

Antecedents of Corporate Board Independence in Simultaneous Equation Framework : Evidence from India

** Shivan Sarpal*

Abstract

This paper drew attention to the core aspect of corporate governance, that is, installation of greater independence in corporate boards. However, it is to be noted that the empirical association between board independence and firm value has not yet been established decisively. Coupled with this fact, board independence, in turn, is determined by several factors, for example, firm value, inside ownership, leverage, firm's dividend payout policy, and so forth. Viewing the lack of such evidence in the Indian context, it became very crucial to analyze the aforementioned factors by using a sample of top Indian corporates. The data was empirically tested by means of three-stage least square regression, which unequivocally accounted for the endogeneity between board independence and firm value. The findings of 3SLS analysis suggested that inside ownership, leverage, dividend payouts, and combined board leadership structure appeared to be significant determinants of board independence. These results will be suitable for policy makers, regulators, and academicians.

Keywords : corporate governance, board independence, firm value, endogeneity

JEL Classification : C23, G32, G34

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Academically, outside directors occupy a central role in controlling corporate agency problems (Fama & Jensen, 1983). The monitoring effectiveness of the outside board members has been well-emphasized in the past empirical research (Choi, Park, & Yoo, 2007 ; Kamardin & Haron, 2011 ; Mak & Roush, 2000 ; Moyer, Rao, & Sisneros, 1992) and thus highlighted that greater presence of outside directors is useful in firms having higher agency costs in order to improve board effectiveness (McKnight & Weir, 2009 ; Mak & Roush, 2000). It is to be noted that emerging markets like India have concentrated corporate ownership structures (family owned and family-run business groups) due to which the interests of weak minority shareholders are being confiscated by the controlling shareholders (Chakrabarti, Subramanian, & Tung, 2010 ; Varottil, 2010). Therefore, the governance of the corporates becomes highly questionable when the representation of affiliated members having ties with the controlling family is higher in their boards (Yeh & Woidtke, 2005). Herein lies the relevance of independent directors who are expected to guard effectively the interests of the minority shareholders.

Although the literature evidences concerning the impact of board independence on the performance are not incontrovertible by nature (Abdullah, 2004 ; Chou, Chung, & Yin, 2013 ; Koerniadi & Tourani-Rad, 2012 ; Rashid, Zoysa, Lodh, & Rudkin, 2010 ; Yammeesri & Herath, 2010 ; Wang, 2014) ; yet, past research suggests that higher board independence, in terms of proportion of independent directors on the board, helps in mitigating agency conflicts (Hsu, Wang, & Hsu, 2012) and also facilitates increased firm efficiency (Hsu &

**Senior Research Scholar, Commerce & Business Management Department, Guru Nanak Dev University, Amritsar, Punjab - 143 001. Email : sarpalshivan@yahoo.com*

Petchsakulwong, 2010), improved governance (Iwu-Egwuonwu, 2010), and the lesser tendency of : (a) fraud (Sharma, 2004) or fraudulent financial statements (Beasley, 1996) and (b) earnings management (Davidson, Goodwin-Stewart, & Kent, 2005 ; Ebrahim, 2007 ; Jaggi, Leung, & Gul, 2009 ; Klein, 2002 ; Prencipe & Bar-Yosef, 2011 ; Xie, Davidson, & DaDalt, 2003).

However, in light of diversity in the performance effects of board independence, it becomes insistent against this backdrop to analyze the factors which determine the level of board independence.

Theoretical Framework

This section discusses the theoretical propositions on the various corporate governance mechanisms highlighted in the agency literature. One of the most important aspects studied in the board composition literature is the extent of inside/managerial ownership in a firm. A number of studies have reckoned managerial/inside ownership as one of the mechanisms in alleviating agency conflicts (Bathala & Rao, 1995 ; Cotter & Silvester, 2003 ; Jensen & Meckling, 1976 ; Mak & Li, 2001; Prevost, Rao, & Hossain, 2002a). Generally, the studies determining the impact of inside/managerial ownership on board independence (or composition) have reported a negative relationship between the two (Bathala & Rao, 1995 ; Barnhart & Rosenstein, 1998 ; Cotter & Silvester, 2003 ; Denis & Sarin, 1999 ; Fernandez & Arrondo, 2005 ; Mak & Roush, 2000; Prevost et al., 2002a). The negative association, as highlighted above, is in line with the substitution hypothesis, where board independence serves as a substitute for inside ownership in controlling agency conflicts, and thus aligns the interests between controlling and minority shareholders.

Past research also suggests that dividend payout (DIVPAYOUT) also serves as a mechanism to control agency conflicts. For example, Easterbrook (1984) stated that firms paying persistent payments for dividends had to raise money from the capital markets, which is subject to greater informatory disclosure as well as review by the investment bankers and other financial intermediaries. Jensen (1986) also argued that since dividends reduce the availability of free cash flow with the insiders, therefore, they can minimize the agency costs. The negative influence of dividend payout on the independence/composition of the board has also been indicated in prior empirical research (Bathala & Rao, 1995), which is consistent with the agency theory explanations.

Coupled with this fact, Setia-Atmaja, Tanewski, and Skully (2009) found that the negative influence of dividends on the board independence occurs in family firms than the non-family ones. In addition to dividends, governance literature also suggests that agency costs can be controlled through debt leverage as the obligations (pre-commitments or bondings) associated with it diminish the level of free cash flows with the managers, which could otherwise be used for undesirable activities (Grossman & Hart, 1982 ; Jensen, 1986). Since debt leverage helps in mitigating the agency costs (Harris & Raviv, 1991 ; Mcnight & Weir, 2009), therefore, it has been highly accredited under the agency theory perspective (Bathala & Rao, 1995).

Contradicting the above, the positive association by some of the other related research studies (Prevost et al., 2002a) reflected the argument that the demand for outside directors' expertise increases when firms diversify by financing the growth activities with more debt leverage (Li, 1994). Moreover, it has been witnessed from the past literature that institutional owners also perform the monitoring function (Bjuggren et al., 2007). Some of the studies, for example, Bathala and Rao (1995) reported a positive relationship between institutional ownership and board composition. Another study by Feldmann and Schwarzkopf (2003) also observed results in a similar line of direction by stating that increased institutional ownership over time was positively related to higher percentage of outside directors on the board. Analogously, Whidbee (1997) and Chouchene (2010) also presented the view that the likelihood of appointment of outside/independent directors tends to increase with the level of ownership by the institutional investors. On the other side, there are evidences which contradict the above arguments by stating that the monitoring provided by the institutional owners lessens the demand for

more outside directors (Kyereboah-Coleman & Biekpe, 2007).

Apart from the above, a number of researchers have included board size as one of the explanatory variables so as to account for the impact of board characteristics, for example, Li (1994), Denis and Sarin (1999), Mak and Li (2001), Prevost, Rao, and Hossain (2002b). However, the findings of preceding literature are mixed, and thus, are inconsistent.

Apart from the board size, CEO duality also affects the level of board independence/composition. Some of the past research studies have empirically validated the aforesaid argument which include Young (2000), Prevost et al. (2002a), Setia-Atmaja (2009), Chen and Al-Najjar (2012), and so forth, and thus, studies have stated that firms with CEO duality in their board leadership structures are reluctant to appoint outside/independent directors on the board. On the flip side, CEO duality instigates the need for board monitoring by means of higher board independence (Monem, 2013). This indicates that if the presence of CEO duality (i.e. combined leadership structure) decreases the board independence, the same can be restored by appointing more independent directors on the board.

In addition to the above, literature also provides empirical evidences of growth opportunities (Bathala & Rao, 1995; Mak & Roush, 2000; Prevost et al., 2002b), earnings volatility (Bathala & Rao, 1995), and size of the firm (Hillier & McColgan, 2006 ; Li, 1994 ; Mak & Roush, 2000; Setia-Atmaja, 2009) in explaining the level of board independence.

Table 1. Definition of the Variables Covered in the Study

S. No.	Explanatory Variables	Definition
1	Board Independence (PERCIND)	Proportion of Independent Directors on the Board
2	Inside Ownership (INSOWN)	Percentage of shares held by the promoters (promoter and promoter group) of the firm
3	Leverage (LEV)	Ratio of long-term debt to total assets
4	Performance (TQ)	Performance has been proxied by the Tobin's Q ratio Tobin's Q = The sum of market value of equity, book value of preference share capital, total borrowings, and current liabilities divided by the book value of total assets.
5	Dividend Payout Ratio (DIVPAYOUT)	Dividend payout ratio is Dividend per share (DPS) divided by Earnings per share (EPS)
6	Institutional Ownership (INSTOWN)	Percentage of shares held by the institutional shareholders where value 'one' is assigned in case the institutional ownership stake exceeds 25% and 'zero' otherwise.
7	Board Size (BSIZE)	Total number of directors (both executive and non-executive) on the board.
8	CEO Duality (DUALITY)	A binary variable which equals 'one' if a Chairman of the board is also the Chief Executive Officer (CEO) of the firm and 'zero' otherwise.
9	Firm Size (LSIZE)	Natural logarithm of total assets of the firm
10	Growth (GROWTH)	The growth rate in net sales over that of the previous year
11	Volatility (VOL)	Volatility in earnings as measured by the standard deviation of the first difference of the ratio of earnings before interest and taxes (EBIT) to total assets
12	Firm Age (LAGE)	Natural logarithm of number of years of a firm since its incorporation
13	Profitability (ROA)	It is represented by Return on Assets (ROA), as proxied by Earnings before Interest and Taxes (EBIT) divided by book value of total assets.
14	Lagged Profitability (LAGROA)	It is previous year's Return on Assets (ROA)

Sample Selection and Research Methodology

The testing of the variables determining the level of board independence has covered a time-frame of 5 years (i.e. from 2005-06 to 2009-10) by considering a sample of 114 companies listed on the Bombay Stock Exchange in India. This initial sample set of top 200 companies was derived after ranking the market capitalization of all BSE-listed companies (after excluding banking and finance companies) as on March 31, 2010. Out of the initial sample set, those companies were excluded which were not traded (or listed) for all the 5 years under consideration and whose financial year(s) did not close on March 31 each year during the tenure covered in the study. This leads to a final sample of 114 companies for a period of 5 years, that is, 570 (114*5) firm-year observations.

Secondary sources, annual reports, and Prowess database were used to collect the required governance and financial parameters of the companies, respectively. To be more specific, corporate governance reports acted as the basis for gleaning the data manually on selected board characteristics. The aggregated hand-collected data on board characteristics and other financial data from the Prowess database were then computed to arrive at the measures specified for the purpose of testing in the following section. The operationalization of the variables has been elucidated in the Table 1.

It is to be noted that the appointment of a Chief Executive Officer is not commonplace in the Indian corporate sector. The Managing Director or other designated individuals generally perform the functions of the Chief Executive Officer in such corporates. Therefore, in order to define CEO duality, the status of the Chief Executive Officer was identified with reference to the provisions stated under Revised Clause 49 of the Listing Agreement (SEBI, n.d.).

(1) It has been observed that some companies have designated specific individuals as Chief Executive Officers (CEOs), therefore, these individuals have been considered as the CEO for the purpose of CEO duality.

(2) In other cases (i.e. where the CEO has not been specifically appointed in a company), the CEO of a company has been identified by having recourse to the requirements of Clause 49 of the Listing Agreement which deals with the code of conduct (Clause 49 I(D)) and CEO/CFO certification (Clause 49 V), respectively.

Thus, an individual is regarded as CEO :

(i) If he/she has given a declaration on compliance with the code of conduct being affirmed by the board members and senior management of the company (Clause 49 I(D)).

Or

(ii) If he/she certifies to the board as regards to the authenticity and integrity of the financial statements and cash flow statement, establishing and maintaining internal controls, sincerity in and legality of transactions, and so forth (Clause 49 V).

It has been further discerned that mostly, managing directors have provided declaration/certification in the annual reports of their respective sampled companies. Thus, the same have been considered as CEOs for the purpose of CEO duality.

The present paper has employed three-stage least squares under the simultaneous equations approach to allow for endogeneity between board composition and firm performance. As shown, two equations for board independence and firm performance have been modeled, whereby firm performance has been introduced as a regressor (explanatory variable) in the board independence equation ; whilst, board independence as a regressor is inserted into the firm performance equation.

Table 2. Descriptive Statistics

Variables	Mean	Std. Deviation	Maximum	Minimum
TQ	2.6785	1.9073	0.3710	10.8269
PERCIND	0.4746	0.1428	0	0.8571
INSOWN	56.3339	21.4691	0	99.59
DIVPAYOUT	0.2974	0.5046	0	7.4251
LEV	0.1731	0.1541	0	0.6604
BSIZE	10.7228	3.0468	4	22
GROWTH	0.3404	2.7771	-0.5184	66.1417
LSIZE	10.8854	1.2982	6.8041	14.7367
VOL	0.0267	0.0316	1.94e-06	0.3233
AGE	3.4242	0.6207	1.7917	4.7273
ROA	0.1397	0.0960	-0.1184	0.6254
LAGROA	0.1422	0.1003	-0.1331	0.7079
DUALITY	41.40 %*		0	1
INSTOWN	51.58%*		0	1

Note: '*' denotes percent of firm-year observations having duality or more than 25% institutional ownership stake in a firm.

Some of the variables, for example, inside ownership, dividend payout ratio, institutional ownership, leverage, growth opportunity, and firm size have been used under both the equations. Apart from these, the board composition equation also includes earnings volatility and board characteristics such as board size and CEO duality ; whereas, the effects of firm age, current year, and lagged profitability have been incorporated into the firm performance equation. However, it is to be noted that this paper has been restricted to the determinants/antecedents of board composition and its association with firm performance (Tobin's Q). Thus, the analysis of independent variables (except board independence) is not probed under the scope of the present research.

$$\text{PERCIND} = \alpha + \hat{\alpha}_1 \text{TQ} + \hat{\alpha}_2 \text{INSOWN} + \hat{\alpha}_3 \text{DIVPAYOUT} + \hat{\alpha}_4 \text{LEV} + \hat{\alpha}_5 \text{INSTOWN} + \hat{\alpha}_6 \text{BSIZE} + \hat{\alpha}_7 \text{DUALITY} + \hat{\alpha}_8 \text{GROWTH} + \hat{\alpha}_9 \text{LSIZE} + \hat{\alpha}_{10} \text{VOL} + \hat{\alpha}_{11} \text{IND Dummies} + \hat{\alpha}_{12} \text{YEAR Dummies} + e \quad \dots\dots(1)$$

$$\text{TQ} = \alpha + \hat{\alpha}_1 \text{PERCIND} + \hat{\alpha}_2 \text{INSOWN} + \hat{\alpha}_3 \text{DIVPAYOUT} + \hat{\alpha}_4 \text{LEV} + \hat{\alpha}_5 \text{INSTOWN} + \hat{\alpha}_6 \text{GROWTH} + \hat{\alpha}_7 \text{LSIZE} + \hat{\alpha}_8 \text{LAGE} + \hat{\alpha}_9 \text{ROA} + \hat{\alpha}_{10} \text{LAGROA} + \hat{\alpha}_{11} \text{IND Dummies} + \hat{\alpha}_{12} \text{YEAR Dummies} + e \quad \dots\dots\dots(2)$$

Results of Three-Stage Least Squares

The Table 2 exhibits the descriptives of the study variables which contains mean, standard deviation, minimum, and maximum values. The Tables 3 and 4 present the results of 3SLS, which indicate that firm performance and board independence are jointly determined since both the coefficients of firm performance (*Tobin Q*) and board independence (*PERCIND*) are positive and significant in board independence and firm performance equations, respectively. This shows that well-performing firms tend to bring more independent outside members into the board, and higher representation of independent outside members is tied to better firm performance. In other

Table 3. Results of Three-Stage Least Squares (3SLS)

Independent Variable	Model 1		Model 2	
	PERCIND	TQ	PERCIND	TQ
Constant	0.4605*** (0.0805)	-1.4356 (3.7305)	0.4871*** (0.0807)	-0.9050 (3.2395)
TQ	0.0315*** (0.0062)		0.0304*** (0.0062)	
PERCIND		12.1309** (5.4395)		11.0122** (4.6519)
INSOWN	-0.0022*** (0.0002)	0.0306*** (0.0112)	-0.0022*** (0.0002)	0.0284*** (0.0096)
DIVPAYOUT			-0.0273*** (0.0103)	0.2707 (0.1908)
LEV	0.1555*** (0.0413)	-2.2995*** (0.8495)	0.1448*** (0.0413)	-2.0438*** (0.7389)
BSIZE	-0.0010 (0.0009)		-0.0011 (0.0010)	
DUALITY	0.0172* (0.0102)		0.0209* (0.0108)	
GROWTH	-0.0022 (0.0018)	0.0458* (0.0282)	-0.0023 (0.0018)	0.0460* (0.0266)
LSIZE	0.0008 (0.0059)	-0.2936*** (0.0962)	-0.0003 (0.0059)	-0.3027*** (0.0890)
VOL	-0.1366 (0.1020)		-0.1561 (0.1086)	
LAGE		-0.0827 (0.0772)		-0.0819 (0.0732)
ROA		4.3803*** (0.9228)		4.7137*** (0.9411)
LAGROA		2.2463 (1.9023)		2.3955 (1.7199)
Industry Dummies	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes
R - Square	26.52	12.00	27.60	21.25
Hansen-SarganOveridentificationStatistic	6.715	7.368		
p - value	0.1517	0.1177		

Note: ***, **, * denote that the variable is significant at the 1, 5, and 10% levels, respectively.

Table 4. Results of Three-Stage Least Squares (3SLS)

Independent Variable	Model 1		Model 2	
	PERCIND	TQ	PERCIND	TQ
Constant	0.4779*** (0.0842)	-1.3849 (3.7245)	0.5078*** (0.0846)	-0.8642 (3.2396)
TQ	0.0315*** (0.0062)		0.0304*** (0.0062)	
PERCIND		12.1933** (5.1958)		11.1061** (4.4379)
INSOWN	-0.0024*** (0.0003)	0.0292** (0.0136)	-0.0025*** (0.0003)	0.0268** (0.0118)
DIVPAYOUT			-0.0280*** (0.0103)	0.2693 (0.1905)
LEV	0.1477*** (0.0426)	-2.3536*** (0.7875)	0.1356*** (0.0426)	-2.1083*** (0.6921)
INSTOWN	-0.0167 (0.0157)	-0.0971 (0.2748)	-0.0193 (0.0156)	-0.1117 (0.2565)
BSIZE	-0.0011 (0.0009)		-0.0011 (0.0010)	
DUALITY	0.0185* (0.0108)		0.0224** (0.0110)	
GROWTH	-0.0024 (0.0018)	0.0445 (0.0290)	-0.0026 (0.0018)	0.0446* (0.0273)
LSIZE	0.0015 (0.0058)	-0.2886*** (0.0903)	0.0003 (0.0058)	-0.2969*** (0.0839)
VOL	-0.1281 (0.0976)		-0.1464 (0.1046)	
LAGE		-0.0805 (0.0751)		-0.0778 (0.0718)
ROA		4.3515*** (0.9197)		4.6711*** (0.9369)
LAGROA		2.2578 (1.8300)		2.4104 (1.6574)
Industry Dummies	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes
R- Square	26.68	11.5	27.82	20.59
Hansen-SarganOveridentificationStatistic		6.708		7.384
p- value		0.1521		0.1169

Note: ***, **, * denote that the variable is significant at the 1, 5, and 10 % levels, respectively.

words, the association between board independence (*PERCIND*) and firm performance (*PERF*) is bidirectional in nature, where both influence each other.

The variable inside ownership (*INSOWN*) is negative and significant at the 1% level. In other words, firms having higher inside ownership resort to lesser board independence as the requirement for the latter decreases with the alignment of interests of controlling and minority shareholders. This suggests that higher inside ownership, in terms of promoters' stake, is related to a smaller proportion of independent directors on the board, and thereby, it connotes that inside ownership and board independence are substitute corporate governance mechanisms in mitigating agency conflicts.

Past research also corroborates an inverse association between inside ownership and board independence (or composition) (Bathala & Rao, 1995 ; Barnhart & Rosenstein, 1998 ; Cotter & Silvester, 2003 ; Denis & Sarin, 1999; Fernandez & Arrondo, 2005 ; Mak & Roush, 2000 ; Prevost et al., 2002a). Like inside ownership, the regression estimate for dividend payout (*DIV*) variable has also been found to be negative and significant at the 1% level, which reflects that higher dividend payout ratio is related to a smaller proportion of independent directors on the board (model 2 of Tables 3 & 4). This concurs with Jensen's (1986) argument that dividends reduce the availability of free cash flows with the insiders, thereby, the associated agency costs can be minimized by reining the insiders' opportunistic behaviour. Similarly, the inverse coefficient of dividend payout policy is also in line with prior empirical research (Bathala & Rao, 1995). In another way, it can be expressed that the shareholders receiving higher dividends are lesser motivated to increase the level of board independence.

The leverage (*LEV*) variable has been found to be positive and significant at the 5% level. Thus, this supports a complementary effect between the two. In other words, higher leverage is related to a larger proportion of independent directors on the board. This positive evidence was also exhibited by Prevost et al. (2002a) and thus, is in agreement with Li's (1994) argument that the expertise of the outside directors plays an important role in firms that are financing their growth or are expanding by increasing debt leverage. This complementary relationship, however, is not in line with past research, suggesting substitutability effect under agency cost assumption (Bathala & Rao, 1995), and also contrasts with the viewpoints of Harris and Raviv (1991) and Mcnigh and Weir (2009).

Furthermore, institutional ownership has been found to be statistically insignificant, the finding which is dissimilar to the positive and significant results reported by Bathala and Rao (1995), Whidbee (1997), Feldmann and Schwarzkopf (2003), and Chouchene (2010).

As far as board size is concerned, it has not appeared to explain the level of independence of the board ; thus, is in contrast to the significant evidences reported by Li (1994), Mak and Li (2001), Prevost et al. (2002b), and so forth. The board leadership variable, CEO duality, is positive and significant at the 1% level. The positive association indicates a strong need for board monitoring, by way of greater representation of independent directors on the board, in firms following combined board leadership structures (i.e. CEO duality). In other words, this suggests strong complementarity between two board characteristics, where one (CEO duality) leads to the other. The above finding is similar with the results reported by earlier studies, including those of Li (1994) and Monem (2013), but is in contrast to the findings obtained by Young (2000), Prevost et al. (2002a), Setia-Atmaja (2009), Chen and Al-Najjar (2012), who suggested an inverse association. This is also somewhat consistent with the Indian legal corporate governance framework (Revised Clause 49), which requires that at least half of the board should comprise of independent directors, in case the Chairman is an Executive Director.

In essence, greater monitoring provided by more independent directors becomes essential for rejuvenating the level of board independence, particularly in the existence of combined leadership structures in corporate boards. Other variables such as firm size, growth, and volatility are found to be statistically insignificant.

Managerial Implications

The results derived in this study offer several directions to the managers of corporates as well as policy makers. The findings have overall provided the reflection that board independence is not only affected by the extent of firm-specific factors such as firm performance, dividend payout policy and leverage, but also by the ownership (inside ownership) as well as by the board structure (CEO duality). This put forwards that corporates desirous of bringing about changes in the board independence level - being a corporate governance mechanism - can do so by varying the levels of the others (such as inside ownership, leverage, dividend payout policy). Furthermore, the endogenous relationship (reverse causality) between board independence and firm performance, in contrast to the unidirectional linkages, offers additional insights for corporates, regulators, and policy makers.

Conclusion

This paper sheds light into the determinants of board independence after taking into consideration the potential endogeneity between board independence and firm performance. Empirical findings have divulged significant associations of firm performance, inside ownership, leverage, CEO duality, and dividend payout policy with the level of board independence. Findings have conformed to the agency perspective in so far as it has pointed towards the substitutive effect between inside ownership, dividend payout policy, and board independence. In other words, higher inside ownership and dividend payouts itself help in mitigating agency conflicts, thus, place a lesser demand for independent outside directors. Intriguingly, the results also concluded that the association between board independence and firm value is a two-way round, whereby both endogenous variables influence each other. The above findings are also suitable for policy makers, regulators, and the academicians as the subject under consideration has received very less empirical attention in India.

Limitations of the Study and Scope for Further Research

The present study has attempted to incorporate the effects of various firm variables, such as inside ownership, leverage, dividend payout policy, institutional ownership, board size, CEO duality, and other control variables while determining a significant impact on board independence. However, there are some other firm-specific variables such as ownership concentration (or block holder ownership), CEO tenure, board chairman status, and so forth, the impact of which has not been covered under the realm of this study.

The current empirical analysis is also limited to the study of main effects of the selected independent variables on the level of board independence. In other words, the study has not taken into account the interaction effects of independent variables. Moreover, the present study can be extended by undertaking a separate board independence analysis for large and small firms. Therefore, more empirical work is warranted on this subject to analyze the aforementioned untouched issues and thus, propounds suitable research directions for future researchers.

References

- Abdullah, S.N. (2004). Board composition, CEO duality and performance among Malaysian listed companies. *Corporate Governance*, 4 (4), 47-61. DOI: <http://dx.doi.org/10.1108/14720700410558871>
- Barnhart, S.W., & Rosenstein, S. (1998). Board composition, managerial ownership, and firm performance: An empirical analysis. *The Financial Review*, 33 (4), 1-16. DOI: 10.1111/j.1540-6288.1998.tb01393.x

- Bathala, C.T., & Rao, R.P.(1995). The determinants of board composition: An agency theory perspective. *Managerial and Decision Economics*, 16(1), 59-69. DOI: 10.1002/mde.4090160108
- Beasley, M. S. (1996). An empirical analysis of the relationship between the board of director composition and financial statement fraud. *The Accounting Review*, 71(4), 443-465.
- Bjuggren, P., Eklund, J.E., & Wiberg, D. (2007). Ownership structure, control and firm performance: the effects of vote-differentiated shares. *Applied Financial Economics*, 17(16), 1323-1334.
- Chakrabarti, R., Subramanian, K. V., & Tung, F. (2010). *Independent directors and firm value: Evidence from an emerging market* (Working Paper). Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1631710
- Chen, C.H., & Al-Najjar, B. (2012). The determinants of board size and board independence: Evidence from China. *International Business Review*, 21(5), 831-846. doi:10.1016/j.ibusrev.2011.09.008
- Choi, J.J., Park, S.W., & Yoo, S.S. (2007). The value of outside directors: Evidence from corporate governance reform in Korea. *Journal of Financial and Quantitative Analysis*, 42(4), 941-962.
- Chou, H., Chung, H., & Yin, X. (2013). Attendance of board meetings and company performance: Evidence from Taiwan. *Journal of Banking & Finance*, 37(11), 4157-4171.
- Chouchene, I. (2010). The determinants of the presence of independent directors in French board companies. *International Journal of Business and Management*, 5(5), 144-153.
- Cotter, J., & Silvester, M. (2003). Board and monitoring committee independence. *Abacus*, 39(2), 211-232. DOI: 10.1111/1467-6281.00127
- Davidson, R., Goodwin-Stewart, J., & Kent, P. (2005). Internal governance structures and earnings management. *Accounting and Finance*, 45(2), 241-267.
- Denis, D.J., & Sarin, A. (1999). Ownership and board structures in publicly traded corporations. *Journal of Financial Economics*, 52(2), 187-223.
- Easterbrook, F.H. (1984). Two agency-cost explanations of dividends. *The American Economic Review*, 74(4), 650-659.
- Ebrahim, A.(2007). Earnings management and board activity: An additional evidence. *Review of Accounting and Finance*, 6(1), 42-58.
- Fama, E.F., & Jensen, M.C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301-325.
- Feldmann, D.A., & Schwarzkopf, D.L. (1993). The Effect of institutional ownership on board and audit committee composition. *Review of Accounting and Finance*, 2(4), 87-109.
- Fernandez, C., & Arrondo, R. (2005). Alternative internal controls as substitutes of the board of directors. *Corporate Governance: An International Review*, 13(6), 856-866.
- Grossman, S.J., & Hart, O.D. (Eds). (1982). Corporate financial structure and managerial incentives. In, *The economics of information and uncertainty* (pp. 107-140). Chicago : University of Chicago Press.
- Harris, M., & Raviv, A. (1991). The theory of capital structure. *The Journal of Finance*, 46(1), 297-355.

- Hillier, D., & McColgan, P. (2006). An analysis of changes in board structure during corporate governance reforms. *European Financial Management*, 12 (4), 575-607.
- Hsu, W. - Y., & Petchsakulwong, P. (2010). *The impact of corporate governance on the efficiency performance of the Thai non-life insurance industry*. The Geneva Papers on Risk and Insurance - Issues and Practice, 35, S28-S49. doi:10.1057/gpp.2010.30
- Hsu, W.L., Wang, G.Y., & Hsu, Y. (2012). Testing mediator and moderator effects of independent director on firm performance. *International Journal of Mathematical Models and Methods in Applied Sciences*, 6 (5), 698-705.
- Iwu-Egwuonwu, R.C. (2010). Some empirical literature evidence on the effects of independent directors on firm performance. *Journal of Economics and International Finance*, 2 (9), 190-198.
- Jaggi, B., Leung, S., & Gul, F. (2009). Family control, board independence and earnings management: Evidence based on Hong Kong firms. *Journal of Accounting and Public Policy*, 28 (4), 281-300.
- Jensen, M.C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American Economic Review*, 76 (2), 323 - 329.
- Jensen, M.C., & Meckling, W.H. (1976). Theory of the firm : Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 3 (4), 305-360.
- Kamardin, H., & Haron, H. (2011). Internal corporate governance and board performance in monitoring roles: Evidence from Malaysia. *Journal of Financial Reporting and Accounting*, 9 (2), 119-140.
- Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics*, 33 (3), 375-400.
- Koerniadi, H., & Tourani-Rad, A. (2012). Does board independence matter? Evidence from New Zealand. *Australasian Accounting Business and Finance Journal*, 6 (2), 3-18.
- Kyereboah-Coleman, A., & Biekpe, N. (2007). On the determinants of board size and its composition: Additional evidence from Ghana. *Journal of Accounting and Organizational Change*, 3 (1), 68-77.
- Li, J. (1994). Ownership structure and board composition: A multi-country test of agency theory predictions. *Managerial and Decision Economics*, 15, 359-368.
- Mak, Y.T., & Li, Y. (2001). Determinants of corporate ownership and board structure: Evidence from Singapore. *Journal of Corporate Finance*, 7 (3), 235-256.
- Mak, Y.T., & Roush, M. L. (2000). Factors affecting the characteristics of boards of directors: An empirical study of New Zealand initial public offering firms. *Journal of Business Research*, 47, 147-159.
- Mcknight, P.J., & Weir, C. (2009). Agency costs, corporate governance mechanisms and ownership structure in large UK publicly quoted companies: A panel data analysis. *The Quarterly Review of Economics and Finance*, 49, 139-158.
- Monem, R.M. (2013). Determinants of board structure: Evidence from Australia. *Journal of Contemporary Accounting & Economics*, 9 (1), 33-49.
- Moyer, C. R., Rao, R., & Sisneros, P.M. (1992). Substitutes for voting rights: Evidence From dual class recapitalizations. *Financial Management*, 21 (3), 35-47.

- Prencipe, A., & Bar-Yosef, S.(2011). Corporate governance and earnings management in family-controlled companies. *Journal of Accounting, Auditing & Finance*, 26 (2), 199-227.
- Prevost, A.K., Rao, R.P., & Hossain, M. (2002a). Board composition in New Zealand : An agency perspective. *Journal of Business Finance & Accounting*, 29(5 - 6), 731-760.
- Prevost, A.K., Rao, R.P., & Hossain, M. (2002b). Determinants of board composition in New Zealand: A simultaneous equations approach. *Journal of Empirical Finance*, 9, 373-397.
- Rashid, A., Zoysa,, A., Lodh, S., & Rudkin, K. (2010). Board composition and firm performance: Evidence from Bangladesh. *Australasian Accounting Business and Finance Journal*, 4 (1), 76-95.
- SEBI. (n.d.). *Revised Clause 49 of the listing agreement*. Retrieved from www.sebi.gov.in
- Setia-Atmaja, L., Tanewski, G.A., &Skully, M. (2009). The role of dividends, debt and board structure in the governance of family controlled firms. *Journal of Business Finance & Accounting*, 36 (7 & 8), 863-898.
- Setia-Atmaja, L.Y. (2009). Governance mechanisms and firm value: The impact of ownership concentration and dividends. *Corporate Governance: An International Review*, 17 (6),694-709.
- Sharma, V.D. (2004). Board of director characteristics, institutional ownership, and fraud: Evidence from Australia. *AUDITING: A Journal of Practice & Theory*,23 (2), 105-117.
- Varottil, U. (2010). Evolution and effectiveness of independent directors in Indian corporate governance. *Hastings Business Law Journal*, 6 (2), 1-91.
- Wang, W. (2014). Independent directors and corporate performance in China : A meta-empirical study. *International Journal of Business and Management*, 2 (3), 145-171.
- Whidbee, D.A. (1997). Board composition and control of shareholder voting rights in the banking industry. *Financial Management*, 26 (4), 27-41.
- Xie, B., Davidson, W.N., & DaDalt, P.J. (2003). Earnings management and corporate governance: The role of the board and the audit committee. *Journal of Corporate Finance*, 9 (3), 295-316.
- Yammeesri, J., & Herath, S.K. (2010). Board characteristics and corporate value: Evidence from Thailand. *Corporate Governance*, 10 (3), 279-292.
- Yeh, Y., & Woitdtk, T. (2005). Commitment or entrenchment? : Controlling shareholders and board composition. *Journal of Banking & Finance*, 29 (7), 1857-1885.
- Young, S. (2000). The increasing use of non-executive directors: Its impact on UK board structure and governance arrangements. *Journal of Business Finance & Accounting*, 27 (9 & 10), 1311-1342.