fig 5 part (A). Standardized path coefficients appear in Fig. 5, with corresponding unstandarized coefficients shown in parentheses. The standardized regression coefficient (-0.084) is also shown in the first line of Table 3. The mediator variable (independent director) was regressed on the independent variable (CEO duality) to obtain the regression coefficient for path a in Fig. 5 part (B). The standardized regression coefficient is -0.061. The dependent variable (Firm performance) was regressed simultaneously on both the mediator (independent director) and the independent variable (CEO duality). This analysis provided with standardized coefficients for path b (0.223) and c' (-0.070) respectively in Fig. 5, part B.

The results presented in Table 3 of Model1, Model 2, Model 3 and Model 4 indicate that the four critical conditions of the Baron and Kenny's (1986) approach were satisfied. The influence of the independent variable (CEO duality) on the dependent variable (Firm performance) remains significant in the presence of the mediator (Independent director), the effects of the independent variable (independent director) are "partially" mediated.

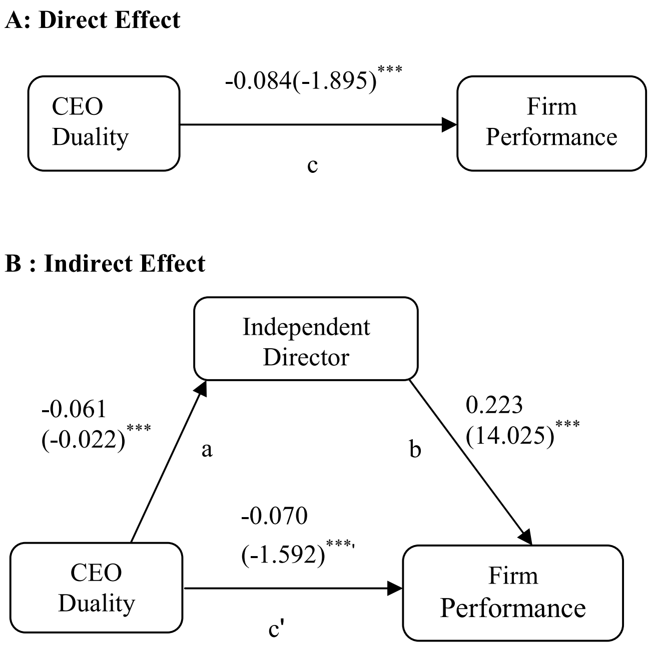

Fig. 5 Direct Effect and Indirect Effect

C Implications for Practice

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. While the study has established the important role of independent director in the context of firm performance, it is essential to facilitate to establish an evaluation system to enable a more regular and systematic follow-up of independent directors' contributions to boards and the degree of independent directors fulfilling their responsibilities [29]. This will foster the efficiency and efficacy of board and to improve the board work.

The results are in line with previous findings from the perspective of team production. A change in board composition by way of including independent directors in board influences firm performance. 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.

In summary, through the mediation analysis, we have demonstrated that an independent director has the mediating effect on the long debate relationship between CEO duality and firm performance. Our findings contribute to the emerging body of corporate governance research by shedding new light on the role of independent directors on firm performance and also open new avenues for mediating and moderating research. By exploring the role of mediator and moderator, it allows a focus on a wider understanding of value creation by good corporate governance practices. This may foster the speed for the development of a new corporate governance theory.

D. Limitations and Directions for Future Research

Various directions for future research are possible. First, our study examines how independent directors affect the relationship between CEO duality and firm performance by using Baron and Kenny's (1986) approach [5]. Further research may utilize different methods to test for mediation and to differentiate the direct effects, indirect effects as well as the aggregate of specific effects [22]. Moderation and mediation can be tested by using other methods to catch the more sensitive effect of third variables [23][27]. are more sensitive to the effects of thirds variables Second, a longitudinal study may shed further light on the important role of independent directors in the process of strategic decision making and how the independent directors use their knowledge and skills in the board's work. Finally, our study is based on listed firms in Taiwan. As we discussed earlier in section 2, although the Taiwan governance context has many similarities to other counties, there are also differences in terms of regulatory framework and ownership structures. These specific features of Taiwanese contexts make it a particular useful empirical setting for our research. However, our findings may not be able to generalize to other settings. Therefore, there is a need for further research to conduct in different empirical settings in order to generalize the results.

VI. Conclusion

The study has explored how independent directors mediate the relationship between CEO duality and firm performance. The findings have justified the mediating effects of independent directors on the negative effect of CEO duality on firm performance. We acknowledge that our study has limitations in respect of its single country setting. Nevertheless, in testing the mediating and moderating effects of independent directors, we have made an initial contribution towards the understanding of independent directors' role in corporate governance mechanism. Our study has implications both for theory and practice, indicating how important the independent directors in the contribution of firm performance. The results also provide support for the contemporary issues of including two independent directors in the board to facilitate the board work.

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