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Effects of Board Structure on Firm Performance: A Comparison between Australia and Sri Lanka

Puwanenthiren Pratheepkanth[a], Samanthala Hettihewa[b*] and Christopher S. Wright[c]

This study analyses the correlation between Board attributes and firm performance in a sample of 100 Australian and 100 Sri Lankan firms to analyse. The board attributes analysed are size; gender ratio; non-independent-to-total members; and experience. The level of economic development is considered as an overlaying potential confounding effect on the outcomes. The analysis and a visual inspection of the raw data suggest that: Australian Boards are much larger than Sri Lankan Boards; in both nations, Boards are male dominated; and while board structure provides predictive insight into firm performance, only a few individual attributes are significant. The most important finding of this research is that the larger Boards of Australia appear to have a significantly stronger influence on firm performance than the relatively smaller boards of Sri Lanka. Future research should extend the review of the effects of Board size on corporate performance.

Keywords: Board structure, board size, independent directors and performance

JEL Codes: G30, G34 and G38

1. Introduction

Corporate governance (CG) encompasses the guidelines, rules and practices by a company seeks to achieve its objectives, including a balancing of the interests of stakeholders. (Aoki 2000: Aguilera and Jackson 2003). Dehaene et al., (2001) and Dalwai, et al., (2015) describe the importance of the role of board of directors(BDs) with a significant accountability and responsibility in improving the shareholder-manager relationship via CG. In the past two decades, CG has become an exciting topic globally; particularly after the high-profile corporate debacles, including, Bearings Bank, Enron and WorldCom precipitated the introduction of USA Sarbanes-Oxley Act in 2002.

CG committee of Japan (Corporate Governance Forum 1997, pp. 1) asserts "… directors are entitled to govern the company, and to supervise and monitor the company's management in order to promote effective management and ensure prudent accountability to the shareholders". Donaldson (1990) states that the CG structure also includes the controls, executive incentives, and other schemes of monitoring and bonding process of BDs.

Mr. Puwanenthiren Pratheepkanth, Email: p.pratheepkanth@federation.edu.au

Dr. Samanthala hettihewa, Federation Business School, Federation University Australia, POBox 663, Ballarat, Vic 3353, Australia. Tel: 03 53279158 , Email: s.hettihewa@federation.edu.au

Prof. Christopher S Wright, Higher Education Faculty, Holmes Institute, Australia. Tel: 03 96622055 Email: cwright@homes.edu.au

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The BDs are one of many internal control mechanisms directed at aligning the interests of shareholders and managers and/or disciplining or removing ineffective management (Barnhart et al., 1994: Park and Shin 2003). Rajagopalan and Zhang (1990), Dehaene et al., (2001), Klapper and Love, (2004), Krivogorsky (2006), Rajagopalan and Zhang (2008), Klapper and Love (2004) and Abidin et al., (2009) note that the effective CG assists in enriching firm performance. While most of CG studies have focused on developed countries (Daily et al., 2003: Rajagopalan and Zhang 2008) there is an increasing interest in CG in developing countries (Haniffa and Hudaib 2006: Mak and Li 2001: Kato and Long 2006), and in comparative studies between developed and developing countries.

This paper evaluates whether the development level influences CG and the effect of CG (i.e. the effect of board structure on firm performance) by examining listed firms in Australia and Sri Lanka. Corporations in Australia and those in Sri Lanka face significantly different legal, economic, resource-availability circumstances.

The Australian institutional setting may give rise to different forms of CG (Craswell et al., 1997). Other reasons to consider Australia include its ability to weather the global financial crises (GFC); to continuously improve its capital markets via regulations, whilst maintaining high corporate ethical standards. Sri Lanka is an emerging economy that is also emerging from three decades of civil war and there has been considerable economic progress in the last few years (Guo and Kga 2012). Thus, an examination of characteristics of the structure and opertaion of companys' boards as an substantial driver in CG may provide insights to improvements in CG in developed and emerging economy. The paper is organised with: Section 2 describing research methods; Section 3 presenting findings and discussion; and Section 4 concluding the paper.

2. Research Methods

In order to assess the board structure and firm performance of Australian and Sri Lankan firms, this study employed quantitative techniques. The focus of interest in this study is the 200 listed firms on the Australian Securities Exchange (ASX) as per S&P/ASX200 and 289 listed firms on the Colombo Stock Exchange (CSE) as at Feb/13. In order to select the sample, random sampling method used, which implies population has equal change of being included in the sample (Saunders, et al., 2009). Consistent with this selection, the sample size is 100 Australian and 100 Sri Lankan listed firms. Also, some of the analysis is based on published financial statements and other secondary sources. The quantitative data were analysed using SPSS (version 21.0) to produce descriptive statistics and regression analysis.

In the empirical investigation, the data for independent variables are collected for 2011, representing a year lag to the 2012 performance data. Thus 2012-full-year data are used for performance data of Australian and Sri Lankan firms. Return on assets (ROA) and return on equity (ROE) are measures firm performance. ROA is a measure of performance used in the CG literatures (Dehaene, et al., 2001: Leung, et al., 2014: Chen 2014). ROE has been used in existing studies to measure firm performance (Krivogorsky, 2006: Bachiller, et al., 2014). In independent variables, Board size,

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female ratio, independence ratio and directors' experience are used to measure board structure.

Table 1: Variables used to study the Board Structure and Firm Performance

Variables	Measures	Symbols
Board Structure		
Board Size	Number of directors	BOS
Female ratio	Female directors to total directors	FER
Non-Independence ratio	Non-Independent directors/total directors	INDE
Director's experience	Percentage of the board being directors more than 10 years	DIE
Firm Performance		
Return on Assets	Net Income after Taxation /Total Assets	ROA
Return on Equity	Net Income after Taxation/Equity Capital	ROE

To test whether board structure affects the association between board size, female director position, directors' experience and board committee independence and firm performance, researchers use the following regression model:

$ROA = a_o + a_1 BOS + a_2 FER + a_3 INDE + a_4 DIE$ (Eq 1)
$ROE = b_o + b_1 BOS + b_2 FER + b_3 INDE + b_4 DIE$ (Eq 2)

Where: a_o and b_o, = constant terms,
a_1, a_2, a_3, a_4, b_1, b_2, b_3, b_4, are regression coefficients, and
The variables are defined in Table 1

3. Findings and Discussion

1.1 Descriptive statistics analysis

Descriptive statistics described the characteristics of board structure prevalent among listed companies in Australia and Sri Lanka are summarised in Table 2.

Table 2: Descriptive Statistics: Australia and Sri Lanka

	Australia				Sri Lanka			
	Minimum	Maximum	Mean	SD	Minimum	Maximum	Mean	SD
BOS	6	35	15.39	4.297	3	13	8.05	2.231
FER	.00	50.00	14.057	10.6105	.00	37.50	5.4770	8.1710
INDE	25.00	88.89	64.017	10.6818	12.50	87.50	62.570	15.256
DIE	.00	76.92	29.053	18.0507	.00	100.00	36.187	20.467

Board Size: Australia and Sri Lanka
The 100 firms in the sample are across a range of industrial sectors. Board size (BOS) for the Australian selected companies' (as stated in descriptive statistics) in 2011, averaged 15 and ranged from six to 35 members. The Sri Lankan BOS, in 2011,

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averaged 8 and ranged from 3 to 13 members. This result is consistent with some other existing literature by Bostock (1995) who notes that average board size in UK was 12 to 13 directors and also Yermack (1996) asserts that boards in the USA averaged 12 members. Hanson and Song (2000) note that number of directors in USA boards has declined over the years. Dehaene, et al., (2001), notes that USA Board sizes had a maximum size of 35 members. The Olivencia report in Spain recommended an ideal size of Boards of 5 to 15 (Garcia Lara et al., 2007). From a resource dependent perspective, bigger boards should be relatively more effective. In particular, Hillman, et al., (2000), Palmer, and Barber (2001) report that the board directors is a substantial resource for companies. Van den Berghe and Levrau (2004) argue that increasing the number of board directors provides an increased pool of expertise and thus larger boards are likely to have more knowledge and skills at their disposal. Similarly, resource dependence theory suggests that larger boards may have a better ability to form environmental links and secure critical resources (Goodstein, et al., 1994). Conversely, overly large boards experience drawbacks such as: lack of cohesiveness, coordination issues and fractionalisation (Bonn, et al., 2004). Kiel and Nicholson (2003) state that Australian boards are usually small, with a mean number of fewer than 10 directors however, this study found that 96 percent of Australian companies have Board with over 10 members, but 81 percent of Sri Lanka companies have Boards with under 10 members.

Gender Diversity: Australia and Sri Lanka

In Table 2, there are few female directors in both countries. Specifically, female Board members in Australian firms averaged 5 percent and ranged from 0 to 50 percent; and in Sri Lankan firms averaged 14 percent and ranged from 0 to 38 percent. These results are consistent with the recent study by Kang et al., (2007) which also reveal that gender diversity in Australian boards is very low, particularly compared to the USA (only 13 percent of Fortune 500 companies did not have a female directors; Hyland and Marcellino 2002). It is, however, slightly higher than the female representation reported in some European and Asian countries. The issue of gender in board diversity is particularly apt given recent Europe efforts to increase female representation on boards (Brennan and McCafferty, 1997: Singh, et al. 2001). In UK the average number of female in boards has increased recent years from 27.8 percent in 2001 to 28 percent in 2008 (Martin et al., 2008: Gregory et al., 2014). Although females are progressively being appointed to boards of Canadian companies, they comprise only about five percent of Canadian directors (Burke, 1994). These results are consistent with Japan with 3 percent of directors being female (Hyland and Marcellino, 2002). In conclusion, while females hold 10-14 percent of all Australian Board positions, the female gender ratios for the USA, the UK, Sri Lanka, and Japan are worse, being (respectively) 13, 6, 5, and 3 percent.

Board independence: Australia and Sri Lanka

According to the CSE (2013) listing guidelines, independent directors are outside directors who are not employed by the company, are not related to a key employee, are independent from management, and have never worked at the firm or its subsidiaries, or for its consultants or major stakeholders.

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Table 2 notes that most of the selected Australian companies have the majority (89 percent) of their board being independent directors. Albeit, 25 percent of companies have minimum independent directors on board, with averagely 64 percent of directors are independent position in the boards. The result of this study are consistent with Stapledon and Lawrence (1996) who find that Australian boards of which the most of directors are independent. Whereas results also show that 88 percent of the Sri Lankan companies' directors are independent directors. This proportion is much similar with Australian results. Especially, the number of independent directors ranged from a minimum of 13 percent to a maximum of 88 percent, which is above the minimum recommended by the ICASL code of best practice of 2003. In prior studies reveal that the number of independent directors on boards of UK companies has increased considerably over time. For instance, Conyon (1994) examined the corporate governance changes in UK and the study consisted of 400 large UK companies in the Times 1,000 companies between 1988 and 1993. The results suggest that the mean percentage of independent directors increased from 38 to 44 percent from 1988 to 1993. However, Peel and O'Donnell (1995) report that UK boards comprised an average of eight directors, of which three were independent. Only eight percent of companies had no independent directors. A majority (54 percent) complied with the Cadbury Committee's recommendation that all boards should contain a minimum of three independent directors. In Belgian context, the number and percentage of non-independent directors decreased over time whilst the number and percentage of independent directors increased (Dehaene, et al., 2001). Moreover, most corporate governance rules and codes globally require boards of directors of listed companies to have a grouping of independent and non-independent directors (Jackling and Johl 2009). The ASX corporate governance board notes that a majority of the board should be independent directors. It is similar with the New York stock exchange 2003, that all listed companies have a majority of independent directors on their boards. The UK Combined code of 2004 provides that at least half of the board members be independent directors. The Malaysian code on corporate governance (2000) recommends that there needs to be balance on the board of directors with at least one third of the board directors should be independent directors. It is consistency with corporate governance rules as required by section 7.10 of the listing rules of the Colombo Stock Exchange (CSE). In India the recommendations of the Birla committee 2004, the board directors of a company is required to have an independent and non-independent directors with not less than 50 percent of directors consisting of independent directors. Monitoring is more effective with a larger percentage of independent directors because of better information sharing by directors (Raheja, 2005; Lehn, et al., 2009; Chen, 2014). Consequently this study concludes that Australia and Sri Lanka, independent directors have a larger influence on the board similar to existing studies (Jackling and Johl, 2009; Chen, 2014).

Directors' Experience: Australia and Sri Lanka

Table 2 notes that averagely 29 percent of directors in Australian sample companies have more than 10 years directors' experience while maximum 77 percent of directors have more than 10 years' experience in managerial position. The results also show that mean around 36 percent of directors have more than 10 year experience with a minimum value of 0 percent to a maximum value of 100 percent. Surprisingly, there

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appears to be a dearth of published research on directors' experience on developed or emerging countries.

1.2 Regression Analysis

Table 3 presents findings of regression analysis with information on the impact of an independent variable on the dependent variable. Of the Australia the models R^2 value of two performance ratios indicate that 23 percent and five percent to the observed variability in company performance can be explained by the board structure. The F-statistics and significance levels (sig) in Table 2 shows that ROA model generate statistically significant outcomes in Australia. Whereas of the Sri Lanka the models R^2 value of two performance ratios indicate that each three percent to the observed variability in company performance can be explained by the board structure variables. The F-statistics and significance levels (sig) in Table 2 shows that both ROA and ROE models generate statistically insignificant outcomes.

Table 3: Predictors of ROA and ROE – Model summary

	Australia		Sri Lanka	
	ROA	ROE	ROA	ROE
R	.476	.224	.175	.188
R^2	.227	.050	.031	.035
R^2 Adjusted	.194	.010	.010	.005
F-Statistics	6.973	1.260	.750	.868
Sig.	.000	0.291	.560	.486

Table 4 displays the results of the coefficient estimation for each performance measure of the study. The impact of BOS on ROA in the case of Australia is significant at the 1 percent level (T=5.036 and P = 0.000). However, the other variables in that equation are not statistically significant. The impact of DIE on ROE is significant (T=2.119 and P = .037) at the 5 percent level, all the other variables are not statistically significant though all have positive signs. While, none of the Sri Lankan variables are statistically significant, they all have the expected positive signs.

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Table 4: Coefficients for predictors of ROA and ROE

Models	Australia		Sri Lanka	
	ROA	ROE	ROA	ROE
Constant	3.322	.171	1.749	1.418
	(.001)	(.865)	(.084)	(.160)
BOS	5.036	.362	1.122	.900
	(.000)***	(.718)	(.265)	(.371)
FER	.506	.005	.305	.617
	(.614)	(.996)	(.761)	(.539)
INDE	1.277	.495	.065	.217
	(.205)	(.621)	(.948)	(.829)
DIE	.623	2.119	1.092	1.274
	(.535)	(.037)**	(.278)	(.206)

Significant at: *** = 1%; ** = 5%; * = 10%

4. Conclusion and Future Research

This study investigates whether the effect of board structure on firm efficiency varies significantly between Australia and Sri Lanka. The results show that the average board size of Australian companies being relatively large (i.e. a mean of 15 members with a range of six to 35) as compared to Sri Lanka (with a mean of 8 members range of three to 13). The participation of females on boards in both nations is roughly the same and low in both countries. Independent directors make up the vast majority of board members, which is consistent with good corporate governance practices.

The most important finding of this study is that board size has a significant positive effect on ROA in Australia whereas for Sri Lankan companies, a weak (statistically not significant) relationship exists between board size and firm performance for ROA and ROE. Given that board size is significantly larger in Australian than it is in Sri Lanka, Board size may be a confounding factor that entangles and prevents the influence of the level of economic development from being understood. As a result, it is important that future research more fully examine the effect of Board size on firm performance. This research question may best be answered by a future research study that examines it “jointly and severally” across a number (e.g. six – 10) of developed and emerging nations.

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