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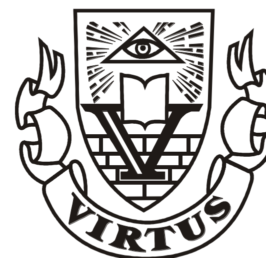

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THE IMPACT OF CORPORATE SOCIAL RESPONSIBILITY ON FIRM PERFORMANCE: EVIDENCE FORM A MENA COUNTRY

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Abstract

This paper investigates the effect of corporate social responsibility (CSR) on organization performance. It uses cross sectional data from non-financial companies in Egypt that derived from the Kompass Egypt data base. Regression analysis was used to explain the relationship and the effect of CSR on organization financial performance. The findings of this study found that there is a positive and significant effect of CSR on firm performance. Also, all CSR dimensions have significant relationship with firm financial performance. Furthermore, one of the conclusions of this study is that larger and older firms have a positive effect on financial performance (profitability) which will lead to enhance use of better CSR practice.

Keywords: Corporate Social Responsibility, Organization Performance, Egypt, SMEs

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1. Introduction

Corporate social responsibility (CSR) has emerged and developed rapidly as a field of study. It has emerged as an important approach and framework for addressing the role of business in society, setting standards of behaviour to which a company must fallow to impact society in a positive and an effective way at the same time as abiding by values that exclude profit seeking at any cost. Empirical evidence suggests that CSR actions lead to superior market performance (Orlitzky and Benjamin, 2001; Dabas, 2011). CSR practices can impact customer satisfaction, employee satisfaction, stronger brand equity and favourable attitudes towards firms (Brown and Dacin, 1997; Maignan et al., 1999; Valentine and Fleischman, 2008). These relational benefits, in turn, increase firm reputation and financial performance (Luo and Bhattacharya, 2006; Maignan et al., 1999).

Corporate social responsibility generally refers to the strategies implemented by corporations to conduct their business in a way that is ethical, society friendly and beneficial to community in terms of development (Ismail, 2009). CSR describes a firm's obligation to protect and improve social welfare now as well as in the future, by generating sustainable benefits for stakeholders (Lin et al., 2009). CSRbecame an integral part of business strategy for many organizations for addressing the social and environmental impact of company activities (Luo and Bhattacharya, 2006; Lin et al., 2009; Dabas, 2011; Beret, 2011). Although many firms use CSR, many others still consider the society and environment to be the smaller domain within the economy circle (Berete, 2011). Studies show that the more the companies are socially responsible the larger the companies are (Moore, 2001).

Furthermore, because stakeholders and investors demand that companies become more socially and environmentally responsible. Top management find that they under great pressure to adopt CSR in order to attract such stakeholders and investors (Berete, 2011). Examining the relationship between social welfare and company profitability is repeatedly being the focus of study and research in the area of social responsibility. A firm could have a great competitive advantage in obtaining economic or social benefits or both when it uses CSR process capabilities that support the firm's strategic initiatives (Sirsly and Lamertz, 2007).

The relationship between CSR practices and firm performance has been the focus of several studies in various settings (see for example, Aupperle et al., 1985;Pava and Krausz,1996; Griffin and Mahon, 1997; Kempf and Osthoff, 2007; Jackson and Parsa, 2009). However, there is a lack of research examining the practices of CSR and its effect on firm performance in the Middle East and North Africa (MENA) region.

This paper sheds light on CSR practices in a MENA country, namely Egypt. The paper provides empirical evidence on the impact of corporate social

responsibility on performance in firms operating in Egypt. The rest of the paper is organised as follows: the following section provides a literature review. The theoretical background and hypotheses development are provided in section 3. The research methodology is provided in section 4, followed by the findings and analysis in section 5; and finally summary & conclusion are provided in section 6.

2. Literature Review

The debate over corporate social responsibility goes back to the 1950s. Carroll (1999) states that in the early writings on CSR. It is referred to more often as social responsibility (SR) than as CSR. There are countless definitions of CSR but the most widely cited definition is provided by Carroll (1979) stating that 'The social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at any given point in time'. He argues that these social responsibilities carried by the firm are for the sake of both the society at large and the firm itself. So, firms are obligated to take the society's interest into consideration when taking its decision because at last the society is greatly affected by those decisions.

Corporate social responsibility is viewed as an organization's commitment to make the most of its positive impact on stakeholders while minimizing its negative impact on the society (Ferrell et al., 1989; Brinkmann and Peattie, 2008). The World Bank (2004) defines CSR as "the commitment of business to contribute to sustainable economic development by working with employees, their families, the local community and society at large to improve their lives in ways that are good for business and for development". The corporate responsibility Index (2007) states that corporate Social responsibility is achieved when "a business adapts all of its practices to ensure that it operates in way that meet, or exceeds, the ethical, legal, commercial and public expectations that society has of business". There are several initiatives by policy makers and various stakeholder representatives to spread the idea of socially responsible behaviour. The Commission of the European Communities defined (2001) CSR as "a concept whereby companies integrate social and environmental concerns in their business operations on a voluntary basis".

The literature is rich with several studies examining the association between the social involvement of businesses and financial performance and profitability (e.g. Griffin and Mahon, 1997; Waddock and Graves, 1997; Jackson and Parsa, 2009; Kempf and Osthoff, 2007). However, empirical findings reveal inconclusive evidence of the relationship between CSR and profitability.Pava and Krausz (1996) examine21 studies of corporate social performance and financial performance between 1972 and 1992.The findings of 12 studies demonstrate a positive association, eight showed no association, and only one study indicates a negative correlation. Early research such as Aupperle et al. (1985) finds slightly negative relationship between social responsibility and profitability. This research supports the view that the costs of being socially responsible forces the firm into an unfavourable financial position versus firms that are not socially responsive. Moore (2001) examines the relationship between corporate social and financial performance in the UK. Supermarket industry, the outcomes find a negative relation between contemporaneous social and financial performance are while prior-period financial performance is positively related with subsequent social performance. Moreover, Mc Williams and Siegel (2001) reveal no significant direction between CSR and corporate performance.

On the other side, Stanwick and Stanwick (1998) examine the relationship between the corporate social performance and the financial performance of an organization between 1987 and 1992. The results of the study show a significant positive correlation between CSP and profitability for all six years of the study. This study supports the view that profitability of the firm allows and/or encourages managers to implement programs that increase the level of corporate social responsibility.

Berman et al. (1999) reports positive and significant effects from some CSR dimensions and the short-term profitability. Berman et al. (1999) indicate that corporate activity enhancing employees' relations has a positive impact on firm efficiency. They point out that the carrying out of advanced human resources practices including in the legal and ethical dimensions allows firms to achieve low turnover, high productivity, and increased firm's commitment among employees. Moreover, the results show that the failure to maintain high product quality through irresponsible corporate activities leads to decreased patronage or increased lawsuits so could decrease firm profitability.

Waddock and Graves (1997) measure the profitability of corporate financial performance by using three measures which are ROA, ROE, and ROS, providing a variety of measures used to assess corporate financial performance by the investment community. Firms that are doing financially well have the resources to spend on long-term investments with high strategic impact such as investment in enhance local schools and improve community conditions, While those firms with financial troubles may have fewer financial resources to invest in traditional CSR activities.

Additionally, the results indicate that there are positive link between corporate social performance and financial performance. Luo and Battacharya (2006) report that corporate social responsibility contributes positively to market value and financial performance and that CSR has been influenced a

firm's performance through customer satisfaction. They suggest that managers can obtain competitive advantages and reap more financial benefits by investing in corporate social responsibility. Many researchers examined the relationship between each dimension of CSR and firm performance (Inoue and Seoki, 2011; Robert, 1992). Bird, Momente and Reggiani (2007) also find a positive relationship to exist between an aggregate score for CSR activities and corporate performance but conclude that this finding did not extend to the relationship between each individual CSR activity and corporate performance.

Peloza and Papania (2008) point out that the financial effects of various CSR dimensions may be different for firms in different industries based on the level of importance assigned to each primary stakeholder for the industry. Inoue and Lee (2011) examine how different dimensions of CSR could affect financial performance among firms within four tourism-related industries. The results show that each one of CSR dimensions in a different way affects the two financial performance measures and that such financial impact vary across the four tourism-related industries.

In addition, the association between CSR and corporate performance, where numerous studies controlled for three variables (firm size, industry sector and firm age) which have a significant impact on the effects of market orientation and CSR on firm performance (Brik et al., 2011; Barone et al., 2007; Bhattacharya and Sen, 2004; Maignan et al., 1999).Moreover, many researchers provide evidence that the stakeholders expect more social initiatives from large companies than from small ones. For example, large corporations and publicly traded businesses are pressured to display anobligation to CSR (Windsor, 2001; Park, 2010; Brik et al., 2011). In their early study, Trotman and Bradlely (1981), find significant relation between social responsibility disclosure and the firm size measured by both total assets and sales volume. Additionally, Stanwick and Stanwick (1998) point out those larger firms recognise the need to be leaders in their commitment to corporate social performance. The leadership role may be due not only to the firm's access to further assets used to implement corporate social performance plans, but also to the increased impact of other stakeholders (i.e. government regulations, environmental groups) rather than a primary focus on stockholders. They found a significant positive association between the firm size and corporate social performance. Furthermore, small companies are less able than their large counterparts to adopt CSR philosophies and to connect their CSR activities to outside stakeholders (Margolis et al., 2009; Brik et al., 2010; Stanwick and Stanwick, 1998; Spicer, 1978).

In the same line, Park (2010) indicates that the large firms have more resources available, and are able to involve more CSR activities leading to generate highly financial performance. Consequently, Firm size is an important control variable and positively influences the relationship between CSR and business performance (Stanwick and Stanwick, 1998; Mc Williams and Siegel, 2001; Park, 2010; Brik et al., 2011).

3. The Theoretical Framework and Hypotheses Development

3.1 The Theoretical Framework

The stakeholder theory is the most common theory, with the most important argument that there are wider groups of stakeholders in a corporation than merely shareholders and investors. The basic premise is that an organization needs to manage its relationship with many stakeholder groups that affect or are affected by its business decisions (Freeman, 1984 cited in Clarkson, 1995). In this way, the term stakeholder includes "... persons or groups of persons that have, or claim ownership, rights, or interests in a corporation and its activities, past present or future" (Clarkson, 1995). The importance here is on 'who can affect or be affected by' as this includes a number of groups within a society and how their actions affect corporations, or how they may be affected by the actions taken by the organization.

The theory explores and explains the firms' responsibilities, structures and operations. It also investigates the stakeholders' responsibilities in having better firm performance and better society (Clarkson, 1995; Russo and Perrini, 2010; Arenas, Lozano and Albareda, 2009; Mohamed et al., 2013). The theory paid attention to "secondary stakeholders" who are the people or groups who do not directly participate in the production or consumption processes such as "community activists, advocacy groups, civil society organizations and social movements "(Russo and Perrini, 2010). There are arguments about this type of stakeholders as they do not have any legal authority over the firms so they should not be considered as stakeholders (Clarkson, 1995; Arenas et al., 2009; Russo and Perrini, 2010;). Actually, there are three approaches in the stakeholder theory which are the instrumental, descriptive and normative approaches (Donaldson and Preston, 1995; Arenas et al., 2009; Basuony et al., 2014). The normative approach is discuss the firm's moral obligations to constituents and, indeed, the very purpose of firms themselves. While the instrumental and descriptive suggest that businesses strategically manage powerful stakeholders by identifying them with the self-interest of the business (Donaldson and Preston, 1995; Arenas et al., 2009). Also stakeholders have a mix of the normative and instrumental approaches when they are defined or evaluated according to their legitimacy, power and urgency (Donaldson and Preston, 1995; Arenas et al., 2009).

In this study, the conceptual framework combined among corporate social responsibility (CSR), control variable and firm performance. CSR consists of four dimensions which are economic, ethical, legal and discretionary dimensions. Firm size, firm age and type of industry are the control variables used in this framework. Finally, ROA, ROS, ROE, competitive position and sales growth represent the firm performance used as dependent variables in this conceptual framework.

3.2 Hypotheses Development

Widespread research has been led to assess the empirical association and relation between CSR and firm financial performance. Some of the researchers have provided that a positive relationship between CSR and corporate financial performance (Russo and Fouts, 1997; Waddock and Graves, 1997; Maignan et al., 1999; Luo and Bhattacharya, 2006; Akpinar et al., 2008; Zairi and Peters, 2002). On the other hand, other researchers have statedthat a negative relationship between the two constructs (Vance, 1975; Aupperle et al., 1985). The researchers argue that this negative relationship due to that organizations are trying to satisfy the inconsistent objectives of different stakeholders that might result in inefficient use of resources and subsequent decline of financial performance (Aupperle et al., 1985; Ullman, 1985; Choi et al., 2010; Sternberg, 1997). On the basis of the above arguments, these studies prompt the following hypotheses:

H_1: There is a positive significant relationship between CSR and firm performance.

H_{1a}: There is a positive significant relationship between the economic dimension of CSR and firm performance.

H_{1b}: There is a positive significant relationship between the legal dimension of CSR and firm performance.

H_{1c}: There is a positive significant relationship between the ethical dimension of CSR and firm performance.

H_{1d}: There is a positive significant relationship between the discretionary dimension of CSR and firm performance.

H_2: There is a significant relationship between firm size, firm age, industry Type and firm performance.

Studies of CSR signify the important role of the industry type (Trotman and Bradley, 1981; Francesco et al., 2007; Sebastian and Malte, 2010; Basuony and Mohamed, 2014). Researchers show that the service companies tend to show more positive effects from CSR activities (Calabrese and Lancioni, 2008), than manufacturing companies do (Jackson and Parsa, 2009). Wider survey methods using appropriate measures to investigate the influence of firm size and age on the CSR (Sebastian and Malte, 2010; Francesco et al., 2007; Francesco, 2006). On the basis of the above discussion, these studies prompt the following hypotheses:

H3: There is a significant relationship between firm size, firm age, type of industry AndCSR.

H4: Firm performance is affected by CSR, firm size, type of industry and firm age.

4. Research Design and Data Collection

4.1 The method

A survey is used as a methodology to design this study since the objective of the paper is to examine the impact of corporate social responsibility of large firms and SMEs on firm performance. Questionnaire is considered the appropriate method even it has both advantages and disadvantages (; Churchill, 1995; Dillman, 2000; Mohamed and Hussain, 2005). To do the questionnaire in a proper way, the responses should be gathered in a standardized way to achieve objectivity. In this survey the previous disadvantage is reduced by conducting a pilot study test. Furthermore, to avoid the low response rate as a disadvantage of the questionnaire, actions have been taken to avoid this problem and enhance and improve the response rate.

After reviewing the literature and research studies related to field of this study, a construction of the first draft of the questionnaire is ready. A pilot test has been made by sending the questionnaire to some academics in this field to give their opinions. The questionnaire has been also sent to five companies listed in the sample selected. Some minor clarificationsand changes were made to the questionnaire according to the results of the pilot tests. There is no concern about any reliability or validity.

4.2 The instrument

The final version of the questionnaire consists of three sections. While the first section requests information about firm size, firm age and the type of industry. The second section consists of questions associated to the four dimensions of corporate social responsibility that the organization adopted. The final section is conducted based on financial performance which is measured by using five measures which are the return on assets (ROA), return on sales (ROS), return on equity (ROE), competitive position and sales growth. Table (1) summarizes the constructs of the conceptual model, variables, and indicators of each construct.

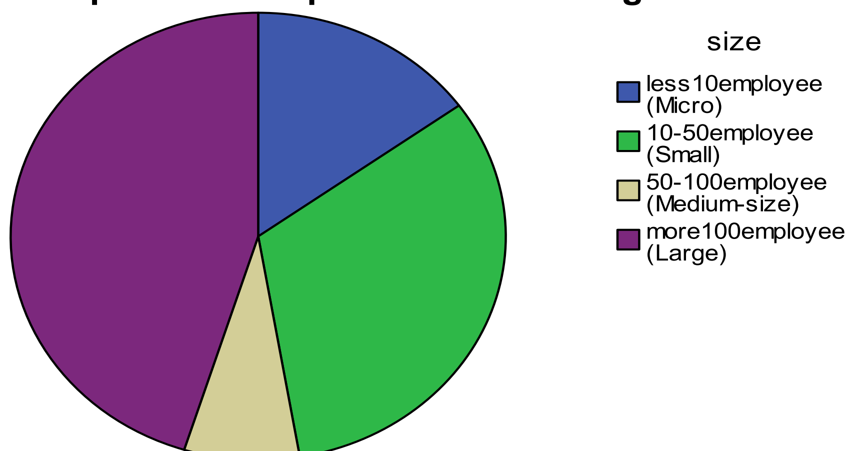
Table 1. The Constructs, Variables, and Measures of Conceptual Model

Constructs	Source of Construct	Variables	Indicators
Corporate Social Responsibility (CSR)	Maignan. I., Ferrell. O.C. and Hult. G (1999), Journal of the Academy of Marketing Science	Economic	• responses for customer complaints • Quality of products • Customer satisfaction • Maximizing profits • Minimizing the operating costs. • Monitor employees' productivity. • Engaging in Long-term business strategy.
		Legal	• Environmental laws. • legal standards • contractual obligations • compliance with law • Hiring laws regulation • Diversity of workforce • Avoiding the discrimination • follow internal policies of remuneration among employees
		Ethical	• Code of conducts. • professional standards • monitor of activity • trustful company • fairness employees evolution • providing full &accurate information to customers
		Discretionary	• competitive salary • support for education and job training programs • encourage employees to join philanthropic organizations • energy and materials program of reduction support for the local community • Direct involvement in community projects and affairs. • An employee – led approach to philanthropy. • Offers generous product warranties. • Campaigning for environmental and social change.
Organization Performance	Waddock and Graves (1997), Strategic Mgt. Journal	Financial performance	• Return on Assets (ROA) • Return on Sales (ROS) • Return on Equity (ROE) • Competitive position • Sales growth
Control Variables	Brik, A., Rettab, B., and Mellahi, K. (2011) Journal of Business Ethics	Firm Size Firm Age Type of Industry	• Number of Employees • New/ Old • Manufacturing / Non-manufacturing

4.3 Sampling frame and data collection

The study's hypotheses were tested using data collected from a survey of 400 companies in Egypt where these companies were derived from the Kompass Egypt database according to the number of employees. Figure (1) shows the description of the sample based on number of employees.

Figure 1. Description of sample



For the purpose of carrying out the research and collecting the data, the researcher used mixed-mode surveys. The researcher combined between two methods for the collection of data. These methods are Mail questionnaires, E-Mail questionnaires. By adopting the Council of American Survey Research Organizations (CASRO) in 1982, the response rate standard reveals that the survey yielded a response rate of 23%.Table (2) shows the detailed composition of the sample which includes the descriptions of the firm size; firm age; industry type; and position of respondents.

Table 2. Composition of the Sample

Description	%
Firm size (number of employees):	
Micro (less than 10 employees)	15.1
Small (from 10-50 employees)	32.3
Medium-size (from 50-100 employees)	7.5
Large (more than 100 employees)	45.2
Industry Type:	
Production	14
Service	86
Position of respondents:	
Board of directors	6.5
Top management	38.7
Middle management	54.8
Firm age:	
Less than 3 years	10.8
From 3- less than10 years	37.6
From 10- less than30 years	24.7
More than 30 years	26.9

5. Analysis and Findings

5.1 Descriptive statistics

Table (3) illustrates the minimum and maximum values for the variables. The descriptive findings show the central tendency and dispersion of the indicators. The calculated mean of the corporate social responsibility (CSR) is 4.141 and the standard deviations as a measure of dispersion is (0.53). The calculated means of the four dimensions of the CSR are 4.230 for economic dimension, 4.216 for legal dimension, 4.353 for ethical dimension, and 3.762 for discretionary. The standard deviations are 0.72 for economic dimension, 0.62 for legal dimension, 0.61 for ethical dimension, and 0.55 for discretionary. The calculated means and standard deviations for all five measures of financial performance which are ROA, ROS, ROE, competitive position, and sales growth are presented in table (2). For example, the calculated mean of the firm performance (ROA) as a measure of profitability is 3.41 and the standard deviations as a measure of dispersion is (0.80). The calculated means of the control variables are 1.86 for industry type,

1.52 for firm age and 1.45 for firm size. The standard deviations for control variables are 0.35, 0.50, and 0.50 respectively.

5.2 Reliability Test

The Cronbach alpha coefficient was used to assess reliability (Cronbach, 1951). Alpha has been proposed as the most appropriate means of assessing reliability in management accounting research (Abdel-Kader and Dugdale, 1998; Hoque and James, 2000; Ittner et al., 2003; Abdel-Maksoud et al., 2005; Auzair and Langfield-Smith, 2005; Amin and Mohamed, 2012). In this instance, Nunnally's (1978) threshold level of acceptable reliability, an alpha coefficient of around the 0.70, was adopted. All scales were found to satisfy this reliability criterion with Cronbach alpha coefficients for economic dimension = 0.93, for legal dimension= 0.93, for ethical dimension = 0.93 and for discretionary dimension = 0.92.

Table 3. Descriptive Statistics

Variables	Mean	SD	Min.	Max	Observations
perf1(ROA)	3.41	.80	1	5	93
perf2 (ROS)	3.59	.74	2	5	93
perf3 (ROE)	3.87	.78	2	5	93
perf4(Comppsit)	4.30	.79	2	5	93
perf5(Salesgrow)	4.31	.83	2	5	93
CSR	4.1410	.5269	2.27	4.95	92
ECONOMIC	4.2304	.7239	1.00	5.00	93
LEGAL	4.2164	.6204	2.00	5.00	93
ETHICAL	4.3530	.6078	2.17	5.00	93
DISCRT	3.7620	.5499	2.20	4.90	92
INDTYP	1.86	.35	1	2	93
FIRMAGE	1.52	.50	1	2	93
FIRMSIZE	1.45	.50	1	2	93

5.3 Hypotheses Testing

As stated earlier, this study tests four hypotheses. Correlation analysis was used to test the first two hypotheses. For testing the third hypothesis, two-independent samples t-test was adopted. Finally, multiple regressions were used to test the fourth hypothesis.

5.3.1 Testing the relationship between CSR and firm performance

This hypothesis is concerned with the relationship between CSR and firm performance.

H_1: There is a positive significant relationship between CSR and firm performance.

H_2: There is a positive significant relationship between the four dimensions of CSR and firm performance.

Pearson correlation coefficients for all variables are presented in table (4). Table (4) indicates that a positive correlation was evident between all the five measures of financial performance ROA, ROS, ROE, competitive position and sales growth and CSR at 1% level. Moreover, table (4) indicates that there is a positive relationship between each one of the five measures of financial performance and all four dimensions of CSR at the level of 5% and 1% as shown in Table (4).

The finding of this study found that there is a significant and direct relationship between CSR and firm performance which is consistent with many researches in the area of CSR (Waddock and Graves, 1997; Lin et al., 1999; Bird et al., 2007). Furthermore, Bearman et al., (1999) found that there are positive and significant effects from CSR dimensions and the farm performance. Inoue and Lee (2011)found that each one of CSR dimensions differently affects the financial performance indicators. Furthermore, Peloza and Papania (2008) pointed out that the financial effects of numerous CSR dimensions may be dissimilar for companies in different sectors based on the level of importance allocated to each principal stakeholder for the sector.

The only difference between this study and other studies is that Luo and Battacharya (2006) found that corporate social responsibility contributes positively to market value and financial performance and that CSR has been influenced a firm's performance through customer satisfaction. This means that in other studies the CSR plays as a mediator and moderator to affect the firm performance.

Table 4. Correlation Matrix

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13
CSR (X1)	1												
Perf-ROA (X2)	.300**	1											
Perf-ROS (X3)	.362**	.856**	1										
Perf-ROE	.408**	.399**	.470**	1									
(X4)	.538**	.544**	.565**	.555**	1								
Perf-cmop	.575**	.411**	.525**	.611**	.614**	1							
(X5)													
Perf-salesg													
(X6													
firmsize (X7)	-.143	.159	.269**	.039	.147	-.029	1						
firmage(X8)	-.091	.065	.222*	.226*	.097	.079	.490**	1					
Inds. type (X9)	-.133	- .301**	- .308**	-.266*	-.240*	-.222*	-.133	-.204*	1				
economic(X10)	.833**	.236*	.299**	.398**	.428**	.587**	-.050	-.100	-.099	1			
legal(X11)	.901**	.229*	.301**	.340**	.392**	.499**	-.156	-.053	-.148	.709**	1		
ethical (X2)	.818**	.275**	.284**	.237*	.462**	.381**	-.256*	-.075	-.115	.501**	.664**	1	
Discret. (X13)	.801**	.273**	.334**	.383**	.526**	.422**	-.022	-.076	-.085	.505**	.642**	.608**	1

* Statistically significant at the 0.05 level
** Statistically significant at the 0.01 level

5.3.2 Testing the relationship among the firm size, type of industry, firm age and CSR

This hypothesis is concerned with the relationship among the firm size, type of industry, firm age and CSR.

H_3: There is a significant relationship between firm size, firm age, type of industry and CSR.

H_{3a}: There is a significant relationship between firm size and CSR.

Two groups were used in this sub-hypothesis. These two groups were: SMEs and large companies which use the CSR. The independent-samples T-test is used for this hypothesis.

Table (5) illustrates that for the 51 SMEs, the mean was 4.208 (SD = 0.314), while for the 41 large companies, the mean was 4.057 (SD = 0.703). The difference between the means for the two groups is 0.151. There appears to be very little difference between the two, but this can be confirmed by using the independent t-test.

Table 5. Descriptive statistics for the firm size with CSR

	SIZE	N	Mean	Std. Deviation
CSR	SMEs	51	**4.208**	0.314
	Large	41	**4.057**	0.703

The explanation of the independent t-test result is a two-stage process. The first stage is to examine the homogeneity of the variance between the two groups using Levene's Test for Equality of Variances, where (F = 31.041, P = 0.000). This is considerably less than 0.05 (thus significant), indicating that equal variances cannot be assumed. The second stage is to use the t-test row of results labelled equal variance not assumed. This provides the t-value (t = 1.276), (df = 52.807), and the sig. (2-tailed) is 0.208, where (P > 0.05). Thus, the result is not significant which means that SMEs are not significantly different from large companies in using the CSR as in table (6).

Table 6. Independent-Samples T-test for the CSR and firm size

	Levene's Test for Equality of Variance		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
CSR Equal variances assumed	31.041	.000	1.373	90	.173
Equal variances not assumed			1.276	52.807	.208

The second sub-hypothesis is concerned with the relationship between type of industry and CSR.

H_{3b}: There is a significant relationship between type of industry and CSR.

Two groups were used in this sub-hypothesis. These two groups were: manufacturing and non-manufacturing companies which use the CSR.

Table (7) illustrates that for the 13 manufacturing companies, the mean was 4.312 (SD = 0.426), while for the 79 non-manufacturing companies, the mean was 4.112 (SD = 0.538). The difference between the means for the two groups is 0.20. There appears to be very little difference between the two, but this can be confirmed by using the independent t-test.

Table 7. Descriptive statistics for the industry type with CSR

	Industry Type	N	Mean	Std. Deviation
CSR	Manufacturing	13	**4.**312	0.426
	Non-manufacturing	79	**4.**112	0.538

The explanation of the independent t-test result is a two-stage process. The first stage is to examine the homogeneity of the variance between the two groups using *Levene's Test for Equality of Variances*, where (F = 0.231, P = 0.632). This is considerably larger than 0.05 (thus not significant), indicating that equal variances can be assumed. The second stage is to use the t-test row of results labelled equal variance assumed. This provides the t-value (t = 1.273), (df = 90), and the sig. (2-tailed) is 0.206, where (P > 0.05). Thus, the result is not significant which means that manufacturing companies are not significantly different from large companies in using the CSR as in table (8).

Table 8. Independent-Samples T-test for the CSR and firm size

	Levene's Test for Equality of Variance		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
CSR Equal variances assumed	0.231	.632	1.273	90	0.206
Equal variances not assumed			1.505	18.916	0.149

The third sub-hypothesis is concerned with the relationship between firm age and CSR.

H_{3c}: There is a significant relationship between firm age and CSR.

Two groups were used in this sub-hypothesis. These two groups were: new and old companies which use the CSR. Table (9) explains that for the 45 new companies, the mean was 4.189 (SD = 0.372), while for the 47 old companies, the mean was 4.094 (SD = 0.642). The difference between the means for the two groups is 0.095. There appears to be very little difference between the two, but this can be confirmed by using the independent t-test.

Table 9. Descriptive statistics for the firm age with CSR

	Firm age	N	Mean	Std. Deviation
CSR	New	45	**4.**189	0.372
	Old	47	**4.**094	0.642

The explanation of the independent t-test result is a two-stage process. The first stage is to examine the homogeneity of the variance between the two groups using Levene's Test for Equality of Variances, where (F = 13.300, P = 0.000). This is considerably less than 0.05 (thus significant), indicating that equal variances cannot be assumed. The second stage is to use the t-test row of results labelled equal variance not assumed. This provides the t-value (t = 0.877), (df = 74.352), and the sig. (2-tailed) is 0.383, where (P > 0.05). Thus, the result is not significant which means that new companies are not significantly different from old companies in using the CSR as in table (10).

Table 10. Independent-Samples T-test for the CSR and firm age

	Levene's Test for Equality of Variance		t-test for Equality of Means		
	F	Sig.	T	df	Sig. (2-tailed)
CSR Equal variances assumed	13.300	.000	0.868	90	0.388
Equal variances not assumed			0.877	74.352	0.383

Finally, the findings of this study found that there is no significant relationship between firm size, industry type, firm age and CSR. The findings of this study are not consistent with other studies where many studies controlled for three variables (firm size, industry sector and firm age) which have a significant impact on the CSR (Brik et al., 2011; Barone et al., 2007; Bhattacharya and Sen, 2004; Maignan et al., 1999). Small firms are less able than their large counterparts to adopt CSR principles and to communicate their CSR activities to external stakeholders (Margolis et al., 2007; Brik et al., 2010; Stanwick and Stanwick, 1998). Also, Brik et al., (2010) provides evidence that the stakeholders expect more social initiatives from large corporations than from small ones. Moreover, Park (2010) indicated that the large firms have more resources available, and are able to involve more CSR activities. One can say that the differences between the findings of this study and other studies are due to many variables such as corporate strategy, management philosophy and culture which are totally different in developing countries than developed countries.

5.3.3 Testing the effect of firm size, type of industry, firm age, CSR on firm performance

The fourth hypothesis concerns with investigating the effect of firm size, industry type, firm age, CSR on firm performance by using OLS analysis. Table (11) provides the results for the multivariate regression models.

Model 1 investigates the relationships between firm performance (ROA) and the variables of interest. The R2 is 0.190 and the model appears highly significant (F = 5.094, p = 0.001). As regards our variables of interest, CSR and firm size appear to have an effect on ROA, where the estimated coefficients are positive and statistically significant at 1% and 10% level respectively. The industry type has an effect on ROA, where the estimated coefficient is negative and statistically significant at 5% level. This means that only the manufacturing firms have an effect of firm performance (ROA) rather than non-manufacturing firms. The variance inflation factor (VIF) score was calculated for each independent variable and the highest VIF obtained is 5.31. Regarding model 2, it examines the relationships between firm performance (ROS) and CSR and control variables. The R2 is 0.295 and the model appears highly significant (F = 9.102, p = 0.000). As regards our variables of interest, CSR and firm size appear to have an effect on ROS, where the estimated coefficients are positive and statistically significant at 1% and 5% level respectively. The industry type has an effect on ROS, where the estimated coefficient is negative and statistically significant at 5% level. The variance inflation factor (VIF) score was calculated for each independent variable and the highest VIF obtained is 5.319.

Regarding model 3, it examines the relationships between firm performance (ROE) and CSR and control variables. The R^2 is 0.268 and the model looks highly significant (F = 7.977, p = 0.000). CSR and firm age have significant effect on ROE at 1% and 5% respectively, where industry type has a negative effect on ROE at 10%.For model 4, it examines the relationships between firm performance (competitive position) and CSR and control variables. The R^2 is 0.357 and the model appears highly significant (F = 12.052, p = 0.000). CSR and firm size have significant effect on competitive position at 1% and 10% respectively. Model 5 examines the relationships between firm performance (sales growth) and CSR and control variables. The R^2 is 0.366 and this model seems highly significant (F = 12.574, p = 0.000). Only CSR has a significant effect on sales growth at 1%.Finally, it can be said that CSR has a high significant effect on all the five measures of firm performance at 1%.The findings of this study are consistent with many studies which found that there is a positive and significant effect of CSR on firm performance (Luo and Battacharya, 2006; Stanwick and Stanwick, 1998; Lin et al., 1999; Peloza and Papania, 2008) and contradictory with the different studies which they found negative effect of CSR on financial performance (Mc Williams and Siegel, 2001; Aupperle et al., 1985).

6. Summary and Conclusions

CSR represents the new era challenge and an actually paradigmatic change for corporations. The current work has tried to present deepen understanding about the concept of CSR from the employees' perspective. The aim of this study is to empirically examine the extent to which CSR contributes to financial performance of non-financial companies in Egypt. To achieve this aim, this paper has been reviewed the extant literature on the relative between social responsibility and financial performance. With this in mind the study obtained data on variables which were believed to have relationship with CSR and financial performance. Actually, former research linking CSR and financial performance has often used too little financial performance measures. This study is significant due to the using of multiple financial performance measures which will provide a better degree of assurance in the effect and relationships thus providing a more precise valuation of CSR on the whole of the firm's financial makeup. These variables included ROA, ROS, ROE, competitive position, Sales Growth. This study pays attention on developing economies and on Egypt specifically.

In fact, empirical results for understanding the relationship between CSR and financial performance have been largely inconclusive. Some scholars argued that the relationship between CSR and financial performance is very complex relationship and it might be non existence (Mc Williams and Siegel,

2000).Consistent with the others researchers' results such as Margolis, et al (2009) Waddock and Graves (1997); Inoue and Lee (2011) where the findings of this study found that there is a positive and significant effect of CSR on firm performance based on the five measurements. Also, all CSR dimensions have significant relationship with firm financial performance. Most of recent studies found that corporate social responsibility contributes positively to financial performance and that CSR has been influenced a firm's performance through customer satisfaction or market orientation. This means that CSR is used as a mediator or moderator in the relation to the firm performance while this is not found in this study where it is affect the firm performance directly. The reasons for considering CSR as a mediator in developed countries rather than developing countries is due to the level of awareness of the management, corporate strategy, and management philosophy.

Based on the findings of this study on the relationship between CSR and financial performance, one can argue that a better CSR practice translates to a better financial performance. However, this relationship may be affected by several other factors. Therefore, the model of this study determined that these factors are firm size, type of industry and firm age. In contrast to others findings (Brik et al., 2011; Barone et al., 2007; Bhattacharya and Sen, 2004; Maignan et al., 1999) which indicated that the larger firms are more able than their small counterparts to adopt CSR principles and practice their CSR activities to external stakeholders. Our findings found no significant relationship between firm size, industry type, firm age and CSR. The explanation and conclusion of this study is that larger and older firms have a positive effect on financial performance (profitability) which will lead to enhance use of better CSR practice. In other words, it can be said that control variables (firm size, type of industry and firm age) could affect the CSR indirectly through the financial performance.

Table 10. OLS regression results

	Model 1 (Dependent Variable ROA)		Model 2 (Dependent Variable ROS)		Model 3 (Dependent Variable ROE)		Model 4 (Dependent Variable Comppposit)		Model 5 (Dependent Variable Salesgrowth)	
	Coeff.	t-statistics	Coeff.	t-statistics	Coeff.	t-statistics	Coeff.	t-statistics	Coeff.	t-statistics
Const.	2.273	2.474**	1.368	1.721*	1.517	1.779*	1.014	1.252	.828	0986
CSR	.443	2.949**	.538	4.141**	.602	4.314**	.822	6.211**	.895	6.528**
INDTYP	-.556	*	-.419	*	-.355	*	-.322	*	-.276	*
FIRMAG	-	-	.148	-	.409	-1.673*	2.764E	-1.597	.210	-1.319
E	7.952E	2.430**	.386	2.117**	-	2.469**	-02	.176	-	1.288
FIRMSIZ	-02	-.446		.962	5.88E	-.355	.298	1.898*	9.83E	-.060
E	.318	1.788*	9.102	2.506**	-02				-03	
			0.000				12.052			
F-	5.094		0.295		7.977		0.000		12.57	
statistics	0.001		0.263		0.000		0.357		4	
p-value	0.190		5.319		0.268		0.327		0.000	
for F- test	0.153				0.235		1.345		0.366	
R-squared	5.31				1.345				0.337	
adjusted									1.345	
R^2										
Max VIF										

Several areas of future research can be suggested. One of the main differences between the results of this study and others studies is management philosophy which might be different in developing countries than developed countries. Galbreath (2009) pointed out that management may have significant discretion in establishing the firm's social orientation, especially in the establishment of more proactive social issues. Therefore, future research can examine the role management characteristic and leadership in shaping corporate social policy and monitoring managerial actions. The research should cover how social responsibility can help companies with low financial performance or bad reputation to improve its performance, image and reputation in the market and at the consumers' minds. Moreover, they should test the disadvantages and side effects of the social responsibility as it is a debatable issue.

In fact, the majority of CSR studies do not recognize cultural factors such as religion in viewing and understanding the concept of CSR and its practice. Religion could be an essential part of CSR; for example, the Islamic philosophy is rich in values relating to CSR. Thus, investigate the influence of religion as an environmental / cultural factor in viewing CSR may provide further insights.

Moreover, Aras and Crowther (2009), discussed that corporate governance relations to a corporate performance, market value and credibility, and therefore that firm has to implement corporate governance principles to reach its strategies. They stated the link between corporate governance and firm performance is still open for discussion and the relationship between the CSR and corporate governance is still not clearly defined and understood. Therefore, the further research should investigate such this relationship and its effect on the financial performance especial in Egypt.

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ESTIMATION OF BANKING SYSTEM REGULATION EFFICIENCY

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Abstract

There was discovered the essence of the banking system regulation efficiency, the quantitative and the qualitative criteria of its estimation by the systemic approach being formed due to integral, theoretical-essential, standard, target and stakeholder approaches concerning the interpretation of "the efficiency" category in this article. There was explained the necessity to distinguish full, partial, economic, social, external and internal estimation of the banking system regulation efficiency. The main factors influencing on the banking system regulation efficiency and their classification were also defined.

Keywords: Banking System, Regulation, Efficiency, Efficiency of the Banking System Regulation

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Introduction

The banking system regulation takes one of the leading place in our scientists' researches in the period of increased international economic integration and globalization because the banking sphere is a strong economic sector the leading role of which is bound with the financial resources accumulation of the country to meet the economy needs and the formation of favorable macroeconomic climate. The activity of the banks is constantly under the influence of internal and external environment factors that causes the need of the country to apply the different influence means to ensure their stable functioning. The formation of the current regulation mechanism is not only the guarantee of the effective banking system functioning but the important background of the social-economic country growth taking into account the actual banks significance.

The formation of the criteria and the factors influencing on the criteria results is important to ensure the effective banking system regulation. The banking system regulation efficiency is achieved by the growth of the whole system regulation efficiency, the adequacy of the principles, ways, methods, and a means of achieving the regulation aims, the available resources and the terms of the banking system functioning.

It is necessary to note that the banking system regulation efficiency is a complicated process and determined by the requirements of the society to the banking system functioning which stipulate making appropriate decisions in regard to its regulation; by the society trust level to the banking system regulation and decisions being made; by the resources belonging to the entity of the banking system regulation for decisions realization regarding the regulation to achieve the aims.

The analysis of the last researches and publications

Fundamental researches of the banks efficiency and the banking system functioning are reported in the scientific works of many foreign and native scientists: F. Aleskerov, P. Bauer, S. Berg, A. Berger, A. Buriak, F. Forsund, S. Golovan, N. Halajko, D. Humphrey, E. Jansen, D. Kruglov, N. Maslak, A. Mertens, L. Mester, S. Moiseyev, V. Sarkisyan, V. Volokhov, etc. Conditions and factors making economy and its structural elements stable are studied significantly in the economic literature, in particular these aspects are considered in the works of such researchers as O. Chub, I. D'yakonova, O. Kolodizyev, Yu. Korneyev, A. Kostyuk, M. Kotlyarov, H. Lubinda, A. Miroshnichenko, O. Primerova, I. Salo, A. Zakharov, V. Zinchenko, etc.

Summing up the researches on this subject it was determined that the majority of the scientific works are dedicated to the analysis of the essence of such categories as "the efficiency", "the efficiency of the banking activity" and "the efficiency of the banking system functioning"; to the different methods of the banking activity and the banking system efficiency estimation; to the factors and conditions under which the banks or the whole banking system is getting financially stable. Nevertheless, the matter of the banking system efficiency estimation, the criteria and the factors of its efficient regulation are not substantially analyzed and need to be completely

studied that has stipulated the urgency of the topic choice.

The topic of the research is to define the banking system regulation efficiency and to set the criteria of its estimation on the basis of the systematization of scientific approaches to "the efficiency" understanding, also to form and systematize the factors influencing on the banking system regulation efficiency.

Fundamental researches results

Activity efficiency is very complicated and multiplex and one of the basic elements in the economic theory, their fundamental features are directly connected with the banking system regulation. It's necessary to notice that the banking system regulation is implemented by means of the special bodies of the public administration (central bank and bank supervision bodies) which are to ensure achieving the fundamental aims of the society in the banking system functioning. Accordingly a conceptual meaning of "the banking system efficiency" and its estimation criteria change.

According to the results of our research it was defined that the notion "efficiency" is interpreted by theoretical-essential, standard, target stakeholder and systematic approaches.

According to the first approach determined by the scientists as theoretical-essential the efficiency is considered as the results rating of activity (ratio of the activity results to the expenses or the utilized resources or "entries" and "exits" in the systems theory) [1].

According to this approach the efficiency is defined as: "…results rating i.e. activity result (effect) which a society, an enterprise or an individual gets per unit of utilized resources" [8]; "…the ratio of the result or the effect of any activity and expenses connected with its implementation. Herewith it can be as the ratio of the result and expenses as the correlation of expenses and activity results" [9]; "…shows the correlation between the received results and the utilized resources for them, moreover while determining the efficiency the resources can be represented as in a definite volume of expenses at their primary (overestimated) cost (utilized resources) or at their cost part as production expenses" [10].

We agree upon N. Maslak's statement that: "…the efficiency and the rating results are interrelated notions which indicate the quality of a certain activity or some object functioning but they aren't identical because they anticipate different levels of result "[7].

Within this approach the pragmatic criteria should be reasonably applied to the banking system regulation efficiency. They are determined by a real change of the banking system parameters on micro- and/ or macro levels as the result of the regulation tools application with the minimal expenses of the resources per sample "expense-profit". In this case the banking system regulation efficiency is measured by means of the pecuniary advantage that is comparable with the certain program expenses or regulating influence applied. For this it is necessary to convert the effects received after the measures of the banking system regulation were taken, into their pecuniary equivalent that complicates a wide spread of this method.

The second approach – standard – interprets the efficiency as a degree of the standard correspondence [1, 5]. This approach anticipates the comparison of own indices with standard ones in the similar sphere including benchmarking that enables to determine susceptible and rational sides of the banks activity [7].

One supposes it is reasonable to use this approach for the estimation of the banking system regulation efficiency first of all in the context of qualitative estimation and formation of the qualitative estimation criteria.

It is necessary to determine the standards for the comparative estimation of the banking system regulation efficiency and to form the criteria which allow determining the degree of the standard correspondence. Standard approach is in the ground of the banking supervision efficiency wherefore in 2006 the Basel Committee on Banking Supervision (Switzerland) prepared the document "Kea Principles for Effective Banking Supervision" [2]. In 2009 in partnership with The International Association of Deposit Insurers it was prepared the document "Kea Principles for Effective Insurance Systems of Deposits" [3].

The standards of the banking system regulation are the standards which must determine the desired attributes of all its elements (methodological, institutional, functional and instrumental blocks) which they should correspond to. Finally it will determine whether the aims, tasks, functions will be achieved and specific tasks of separate conceptions, strategies, and programs of banking system development will be solved.

The criteria, unlike the standard, are the instruments for the banking system regulation efficiency in the context of standards correspondence, also according to the temporal and other criteria.

In our opinion the principles of the banking system regulation must be founded while forming the standard of the banking system regulation efficiency because these principles are the regulation means of connection between the aims and results of regulation, and express the requirements of the objective regulation laws; their action is connected with the realization of regulation system functions and stimulates the activity of banking system regulators. One supposes that each principle of the banking system regulation can be a standard characteristic of its efficiency estimation.

The third approach to the efficiency estimation is target and considers it as the degree of achieving the aim [1]: "…the indicator of the system functioning

successfulness to achieve the desired aims" [4, 11]; "…the degree of achieving strategic aims and tasks" [13]; "… generally the efficiency of any process, any type of activity characterizes the degree of achieving the desired aim" [12].

While taking the target approach to the banking system efficiency it is important to note that the regulation aims have social significant character, the results are the objects and the processes connected with fundamental aims of the society (ensuring the efficiency of the resource assignment in the economy); the regulation resources are economic, social, political, ideological and informational capital restricted by the state in terms of both social expediency, possibility and legal sufficiency.

The efficiency criteria of the banking system regulation by target approach are formed on the basis of the strategic aims set by the government authorities and regulators of the banking system to achieve fundamental aims of the society.

It is explained by the fact that the target subsystem including conceptions, strategies of the banking system regulation are variable, stipulated by external and internal conditions wherein the banking system functions, is a reaction basis of the regulation entities of the banking system on the environmental and internal state of the banking system changes, and external and internal changes control system.

By the target approach the efficiency estimation of the banking system regulation is a comparison procedure of the various decisions as to the banking system regulation with criteria features which determine target parameters of the banking system functioning.

According to the research results it was defined 3 types of the efficiency while taking this approach for estimation of the banking system regulation:

- target efficiency – the result of the banking system regulation corresponds to the environmental conditions, internal state of the banking system and requirements of the persons interested in the banking system functioning;
- efficiency of the aim determination – the aim and the set tasks for achieving it correspond to the environmental conditions, internal state of the banking system and requirements of the persons interested in the banking system functioning;
- executive efficiency – the banking system regulation result corresponds to the regulation aim. One suggests that estimation criteria of the executive efficiency of the banking system regulation should be classified into value-rational and target-rational.

The value-rational criterion of the banking system regulation efficiency allows to estimate the efficiency of global, systemic decisions of the banking system regulation entities resulting in big changes of the banking system on the basis of its fundamental reforming. As a rule the aims which must be achieved are defined by the strategy of the banking system reforming being worked out for a long period (not less than 10 years).

It is not reasonable to define estimation of the banking system regulation on such a level according to the partial, both positive and negative results in the time interval. It is possible to define positive or negative efficiency of available vast regulating influences of the regulation entities only through achieving the fundamental aims of the society from the actions of the banking system reforming.

Target-rational criterion of the banking system regulation efficiency is a general, complex criterion oriented on the estimation of the banking system regulation efficiency by definite indices which characterizes the immediate results of aims, tasks, strategies and programs realization taking into account the utilized resources.

In this case the aims which are defined by the strategy of banking system development on the medium-term basis (up to 5 years), by both quantitative and qualitative methods, have formalized character. Accordingly effectiveness of the banking system regulation is defined by the level of achieving target indices in a definite time interval.

V. Zinchenko defined that "…the most utilized criteria are the ratio of the total assets of the banking system to the GDP; the ratio of the regulatory (balance) capital to the GDP; the ratio of the credits to the GDP ; the ratio of the natural persons' deposits to the GDP; dynamics of the assets portion of the banking sector in the GDP in relation to the economy monetization; concentration level of the banking system; the ratio of foreign aggregate banking position to the aggregate capital of the banking system; the portion of the credit portfolio in assets; indices of economic freedom and competitiveness concerning banking system development" [14].

The scientists emphasize that the target approach to the efficiency estimation has some disadvantages which must be taken into account while taking it to estimate the efficiency of banking system regulation. They are the results of such reasons:

a) the aims are not always formulated explicitly, for example as strategic aims, that makes impossible to estimate the degree of their achieving;

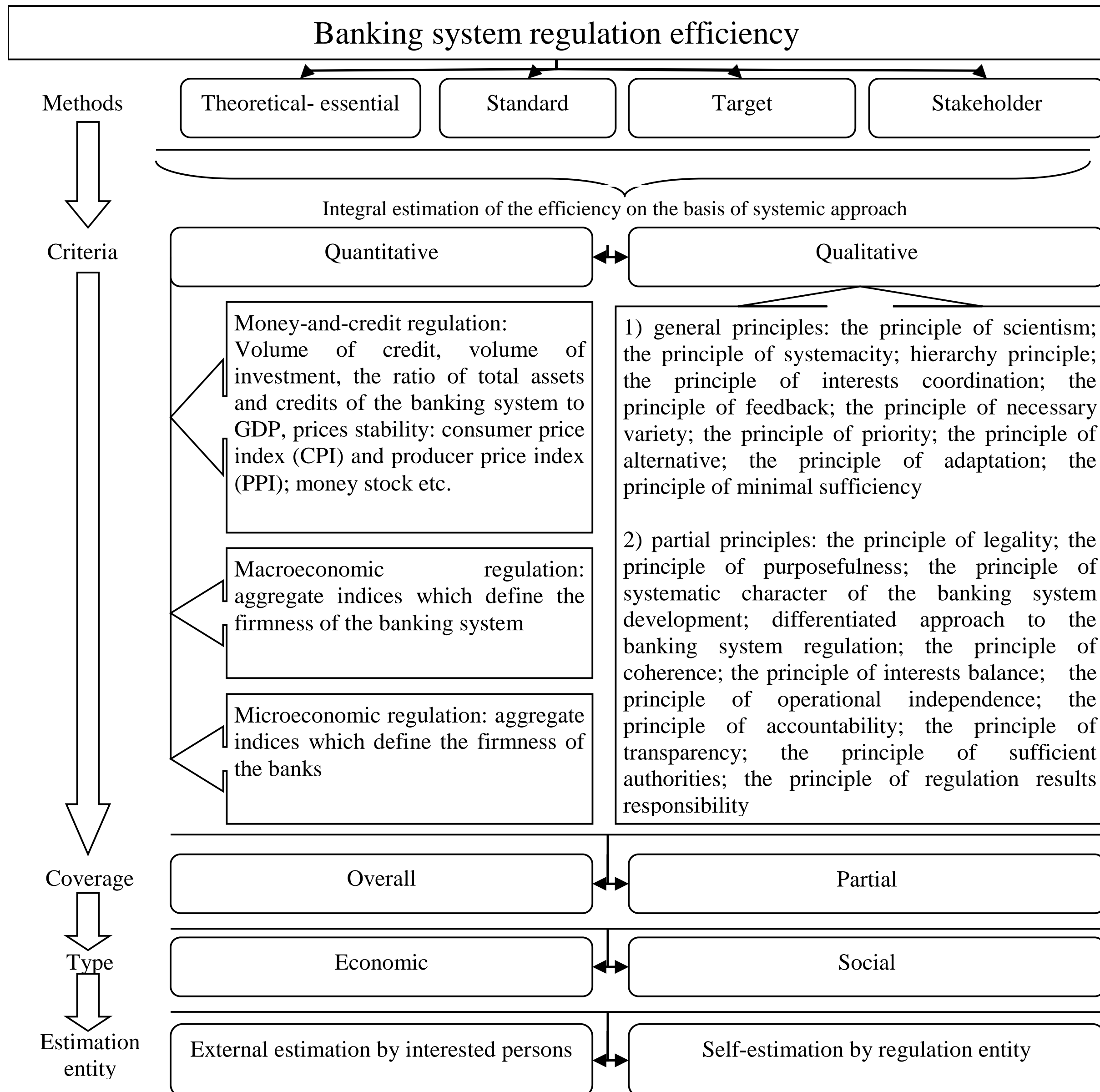
в) aims formation has a subjectivity because it depends on accommodating the interests of the interested groups that leads as a rule to their multidirectionality, environmental conditions, internal state of the banking system. Finally besides the quality and "the rightness" of the aim setting, the objective factors influence on a desired result [1].

Taking into account all reasons mentioned above to avoid their negative results the target approach ensures getting the qualitative information about the regulation results.

The fourth approach – stakeholder – determines the efficiency as a degree of the satisfaction in the results of institution activity of the interested parties that depends on their interests realization.

While taking this approach to the estimation of the banking system regulation efficiency one should select the groups of the interested parties each of which has own interests in the results of banking system regulation on the ground of which the regulation aims and the efficiency criteria can be formulated in the context of a definite group. As far as the interests of the interested groups are different the criterion of the regulation efficiency by this approach is the efficiency as the ability of the banking system regulator to ensure the optimal choice of the regulation variant in the context of the profits and the expenses of social groups including banks, banking services consumers, state and society totally.

Figure 1. The estimation of the banking system regulation efficiency



In this context at least it is necessary to form the criteria system of the banking system regulation efficiency as a sign or the signs in total on the ground of which it is estimated both by the regulation entities of the banking system (it allows to control the efficiency of regulation tools) and society in general (allows to control the activity of the regulation entities of the banking system).

In the scientific researches it is anticipated a systemic approach on the basis of approaches integration to the estimation of the banking system regulation efficiency which were characterized above. Nothing but the systemic approach must be taken to estimate the banking system regulation efficiency taking into account the complication of the banking system as a regulation object.

Summing up the author suggests to mean by the banking system regulation efficiency the results rating of the banking system activity which is ensured by means of the aims achieving, expressed by the ability to adapt itself to the environmental conditions of functioning keeping itself as an integral formation.

In the context of the banking system regulation efficiency it is reasonable to distinguish such notions as “a partial efficiency” (characterized by the indices which define achieving intermediate or partial aims and tasks of the banking system regulation) and “an overall efficiency” (characterized by the indices which define achieving the ultimate aim of the banking system regulation). Commitment to ensure the overall efficiency of the banking system regulation is predominant.

In addition to the above the scientists distinguish economic, social or social-economic efficiency of the banking system regulation [4, 5, 6]. Economic efficiency is meant by achieving as high as possible aims of the banking system regulation at the minimal recourses spending in the regulation process; social efficiency is meant by the highest social tasks solution in the banking system regulation process at the minimal resources spending in the regulation process.

General conclusion of the above mentioned approaches is shown on the figure 1.

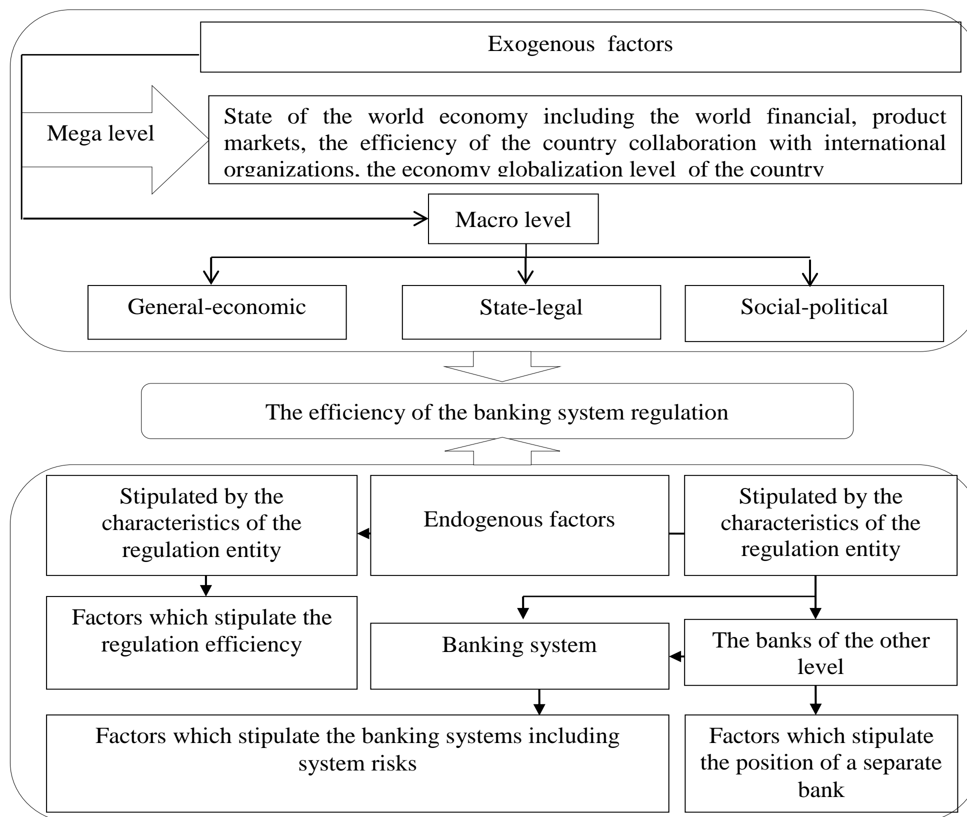
The efficiency of the banking system regulation is significantly influenced by the range of factors which must be taken into consideration while forming regulation system and regulating influences.

According to the research results it was defined that there is not the only one approach to determine the structure and the factors systematization which influence on the banking system regulation efficiency.

According to all researches the environmental conditions influence on the efficiency of the banking system regulation which is realized in them.

Summing up the main approaches to the classification of factors influencing on the banking system and its regulation efficiency let’s show its complex classification (figure 2):

Figure 2. Structurization of the factors influencing on the efficiency of the banking system regulation



The exogenous factors of the influence on the banking system regulation efficiency are those factors which are out of the bounds of the banking system. The factors of this group have a complex, multi-aspect influence on the efficiency of the banking system regulation: through the influence on the banks and other regulation subjects functioning and the possibilities of the entities to set the aims of the banking system regulation and apply the tools which ensure their achieving. These factors structure is very significant and heterogeneous, and the influence is big and not enough forecasted. It is reasonable to consider exogenous factors on the mega and macro levels.

The endogenous factors of the influence on the banking system regulation efficiency are those factors which are formed within the banking system, determine the peculiarities of its functioning and can be corrected according to the set aims. The endogenous factors are worth to be considered separately on the level of entity and object of regulation**.**

Conclusions

The author interprets the banking system regulation efficiency as the results rating of the banking system activity which is ensured by means of achieving the set aims, expressed by the ability to adjust to the environmental conditions of functioning keeping itself as an integral formation.

The criteria of the banking system regulation efficiency are suggested to be defined by the systemic approach on the ground of integration of theoretical-essential, standard, target and stakeholder approaches distinguishing the quantitative criteria within money-credit, micro-, macroprudential regulation and qualitative criteria being based on the necessity to comply with the general and partial principles.

According to the estimation of achieving the set aims the banking system regulation efficiency should be classified into overall and partial, according to the type – into economic and social, and according to the entity that estimates - into the external estimation by the interested persons and the self-estimation by the regulation entity.

The factors which influence on the banking system regulation efficiency are classified into exogenous and endogenous. In its turn exogenous factors are classified into the factors of mega and macro level, and endogenous – into the factors which are formed on the level of the object and the regulation entity.

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CORPORATE GOVERNANCE AND FINANCIAL PERFORMANCE OF PUBLIC LISTED COMPANIES IN MALAYSIA

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Abstract

This study investigates a link between corporate governance and ownership structures on firm performance of 293 companies listed on the Main and Second Board of Bursa Malaysia from 2000-2006. A dynamic panel system generalized method of moment technique is applied to control the endogeneity effect. After controlling for size, gearing, industry and time, this study finds significant positive relationships between institutional and foreign shareholdings using both market and accounting performance measures. These results imply their positive roles in constraining any opportunistic behavior of management. Interestingly, role duality (positions of Chairman and CEO were the same person) was observed to be negatively related to both performance measures, thus supporting the recommendation by Malaysian Code of Corporate Governance (MCCG). However, contrary to agency theory and MCCG, firm performance decreases with the increase in proportion of independent directors in the board.

Keywords: Corporate Governance, Agency Theory, Stewardship Theory, Resource Dependency Theory

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1. Introduction

Corporate governance (CG) has received much attention lately because of a series of corporate scandals around the world such as Enron, WorldCom. This has resulted in capital flight from affected countries as investors lose confidence and trust in the firms that they invested in. It is believed that good CG enhances investor confidence (Claessens, Djankov & Xu, 2000b). In fact, a survey by McKinsey (2000) found that Asian investors are willing to pay premium averaging 20-25% for well governed companies. Therefore, to restore public confidence, not only current corporate legislature needs to be reviewed but also the way in which these businesses have been conducted in the affected countries. There must be greater transparency and accountability in both public and private sectors to ensure stability of market oriented economics Around this time, governments of many countries around the world have undertaken various measures to improve the efficacy of the governance structures for this will not only attract more foreign investments into the countries but also investors are willing to pay a premium for the price of shares (Coombes & Watson, 2000). Furthermore, effective CG also promotes efficient use of resources which will ultimately bring about benefits to the long term viability of the firms and the country at large (Gregory & Simms, 1999). In addition, there have been many academic studies (Vafeas & Theodorou, 1998; Weir, Laing & McKnight, 2002; amongst others) to determine the most effective governance structures.

This study makes a number of contributions to the literature. First, it adds to the empirical evidence on the relationship between board characteristics which include board sub committees and ownership structures (shareholdings by independent, executive and foreign shareholdings) and firm financial performance in a comprehensive model. Most existing studies have not examined these governance structure characteristics in a single study (Haniffa and Hudaib, 2006). Furthermore, the results would be more generalisable as the sample in this study includes

smaller firms unlike previous studies. Third, this study is undertaken using generalized method of moment (GMM) dynamic panel technique to control for endogeneity and therefore results are more robust. Fourth, in addition to agency and stewardship theories, resource dependency theory (RDT) is employed to explain the results obtained. Many empirical researches (Che Haat, Abdul Rahman and Mahenthiran, 2008; Abdul Wahab, How & Verhoeven, 2007 among others) predominantly discussed their findings based on both agency and stewardship theories. Recently, RDT has been applied broadly across the research domain to explain how companies reduce uncertainty and environmental interdependence (Hillman, Withers & Collins, 2009) by having resource rich directors on board. Instead of just focusing merely on agency theory, RDT can explain how directors who provide advice and counsel to the CEO and their close ties with the external environment can improve firm performance (Daily, Dalton & Cannella, 2003). Likewise Mangena, Tauringana and Chamisa (2012) in their study of severe political and economic crisis in Zimbabwe draws from RDT and political theory (Roe, 2003) to explain how CG mechanisms are structured in companies to ward off any threats that undermine their survival.

The objective of this paper is to examine the effect of the corporate governance structure on financial performance. Our analysis involves an examination of 293 companies listed on the main and second board of the KLSE (Previously Kuala Lumpur Stock Exchange. Now known as Bursa Malaysia.) from 2001 to 2006. Regression results indicate significant associations between accounting and market performance measures and board size, board composition, role duality, and institutional ownership, gearing and company size. Furthermore, the results showed a significant relationship between accounting performance measures and executive and independent directors' shareholdings. Contrasting results are observed for foreign ownership, negative for accounting return but positive for market return.

We begin our discussion with a brief review of CG development and ownership structures in Malaysia. In Section 3 we shall review the three theories that shall be employed in interpreting the results of this study and review the relevant literature on the impact of governance mechanisms on firm performance. It also sets out the hypotheses to be tested. Then we describe our methodology in Section 4, followed by analyses and the results in Section 5. The paper ends with a summary and concluding remarks as well as possible avenues for future research in Section 6.

2. Corporate Governance in Malaysia

2.1 Malaysia: A Government Led Model and institutional framework

The Malaysian government plays a prominent role in the development of the Malaysian corporate sector to promote industrialization and at the same time restructure society in terms of participation and ownership. The New Economic Policy (NEP) enacted in 1971 has entrenched government intervention in the corporate sector and since its implementation, business and politics became intertwined in Malaysia (Malaysia, 1971). According to Gomez and Jomo (1997), NEP has affected the way businesses were conducted which resulted in unequal access to opportunities. Therefore firm performance could be linked to the owner and how close their relationship or ties were with the political agents.

Table 1 provides the legislative framework for the Malaysian capital market before the financial crisis.

Following the 1997 economic crisis, one of the key weaknesses that surfaced was the overlapping authority of regulatory institutions governing the securities market and its ambiguous accountability. Therefore to address this issue, the Securities Commission Act of 1993 was amended to make the Securities Commission (SC) as the sole regulator for fundraising activities and for the corporate bond market. The Malaysian Capital Market Master Plan was established to further regulate the capital market a year later. The legal framework for corporate governance is based on common law. The legal framework governing companies is defined by the Companies Act of 1965 (CA); the Securities Industry Act of 1983, as amended; the Banking and Financial Act of 1989; the Securities Industry (Central Depositories) Act of 1991; the Securities Commission Act of 1993; the Futures Industry Act of 1993; and the Financial Reporting Act of 1997. Therefore, even before the implementation of MCCG in 2001, there was a certain degree of CG reforms in place such as the requirements to have independent directors presence in the board in 1987 and the setting up of audit committee with effect from 1994 (Khoo, 2003).

Even though, Malaysia has comprehensive laws relating to CG in terms of shareholder and creditor protection, shareholders were not active participants in the annual general meeting (Zhuang et al. 2000). In 2001, the Minority Shareholder Watchdog Group (MSWG) was established to promote shareholder activism. Subsequently, institutional investors are encouraged by the regulators to take the lead role as empirical evidences showed that they could bring about socially responsible changes in the firms that they invested

The Malaysian CG reforms cover the transparency and disclosure of timely information to shareholders and protection of minority interests.

Examples of specific reforms introduced by SC are that beneficial owners must be revealed in nominee accounts, the number of directorships a director can hold and disclosure on matters relating to interested party transactions which directors have personal interests in, mergers and acquisitions that are provided in the amendments to CA 1965.

Table 1. Legislative Framework for the Malaysian Capital Market

1965	*The Companies Act (CA)*	*Governs all aspects of company law. Contains provisions on minimum levels of disclosure to the public, rights and obligations of the directors and shareholders.*
1973	The Securities Industries Act (SIA)	This Act was subsequently repealed and replaced by a similar Act in 1983. The Act provides more specific regulations on the securities industry and to protect investor interests. Amongst its provisions are the licensing of dealers, powers to curb excessive speculation, insider trading and market manipulation, and enhancement of supervision and control of the industry.
1987	Malaysian Code on Take-overs and Mergers	The code was enacted under the Companies Act to regulate corporate takeovers and mergers.
1989	Banking and Financial Institution Act (BAFIA)	The Act provides for the licensing and regulating of the activities of all types financial institutions including money broking services. The Bank Negara Malaysia (BNM) is the custodian of this Act.
1991	The Securities Industry (Central Depositories) Act (SICDA)	The Act governs the maintenance and operation of a central depository system.
1993	Securities Commission Act (SCA)	The Securities Commission (SC) was established as a regulatory body for the capital market.
1993	The Futures Industry Act (FIA)	Provides for the establishment of futures exchanges and regulation of the trading in futures contract.
1995	SCA	Amendments were made which marked the first move of the regulatory regime towards a disclosure based regime
1997	The Financial Reporting Act (FRA)	The Act was to bring the financial reporting in step with international standards and for effective enforcements. The Financial Reporting Foundation (FRF) and the Malaysian Accounting Standards Board (MASB) were established to set reporting and accounting standards.

Source :Khoo, B.Y (2003). *Corporate Governance in Malaysia.* Asian Development Bank which was adapted from Securities Commission website.

2.2 Ownership structures

Concentration of ownership and control in most Malaysian companies tends to be invested by blockholders, which include the government, families and other institutions (Claessens et. al., 1999, Khatri et al., 2003, Lee, 2001, La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998). Further, the high degree of concentration was due to interlocking or pyramiding structure in which a holding company owned a minor but significant proportion of shares in a large number of companies (Lim, 1981).

Zhuang et al. (2000) found that in closely held firms, the major shareholders are either individual/family. Many of these firms were started by the founders of the family and even when the companies were publicly listed, they are still actively involved in their businesses (Redding, 1996). They may even hand over the businesses to the future generations as they have long term plans for the business such as the Genting and YTL (Yeoh Tiong Lay Group currently headed by Tan Sri Francis Yeoh.) Group. Such firms performed better because of high ownership concentration and close business

networks (Redding & Wong, 1986). They also found that majority of the Malaysian firms are family (42.6 percent) and state owned (34.8 percent) which confirmed with Claessens et al. (1999). But, in a later study on ownership structure in Malaysia by Tam and Tan (2007), it was shown that government has the highest ownership concentration, followed by trust fund firms, foreign firms and family controlled business

The ownership structure in Malaysian companies differs from that of the Anglo-American CG system where the owners are separated from control and control is delegated to managers. Therefore, the agency problem experienced in Malaysia is different from dispersed ownership structure and the problem is between controlling shareholders and minority shareholders (Tam & Tan, 2007).

2.3 CG Milestones

In 1998, the Ministry of Finance commissioned the set up of a body known as the High Level Finance Committee (HLFC) (CG Guide: Bursa Malaysia.) on Corporate Governance to address any CG shortcomings after the Asian financial crisis in 1997. Subsequent CG reforms that took place after the 1997 crisis is provided in Table 2.

Table 2. CG Milestones

1998	*Formation of High Level Finance Committee to conduct a detailed study on CG*
1998	The MCCG practices in Malaysia.
1999	Directors and CEO were required to disclose their interests in PLCs
1999	PLCs were required to submit quarterly reports to public
2000	SCA was amended to make SC the sole regulator for fund raising activities.
2001	KLSE issued its revamped LR to include new sections on CG and disclosure requirements
2001	Minority Shareholders Watchdog Group (MSWG) was established to promote shareholder activism
2001	Directors are required to attend mandatory training
2001	The Audit Committee must have a member who has a finance background.
2001	The Financial Sector Master Plan was launched to chart the future direction of the financial system over the next 10 years
2002	The internal audit guidelines for PLCs was issued
2004	Best practices for corporate disclosures and whistle blowing provisions in securities laws
2005	Amendments to LR: new policy of enforcement for delays in issuance of financial statements
2007	New updates to MCCG with strengthening of audit committee
2010	Setting up of the Audit Oversight Board (AOB)
2011	Capital Market Master Plan 2 (CMP2)
2012	CG Blueprint issued by SC, followed by MCCG 2012

Taken from CG Blueprint 2011: http://www.sc.com.my/main.asp?pageid=1087&menuid=&newsid=&linkid=&type=

As can be seen from the table, there are two updates to MCCG 2001, one in 2007 and the other in 2012 These updates take into account changing market dynamics, international developments in the CG framework on how to enhance its effectiveness.

3. Prior Empirical Studies and Hypotheses Development

3.1 Theories

Agency theory has been used to explain the problem arising from the separation of ownership and control in much of the literature on corporate governance following the numerous corporate scandals, which happened globally (Berle & Means, 1932; Eisenhardt, 1989). In order to minimize these problems, various CG mechanisms have been suggested such as having outside directors in the board structure and subcommittees consisting of majority independent directors (Vafeas, 2003). Many of the CG codes around the world (US, UK and Malaysia, among others) have advocated for the positions of Chairman and CEO to be held by different individuals (non-role duality) and the former should be independent so that there is a check and balance on the actions of the CEO. The Chairman is responsible for ensuring the board carries out its oversight duty well whilst the CEO helms the management of the company. Another researcher, Matsumura and Shin (2005) suggested top management be rewarded for good performance. The incentive solution was to tie the wealth of the executive to the wealth of the shareholders so that their interests are aligned. In many of the US companies, executives are given stock options as a

significant component of their compensation (Kim & Nofsinger, 2007).

Stewardship theory comes from the branch of sociology and psychology. Stewardship asserts a model of the human being in which individuals act to serve the collective interests of the firms. This is in contrast to economics based agency concepts of people as individualistic and self-serving (Davis, et al., 1997; Fox & Hamilton, 1994). Furthermore, it suggests that management will always put the interests of the principals above their personal interests because they strongly believe in cooperation than self-serving behaviour (Davis et al). The steward's interests are aligned with those of the investor and so the steward is less apt to engage in self-serving behaviours and actions that transfer wealth from the investor to the steward. Therefore, there is a lower need for monitoring and control mechanisms to check the opportunistic behaviour of managers. Boards should not be dominated by non-executive director as they lack the knowledge, time and resources to monitor management effectively (Donaldson & Davis, 1994). Another structure proposed by stewardship theorists include that CEO should chair's the board of directors because outside chairman may impede strategic decision making process due to lack of knowledge and expertise. In a stewardship environment, there is more emphasis placed on empowerment and structures that facilitate cooperative activities in a non-adversarial fashion (Brooks & Dunn, 2007).

Although the agency and stewardship theories have been widely used in research on board of directors (Dalton, Hitt, Certo, & Dalton, 2007; Johnson, Ellstrand, & Daily, 1996; Zahra & Pearce, 1989), earlier studies have used RDT in explaining how board gain resources through varying its board size as well as board composition. Pfeffer (1987) in his seminal paper found that firm's environmental needs impacted the board size as well as its composition. According to them, these directors brought about four benefits to organizations, namely, they provide advice and counsel; they have access to information about firms and its environment; they have preferential access to resources and they possess legitimacy. Earlier studies (Provan, 1980; Luoma & Goodstein, 1999, Johnson & Greening, 1999) supported their claims. In his study, Provan (1980) found that firms attracted powerful members of the community who have connections with the environment to their boards. Luoma and Goodstein (1999) found that firms in highly regulated industries have a higher proportion of stakeholder directors and these stakeholder directors are found to improve firms' corporate social performance (Johnson & Greening, 1999).More recent works (Mangena, Tauringana & Chamisa (2011); Claessens, Feijen & Laeven, 2008; Adams & Ferreira, 2007) supported the above arguments as well. In their study of board size and ownership concentration in an environment of severe political and economic crisis, Mangena et al. (2011) concluded that firms tend to have larger boards (engaged directors with political connections) to ward off external threats of political environment as well as having lesser non executive directors. During such crisis, executive directors could better manage the firm

3.2 Corporate governance mechanisms

A review of prior empirical literature on the relationship between CG and ownership structures on firm performance showed mixed results.

Huther (1996) and Yermack (1996) found that the market perceived smaller boards more effective than larger boards. Yermack found a positive stock price reaction for firms announcing a reduction in board size and a negative stock price reaction to announcements on increase in board size. The logic for why this might be so deals with the free-rider problem. For a small board, each member may need to monitor the firm, as there are a few of them. However, members of larger boards may assume that there are others who are monitoring. Another reason is that it may be more difficult to reach a decision with larger boards (Lipton & Lorsch, 1992).

On the other hand, bigger boards not only bring in more skills, diversity and experience into the firms but also create added value in management of resources (Goodstein et al., 1994; Pearce & Zahra, 1992). Empirical evidences supporting the resource dependency theory found that "resource rich" directors have access to important and critical resources. Provan (1980) found that boards who have powerful members of community are able to acquire critical resources from the environment, thus impacting positively on firm performance. However, Holthausen and Larker (1993) failed to find a link between board size and financial performance. Since MCCG does not recommend any board size and prior studies produced mixed results, the following hypotheses are stated as follows:

H_1: There is a significant relationship between board size and firm performance.

Proponents of agency theory believed that a board comprising a larger representation of independent directors will be more effective in monitoring management by checking on the opportunistic behaviour of the executive directors (Fama & Jensen, 1983). According to Farrell and Whidbee (2000), a board comprising members who are related to the CEO is probably less likely to fire the CEO for poor performance. Furthermore, the presence of truly independent directors in the board, audit, compensation, and nominating committees has been found to be more likely to monitor management's activities effectively by several academic studies (Byrd & Hickman, 1992; Daily & Dalton, 1992; Fama, 1980; Jensen, 1993), accounting

professional (AICPA[1], 1992), government regulators such as US Securities and Exchange Commission, 1988, US Committee Of Sponsoring Organization of the Treadway Commission. Similarly, proponents of resource dependency theory provide evidence to support their claims that "resource rich" outside directors may by virtue of their contacts have access to critical resources (Pfeffer & Salancik, 1978; Johnson & Greening, 1999 among others).

However, empirical evidences on the role of independent directors were mixed. Some studies had not found such an association (Che Haat et al., 2008; Fosberg, 1989; Haniffa & Hudaib, 2006; Hermalin & Weisbach, 1991) whilst others had found a significant positive link (Daily & Dalton, 1994; Prevost et al., 2002). However, Koerniadi & Tourani-Rad (2012) conducted a similar study of NZ firms from 2004-2006 and found that board independence was negatively related to firm performance which was contrary to the findings of Prevost et al. Koerniadi concluded that this could possibly be due to the difference in time period of the studies; theirs was done a decade later when the number of independent directors was more. Their findings suggested that board independence may not generally be suitable for countries where managers were considered as active partners along with other stakeholders in companies. This was more consistent with stewardship theory than agency theory as the boards were seen to be collaborating with managers than being monitors. Recent findings (Chhaochharia & Grinstein 2007; Duchin et al., 2010) also concurred with theirs. A Korean study conducted during the governance reform movement in 1999 showed a weak link between outside directors and performance (Cho & Kim, 2007) which may be attributed to resistance of large shareholders to reform. Since MCCG recommends that companies should adopt a balanced board comprising at least one third independent directors to monitor management, the next hypothesis is as follows:

H_2: There is a significant positive relationship between board composition and firm performance.

There are two views regarding the issue of separating the role of chairperson and that of the CEO. Proponents of agency theory argue that the chairperson has to be independent in order to check on the possibility of the over ambitious plans of the CEO (Argenti, 1976; Blackburn, 1994; Stiles & Taylor, 1993). The separation of the two roles is necessary to provide the essential checks and balances over management performance. This was because a person who held both positions of CEO and Chairman would most likely engage in choosing strategies that promote his own interest instead of the company's interests (Jensen & Meckling, 1976). Furthermore, the monitoring ability of the board of directors on management may be reduced. Yermack (1996) found that firms were valued lower when the same person held both these positions. Agency theory therefore suggests that role duality reduce the monitoring effectiveness of the board over management and supports the separation of the role of chair and CEO.

On the other hand, those who favoured role duality use stewardship theory to support their case. They argued that managers will act in the best interests of the shareholders, as there was no inherent conflict between them as suggested in agency theory. Managers identified with the goals of the firm and strived to make sure those goals are achieved. Besides that, the benefits of role duality include faster implementation of decisions, which was due to lesser board interference and ability to focus on company objectives. Ultimately, this would lead to improvement in firm performance (Dahya, Lonie & Power, 1996).

Since MCCG recommends the separation of the two roles to ensure proper checks and balances on the top leadership of the companies, we hypothesize the following:

H_3: There is a significant negative relationship between role duality and firm performance.

Empirical evidences on the relationship between the presence of audit committee and the financial performance have yielded conflicting results. Some found no significant association between this board committee and financial performance (Klein, 1998; Petra, 2002; Vafeas & Theodorou, 1998; Weir et al., 2002). Similarly, in the analysis of a sample of 412 publicly listed Hong Kong firms during 1995–1998, Chen et al. (2005) found little impact of audit committee on firm value. In contrast, Wild (1994) showed evidence that the market reacted favourably to earnings reports after an audit committee had been formed. Similarly in a study of UK companies using 1992 and 1996 data, Laing and Weir (1999) concluded that audit committee contributed to significant improvement in performance of firms than non-executive director representation or non duality.

The MCCG recommends the establishment of an independent audit committee with majority of independent directors to ensure proper checks and balances on top management. It is mandated by the LR to have such a committee in all public listed companies in 1994. The next hypothesis is as follows:

H_4: There is a significant positive relationship between independent audit committee and firm performance.

Although not required by regulation, many corporations in US have instituted remuneration committees composed entirely of outside independent directors to give the appearance that a reasonable and objective process determines the compensation for top management, including the CEO. Cyert et al. (1997) found that the level of CEO compensation was inversely related to the level of stock ownership held by members of the remuneration committee. The result suggested that a remuneration committee might be an important element in the board of directors'

[1] American Institute of Certified Public Accountants

ability to monitor and control the actions and decisions of top management. Remuneration committees were more effective monitors as compared to non-duality or independent boards (Laing & Weir, 1999). Petra (2005) reviewed the case study on Enron Corp., Global Crossing Ltd and WorldCom and concluded that the presence of outside independent directors on the remuneration committees did not affect firm performance. In his earlier study, he too found no association between informativeness of earnings and remuneration committee (Petra, 2002). A study conducted by Yatim (2012) showed evidence that director remuneration was positively and significantly related to a firm's accounting performance (ROA). This indicated that such committee can strengthen boards by controlling the level of directors' remuneration.

The MCCG recommends the establishment of an independent remuneration committee to ensure that top management do not remunerate themselves excessively. The next hypothesis is as follows

H_5: There is a significant positive relationship between independent remuneration committee and firm performance.

Here again, although not required by regulation, many corporations in US had instituted nominating committees, which were composed entirely of outside independent directors. Such nominating committees gave the appearance that the board of directors had little or no prior relationship with the CEO. Shivdasani and Yermack (1998) found evidence suggesting that directors selected by CEO were not likely to monitor the behaviour of management. Their findings also suggested that the market preferred the CEO not be involved in the appointment of new directors. This highlighted the need for boards of directors to maintain independent nominating committee. However, Klein (1998) and Petra (2002) found little evidence that such independent committee affected firm performance.

The MCCG recommends the establishment of an independent nominating committee to ensure that board members are selected based on personal merits. The next hypothesis is as follows

H_6: There is a significant positive relationship between independent nominating committee and firm performance.

Many empirical studies in Malaysia revealed that the ownership structure of PLCs were highly concentrated and were held by a small number of individuals, families and state enterprises (Claessens et al., 2000a; Tam & Tan, 2007). These studies also noted the same observations as studies done elsewhere that is, relationship between performance and executive directors' shareholdings was not linear (Khatri et al. 2002; Tam & Tan, 2007). A study done in Malaysia showed consistent positive significant impact using three performance measures (Ngui et al., 2008). However, Haniffa and Hudaib (2006) found a negative impact using ROA while no relationship using Tobin's Q. Because of the contrasting evidences on the relationship between directors' shareholdings and performance, the following hypothesis is as follows:

H_7: There is a significant relationship between executive directors' shareholdings and firm performance.

Jensen (1993) espoused that outside independent directors should be encouraged to maintain ownership in their firms and this ownership should be significant in relation to the individual director's personal wealth so as to ensure that the director recognized that his/her decisions affected their own wealth as well as the wealth of the other shareholders. Similarly, Cotter, Shivdasani & Zenner (1997) concluded that independent outside directors enhance target shareholder gains from tender offers, and that boards with a majority of independent directors are more likely to use resistance strategies to enhance shareholder wealth. Proponents of agency theory argued that independent directors who owned shares might mitigate agency problems caused by dispersed ownership. Bhagat and Black (2000) found positive relationship between firm performance and independent directors' shareholdings.

On the other hand, Mc Connell and Serveas (1990) failed to find such an association between market based measure and independent directors' shareholdings. Several empirical evidences (Morck, 2004; Berle & Means, 1932) pointed out that such shareholdings had negative impact on firm performance as independent directors could have a misplaced sense of loyalty to dominant CEO instead of challenging their decisions. They might corroborate with management because of their non-independence. These arguments lead us to the next hypothesis

H_8: There is a significant relationship between independent directors' shareholdings and firm performance.

Many empirical evidences demonstrated that institutional shareholders have the potential to exert positive influence on firm performance that also benefitted minority shareholders (Gillian & Starks, 2000; Li & Simerly, 1998). But in a dispersed ownership situation where there were no major blockholders, free rider problems may arise (Gugler, 2001). However, dominance of a large blockholder may also create problem by over exposing the firm to risks (Demsetz & Lehn, 1985). Yet other studies observed different investment strategies behaviour exhibited by institutional investors (Black 1992; Goyer, 2010; Maug, 1998) which contributed to contrasting results in firm performance.

Prior studies that recorded the effectiveness of the monitoring by institutional investors are many (Becht et al., 2009; Denis & Sarin, 1999; Gorton & Schmid, 2000; Del Guercio & Hawkins, 1999; Holderness & Sheehan, 1988; Joh, 2003; Leech & Leahy (1991); McConnell & Servaes, 1990; Morck et al., 2000; Park & Chung, 2007; Sarkar & Sarkar,

2000; Thomsen & Pedersen, 2000; Xu & Wang, 1999). In contrast, Woidtke 2002 noted that institutional investors may not be effective monitors as there was no single controlling shareholder to ensure that managers were doing their job. Other studies found no empirical relationship between institutional ownership and firm performance (Demsetz & Lehn, 1985; Demsetz & Villalonga, 2001; Duggal & Millar, 1999; Faccio & Lasfer, 2000; Karpoff et al., 1996; Lee, 2009; Murali & Welch, 1989; Smith, 1996; Weir et al 2002). Some observed that pressure insensitive institutional investors are more likely to discipline and vote against management rather than pressure sensitive ones (Abdul Wahab et al., 2008; Brickley et al., 1988; Cornett et al., 2007; Pound, 1988). They observed that large institutional shareholders corroborated with management when it benefitted them to do so which may result in high risk exposure and subsequently a decline in firm performance.

In Malaysia, many empirical evidences pointed to a high concentration of ownership among public listed companies (Abdul Samad, 2002; OECD, 1999). Similar mixed findings were found as other countries (Haniffa & Hudaib, 2006; Tam & Tan, 2007). Against this backdrop, the hypothesis is formulated as follows:

H_9: There is a significant relationship between institutional shareholdings and firm performance.

Prior research found that foreign owners can mitigate agency problems as they can exert much influence on management to align their interests with investors (Hingorani et al., 1997; Jensen & Meckling, 1976). The results of Che Haat et al. (2008) supported that of D'Souza et al. (2001) in that foreign ownership brought about benefits such as higher managerial talent, access to advanced technology and entry into capital markets. Similarly, Weiss and Nikitin (2004) found that when foreigners became the major shareholders of publicly traded firms in the Czech Republic, these firms experienced improvements in performance. Other empirical studies which found that firms with higher share of foreign ownership performed better than their domestic counterparts were many (Ali Yrkko & Nyberg, 2005; Baek et al. 2004; Douma et al., 2006; Park & Chung, 2007; Reese & Weisbach, 2002; Sarkar & Sarkar, 2000; Suto, 2003; Tam & Tan, 2007). Yet there are studies that found no association between the relationship between foreign ownership and firm performance, which could be due to their short-term investment view (Lee, 2009). On the other hand, foreign shareholders might not be effective monitors because of their close involvement with management in running of businesses (Redding, 1996). Therefore, this leads us to the next hypothesis:

H_{10}: There is a significant relationship between foreign shareholdings and firm performance.

3.3 Control variables (firm-specific characteristics)

3.3.1 Firm Size

Conflicting results were obtained in prior studies; some observed that firm size was positively related to firm performance. Larger firms performed better due to risk aversion (Ghosh, 1998), more analysts following their performance and banks prefer to finance larger companies (Black, Jang & Kim, 2006; Lee, 2009), better assets utilization because of economies of scale and managerial knowledge (Himmelberg et al., 1999; Tam & Tan, 2007). On the other hand, smaller firms reported positive results because they had more growth opportunities (Anderson & Reeb, 2003; Kouwenberg, 2006), more adaptable to change which enhanced competitiveness (Hannan & Freeman, 1989). On the contrary, Cornett et al. (2007) failed to find such a link. However, Haniffa and Hudaib (2006) found mixed results using Tobin's Q and ROA. Kole (1995) examined the differences in data source used in several studies by Morck et al.(1998), Mc Connell and Servaes (1990) and Hermalin and Weisbach (1991) and concluded that differences in firm size accounted for the reported differences in those studies. Therefore, these evidences lead to the next hypothesis:

H_{11}: There is a significant relationship between firm size and firm performance.

3.3.2 Gearing

According to agency theory, external creditors may help to reduce agency costs by disciplining management if they engaged in non-optimal activities (Jensen, 1986; Stulz, 1990). Several prior empirical findings were consistent with the implications of agency theory; debt financing were used as a CG tool to constrain opportunistic behaviour of management (Chen & Lee, 2008; Hurdle, 1974; Johnson & Mitton, 2003; Suto, 2003). Managers whose firms were financed mainly by external debts would engage in wealth generating activities to service the debts faster (Grossman & Hart, 1982) and thereby reduced cost of debts (John & Senbet, 1998; Kouwenberg, 2006).

On the other hand, results of some empirical studies yielded negative results (Chang & Abu Mansor, 2005; Claessens et al., 2000b; Dowen, 1995; McConnell & Servaes, 1995, Short & Keasey, 1999; Suto, 2003; Tam & Tan, 2007; Weir et al., 2002). Some of the reasons uncovered were managers cum shareholders may be involved in risky projects to the detriment of other stakeholders (Stiglitz & Weiss, 1981). They found that not only debt financing is an ineffective CG mechanism to control management but resulted in poorer performance.

It was found that many Malaysian firms relied on external debt to finance its operations and had established close relationships with their bankers due

to political patronage (Gomez & Jomo, 1997; Suto, 2003). As such, debt was not an efficient governance tool in Malaysia. Furthermore, Tam and Tan (2007) supported the argument regarding the inability of the financial market to discipline poor performance firms due to excessive political and business relationship building. Chang and Abu Mansor (2005) also concurred with Tam and Tan. However, contrasting results were discovered by Haniffa and Hudaib (2006) using two types of performance proxies; negative significant association for the accounting measure but positively related for market measure. As previous studies have uncovered contrasting results, the hypothesis is as follows:

H_{12}: There is a significant relationship between gearing and firm performance.

4. Research Methods

4.1 Sample selection

The sample in this study consists of non-financial, non-unit trusts companies listed on the main board, and second board of Bursa Malaysia (Bursa) from financial year ended 2001 to 2006. The reason for excluding financial and unit trusts companies from the sample is due to differences in the regulatory requirement in their reporting as in the studies done by Nazrul, Rubi and Hudson (2008) and Haniffa and Hudaib (2006). Only those companies which are in operation throughout this period are selected for this study.

The screening process finally yielded a sample of 293 companies with a panel sample of 1,758 observations across a six years period after excluding delisted companies over the sample period. This panel is balanced as all data are available for all the 293 companies throughout this period.

4.2 Measures of firm performance and other independent variables

As for firm performance measures, there is no agreement among researchers as to which proxy is the best (Cochran & Wood, 1984). Each proxy has its own pros and cons. In this study, two measures are used market (Tobin Q) and accounting based returns (return on asset, ROA). Cochran and Wood went on to say that it is prudent to use a few measures to capture the various aspects of financial performance. Industry sector may affect firm performance due to differences in ownership structures and their objectives as shown in prior studies (Black, Jang & Kim, 2006; Lee, 2009; Tam & Tan, 2007).

There are ten independent variables, two dependent variables and two control variables. The ten independent variables are broken down into two types of structure namely corporate governance structures (board characteristics) and ownership structures (shareholdings by executive directors, independent directors, institutions and foreigners). Similar breakdown were found in prior empirical research (Anderson & Reeb, 2003; Haniffa & Hudaib, 2006; Petra, 2002).

Data on CG variables, ownership shareholdings and accounting performance measure (ROA) were retrieved from the Bursa Malaysia's website (year 2001 onwards). Tobin's Q data was extracted from Bloomberg and DataStream databases. Table 3 provides a summary of the operationalisation of the variables.

4.3 Econometric estimation

In most prior studies, the standard approach employed in examining the relationship between performance and corporate governance variables is the ordinary least squares (OLS) model. However, OLS models ignore the panel structure of the data by treating data as cross-sectional (Gujarati and Porter, 2009; Kohler and Kreuter, 2009; Roodman, 2009). Therefore, they violate the underlying OLS assumption that all observations are independent of each other. We carefully address potential endogeneity concerns by using a system generalized method of moments (GMM) approach developed by Arellano and Bond (1991), Arellano and Bover (1995) and Blundell and Bond (1998). The system GMM estimation is appropriate for analysis of data involving few time periods and a large number of companies. This method is commonly used in empirical analyses involving panel data because it is robust to panel specific autocorrelation and heteroscedasticity (Capezio, Shields and O'Donnell, 2010; Roodman, 2009). The degrees of freedom are increased and collinearity among the explanatory variables is reduced and the efficiency of economic estimate is improved. It achieves this using lagged differences and lagged levels of instruments. In order to obtain a consistent estimator, the validity of the instruments must be tested. The Sargan test and Arellano-Bond second order autocorrelation test (AR2) are conducted to assess the reliability of the estimates as well as to ensure no methodological problems exist. The Sargan test of over-identifying restrictions test the null hypothesis that instruments are not correlated with error term and thus tests the validity of the instruments. The AR2 tests the null hypothesis that there is no second order serial correlation in the disturbance term (Roodman, 2009). If the two hypotheses are not rejected ($p>0.05$), it implies that the system GMM approach is an appropriate method of analysis.

Table 3. Operationalisation of Variables

Variables	*Acronym*	*Operationalisation*
Dependent variables		
Tobin's Q	Tobin Q	Ratio of the market value of a firm to the replacement cost of firm's assets
Return on asset	(ROA)	Earnings after tax divided by total assets
Independent variables		
CG variables		
Board size	BSIZE	Total number directors in the board
Board composition	BRDC	% of independent directors in the board
Role duality of Chairman/ CEO Positions	DUAL	Dichotomous, 1 if role duality and 0 if no role duality
Audit Committee	AUDC	Dichotomous, 1 with audit committee and 0 if no audit committee
Nominating Committee	NOMC	Dichotomous, 1 with nominating committee and 0 if no nominating committee
Remuneration Committee	REMC	Dichotomous, 1 with remuneration committee and 0 if no remuneration committee
Ownership variables		
% of executive directors' shareholdings	MOWN	% of shareholdings held by executive directors'
% of institutional shareholdings	IOWN	% of shareholdings held by institutions
% of foreign shareholdings	FOWN	% of shareholdings held by foreigners
Control variables		
Firm size	LNTA	Natural logarithm of total assets
Gearing	GEAR	Total debt to total assets
Moderating variables		
Industry based on Bursa Malaysia Classification	CP IP CM PH PT TS	Consumer Product Industrial Product Construction & Mining Property & Hotel Plantation & Technology Trading & Services
Year		2001-2006

The following two models based on agency, stewardship and resource dependency theories as well as prior research discussed in section 3. The models are estimated with inclusion of all dependent and independent variables and control variables. These comprehensive models will therefore provide better insight into the effect of these structures on the firm performance. They are namely:

Model 1:

ROA $_{it}$ = α_0 + β_1(BSIZE)$_{it}$+ β_2(BRDC)$_{it}$ + β_3(DUAL)$_{it}$ + β_4(AUDC)$_{it}$ + β_5(REMC)$_{it}$ + β_6(NOMC)$_{it}$ + β_7(MOWM)$_{it}$ + β_8(OOWM)$_{it}$ + β_9(IOWM)$_{it}$ + β_{10}(FOWN)$_{it}$ + β_{11}(LNTA) $_{it}$ + β_{12}(GEAR) $_{it}$ + INDUSTRY DUMMIES + YEAR DUMMIES + ε

Model 2:

Tobin Q $_{it}$ = α_0 + β_1(BSIZE) $_{it}$ + β_2(BRDC) $_{it}$ + β_3(DUAL) $_{it}$ + β_4(AUDC) $_{it}$ + β_5(REMC) $_{it}$ + β_6(NOMC)$_{it}$ + β_7(MOWN) $_{it}$ + β_8(OOWN) $_{it}$ + β_9(IOWN) $_{it\ it}$ + β_{10}(FOWN) $_{it}$ + β_{11}(LNTA) $_{it}$ + β_{12}(GEAR) $_{it}$ + INDUSTRY DUMMIES + YEAR DUMMIES + ε

Where

α_0	Intercept
Tobin Q	Tobin's Q ; proxy for market return
ROA	Return on assets; proxy for accounting return
BSIZE	Board size.
BRDC	Board composition; Percentage of independent directors in the board.
DUAL	Duality; Role duality of 1 if chairperson of the board is also the chief executive officer. Otherwise 0
AUDC	Audit committee; Dichotomous 1 with audit committee and 0 if no audit committee
REMC	Remuneration committee
NOMC	Nominating committee
MOWN	Percentage of shares held by executive directors
OOWN	Percentage of shares held by outside independent directors
IOWN	Percentage of shares held by local institutions
FOWN	Percentage of shares held by foreign institutions
LNTA	Natural logarithm of total assets
GEAR	Debt ratio defined as total debt to total asset
$\beta_{1\ \text{to}}\ \beta_{12}$	Coefficient measuring relationship strength
ε	Error term

INDUSTRY base on Consumer products, equals 1 if true, otherwise 0
Bursa classifications Industrial products, equals 1 if true, otherwise 0
Property & hotel, equals 1 if true, otherwise 0
Plantation & Technology, equals 1 if true, otherwise 0
Trading/services, equals 1 if true, otherwise 0
Control group is Construction & mining

YEAR DUMMIES If 2001, equals one if true, otherwise 0
If 2002, equals one if true, otherwise 0
If 2003, equals one if true, otherwise 0
If 2004, equals one if true, otherwise 0
If 2005, equals one if true, otherwise 0
If 2006, equals one if true, otherwise 0

5. Results

5.1 Descriptive Statistics

Table 4 presents a breakdown of the sample data by industry sector and by board. The sample consists of 293 companies, that is made up of 239 companies (81.6%) in Main Board and 54 (18.4%) companies in the Second Board. It comprises six industrial sectors; the highest representation is 25.9% from the Industrial Product followed by 23.5% from Trading & Services, 15.4 % from Consumer Product sector, 15% from Properties & Hotels sector, 12.3% from Plantation & Technology sector and 7.9 % from Construction & Mining sector.

Table 5 presents the descriptive statistics of the means for the performance, board and ownership structures and control variables from 2001-2006 and for each year.

Table 4. Sample Data by Industry Sector and by Board

Industry sector	Main Board		Second Board		Total	
	No	%	No	%	No	%
Consumer product (CP)	35	14.6	10	18.5	45	15.4
Industrial Product (IP)	52	21.8	24	44.4	76	25.9
Construction & Mining (CM)	22	9.2	1	1.9	23	7.9
Properties & Hotels (PH)	40	16.7	4	7.4	44	15.0
Plantation & Technology (PT)	31	13.0	5	9.3	36	12.3
Trading & Services (TS)	59	24.7	10	18.5	69	23.5
Total	239	100	54	100	293	100

Source: Analysis of the Secondary Data

Table 5. Descriptive statistics (means) for dependent and independent variables for combined sector

Variables	*2001-2006*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*
Performance measures							
ROA	-0.01	-0.031	-0.046	0.002	0.004	0.009	-0.002
TOBINQ	1.084	1.102	1.091	1.091	1.111	1.022	1.090
Board and ownership structures							
BSIZE	7.633	7.669	7.703	7.720	7.560	7.608	7.539
BRDC	40.712	37.641	39.768	39.557	42.145	42.154	43.015
DUAL	0.15	0.174	0.143	0.143	0.143	0.147	0.147
AUDC	1	1.000	1.000	1.000	1.000	1.000	1.000
REMC	0.807	0.454	0.795	0.881	0.891	0.908	0.911
NOMC	0.805	0.457	0.795	0.877	0.891	0.904	0.908
MOWN	5.509	5.321	5.256	5.636	5.745	5.705	5.390
OOWN	0.182	0.192	0.175	0.161	0.208	0.178	0.180
IOWN	53.066	52.583	53.148	53.320	53.505	53.491	52.351
FOWN	9.8	9.327	8.946	9.205	9.682	10.138	11.505
Control variables							
LNTA	8.699	8.651	8.664	8.703	8.718	8.727	8.733
GEAR	0.549	0.586	0.757	0.510	0.469	0.484	0.491

ROA and Tobin's Q are -1% and 1.084 respectively. The yearly data also show that the means of ROA rebound slowly and slightly from 0.2% in 2003 to 0.9% in 2005 before it dipped again to -0.2% in 2006. Similar trends were observed for the yearly means of Tobin's Q throughout this period of study.

It also illustrates that, on average, board size (BSIZE) in both periods is approximately eight members, which is consistent with previous studies (Lipton & Lorsch, 1992; Haniffa & Hudaib, 2006). The yearly data also show that board size is, on average, eight.

The proportion of independent directors in the board is 41%. It seems that most firms comply with the recommendation of having at least one-third board members comprising non executive directors. The proportion of independent directors had increased steadily to 43 % in 2006.

The mean % of firms having role duality (DUAL) is 15%, indicating that 85% of firms have separated the role of chairman and CEO. The yearly data also indicated a downward trend in line with the recommendation of MCCG that the role of chairperson and CEO should be separated for better governance.

All the firms have audit committees (AUDC) starting from 2001 in compliance with the Code.

On average, the number of firms that formed remuneration committee (REMC) is 81%. The yearly data also show that the number of companies setting up this committee increased from 45.4 % in 2001 to 91.1 % in 2006. This complies with the Code.

Similarly, the table indicates that the mean number of companies that formed nominating committees (NOMC) is 81%. This complies with the Code.

The executive directors hold, on average, about 5.5% of the outstanding shares (MOWN) in their firms. The yearly data shows that the means hover around 5.3 to 5.7 %.

The mean value of percentage ownership by independent directors (OOWN) is only marginal as compared with other shareholder that is 0.2%. According to LR, independent shareholders cannot be a major shareholder and therefore, their ownership cannot exceed 5% of the aggregate of the nominal amounts of all the voting shares in the company.

In contrast, the mean of institutional ownership (IOWN) averaging across all firms is 53 %. This shows that Malaysian firms have concentrated ownerships as concurred by results shown in Claessens and Fan (2002), Haniffa and Hudaib (2006) and Tam and Tan (2007).

On the other hand, the average percentage foreign ownership (FOWN) is 10%. The mean of 9.9% in 2000 climbed up steadily to 11.5% in 2006.

On average, the natural logarithm of total assets size of the firms (LNTA) is 8.7. The yearly mean also indicate similar size.

The mean for the gearing ratio (GEAR) is 54.9%. The yearly data shows a decline in gearing from 75% in 2002 to 49% in 2006.

5.2 Multiple regression results

Table 6 presents the correlation matrix for the dependent and continuous independent variables. Although these univariate results show the relation between corporate board and ownership structures and performance, the analysis does not control for other factors of performance. We therefore extend our analysis to a multiple regression setting using the GMM system estimator. Before that, we first examine multicollinearity problems among the independent variables in our model. It indicates multicollinearity problem between remuneration and nominating committees. These two variables are dummy variables with value of 0 or 1. Based on the high degree of correlation, remuneration committee is removed from the model (Gujerati, 1999).

In Table 7, we report the GMM system estimates for both performance measures based on robust standard errors.

a) Board Size

The results show that the board size is significantly associated with ROA and both performance show negative coefficients. The negative result supports the findings of Yermack (1996) and Lipton and Lorsch (1992) that smaller boards are perceived to be more effective as compared to bigger boards as over sized boards may give rise to coordination problems. Lipton and Lorsch recommended a board size of eight to nine, which is similar to the mean board size of this study. Thus hypothesis 1 is supported. MCCG does not prescribe any optimum board size but leave it to individual firm to decide on its appropriate board size.

b) Board Composition

Contrary to expectation of MCCG and agency theory, the effect of board composition (BRDC) on firm performance yields a significant and negative relationship with ROA at the 1% level. Even though the market result does not yield a significant relationship but the coefficient is negative. These negative results are consistent with the findings of Goodstein et al. (1994) that having a high percentage of independent directors may stifle strategic actions, lack business knowledge to be truly effective and lack real independence (Demb & Neubauer, 1992) or they may be coerced by management to be passive in return for an attractive reward in the company (Abdullah, 2006; Cho & Kim, 2007; Ngui et al., 2008). Thus hypothesis 2 is not supported.

c) Role Duality

Role duality is significantly related to ROA but in the negative direction at the 1% level. Even though, the market result is not significant, the regression coefficient is negative. The negative result is similar to the findings of Haniffa and Hudaib (2006) and Jensen (1993) who observed that role duality gives too much unfettered power of decision to only one individual. Such power may most likely cause him to pursue his own interests instead of shareholders. Agency theory advocates the separation of role as role duality reduce the monitoring effectiveness of the board over management. In a similar vein, MCCG also exhorts PLCs to separate the role of chairperson and CEO. Thus hypothesis 3 is supported for accounting performance measure.

d) Nominating Committee

The results show that the nominating committee is significantly related with ROA for at 1% level but in the negative direction. Even though the market result is not statistically significant but it is in the same negative director. This is contrary to MCCG. Thus hypothesis 6 is not supported.

Table 6. Correlation Matrix of Combined Sector

Correlation	ROA	TOBINQ	BSIZE	BRDC	DUAL	REMC	NOMC	MOWN	OOWN	IOWN	FOWN	LNTA	GEAR
2001-2006													
ROA	1												
TOBINQ	-0.122***	1											
BSIZE	0.185***	-0.095***	1										
BRDC	-0.081***	0.11***	-0.279***	1									
DUAL	-0.029	0.03	-0.102***	0.023	1								
REMC	0.072***	-0.152***	0.081***	0.065***	0.016	1							
NOMC	0.078***	-0.154***	0.081***	0.056**	-0.003	0.916***	1						
MOWN	0.01	-0.017	-0.071***	-0.032	0.112***	0.043*	0.045*	1					
OOWN	0.026	-0.043*	0.134***	0.017	0.018	0.047**	0.043*	0.073**	1				
IOWN	0.083***	-0.062***	0.128***	-0.058**	-0.098***	-0.029	0.001	-0.319***	-0.014	1			
FOWN	0.075**	0.126***	0.122***	-0.021	-0.033	-0.058**	-0.1***	-0.153***	-0.042*	-0.462***	1		
LNTA	0.193***	-0.244***	0.356***	-0.016	-0.025	0.038*	0.061***	-0.196***	-0.056**	0.224***	0.155***	1	
GEAR	-0.654***	0.154***	-0.155***	0.063***	-0.008	-0.129***	-0.136***	-0.011	-0.017	-0.064***	-0.073***	-0.093***	1

Table 7. GMM Results of Combined Sectors

Variables	2001-2006	
	ROA	Tobin Q
BSIZE	-0.0052***	-0.0131**
	(0.0018)	(0.0055)
BRDC	-0.0013***	-0.0008
	(0.0003)	(0.0006)
DUAL	-0.0657***	-0.0198
	(0.0121)	(0.0337)
AUDC		
NOMC	-0.0251***	-0.0024
	(0.0094)	(0.0213)
MOWN	0.0007**	-0.0036***
	(0.0003)	(0.0010)
OOWN	0.0048**	-0.0304***
	(0.0021)	(0.0068)
IOWN	0.0005*	0.0048***
	(0.0003)	(0.0008)
FOWN	-0.0020***	0.0067***
	(0.0005)	(0.0013)
LNTA	0.0647***	-0.2693***
	(0.0172)	(0.0534)
GEAR	-0.1555***	0.0242***
	(0.0068)	(0.0079)
Year Dummies	Included	Included
Industry Dummies	Included	Included
Constant	-0.6094***	1.3927**
	(0.1709)	(0.5579)
Observations	1465	1465
Sargen test of over-identifyng	0.6648	0.0569
Arellano –Bond test for AR(1)	-2.5783***	-3.0578***
Arellano-Bond test for AR(2)	0.1677	1.1626

* Significant at the 10% level; **Significant at the 5% level; *** Significant at the 1% level. Robust standard errors are in parentheses.

BSIZE = board size defined as the number of directors in the board. BRDC = board composition defined as the percentage of independent directors in the board. DUAL = role duality define as t the separation of role between chairman and CEO NOMC = defined as the presence of nominating committee. MOWN = the shareholding by executive directors (ED) defined as the % of shares held by ED. OOWN = shareholding by independent directors (IND) defined as the % of shares held by IND. IOWN = shareholding by institutional investors (II) defined as the % of shares held by II. FOWN = shareholding by foreign investors (FI) defined as the % of shares held by FI. LNTA = logarithm of total assets. GEAR = gearing defined as the total debt over total asset.

e) Executive directors' shareholding

Executive directors' shareholding (MOWN) is found to be significantly related to ROA at the 5% level. The positive regression coefficient implied that executive directors' shareholding provide incentive for alignment of management and shareholders' interests resulting in better firm performance as

confirmed by Jensen and Meckling (1976). This finding supports agency theory, which advocates the adoption of good CG practices to discipline any expropriation behavior of management. On the other hand, the relationship is significant but negatively based on market performance. The market perceives that the executive directors will misappropriate firm's wealth to the detriment of minority shareholders as discovered by Khatri et al. (2002). In their study of the relationship between Malaysian corporate sector performance and corporate governance before the Asian financial crisis, they found that Malaysian companies had high concentrated ownership structure with complex cross holdings and poor debt management. Their results indicated that these features increased the vulnerability of the firms and therefore more likely to be susceptible to crisis. Thus, hypothesis 7 is supported.

f) Independent directors' shareholding

Shareholding by independent directors (OOWN) is found to be positively significantly related with accounting performance at 5% level. Proponents of agency theory argued that independent directors who owned shares might mitigate agency problems caused by dispersed ownership. Bhagat and Black (2000) found positive relationship between firm performance and independent directors' shareholdings. In contrast, the market result is negatively significant. Several empirical evidences (Morck, 2004; Berle & Means, 1932) pointed out that such shareholdings had negative impact on firm performance as independent directors could have a misplaced sense of loyalty to dominant CEO instead of challenging their decisions. They might corroborate with management because of their non-independence. Thus, hypothesis 8 is supported.

g) Institutional shareholding

With respect to institutional shareholding, the results are significant and positive for both performance measures. These results concurred with many prior studies such as in the U.S. (Guercio & Hawkins, 1999; McConnell & Servaes, 1990; Nesbitt, 1994), European countries (Becht, Franks & Rossi, 2009; Gorton & Schmid, 2000, Thomsen & Pedersen, 2000) and Asia (Morck, Nakamura & Shivdasani, 2000; Park & Chung, 2007; Sarkar & Sarkar, 2000). the market perceives institutional investors to be good monitors on management as they focused more on firm performance and less on self serving behavior (Guercio & Hawkins, 1999). Therefore it can be concluded that the institutional investors align the interests of management with that of shareholders as they hold substantial stakes in the companies. Thus, hypothesis 9 is supported.

h) Foreign Shareholding

The impact of foreign shareholding on accounting return is significant but negative. Such foreign shareholders might not be effective monitors because of their close involvement with management in running of businesses (Redding 1996). They corroborate with management to expropriate minority interests. However, the market result revealed that the market performance improve significantly at 1% level ($p<0.01$) as the level of foreign shareholding increases implying that they are able to minimize self-serving behavior of management. In addition, foreign ownership brought about benefits such as higher managerial talent, access to advance technology and entry into capital as found in prior empirical evidences (Tam & Tan, 2007; Che Haat et al. (2008)) also found such relationship in their study. Thus, hypothesis 10 is supported

i) Firm Size

Both measures are significant but in the opposite direction. Firm size (LNTA) is found to be positively associated with accounting return which implies that bigger firms seem to produce favorable results However, the market return supports the findings of Anderson and Reeb (2003) and Haniffa and Hudaib (2006) suggesting that the market perceives smaller firms to be better performers as they are more creative, innovative and ready to change in order to increase firm performance. Thus, hypothesis 11 is supported in both periods.

j) Gearing

The negative result for accounting measure suggests that higher leverage leads to poorer performance which supports the argument that banks and creditors may not be effective monitors because of their close working relationship with management. Furthermore, they may also have multiple directorships in other firms which may compromise their commitment to the firm (Claessens et al., 2000b; Suto, 2003). Past research also found that in cases of excessive debt financing, equity owners may encourage firms to engage in risky projects to the detriment of other investors (Dowen, 1995; McConnell & Servaes, 1995; Short & Keasey, 1999; Tam & Tan, 2007; Weir et al., 2002). On the other hand, the significant and positive relation between gearing and market return at 1% ($p<0.01$) indicates that the market is more confident with the monitoring by firms' creditor which confirms prior studies (Che Haat et al., 2008; Haniffa & Hudaib, 2006; Jensen, 1986. Thus, hypothesis 12 is supported.

Following Roodman (2009), Sargen test and Arellano-Bond second order autocorrelation test (AR2) are conducted to assess the reliability of our estimates as well as to ensure that our results do not encounter methodological problems. The Sargen test

allows the testing of the null hypothesis that instruments are not correlated with the error terms and thus tests the validity of the instruments. The AR2 tests the null hypothesis there is no second-order serial correlation in the disturbance term (Roodman, 2009). If the two hypotheses are not rejected, it implies that the system GMM approach is an appropriate model for our analysis. In the analysis found in the bottom of Table 5.13, the Sargen tests result are not significant indicating that the instruments are valid and are not correlated with the error term. The Arellano-Bond (AR1) tests are all statistically significant, suggesting that the levels used to instrument the first differenced equation provide weak instruments. However, AR2 test result fail to reject the null hypothesis thus providing evidence that the error terms in the system of equations are not serially correlated and orthogonality has been achieved (Roodman, 2009). These tests indicate that the GMM system approach is valid.

6. Conclusions

6.1. Overview of findings

In this study, we use the system GMM approach to examine the relationship between board and ownership structures and firm performance. We draw from the agency (Jensen & Meckling, 1976; Shleifer & Vishny, 1986), stewardship (Donaldson & Davis, 1994) and resource dependency (Pfeffer and Salancik, 19783) theories to examine the issue. Using data drawn from Bursa Malaysia for the period 2001–2006 inclusive, we find that, the mean of board size reduced while proportion of independent and foreign ownership increased even though marginally. On the other hand, the means of the executive and independent directors' share ownership and institutional shareholding remain the same. Firm performance (Tobin's Q and return on assets) is negatively related to board size, proportion of independent directors and role duality. On the other hand, the relationship between performance and executive directors' share ownership is positive for ROA but negative for market return. Overall, the results suggest that small boards, smaller proportion of independent directors in the board and non role duality increase firm performance. These findings are interesting and support the literature suggesting that smaller boards are seen as more effective in monitoring performance as the free rider problem does not exist. As for independent directors, they must be constantly reminded to discharge their duties in the best interests of the shareholders during their training. Role duality may cause the person holding the two roles to pursue his own interests to the detriment of the firm. Therefore, the recommendation by MCCG to separate the two roles should be considered. However, the accounting results suggest that firm performance improves with executive and independent directors' and institutional shareholding (as well as market return). These are effective mechanism to resolve the agency problems especially the institutional investors. However, foreign ownership give contrasting results; negatively related to accounting return but positively to market return. These two groups of investors should be enlisted to engage actively in its monitoring role on management because of their sizable ownership stake in the organization. They can further strengthen corporate governance practices in the firms.

In interpreting the results, however, some limitations need to be noted. First, we examined only a limited number of corporate governance variables. Other board structures such as the composition of the audit, remuneration and nomination committees and board meetings may also be associated with firm performance. Secondly, the ownership identities of large shareholders have not been identified as they may have different investment objectives and strategies, and culture, which will affect firm performance and possibly the type of CG mechanisms employed. However, given the limited data, these variables could not be included in the analyses.

In spite of the limitations, these results have implications for both local and international investors. They are also relevant to policy-makers and firms in emerging countries, as they attempt to improve corporate governance. The results suggest that corporate governance regulations need to consider the nature of the environment rather than adopting a one-size-fits-all approach to corporate governance (Coles, Daniel and Naveen, 2008). Further analysis can also be done to distinguish between those investors that may have business relationships with the firms and those that have no such relationships. It will also be interesting to look at the effect of employee ownership on firm performance.

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PERCEPTIONS ON A STUDENT LEADERSHIP DEVELOPMENT INITIATIVE

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Abstract

Leadership development involves the empowerment and preparation of individuals to be social change agents by developing their understanding of others and self awareness of their roles and responsibilities as leaders in different contexts. In the South African context, student representative councils (SRCs) at universities is an important mechanism to ensure that all South African students receive quality higher education in a safe, disciplined and healthy environment, that is underpinned by access, success and equity which are critical areas of focus in the transformation process. SRCs, as a well organized body, with the necessary skills can channel their capability and commitment toward improving university life for students. As Fullan (1993:182) argues that we hardly know anything about what students think about educational change because no one ever asks them. A student leadership initiative can be a potential for change in universities, since students as the "guardians of the existing culture can be the final arbiters of any change" (Wideen, 1992: 182). Further, by harnessing SRCs as potential reinforcers for improvement, there is more concern with the process through which successful change can be introduced in universities. Since SRCs are vested with the authority to contribute to good governance within universities, students place their trust in it. Therefore, SRCs need the requisite skills to make decisions that do not compromise the interests of students whom they represent. The study aimed to examine student perceptions and expectations of leadership through democratic deliberation at the Durban University of Technology (DUT), in partnership with the International Centre on Non Violence (ICON) and The African Centre for the Constructive Resolution of Conflicts (ACCORD). The student leadership course was a pioneer initiative for student leaders, comprising of local and international students studying at DUT. The rationale for this was the identified need for focused research into what student leaders perceive leadership to be and the value they derive from attending leadership initiatives. The partners felt it important to document student voices through a leadership initiative. The narrative, through a qualitative analysis, captured the contradictions and conflicting challenges student leaders face today, which are always problematic and dynamic, especially when public interests are not at the forefront of the agenda. Students stated that the course was beneficial, because it helped to: focus on purpose and goals of being SRC members; understand cultural diversity; show more interest in developing leadership skills as a collective; gain a sense of clarity of personal and university values; gain improved negotiation, conflict resolution and decision making skills; deal better with complex issues; and willing are able to use leadership practices for the benefit of all stakeholders. It is ultimately envisaged that the leadership initiative will be extended beyond the frontiers of DUT to other local, national and possibly international higher education institutions. As part of an on-going series of courses relating to student leadership, it is expected that such initiatives with the university partners will strengthen the effectiveness of student leaders, thereby contributing to the process of higher education transformation.

Keywords: Leadership, Higher Education, Personnel Training

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Introduction

During the period from the 1960s to the 1990s, university students in South Africa played a pivotal role in the struggle against the apartheid system. Despite considerable transformative changes in the higher education system after the institution of a non-racial democratic government, significant challenges remain. In so far as students are concerned, poor preparation at the school level for university admission, the lack of student financial aid and accommodation remain their principal concerns. They

often see government and management of universities as being insensitive to their plight and needs.

The failure in the resolution of such problems has periodically led to outbreak of violence on many campuses of South African universities. Destruction and burning of buildings and classrooms, the intimidation of students who are continuing with academic classes and examinations and boycotting of classes have been the common manifestations of what protesting students see as their continuing struggle against the legacy of apartheid. The financial cost of these outbreaks of violence, as well as the morally corrosive effect of resorting to violent means to resolve differences are considerable.

The situation demands leadership that is visionary, compassionate and thoughtful, that leads to resolutions positive to the diverse stakeholders in higher education transformation. In addition, the nurturing and development of student leadership at the university student level would provide a cadre of emerging leaders to fill critical positions in the new South African democratic dispensation.

Accordingly, participative governance, which is influenced by policy, students, parents, the Department of Higher Education and members of the community, should contribute toward the establishment of a society based on democratic values, social justice and quality of life (South Africa, 1996). SRCs were established with the aim of promoting the well being of universities; encouraging responsibility among students; liaising between students, lecturers and the university management team; promoting discipline; protecting students against discrimination; listening to students problems; ensuring that universities have a good reputation in the community; and encouraging leadership among students (South Africa, 2002:103).

Need for student leadership development

Literature pertaining to student leadership shows that there is an identifiable gap in our knowledge of students' understanding of leadership and how they see, experience and interpret it in different situations. What is lacking is the production of credible accounts of leadership development benefits from the student's point of view (Dempster and Lizzio, 2007: 280). This view is reinforced by Posner (2004:444) in his statement, "*Studies investigating just how leadership development occurs would be invaluable not just for those involved and responsible for student leadership development, but also for people who provide leadership education for corporate, civic and community organizations*".

While many believe that leaders are born, the authors believe that student leaders can be nurtured by focusing on improving their leadership skills through leadership development initiatives. Such initiatives can grow the ability to think, act and share leadership skills. The contribution of SRCs to transformation is largely dependent on them being effective and efficient leaders within the university governance system.

In this regard, Motala (1995: 10) argues that showing responsibility for governance within universities requires the development of appropriate practices, procedures, language, skills and capacities. This is important in view of the impact of the socio-economic, political and cultural realities that continually impact universities. Dohahue (1997: 45) states that there is abundant evidence of conflict, lack of respect, abuse, incompetence, violence, poor discipline and highly authoritarian structures in universities.

Further, the university culture in determining and reflecting how the elements of university life develop, and is powerfully influenced by people's attitudes and behaviour (Davidoff and Lazarus, 2002:21). This is supported by Thurlow (1996) who states that capacity must be strengthened, since governance is an important aspect of comprehensive reform. By promoting a culture of service; devotion to duty; loyalty to the university; mutual respect; and morality amongst students, the basic principles for effective leadership are developed. In this regard, SRCs play a significant role in assisting students to survive the system and in capturing the hearts, minds and souls of students. . According to Jones (2005:39), "*if you engage with people you learn from them. It does not matter where people exercise leadership, they are still leaders".* This is supported by Goffee (2005), who views leadership as something that leaders do with other people, thereby establishing a relationship between the leader (SRC), the led (students) and the university context. This is supported by Kouzes and Posner (2002: 118) who purport that leadership effectiveness is related to self-awareness and relationships between those who aspire to lead and those who choose to follow. By articulating a vision and purpose which serves the interests of students, the SRC can serve as a conduit to higher levels of performance which is meaningful to students.

SRCs cannot ignore the situational (contextual conditions) and relational (students) variables. The three forces –SRCs, students and university management must interact to generate leadership. Therefore, SRCs need to engage in skills development programmes that will assist them in the following ways (Alexander, 2005: 15):

- Adapt to the context.
- Understand the needs and expectations of all stakeholders.
- Strategic thinking: ability to formulate a vision and clearly articulate it.
- Right action: ability to do what is most effective, while obeying an ethical code.
- Motivational influence: ability to influence students with enthusiasm and dedication through persuasion.

- Commitment to purpose: ability to make a vision a reality through persistence.

An advocacy for leadership development programmes for students is supported by Lambert (2006:239) who considers student leadership as vital for student performance. A study by Lambert (2006:241) on high student leadership capacity schools revealed a high focus on teaching leadership understandings and skills; creating extensive opportunities for participation in governance structures, involvement in action research; conflict resolution; monitoring learner attendance and suspension, responsibility for translating the vision of the school to the community; and planning school and community events.

Therefore, any conceptual framework for student leadership has to be underpinned by activities that enhance relationships, participation and skilfulness. A multi-faceted approach is needed to address the barriers to enhanced quality of learning experiences, academic excellence, educating students to the best of their ability and preparing students for life after school. The development of leadership competencies among SRCs can be one such approach. Some of the objectives in developing strong and effective leadership of student councils can include:

- Understanding the nature and context of leadership theory.
- Reflecting critically on SRCs' and student leaders' role and function in the institutional context, in the light of underlying values and ethics
- Ability to handle conflicts in ways that affirm the rights of different parties in the conflict and develop resolutions that are positive for the institution
- Ability to develop a base for continuous and lifelong learning for leadership skills, including from interaction with others, on the course and beyond
- Ability to identify the steps of their development as leaders and set goals for their future learning.

Research design

The study explored student perceptions of leadership and their challenges as student leaders after attending a three day leadership course. The course content focused on an interactive conceptual understanding of leadership (small group discussions, guest speakers and presentations) and skills building (role playing activities, self reflection exercises) approach. This method was chosen to allow student leaders to freely present information on their perspectives of student leadership, improve students' knowledge through exposure to the topic of leadership and provide opportunities for students to practice leadership in a developmental context where there is less pressure and a lower cost of failure (Jenkins, 2013:50).

The focus on integrity, values, conflict and negotiation drew attention to the importance of not just solving problems, but doing so with ethics in mind, while realising that it is important to accept responsibility and accountability. The sharing of personal experiences by the presenters enhanced the theoretical basis of their presentations, thereby making it more relevant and drawing attention to the fact that not only students are facing challenges. The simplicity of the presentation methodology, which included presentations and discussions, on very complex issues made assimilation of knowledge easier.

The following outcomes were expected after the three day interactive course:

- A basic understanding of the knowledge, skills and values underpinning leadership
- An appreciation of the constraints and complexities of leading and managing a university
- The ability to manage and resolve conflicts non-violently through dialogue, negotiation, mediation and arbitration
- The importance of providing visionary, compassionate and ethical leadership to student representative councils
- To be committed to developing personal leadership on a lifelong basis
- To network with students from other universities including from the SADC region in order to nurture and foster leadership that promotes non-violence and development of societies in a sustainable manner.

Given that this was the first Leadership course offered and one that was very much on a learning trajectory it was confined to students of DUT. The 32 participants comprised four groups from DUT – SRC members, faculty representatives, international students and a women's group were also included. The following criteria guided the selection of 32 students: diversity to include gender mainstreaming, evidence of being involved in leadership activities, involvement in extra-curricular activities, an adequate academic record, and fluency in English.

Data collection

A qualitative approach was used. Data was collected from student surveys and discussions held throughout the three day programme. Content analysis guided the themes that emerged from the surveys and student discussions. Student feedback allowed the facilitators to assess the effectiveness of the activities and discussions, as well as the students' understanding of the topics.

Discussion

Challenges facing student leaders

The experiences of student leaders are not always positive. Identification of negative elements is necessary to address challenges that students may perceive. Students were given an opportunity to

discuss their experiences, which were typically relevant to the leadership experience by discussing the challenges they face as leaders and sharing their problems, a supportive environment was facilitated. Students felt a need for collaborative initiatives with staff, students and external partners to address the following challenges:

- The university was cited as being like a river, whereby students and staff enter and leave at various times, but the river still continues flowing. The term of leadership for SRC members is one year, which impacts on continuity. Further, there are no formal handover processes and procedures between incoming and outgoing SRC members.
- The university has a long term existence and the challenge is how to position the university in 50 years from now. In the national context, DUT falls into the disadvantaged category of universities, therefore needing to galvanize support to build on its limited resources. Some of the challenges include: the need to build DUT and see it growing; identify how students have access to the best opportunities; know who the students are, who their parents are, what skills they possess, what access do they have to technology, attitudes of parents to technology; and how are students affected by universities that are still part of the colonial system.
- Students need to separate the political manifesto from the SRC manifesto if they are sincere about their purpose. Students need to accept that they will be unpopular if the political agenda is not at the forefront of their student leadership, but a leader has to be a survivalist amidst such challenges. One can ensure confidence by being principled, while valuing diversity. There is a need to find ways of separating the personal and political agendas in leadership roles, where the focus is not about being seen as a winner, but rather as an honest person who has accomplished goals with integrity.

Student leaders recognised the need to develop the following competencies to execute their responsibilities effectively:

- Ability to listen and read– Need to listen to the constituency and others, be genuine toward the feelings of others and be courageous to “hold their ground”. Getting all students interested and to participate hinges on being good listeners. One cannot be a leader and not engage with the world of ideas through reading. The idea of having a framework of what students want to achieve, like working toward eradicating poverty or building our democracy helps to make sound judgements.
- Planning- Students need to know their goals, how they want to achieve transformation and how they aim to measure success. Student leaders only plan for one term of office. Challenges occur because management must plan for longer periods. Planning for continuity means keeping records so that other leaders can pick up after their term. The need to focus on adequate record keeping, monitoring and evaluating; and using terms of reference when the need arises.
- Policies - SRC members need to be aware of institutional and national policies before they attend meetings and participate in discussions.
- Conflict – This can be minimised or avoided if students take ownership during policy making and understand the purpose of being a SRC member. Leading peacefully requires knowing and understanding the following: What is your purpose of existence? What is the purpose of SRCs? Why are you a student leader? Were you meant to be a student leader? What is your role in the proper management and governance of the university? How can you respond to challenges that management may have different perspectives on? How can you achieve the middle ground, without compromising student needs? How can you educate students that what they always want they do not necessarily get? How do you relate to power and what does this mean for you? How can the pressure of managing diversity be handled? How do you manage power problems with management? How do you manage power problems within the SRC?
- Complex cultural identities-Recognising the cultural identity of SRCs and recognising whether one wants to continue this cultural identity or disrupt it. This requires an acknowledgement that purpose and cause are more important than self-interest. This can become complex in view of different social identities of SRC members.
- Power- Power contestations obstruct progress in addressing student needs and can result in the wastage of resources. There is a need to avoid becoming power drunk, to the extent that student interests are compromised. This can be addressed through more rigorous communication between student leaders, students and management.

The competencies highlighted that students recognised the following important precepts in leadership (Logue, Hutchens and Hector, 2005: 399):

- Being part of something larger required collaboration, teamwork and building relationships.
- The team is more important than the leader.
- Cohesion in a team determines success.
- Focussing on service to others and for the greater good
- Leadership is not about winning or being the best.
- Focus on getting things done in the current to achieve long term goals.
- Getting things done involves planning to meet responsibilities.
- Awareness of the personal identity that the organization provides to leaders in terms of tasks, rules and activities.
- Motivating different personalities.

Much of the aforementioned precepts are interwoven in terms of people, actions and institutional purpose which are integral for successful

student leadership. While current literature support the assertion that there are benefits associated with student leadership, few studies focused on personal costs and the lack of skills to respond appropriately (Logue *et al*., 2005: 405).

Benefits of a leadership course

Students reported the following benefits accruing from the various presentations pertaining to leadership theory:

- Awareness of the life-long nature of learning on leadership and need to acknowledge, apply and attain learning.
- Identification of what qualities they had as leaders and areas they needed to develop as student leaders.
- Importance of being a successful leader with authority.
- Being able to see things from different perspectives and reflecting on their own value systems and that of multi- stakeholder interests
- Being able to identify their strengths and weaknesses as student leaders and in their personal lives.
- Without the knowledge and understanding of leadership in general and student leadership specifically, they were not able to differentiate between good and bad leadership, citing Nelson Mandela, Martin Luther King, and Julius Malema as successful leaders; and Buthelezi and NATO as unsuccessful leaders.
- Choice of clear and concise words in negotiation is important- This requires recognition of the following: maybe difficult to change people, but not impossible; good to have instructions, but may not be necessarily good for everyone; clear interpretation of instructions that is shared by all; open mindedness and be able to adapt; be prepared to compromise; do not get tired of engaging; do not take rash decisions; cannot just trust anyone; must test other's first, before buying into their ideas; need to deal with those who are not willing to listen, possible to change and move forward; when decisions are taken, be firm and resilient to pressure to change; take responsibility for decisions, without blaming others; persevere when engaging with others; speak with one voice that is not influenced by self- interest; use clear and concise language.
- Collaboration and compromise- Realising that collaboration involves the retention of personal interest in negotiation, while compromise moves from conflict prone to conflict averse, by engaging in fair and workable decisions. The use of the process map of collaborative conflict management helps to unpack the problem and systematically move toward the solution. Apart from applying it in their respective constituencies, they felt that it can be applied in their personal lives as well
- The need for proactive behaviour before issues become unmanageable, therefore necessitating the need to engage in strategic planning.

By initiating discussions and recognizing the challenges associated with student leadership, it is expected that the students would be able to respond to these challenges with a new vision of how to prevent these challenges from festering. However, this requires subsequently a structured approach to initially prepare student leaders as a first step before they become embroiled in SRC issues. Apart from focusing on leadership competence, there is a need for knowledge in: foundations of SRCs, information resources, organization of recorded knowledge and information, research, continuing education and lifelong learning, and administration and management.

Understanding of leadership

Students acknowledged that, s student leaders, they need to recognise the following:

- Setting goals and being honest to oneself and one's followers is vital. Students often lose sight of their purpose as student leaders and become embroiled in conflicts that can be avoided.
- The SRC in not the platform to advance their political agendas, but rather recognise the vision of the institution and the SRC when making decisions.
- Managing change and being able to adapt to change is important for transformation. This requires focusing not only on the present, but also reflecting on the past, so that improvements can be made with the future in mind.
- By having the knowledge, the task can be simplified to a certain extent.
- While it is important to be principled and be firm in one's stance, compromise may be necessary if the benefit is for the common good of all stakeholders.
- The issue of materiality or personal gain should not feature in leadership priorities.
- The achievement of goals can be difficult to accomplish if there is a lack of commitment. Commitment requires leading by example and being transparent about decisions.
- The role of civil society should not be underplayed, when developing leaders.
- Bearing in mind that students have different cultural backgrounds, levels of ability, intellectual capacity and many are from rural backgrounds, the use of different presentation styles and an interactive approach succeeds in reaching out to student diversity.
- Need for education for leadership in other contexts and opportunities for continuity.

Students identified important aspects relating to change, cultural diversity and context, which Dempster and Lizzio (2007:281) see as "*young people's emerging notions of leadership which can be*

seen as an appropriate response to a social context that is characterised by high levels of cultural change and social pluralism". This makes inclusion and collective cooperation more challenging and complex. Dempster and Lizzio (2007:281) suggest the capacity to self regulate as a leadership skill to manage challenge and change; and to successfully negotiate diversity and difference. A further response by Thompson (2006:344), is that students need to engage in systemic thinking, which requires an adaptive environment that can lead to higher levels of success. In this regard, the leadership process theory of Allen, Stelzner and Wiekiewicz (1998:75) assert that individuals with higher levels of systemic thinking are more adaptive, cooperative and open to new ideas. It can therefore be posited that moving from a "leading by a few" perspective to "leading by all" perspective can generate higher levels of leadership empowerment and cohesiveness among student leaders.

Students citied the following characteristics of good student leaders:

- Never tire in the quest for knowledge and gaining valuable insight into the experiences of others.
- Importance of reading as it sharpens mental agility.
- Valued. respected, trusted and noticed .
- Important to determine the extent to which a leader is willing to define how he/she becomes successful.
- Use of power with discretion.
- Do not fight to finish as it destroys legacies.
- Leaders understand that different contexts demand different leadership styles.
- Use of sound and ethical tactics to persuade the community.
- A leader is an entrepreneur with a sense of single mindedness and clear goals.
- Power of persuasion, either verbally or through a simple actions.
- Self-awareness, ensuring that personal weaknesses are not the focus of attention.
- Leaders are patient, give attention to detail and are committed.
- Leaders always listen to their critical voice and conscience.
- Understand the context and balance of forces and compare to different eras..
- A good implementer who can sustain a course of action.

Collectively, the student perceptions is aligned to Burns (1978 citied in Hicks and Given, 2013: 9) understanding of leadership that placed the leader in a position of communal influence, by acting as an agent of the followers. Students recognized that leadership is transformational, where they have to work collectively on end- values based on liberty, justice, and equality. In the absence of all student leaders in SRCs not transcending their personal goals in favor of collective goals, purpose and goals can be compromised.

Student perspectives on leadership can be aligned to Kouzer and Posner's (2002: 18-25) leadership challenge model which encompass the following:

- Inspire a shared vision- others are attracted to share the vision to change the way things are and to create something new.
- Challenge the process- gain support for new ideas that foster progress, innovation and improvement.
- Enable others to act – provide the platform for collective efforts to take risks and create change.
- Encourage the heart- show care and appreciation through one's actions.
- Model the way- demonstrate self-awareness, clarity about one's values honesty, forward-thinking, competence and inspiration.

Unlike the social change model and the relational leadership models, the leadership challenge model identifies an observable set of skills and abilities that are practiced by effective leaders and can be learned by anyone.

Conclusion

Since the 1990's, the higher education landscape has changed in South Africa. Universities were then seen as sites of political struggles. The focus now is on addressing social struggles. In the university context these include: student access, student loans, student accommodation, teaching and learning, broadening student experience and diversity.

Student leaders, with management, need to focus on real issues that can be collaboratively responded to through strategic plans, with an end in mind. This requires determining where the university wishes to go and what will it take to get the job done. Thus, universities must expend efforts to expose student leaders to the concepts of leadership so that they can receive the tools necessary to deal with leadership challenges that may arise during their careers as SRC members. Further, such initiatives have the potential to broaden student leadership behaviors which can also promote opportunities to increase their personal growth, and enhance their academic career success (Patterson, 2012:8).

In view of the discourse on change, especially in the post apartheid era, the element of leadership in training and educating for SRCs is critical for transformational leadership which requires problem solvers, team players, leaders, and articulate spokespeople who are driven by vision, trust, empowerment and values (Burger, 2006: 3). It is only if the SRC is effective, will other stakeholders have trust in them and share the vision.

Strategically, student leaders need to develop ongoing sustainable initiatives that address challenges beyond the social issues like: separating the political

agenda of SRC members from their purpose within the SRC, maintaining a link between outgoing and incoming members, encouraging students to articulate their grievances, inspiring confidence from others, balancing academic and leadership responsibility, managing relationships when decisions do not go down well with the rest of the SRC, managing student responses when the SRC takes decisions with management that negatively impacts on the students, convincing students that decisions taken are for their benefit.

While feedback from sstudents showed that the initiative helped them develop and improve their personal leadership skills through various means of interaction, the researchers acknowledged that this has to be a continuous endeavor by the university partners as the tools needed to execute their roles and responsibilities has to be expended on a continuous basis. This is consistent with Posner"s (2012:233) study findings that the more opportunities that student leaders reported having to develop their skills, the more they reported engaging in the leadership practices of inspiring a shared vision, challenging the process, enabling others to act, encouraging the heart and modeling the way.

There is a need for further research that describes leadership from the students perspective, which would give a more in depth understanding through the voice of the student. Such research is important when developing relevant student leadership development programmes based on student perceptions and provides a potential foci for future research. However, the researchers recognize that there is no best approach to leadership. Since students are individuals, with unique traits, their leadership journeys start from different points and end at different points. Leadership development for student leaders should be modeled on providing them with the critical attitudes, behaviors, and knowledge sets that they can use to build their own unique personal leadership model.

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EMPLOYEE PERCEPTIONS OF THE INFLUENCE OF DIVERSITY DIMENSIONS ON CO-WORKER INTERACTIONS AND DAILY ORGANIZATIONAL OPERATIONS

Atasha Reddy*, Sanjana Brijball Parumasur**

Abstract

This study assesses employee perceptions of the influence of diversity dimensions (race, gender, religion, language, sexual orientation, attitudes, values, work experience, physical ability, economic status, personality) on their interactiions with co-workers as well as on their organization in its daily operations. These perceptions were also compared and gender related correlates were assessed. The study was undertaken in a public sector Electricity Department in KwaZulu-Natal, South Africa. The population includes 100 employees in the organization, from which a sample of 81 was drawn using simple random sampling. Data was collected using a self-developed, pre-coded, self-administered questionnaire whose reliability was assessed using Cronbach's Coefficient Alpha. Data was analyzed using descriptive and inferential statistics. The findings reflect that employees perceive that their interactions with co-workers are most likely to be influenced by attitudes, work experience and personality and that daily organizational operations are most likely to be influenced by race, work experience and attitudes. Furthermore, religion and sexual orientation are perceived as having the least influence on co-worker interaction and day-to-day organizational operations. In the study it was also found that employees perceive that race followed by gender influences day-to-day organizational operations to a larger extent than it influences co-worker interactions. Recommendations made have the potential to enhance the management of workforce diversity.

Keywords: Interactions with Co-Workers, Diversity Dimensions, Attitudes, Race, Personality, Work Experience, Principle of Inclusiveness

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Introduction

In recent times the concept of workforce diversity has become an important variable of interest to researchers (Cox, 1994; Allison, 1999; Kirton & Greene, 2000) especially because workplaces can be rather diverse in terms of race, gender, sexual orientations, personalities, attitudes and values, amongst others. According to Allison (1999), issues of diversity should not be separated from basic management principles. The application of management principles assists in maintaining the integrity of diversity and fairness on a long term basis. Considerable attention has been paid to discussions on the importance of workplace diversity together with efforts to propose models, guidelines and training modules to facilitate diversity training (Allison, 1999).

Diversity has to be recognized as an imperative strategic route that businesses have to take in order to survive (Bryan, 2000/2001; Carrell, Elbert, Hatfield, Grobler, Marx and Van der Schyf, 1998). Researchers such as Cox (1994) and Kirton and Greene (2000) contend that this forward thinking has much to do with future trends which predict that the composition of the workforce will be of people who are essentially different on various levels.

World population statistics reveal that the existing labour force of traditional industrial powers cannot be replaced if one examines the fertility rate of those countries. To replace lost labour or even to add to the existing numbers, has to come from immigration or from increasing the participation of minority groups (Cox, 1994). Increased mobility and the interaction of people from diverse backgrounds, as a result of improved economic and political structures as well as the equal opportunity framework, have forced organizations to embrace workplace diversity (Henry, and Evans, 2007). These trends dictate the impracticality of organizations who hang on to the notion of acquiring and retaining a homogenous workforce (Gudmundson & Hartenian, 2000). What is

inevitable is a workplace that is more diverse and the need to utilize this trend positively is vital if organizations are to cultivate success and remain globally competitive. A homogenous workforce can be detrimental to an organization in various ways. These include implications for "long term growth, renewal, and the ability to respond to important environmental changes such as dynamic market conditions, new technologies and ideas, societal shifts, or the changing expectations of the work force" (Kossek & Lobel, 1996, p. 3). An organization that embraces diversity can aid the culture to adapt to the environmental demands. The aim is to attract, select, motivate, develop and retain a diverse workforce that is skilled enough to successfully work through changes.

Understanding Diversity and Diversity Dimensions

Research identifies two perspectives on workplace diversity: functionalist perspectives and critical perspectives (Cox, 1994; Allison, 1999). This study is based on the former which focusses on workplace diversity in terms of controlling the negative and positive aspects of diversity. This alludes to an organizational effectiveness model where the aim is to enhance organizational productivity, responsiveness and effectiveness (Cox, 1994; Allison, 1999).

A traditional definition of diversity merely focusses on increasing the number of women and minorities in an organization. In fact, many organizations are guilty of simply complying with legal requirements or are just responding to a shift in the labour market resources (Pitts & Wise, 2010; Pless & Maak, 2004) whilst failing to engage in valuing, developing and effectively utilizing diversity (Shen, Chanda, D'Netto & Monga, 2009). Diversity introduces various challenges to organizations. One such challenge is that people are recognizing that enhancing diversity requires organizations to change to the extent of amending current regulations and advocating the sharing of power and decision-making (Ansari & Jackson, 1995). Ansari and Jackson (1995) further advocate that diversity extends beyond treating everyone the same, to recognizing differences and the fact that groups of people have been largely ignored in the workplace. For organizations to adopt a diverse approach means valuing differences and treating people in ways which bring out the best in them (Wise & Tschirhart, 2000).

Diversity refers to differences in "age, ethnic heritage, gender, physical ability and qualities, religious belief and sexual/affectional orientation" (Arai, Wance-Thibault & Shockley-Zalabak, 2001, p. 445). This is a broad definition of the term and is similar to one proposed by Thomas (1996), which adds that diversity in its fullest sense involves a broad range of factors. Similarly, Wise and Tschirhart (2000) advocate a definition by Cox which conceptualizes diversity as the collective (all-inclusive) mixture of human differences and similarities along a given dimension. These dimensions include "race, culture, religion, gender, sexual preference, age, profession, organization team tenure, personality type, functional background, education level, political party, and other demographic, socioeconomic and psychographic characteristics" (Wise & Tshirhart, 2000, p. 2). Workplace diversity includes identifying those individuals who share these common traits which can either unite or divide people. Human (1996), cited in Carrell et al. (1998, p. 50), differentiates workplace diversity on three levels:

- The politically correct term for equal employment opportunity/affirmative action (a narrow view of diversity)
- The recruitment and selection of ethnic groups and women (most organizations tend to focus on this aspect of regulating their workforce numbers)
- The management of individuals sharing a broad range of common traits (a broad perspective on workplace diversity programs).

Lippman (2000, p. 25) defines a diverse workplace as a place where:

- Minorities, women and the disabled have positions at every level.
- People are allowed, even encouraged, to be who they are rather than having to dress, behave and express themselves in a lockstep.
- Barriers to advancement have been torn down to continue to be searched and attacked.
- All employees have the opportunity for personal growth and the room to reach their full potential.

Research studies focus on redefining diversity and paying close attention to the difference(s) between psychological and covert factors or deep-level diversity (personality, attitudes, beliefs and values) and visible, surface-level diversity (demographic and physical characteristics such as age, gender and race) (Barsade, Ward, Turner, Sonnenfeld, 2000; Harrison, Price & Bell, 1998; Knouse & Dansby, 1999; Pitts & Wise, 2010; Saji, 2004; Wentling & Palma-Rivas, 2000).

It is apparent that there are several dimensions to understanding exactly what diversity it. Clearly though, what is needed is a radical change in one's traditional idea of what diversity is and a move towards an amalgamation of different approaches.

Implications of a Diverse Workforce And Perceived Benefits

Having a diverse workforce demands effective diversity management. In other words, there is a need to systematically manage a heterogeneous workforce in a fair and equitable environment where no individual has an advantage or disadvantage and all employees are able to perform optimally. This means

that for organizational success to be attained, effective diversity management practices relating to recruitment and selection, training and development, performance management and pay must be formulated and implemented as a norm rather than an exception (Lawrence, 2001). A heterogeneous workforce has innovative and creative potential that can be utilized to eliminate cultural boundaries, formulate perspectives and solutions to organizational problems, and generate innovative product ideas and market opportunity initiatives (Pitts & Wise, 2009; Pless & Maak, 2004). Hence, diversity in the workplace can be a competitive advantage because enhanced creativity and innovation can lead to better organizational performance (Allen, Dawson, Wheatley & White, 2004) and a diverse workforce can provide superior services due to enhanced understanding of customers' needs (Wentling & PalmaRivas, 2000), thereby reflecting that diversity can result in economic benefit and organizational effectiveness (Ferley, Hartley & Martin, 2003). Therefore, organizations that demonstrate experience in managing diversity are more likely to attract the best personnel (Carrell, et al., 1998), thereby aligning with Von Bergen, Soper and Parnell's (2005) view that diversity can influence performance and performance can influence diversity. However, a study undertaken by D'Netto and Sohal (1999) in Australia found that the management of workforce diversity was only 'mediocre' especially in the areas of recruitment and selection and training and development. In addition, Allen et al. (2004) maintain that only a small percentage of companies tie manager's rewards or compensation to the achievement of diversity goals. Pless and Maak (2004) advocate the need for an integrative approach to diversity and emphasize the importance of creating more inclusive work environments where people from diverse backgrounds feel respected and recognized, have mutual understanding, trust and integrity, whilst taking cognisance of norms and values. The principle of inclusiveness fosters greater employee integration, human diversity and the cohesion of multiple voices into the organizational dialogue (Pless & Maak, 2004). At the realm, of employee integration lie the issue of effective co-worker interaction and organizational practices that promote inclusivity.

Aims of the Study

This study assesses employee perceptions of the influence of diversity dimensions (race, gender, religion, language, sexual orientation, attitudes, values, work experience, physical ability, economic status, personality) on their interactions with co-workers as well as on their organization in its daily operations. These perceptions were also compared and gender related correlates were assessed.

Research Design

Respondents

The study was undertaken in a public sector Electricity Department in KwaZulu-Natal, South Africa. The population includes 100 employees in the organization, from which a sample of 81 was drawn using simple random sampling. According to Sekaran's (2003) population-to-sample size table, a corresponding minimum sample of 80 was needed, thereby confirming the adequacy of the sample of 81 employees.

In terms of the composition of the sample, there were more males (59.3%) than females (40.7%). The majority of the sample were from 26-40 years (64.3%) with 27.2% being from 26-30 years, 17.3% being from 31-35 years and 19.8% being from 36-40 years. The majority of the sample is English speaking (69.1%), followed by those who are Zulu (29.6%) and North Sotho (1.3%) speaking. In terms of tenure, the majority of the employees have between 1-15 years of service (81.5%) with 29.6% of the employees having 1-5 years of service, 28.4% having 6-10 years and 23.5% having 11-15 years of tenure. Furthermore, 51.9% of the participants are Indian, followed by Black (30.9%), White (11.1%) and then Coloured (6.1%). Whilst, 69.1% are general staff, 28.4% comprise of technical specialists and 2.5% are from middle management.

Measuring Instrument

Data was collected using a self-developed, pre-coded, self-administered questionnaire consisting of two sections. Section A relate to biographical (gender, age, language, tenure, race, occupational level) and was assessed using the nominal scale with precoded option categories. Section B tapped into perceptions of the diversity dimensions that influence them when interacting with co-workers as well as the diversity dimensions that influence their organization in its operations. The diversity dimensions assessed included race, gender, religion, language, sexual orientation, attitudes, values, work experiences, physical ability, economic status and personality. Section B was measured using the Likert Scale ranging from strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4) to strongly agree (5). The questionnaire was formulated on the basis of identifying recurring themes that surfaced while conducting the literature review. These ensured face and content validity. Furthermore, in-house pretesting was adopted to assess the suitability of the instruments. Pilot testing was also carried out on 8 employees using the same protocols that were utilized for the larger study to test the process, the appropriateness of questions and employees' understanding thereof. No inadequacies were reported

and the final questionnaire was considered appropriate in terms of relevance and construction.

Research procedure

The research was only conducted after ethical clearance was obtained for the study and upon completion of the pilot study.

Reliability of the questionnaire

The reliability of the questionnaire was assessed using Cronbach's Coefficient Alpha. The items were reflected as having a high level of internal consistency and reliability, with the Cronbach's Coefficient Alpha for the items measuring the perceptions of employees of the diversity areas influencing their interaction with co-workers and that of the organization as being 0.8196.

Statistical analysis of the data

Descriptive statistics (mean, mode, standard deviation, minimum, maximum) and inferential statistics (chi-square correlation: Likelihood ratio) were used to evaluate the objectives and hypotheses of the study.

Results

Descriptive Statistics

Employees' perceptions of the diversity dimensions influencing them when interacting with co-workers were assessed using a 1-5 point Likert scale. The higher the mean score value, the more employees perceive the diversity area to influence their interactions with others (Table 1).

Table 1. Descriptive statistics – Employees' perceptions of the diversity dimensions influencing them when interacting with co-workers

Diversity Dimensions	Mean	Mode	Std. Deviation	Minimum	Maximum
Race	2.6	1	1.5	1	5
Gender	1.8	1	1.1	1	5
Religion	1.7	1	1.2	1	5
Language	2.6	2	1.5	1	5
Sexual orientation	1.7	1	1.0	1	5
Attitudes	3.1	2	1.3	1	5
Values	2.7	2	1.2	1	5
Work experience	3.0	2	1.3	1	5
Physical ability	2.0	1	1.2	1	5
Economic status	1.8	1	1.1	1	5
Personality	2.9	3	1.3	1	5

Table 1 indicates that when employees interact with each other they are influenced, in descending level based on mean score values, by:

- Attitudes (Mean = 3.1)
- Work experience (Mean = 3.0)
- Personality (Mean = 2.9)
- Values (Mean = 2.7)
- Race and Language (Mean = 2.6)
- Physical ability (Mean = 2.0)
- Gender and Economic status (Mean = 1.8)
- Religion and Sexual orientation (Mean = 1.7)

Evidently, employees perceive that their interactions with co-workers are predominantly influenced by attitudes, work experience and personality. The mode of 3 for Personality shows that a significant segment of employees perceive that their interactions with co-workers are largely influenced by this diversity dimension. Furthermore, Interactions with co-workers is least likely to be influenced by religion and sexual orientation.

Employees' perceptions of the diversity dimensions influencing their organization on a daily basis were evaluated using a 1-5 point Likert scale. The higher the mean score value, the more employees perceive the diversity area to influence their organization in its daily operations (Table 2).

Table 2. Descriptive statistics – Employees' perceptions of the diversity dimensions influencing their organization in its daily operations

Diversity Dimension	Mean	Mode	Std. Deviation	Minimum	Maximum
Race	3.8	5	1.4	1	5
Gender	2.5	2	1.3	1	5
Religion	1.7	1	1.0	1	5
Language	2.9	2	1.5	1	5
Sexual orientation	1.8	1	1.2	1	5
Attitudes	3.1	4	1.3	1	5
Values	2.7	2	1.3	1	5
Work experience	3.2	4	1.3	1	5
Physical ability	2.2	2	1.2	1	5
Economic status	2.0	1	1.2	1	5
Personality	2.7	2	1.2	1	5

Table 2 indicates that employees perceive their organizations in their daily operations to be influenced, in descending level based on mean score values, by:

- Race (Mean = 3.8)
- Work experience (Mean = 3.2)
- Attitudes (Mean = 3.1)
- Language (Mean = 2.9)
- Values and Personality (Mean = 2.7)
- Gender (Mean = 2.5)
- Physical ability (Mean = 2.2)
- Economic status (Mean = 2.0)
- Sexual orientation (Mean = 1.8)
- Religion (Mean = 1.7)

Evidently, employees perceive that their organization in its daily operations is predominantly influenced by race, work experience and attitudes. The mode of 5 for Gender and 4 for Attitudes and Work Experience shows that a significant segment of employees perceive that their organization in its daily operations are largely influenced by these three diversity areas. Furthermore, employees perceive that their organization in its daily operations is least likely to be influenced by religion, followed by sexual orientation.

Employees' perceptions of the influence of the diversity dimensions on their interactions with co-workers and on their organization in its daily operations were compared (Figure 1).

Figure 1. Comparison of employees' perceptions of the influence of diversity dimensions on their interactions with co-workers and on the organization in its daily operations

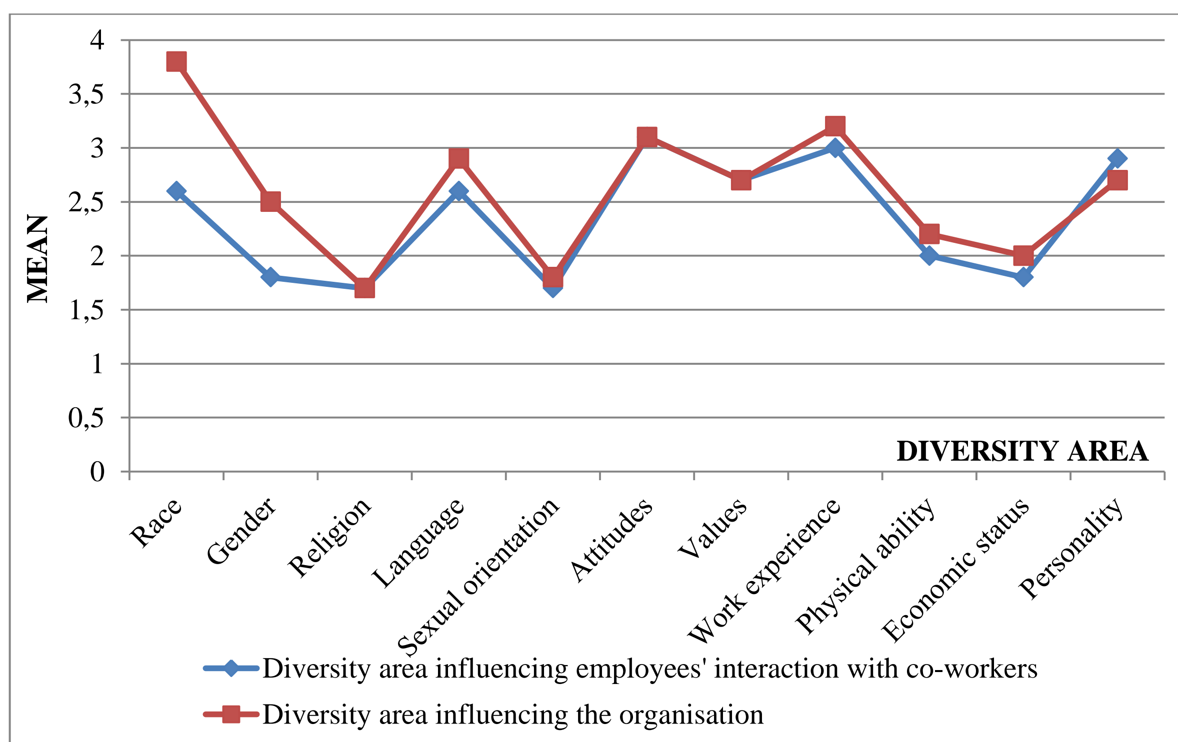

Figure 1 reflects that:

a) Significant differences were noted in employee perceptions of the influence of race and gender on their own interaction with co-workers and their organization's daily operations.

b) Negligible differences were noted in employee perceptions of the influence of language, work experience, physical ability, economic status, personality and sexual orientation on their own interaction and on their organization's daily operations.

c) No differences were noted in employee perceptions of the influence of religion, attitudes and values on their own interaction and on their organization's daily operations.

Evidently, the gap between the perceived differences on the influence of the dimensions on co-worker interactions and day-to-day organizational operations is the greatest for race followed by gender. Employees perceive that race followed by gender influences day-to-day organizational operations to a larger extent than it influences co-worker interactions.

Inferential statistics

Influence of Biographical data

The influence of gender (male, female) on employees' perceptions of the influence of the diversity dimensions on their interactions with co-workers and, on the organization in its daily operations were assessed using chi-square correction (Likelihood ration).

H1: There is a significant relationship between gender (male, female) and employees' perceptions of the influence of the diversity dimensions (race, gender, religion, language, sexual orientation, attitudes, values, work experience, physical ability, economic status, personality) on their interactions with co-workers respectively (Table 3).

Table 3. Correlation (Likelihood ratio) between gender and employees' perceptions of diversity dimensions influencing their interactions with co-workers

Diversity Dimension	Likelihood ratio Value	Df	p
Race	3.806	4	0.433
Gender	12.103	4	0.017*
Religion	6.205	4	0.184
Language	4.570	4	0.334
Sexual orientation	6.092	4	0.192
Attitudes	1.955	4	0.744
Values	7.669	4	0.104
Work experience	2.835	4	0.586
Physical ability	2.051	4	0.726
Economic status	5.404	4	0.248
Personality	2.681	4	0.613

*p < 0.05

Table 3 indicates that there is no significant relationship between gender (male, females) and employees' perceptions of the influence of the respective diversity areas (race, religion, language, sexual orientation, attitudes, values, work experience, physical ability, economic status, personality) on their interactions with co-workers. However, Table 3 reflects that there is a significant relationship between gender (male, female) and the perceptions of employees that gender does influence their interactions with co-workers at the 5% level of significance. In this regard, frequency analyses reflect that more females (87.5%) than males (77.1%) agree that gender influences their interactions with co-workers. Evidently, a significant percentage of both male and female employees are influenced by gender when interacting with co-workers.

H2: There is a significant relationship between gender (male, female) and employees' perceptions of the influence of the diversity dimensions (race, gender, religion, language, sexual orientation, attitudes, values, work experience, physical ability, economic status, personality) on their organization in its daily operations respectively (Table 4).

Table 4. Correlation (Likelihood ratio) between gender and employees' perceptions of the diversity dimensions influencing their organizations in its daily operations

Diversity Dimension	Likelihood ratio Value	Df	p
Race	3.317	4	0.506
Gender	7.036	4	0.134
Religion	2.198	4	0.699
Language	7.116	4	0.130
Sexual orientation	7.012	4	0.135
Attitudes	1.339	4	0.855
Values	9.686	4	0.046*
Work experience	5.155	4	0.272
Physical ability	8.438	4	0.077
Economic status	4.077	4	0.396
Personality	1.709	4	0.789

*p < 0.05

Table 4 indicates that there is no significant relationship between gender (male, females) and employees' perceptions of the influence of the respective diversity areas (race, gender, religion, language, sexual orientation, attitudes, work experience, physical ability, economic status, personality) on their organization in its daily operations. However, Table 4 reflects that there is a significant relationship between gender (male, female) and the perceptions of employees that values do influence their organization and its daily operations at the 5 % level of significance. In this regard, frequency analyses reflect that significantly more males (62.5%) than females (35.5%) agree that gender influences their organization in its daily operations.

Discussion of Results

Employees reflect that their interactions with co-workers are most likely to be influenced by attitudes, work experience and personality and are least likely to be influenced by religion and sexual orientation respectively. The perceived influence of personality on interactions with co-workers is particularly significant since Dougherty, Cheung and Florea (2008) noted that personality influences one's social network and developmental network structures, Yang, Gong and Huo (2011) found that individuals high on proactivity are more likely to engage in helping behaviour and Niehoff (2006) found that participation as a mentor is likely to be influenced by personality. Likewise, it was found in this study that employees perceive their organizations in their daily operations to be influenced the most by race, work experience and attitudes and least by sexual orientation and religion respectively. Regarding the influence of race, Weeks, Weeks and Frost (2007) found a significant interaction between race and social class when predicting the percentage of pay increase given to employees and Gardner and Deadrick (2012) noted that race moderated the validity of cognitive ability in predicting performance. Perhaps, work experience is perceived as having an influence on co-worker interactions and daily organizational operations because work experience influences self-improvement and professionalism (Chinomona & Surujlal, 2012; Hewlett, 2006). Regarding the influence on attitudes on daily organizational operations, Edgar and Geare (2005) found that a significant relationship exists between human resource management practice and employee work-related attitudes. It was also noted that whilst personality was perceived as influencing co-worker interaction it was not viewed as having the potential to strongly influence day-to-day organizational operations. This finding is contrary to that of researchers who found that (1) personality and in particular conscientiousness influences organizational effectiveness (Barbuto, Phipps & Xu, 2010), (2) personality and in particular agreeableness influences job performance (Yang and Hwang, 2014), (3) altruistic employees (those who enjoy helping others) received higher advancement potential ratings and greater reward recommendations and (4) personality influences work involvement, though not strongly or extensively (Bozionelos, 2004).

In this study, it was also noted that religion and sexual orientation had the least influence on co-worker interaction and daily organizational operations. The limited influence of sexual orientation may be due to the fact that since 1980, 12 states have passed legislation banning employment discrimination on the basis of sexual orientation and this philosophy might be permeating throughout many organizations (Human Rights Campaign, 2007) or perhaps, because there is greater willingness by employees to publicly make their gay or lesbian orientation known (Griffith & Hebl, 2002). However, a study undertaken by Fernando and Jackson (2006) found that religion plays a significant role in influencing the judgment, emotion and motivational qualities of Sri Lankan leaders' decision-making.

Furthermore, in this study it was found that the gap between the perceived differences on the influence of the dimensions on co-worker interactions

and day-to-day organizational operations is the greatest for race followed by gender. In other words, employees perceive that race followed by gender influences day-to-day organizational operations to a larger extent than it influences co-worker interactions. In line with the influence of race and gender on organizational operations, Fortune magazine reported that people of colour constituted only 19% of corporate board rooms and 26% of management in the Fortune 1000 and the largest privately owned companies (Hickman, Tkaczyk, Florian & Stemple, 2003) and that in 2006 only 2% of Chief Executive Officers in the Fortune 1000 were women (CNN, 2007), thereby keeping the glass ceiling that prevents women rising in the workplace firmly in place (Human Resource Management International Digest, 2006). Instead of simply assessing the number of women in management, Mensi-Klarbach (2014) proposes assessing gender diversity in top management based on four layers of gender relevant moderators, namely, societal, organizational, top management team and the individual layer. In terms of the influence of gender on co-worker interactions, Leo, Reid, Geldenhys & Govind (2014) emphasize the prevalence of bullying amongst South African employees, and particularly women, in the workplace. However, Richard, McMillan, Chadwick and Dwyer (2003) found that racial diversity resulted in better bank performance when innovation was a core part of the organization's strategy, but jeopardized performance when innovation was not emphasized. Furthermore, Pitts (2009) found that diversity management programs can enhance job satisfaction and perceptions of performance among people of colour.

The influence of gender on employee perceptions of the influence of the diversity dimensions on co-worker interaction and daily organizational operations were also assessed. With regard to the former, it was found that there is a significant relationship between gender (male, female) and the perceptions of employees that gender does influence their interactions with co-workers at the 5% level of significance, with more females (87.5%) feeling in this way than males (77.1%). Evidently, a significant percentage of both male and female employees are influenced by gender when interacting with co-workers.

With regard to the influence of gender on employee perceptions of the influence of the diversity dimensions (race, gender, religion, language, sexual orientation, attitudes, values, work experience, physical ability, economic status, personality) on daily organizational operations, it was found that there is a significant relationship between gender (male, female) and the perceptions of employees that values do influence their organization and its daily operations at the 5 % level of significance, with more males (62.5%) feeling so than females (35.5%). Dean (2008) emphasizes that values are the essence of who we are and influence every facet of our being especially in terms of our motivations, the relationships we build, the organizations we lead as well as our actions and decisions.

The results also indicate that language, physical ability and economic status respectively are perceived by employees as having less influence on co-worker interactions and daily organizational operations. Perhaps, the influence of language on co-worker interactions is clouded since more people are becoming linguistically diverse, for example, 18% of all households in the United States use a language other than English (Rubaii-Barrett & Wise, 2007), multilingualism is encouraged in the South African Police Services (SAPS) in the Western Cape in South Africa (Dyers & George, 2007) and multilingual models of education and language policies are proposed across African populations (Banda, 2009).

Recommendations and Conclusion

The findings reflect that employees perceive that their interactions with co-workers are most likely to be influenced by attitudes, work experience and personality and that daily organizational operations are most likely to be influenced by race, work experience and attitudes. The perceived influence of attitudes, work experience and personality has obvious implications for the human resource practices of recruitment and selection. It is, therefore, recommended to recruit and select individuals whose attitudes and personality are congruent with the culture of the organization and whose work experience fits the job. This will enable the new incumbent to fit into the culture of the organization quicker and better and reach optimal performance within a shorter pace of time. The perceived influence of race on daily organizational operations may be due to race sensitivity particularly that the study is undertaken in South Africa, a country that endured the ills of apartheid. Perhaps, the influence of race on organizational operations is perceived as organizations, whilst complying with legal requirements, may be lagging behind in effectively managing workplace diversity. In the study it was also found that employees perceive that race followed by gender influences day-to-day organizational operations to a larger extent than it influences co-worker interactions. It is, therefore, recommended that organizations create more inclusive work environments where people from diverse backgrounds feel respected and recognized, have mutual understanding and, trust and integrity. The principle of inclusiveness fosters greater employee integration and the cohesion of numerous voices into the organizational dialogue that contributes to attaining organizational effectiveness.

Recommendations for Future Research

This study assesses employee perceptions of the influence of diversity dimensions on co-worker interactions and daily organizational operations. It does not assess the extent to which organizations are engaging in human resource practices that foster more inclusive work environments in managing workforce diversity. Organizations will benefit if future studies focus on the principle of inclusiveness as it has the potential to impact positively on organizational effectiveness.

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IS IT REALLY A BONDING, AN AVOIDANCE, OR A CHARACTERISTICS CHOICE? AN ANALYSIS OF FOREIGN LISTING ON LOW VERSUS HIGH INVESTOR PROTECTION MARKETS

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Abstract

We investigate the difference in the characteristics of firms that cross-list on high versus low investor protection markets. We find that civil law firms that cross-list on common law markets have higher growth rate, larger size and lower turnover pre cross-listing than their counterparts that cross-list on civil law markets. Also, we find that common law firms that cross-list on common law markets are larger and have a lower volume turnover than those that cross-list on civil law markets. Both groups experience a significant increase in their growth after cross-listing on common law markets. We also report that firms which have poor accounting standards, poor performance, are small in size, and from civil law countries are likely to cross-list on the US unregulated exchanges.

JEL: G30, G32, G34

Keywords: Foreign Listing, Legal System, Investor Protection, Civil-Law, Common-Law, Regulated Exchanges, Unregulated Exchanges

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1. Introduction

Abdallah and Goergen (2011) examine the evolution of control for foreign firms that cross-listed on 19 stock markets. They find that these firms experience a decrease in their control concentration. This is the case for civil law firms that cross-list on common law markets and for both groups of common law firms. However, the finding is not upheld for civil law firms that cross-list on civil law markets. Abdallah and Goergen (2011) conclude that the control structure influences the choice of cross-listing location since cross-listing in different legal systems may have different implications for control.

The foreign listing decision is also influenced by the financial needs of the firms. For instance, firms are more likely to cross-list if they are planning a strategic expansion that requires a large amount of external funds. Eiteman et al. (2010), argue that cross-listing enables firms to move from an illiquid market to a liquid market, since the degree of liquidity is different from one market to another. In this regard, firms in illiquid and small markets may benefit from issuing shares internationally, hence enlarging their investor bases. The benefits and reasons for international listing of shares have been explored extensively in previous studies. Those benefits and reasons range from increasing share trading volume (e.g., Barclay et al., 1990; Chowdhry and Nanda, 1991; Mittoo, 1992; Fatemi and Tourani-Rad, 1996; Noronha et al., 1996; Mitto, 1997; Domowitz et al., 1998; Foerster and Karolyi, 1998), to increasing visibility (Baker et al., 2002), reducing cost of capital (Foerster and Karolyi, 1993; Foerster and Karolyi, 1999; Miller, 1999; Ramchand and Sethapakdi, 2000), increasing the level of disclosure (Tesar and Werner; 1995; Noronha et al., 1996; Frost and Pownall, 2000; Leuz and Verrecchia, 2000; Lang et al., 2003a; Lang et al., 2003b; Leuz, 2003; Abdallah et al., 2012), overvaluation (Abdallah and Ioannidis, 2010), and increasing investor protection through bonding (Fuerst, 1998; Coffee, 1999; Kelley and Woidtke, 2001; Coffee, 2002; Reese and Weisbach, 2002; Barton and Waymire, 2003; Doidge, Karolyi and Stulz, 2003; Benos and Weisbach, 2004; Piotroski and Srinivasan, 2008).

Although the literature has answered many questions related to cross-listing, little attempt has

been made to investigate the characteristics and choice of firms that cross-list on high versus low investor protection markets. We mainly investigate how a company's characteristics determine its cross-listing location. Therefore, in a univariate study, we examine the financial characteristics of cross-listed firms before the cross-listing and the implications of cross-listing for them. In particular, we investigate whether firms that cross-list on markets with good investor protection differ from firms that cross-list on markets with low investor protection. We compare the characteristics of our sample firms before and after the cross-listing.

Subsequently, we run a logistic model to test the choice of foreign listing between regulated and unregulated international exchanges. More specifically, we focus on the factors that determine the choice of listing between regulated and unregulated exchanges with respect to investor protection. We find that firms from civil law regimes which cross-list on common law stock exchange markets have a higher growth rate, larger size and a lower turnover pre cross-listing than their counterparts that cross-list on civil law markets. Moreover, we document that firms from common law countries that cross-list on common law markets are larger and have a lower volume turnover than those that cross-list on civil law markets. Our results suggest that civil and common law firms that cross-list on common law markets experience a significant increase in their growth during the cross-listing year. Furthermore, we also provide evidence which indicates that firms from poor investor protection countries, with a low-level of accounting standards, and that are small in size choose to cross-list on the US unregulated exchanges (mainly OTC and PORTAL) which have low investor protection regulations, listing and disclosure requirements.

The rest of the paper is organised as follows. Section 2 presents the hypotheses to be tested. Section 3 defines the sources of data and our variables and explains our methodology. Section 4 discusses the results, and section 5 concludes.

2. Hypotheses to be tested

We derive our hypotheses from the determinants of the cross-listing decision. Firms cross-list in order to raise capital, to improve the liquidity of their shares and to improve their product identification in the host country.

2.1 Cross-listing and raising capital

Firms cross-list in order to raise capital, especially when the financial constraints in their home country are binding. On the home market, the firm is restricted to a certain amount of capital determined by the demand and supply of the market. By listing abroad, the firms' capacity to raise funds is expanded beyond what the firms might have been able to raise in their domestic markets. Mittoo (1992) reports that managers view access to foreign capital markets and the increased ability to raise equity as the main benefits of cross-listing.

Recent research documents that stock markets in countries with good investor protection (La Porta et al., 1997) and higher compliance with legal norms, as measured by the law and order index (Demirgüc-Kunt and Maksimovic, 1998), enable firms to raise more external funds and grow more quickly. An effective legal system discourages the misbehaviour of corporate insiders and should, in principle, impose proper compensation for violations of investor rights. Furthermore, La Porta et al. (1997) find that the percentage of the market capitalisation of equity held by outsiders is higher in common law markets than in civil law markets, and the common law markets have a higher number of listed firms and IPOs than civil law markets.

Firms that cross-list in order to raise capital may have a high level of leverage, high growth opportunities, or their capital needs may be larger than the capacity of their home markets. Due to the existing differences between common law markets and civil law markets regarding the ability of firms to obtain external funds, we hypothesize the following:

H1. Given that common law markets enable firms to raise more external funds than civil law markets, firms that cross-list on common law markets have a higher level of leverage before the cross-listing than firms that cross-list on civil law markets.

H2. Given that common law markets enable firms to raise more external finance than civil law markets, firms that cross-list on common law markets have higher growth opportunities before and after the cross-listing than firms that cross-list on civil law markets.

H3. Given that common law markets are larger and more liquid than civil law markets, firms that cross-list on common law markets have a higher market capitalization relative to their home market before the cross-listing than firms that cross-list on civil law markets.

2.2 Cross-listing and liquidity of the company's shares

Cross-listing the firm's shares abroad makes it easier for foreign investors to acquire and trade the shares. Holding shares in the foreign firm in its domicile market is more risky than holding shares in a firm listed on the local market. This is because of the investment barriers resulting from differences in language, currency, financial reporting and auditing practices, and lack of coverage by financial analysts and the media in the foreign firm. Cross-listing reduces these barriers as the firm prepares periodical information complying with local requirements of the host country. The firm also benefits from local media

and financial analysts' coverage. Accordingly, it will be easier for local investors to obtain timely and relevant information about the foreign firm. This will reduce the risk borne by foreign investors such as exchange risk fluctuations, hence encouraging investors to trade in the share. A survey conducted by Mittoo (1992) reveals that 28% of the managers cite increased liquidity of the firm's share as a major benefit of cross-listing. Mittoo (1992) also reports that firms which voluntarily delisted from foreign exchanges cited lack of trading activity as the main reason for delisting.

Firms that cross-list in order to improve the liquidity of their shares will seek to cross-list on markets with improved market information. The legal and regulatory environment determines the quantity and quality of publicly available information. A good shareholder protection environment minimises the asymmetry information in the market (Brockman and Chung, 2003), which in turn reduces the cost of trading for liquidity providers. This encourages them to trade more often since they are less likely to trade against informed traders. Therefore, we hypothesize the following:

H4. Given that good shareholder protection in common law markets improves share liquidity, firms that cross-list on common law markets have a lower share turnover before the cross-listing than firms that cross-list on civil law markets.

2.3. The choice of the cross-listing location

Coffee (1999; 2002) argues that firms domiciled in low investor protection countries will bond themselves by listing on the US regulated exchanges (AMEX, NASDAQ, and NYSE). Doidge et al. (2004), and Abdallah and Goergen (2011) find supportive evidence. Nonetheless, it is worth noting that those exchanges are associated with a higher level of regulations and listing requirements, and hence, the compliance with their listing requirements requires significant costs to be incurred by the listing firms compared to those of the US unregulated exchanges (OTC and PORTAL). In this respect, Doidge et al. (2004) argue that the decision of firms from poor disclosure environments to list in the US is supportive of the bonding hypothesis. However, the decision of those firms to list on the US unregulated exchanges is to avoid extra costs associated with the listing requirements that are born by listing on the US regulated exchanges. Hence, it is expected that firms from environments with poor accounting standards, those domiciled in poor investor protection countries, those from civil-law countries, firms that have poor performance, and firms that are small in size are more likely to cross-list on the US unregulated exchanges, in order to signal to investors the importance of listing in the US while at the same time incurring fewer listing costs. Hence, we form the following hypothesis:

H5. Firms that are small in size, have poor performance, or are from environments with low accounting standards, poor investor protection, or civil-law countries are likely to cross-list on the US unregulated exchanges to avoid the significant costs associated with listing on regulated exchanges.

3. Sources of Data and methodology

3.1 Sources of data

To test hypotheses H1 to H4, we collected a sample of 175 firms that cross-listed amongst 19 stock exchanges during the period of 1990 to 2000. This sample represents around 21% of the total population of cross-listed firms during that period, due to the fact that the sample was collected manually from websites and sometimes via email after calling the stock exchange when the list of firms was not available on the exchange website. 116 of these firms are from common law countries and 59 are from civil law countries.[2] Table 1 provides the distribution of our sample firms by country of origin[3] and the number of firms from each legal system and their cross-listing location (civil vs. common law system).

To test hypothesis H5 we collected our second sample of firms that had cross-listed on the US and UK regulated, and US unregulated, stock exchanges. Our reasons for choosing these countries were two-fold: first, the US is the only country that has regulated and unregulated exchanges, with differences in listing, disclosure, and regulation requirements. Second, the US and UK have been characterized as having the highest investor protection level worldwide (La Porta *et al*., 1997; 1998).

Accounting data were obtained from Datastream and Thomson Analytics. Trading volume, number of shares outstanding, and market capitalization of the shares outstanding were all obtained from Datastream. When market capitalization is missing, we obtained it from the Federation of the Stock Exchanges (FIBV).

3.2 Methodology

3.2.1 Univariate analysis

For the univariate analysis, we divide our sample firms into four groups: (i) civil law firms that cross-list on civil law markets, (ii) civil law firms that cross-list on common law markets, (iii) common law firms that cross-list on civil law markets, and (iv) common law firms that cross-list on common law markets. This classification of firms allows us to test our hypotheses after controlling for the legal system of the country of origin, i.e., we can compare the characteristics of civil

[2] A similar sample was used by Abdallah and Goergen, 2008.
[3] Country of origin is where the headquarters of the company is based.

firms that cross-list on common law markets with those of civil law firms that cross-list on civil law markets. To test the statistical significance of the differences between the groups, we perform t-tests and Wilcoxon-Mann-Whitney tests for the years –3 to +3 relative to the year of cross-listing.

3.2.2 Definition of variables used in the univariate analysis

Leverage is measured by dividing the long-term debt by the total share capital and reserves. Long-term debt represents the total capital repayable after one year; it includes debentures, bonds, convertibles and debt-like hybrid financial instruments. Total share capital and reserves is the equity share capital and reserves, including preference shares. Growth rate (Growth) is annual asset growth. Relative size (RSize) measures the relative market value of the firms on their domestic market. The relative size of the company is the ratio of the annual average market value of the company, divided by the market value of all the domestic firms listed on the home stock exchange at the end of the year, multiplied by 100. The annual average market value is the average value of the company market value for each day, defined by the closing price for that day multiplied by the shares outstanding. Share turnover (Turnover) is the ratio of the annual average volume of trading shares in thousands, divided by the number of shares outstanding at the end of the year. The trading volume is the volume on the home market, and we believe that this should be a good proxy for the total trading activity for each share (The trading volume on the foreign market is not available for most of the companies and including it in the analysis reduces our observations to almost half. In addition, other researchers such as Pagano et al. (2002) use the volume in the home market as a proxy for trading activity for cross-listed companies. However, they use the monthly figure of the volume at the end of December and we use the average daily figure per year).

3.2.3 Logistic analysis

We predict the choice of cross-listing between regulated and unregulated foreign exchanges. We estimate a logistic model, which allows us to examine if firms from poor investor protection countries are more likely to cross-list on regulated exchanges to signal a commitment to increase the level of investor protection. The model is given as:

$$DFEXCH_i = \alpha + \beta_1(INVESTOR\ PROTECTION) + \beta_2 LNMV_{i,PRE} + \beta_3 ROA_{i,PRE} + \beta_4 DEVEMD_i \quad (1)$$

where $DFEXCH_i$ is a dummy variable that takes the value one if the firm cross-listed on regulated exchanges (AMEX, NASDAQ, NYSE and LSE) and zero if the firm has cross-listed on unregulated exchanges (OTC and PORTAL). We focus on the US and UK, since they are characterized as having the highest level of protection countries (La Porta et al. 1997, 1998). For investor protection, we use three measures (accounting standards rating index, anti-director rights index, and whether the firm is from a civil or common law country). $LNMV_{i,PRE}$ is the natural log of the pre-cross-listing market value. $LNVO_i$ denotes the log of the trading volume during the post-cross-listing period (+2, +250). The average post-listing three years return on assets is given by $ROA_{i,PRE}$. Finally $DEVMD_i$ is a dummy variable that equals one if the firm is from a developed country and zero otherwise.[4] As the measures of investor protection are highly collinear, it is difficult to include them in one equation as this may bias the estimated coefficients, and makes the results difficult to interpret.

Under the hypotheses of investor protection one would expect that firms from countries where investor protection is weak will prefer to list on regulated exchanges to signal their resolve to provide security for the rights of minority shareholders.

4. Empirical results

4.1 Characteristics of cross-listed firms

In this section we discuss the characteristics of cross-listed firms, and the differences between firms that cross-list on low investor protection markets, i.e., civil law markets and firms that cross-list on high investor protection markets such as common law markets. The characteristics we discuss here are leverage, total asset growth, relative size and share turnover.

4.1.1 Leverage

Table 2 displays the descriptive statistics for leverage, as measured by long-term debt, divided by total share capital and reserves. Most of the leverage figures are between 0 and +2 and a few observations are greater than +2. We consider any observation greater than +2 as an outlier and exclude it from the analysis. There are 93 outliers out of 1,109 observations. Inconsistent

[4] This dummy variable is used in Reese and Weisbch (2002).

with hypothesis 1, there is no evidence that civil law firms that cross-list on civil law markets have higher leverage before the cross-listing than civil law firms that cross-list on common law markets. This is also true three years after the cross-listing. On the contrary, we find that throughout most of the period, common law firms that cross-list in common law countries have higher leverage than those that cross-list on civil law markets. However, the difference is only significant in the third year before the cross-listing according to the parametric test, and in the second year following the cross-listing according to both the parametric and non-parametric tests.

Except for common law firms that cross-list on common law markets, we find that all groups of firms reduce their leverage during the cross-listing year. Civil law firms that cross-list on civil law markets reduce their leverage by 39% compared only to 13% for civil law firms that cross-list on common law markets. Also, there is a 3% decline in leverage for common law firms that cross-list on civil law markets. However, the decline in leverage is not statistically significant for any group. We do not find a significant increase in the leverage during the cross-listing year for common law firms that cross-list on common law markets.[5]

4.1.2 Total asset growth (Growth)

Table 3 shows the descriptive statistics for total asset growth. There are 1,096 observations out of 1,017 ranging from –87% to 879%, and only 11 observations out of 1,017 observations are greater than 1000%. Therefore, we consider observations that are greater than 1000% as outliers and exclude them from the analysis. We find that, in general, civil law firms that cross-list on common law markets have higher growth opportunities than civil law firms that cross-list on civil law markets. Although this is true for all years around the cross-listing, it is only significant in the cross-listing year at the 1% level according to the t-test, and is not significant according to the non-parametric test. The finding weakly supports hypothesis 2.

On the contrary, we find that during most of the period, common law firms that cross-list on civil law markets have higher growth opportunities than their counterparts that cross-list on common law markets. The difference is only statistically significant in the second year following the cross-listing for the Wilcoxon-Mann-Whitney test, but it is not significant according to the t-test. However, for the year following the cross-listing, we find that common law firms that cross-list on common law markets have higher asset growth than those that cross-list on civil law markets, but the difference is not statistically significant.

Furthermore, Table 3 reveals that the cross-listing is associated with an increase in total assets during the year of cross-listing for all groups of firms. The increase is only significant for civil law and common law firms that cross-list on common law markets. This suggests that these firms cross-list in order to raise external funds.[6]

4.1.3 Relative size (RSize)

Table 4 displays the descriptive statistics for the company’s relative size (RSize) to the home market. Relative size is calculated by dividing the annual average market value for the company over the total market value of all domestic firms which are listed on its home market. We do not report the RSize for the years after the cross-listing because it is not informative in the context of hypothesis 3, since the company is currently listed on the home and host markets. In addition, our aim is to examine whether the inability of the company to raise funds in its home market before the cross-listing motivates it to cross-list. Consistent with hypothesis 3, Table 4 reveals that the RSize of civil law firms that cross-list on common law markets is higher than the RSize of civil law firms that cross-list on civil law markets. This is true for the cross-listing year and for the three years before the cross-listing. However, the difference is significant for the third year before the cross-listing according to the parametric and non-parametric tests. This finding suggests that civil law firms whose capital needs are large relative to their home market tap large capital markets (i.e., common law markets), in order to raise external funds to finance growth opportunities.

There is some evidence that common law firms that cross-list on common law markets have a higher relative market value than their counterparts that cross-list on civil law markets. The difference is statistically significant for the cross-listing year and one year before the cross-listing, according to the Wilcoxon-Mann-Whitney test, but it is not significant according to the t-test.

4.1.4 Share turnover (Turnover)

Table 5 displays the descriptive statistics for the trading activity on the home market measured by share turnover. Turnover equals the annual average number of company shares traded on the home stock exchange divided by the number of shares outstanding of the company at the end of the year. There are 26 observations out of 1,063 observations greater than or equal to one. Therefore, we consider these observations as outliers and exclude them from the analysis. Inconsistent with hypothesis 4, there is no

[5] In addition, we run the analysis with outliers. In general, we do not find a statistically significant difference between companies that cross-list on civil law markets and those that cross-list on common law markets.

[6] We also perform the analysis for total assets growth with the outliers. In general, the results do not change drastically.

significant difference in the turnover between the civil law firms that cross-list on common law markets and those that cross-list on the civil law markets. However, the figures for common law firms support hypothesis 4. We find that there is a statistically significant difference between the two groups of common law firms. Throughout the whole period, common law firms that cross-list on common law markets have a lower turnover ratio than common law firms that cross-list on civil law markets. There is a no statistically significant increase in the turnover of our sample firms during the year of cross-listing. This is also true for the year after the cross-listing.[7]

4.2. Examining the relation between investor protection and the place of cross-listing (The choice between regulated or unregulated stock exchanges)

To provide further evidence for the relationship between cross-listing and investor protection, we examine the choice of listing between regulated and unregulated international exchanges in relation to the bonding hypothesis (Coffee, 2002). We mainly focus on two countries, the US and UK, which are characterized as having the highest level of investor protection (La Porta *et al*. 1997; 1998). We obtained data on firms that cross-listed on the US/UK regulated exchanges (AMEX, NASDAQ, and NYSE), where the level of regulations and investor protection is high, and those that cross-listed on the US unregulated exchanges (OTC and PORTAL), where the level of regulations and investor protection is low. Table 6 provides a distribution of the sample after dividing firms according to their legal system (civil-law versus common-law).

To test H5, we run a logistic model (equation 1) in order to shed light on factors that may influence the decision to cross-list on regulated or unregulated exchanges. The results of the logistic regression are presented in Table 7. The table indicates that firms with better investor protection (better accounting standards, better anti-director rights regulations, and from common law countries) are more likely to cross-list on regulated exchanges. The table suggests that firms with poor accounting standards cross-list on unregulated exchanges in the US (OTC and PORTAL) in order to prevent additional costs of reconciliation to US GAAP/IAS/UK GAAP,[8] and high levels of enforcement and legal liabilities when cross-listing on regulated exchanges. Likewise, large firms are more likely than small firms to cross-list on regulated exchanges with high levels of investor protection. It is worth noting, however, that the mean (median) size of firms cross-listed on the NYSE and LSE is $6289.02 Mln ($1972.79 Mln) and $6720.12 Mln ($2410.34 Mln), respectively, which is much larger than the $1708.47 Mln ($550.4 Mln) and $1611.4 Mln ($713.4 Mln) for foreign firms listed on OTC and PORTAL, respectively. Hence, large and more sophisticated firms are more likely to be able to meet the costs associated with listing on foreign regulated exchanges. By contrast, many firms seeking low listing costs are expected to go to the US unregulated exchanges.[9] This can be supported by the fact that unregulated exchanges account for about 63% (OTC alone represents about 37%) of foreign listing in the US. This is consistent with Doidge *et al*. (2004) who report that the lower tendency of firms from a low-level disclosure environment to list on regulated stock exchanges is associated with the lower net benefits they receive from such listings.

5. Conclusion

In this paper we investigate whether company characteristics, other than the control structure, influence the choice of cross-listing on civil law markets versus common law markets. We do this by comparing the characteristics of firms that cross-list on common law markets with those of firms that cross-list on civil law markets. We also compare the characteristics of firms within the same group before and after the cross-listing. Furthermore, we predict the choice of cross-listing on regulated exchanges with a high level of investor protection versus unregulated exchanges with a low level of investor protection.

This paper reveals that firms that cross-list on common law markets differ in some financial characteristics from firms that cross-list on civil law markets. We find that civil law firms that cross-list on common law markets have higher growth rates, larger size and lower turnover pre cross-listing than their counterparts that cross-list on civil law markets. Also, we find that common law firms that cross-list on common law markets are larger and have lower volume turnover than those that cross-list on civil law markets. We find that civil and common law firms that cross-list on common law markets experience a significant increase in their growth during the cross-

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[7] We run the analysis with the outliers and obtain similar results. We also conduct the analysis after adding the trading volume on the foreign market. Although the observations are cut to almost half, the analysis (not reported) shows similar results in terms of the differences between the groups and in terms of the pattern of the trading after the cross-listing.

[8] Foreign firms listed in the US have to partially reconcile to US GAAP if listed as ADR level 2, and must fully reconcile to US GAAP if listed as ADR level 3. Foreign firms seeking UK listing have to report under IAS/US or UK GAAP, except firms where the accounting standards of their countries of origin are accepted by the UKLA under the mutual recognition regulations. By contrast, OTC and PORTAL firms do not have to register with the SEC, and do not have to report using US GAAP; they can report using their home GAAP, or any other GAAP.

[9] PORTAL's listing and annual fees are the lowest across all exchanges. In addition, OTC and PORTAL firms, despite having to register with the SEC, do not have to comply with all the reporting requirements set by the SEC. In addition, as level 1 represents the first step into the US market, many foreign firms list as level 1 and go later to levels 2 or 3.

listing year. We find no evidence that there is an increase in the share turnover during the cross-listing year or the year after for all groups of firms.

We also test the choice of cross-listing and provide evidence that is not in line with the bonding hypothesis suggested by Coffee (2002), which states that firms signal their commitment to protect minority investors by cross-listing on exchanges with better investor protection regulations. We instead find evidence indicating that firms with better investor protection (better accounting standards, better anti-director rights regulations, and from common law countries) are more likely to cross-list on regulated exchanges. On the other hand, firms with poor accounting standards are more likely to cross-list on unregulated exchanges in the US (OTC and PORTAL), in order to avoid additional costs of reconciliation to US GAAP/IAS/UK GAAP, and high levels of enforcement and legal liabilities, which they face when cross-listing on regulated exchanges. Likewise, large firms are more likely to cross-list on regulated exchanges, with high levels of investor protection, than small firms. These results are consistent with those of Doige *et al*. (2004) who find that firms from a lower (higher) disclosure environment are less (more) likely to cross-list on regulated exchanges.

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Table 1. Distribution of sample companies

Panel A: Number of cross-listings (CLS) by companies in the final sample and their cross-listing locations for the period 1990-2000

	Country of origin	**Neuer. mkt**	**Euro.NM Amsterdam**	**Lenouvea marche**	**Brussels**	**Frankfurt**	**Paris**	**Amsterdam**	**Stockholm**	**OSLO**	**Swiss**	**Aus-tra-lian**	**New Zealand**	**Irish**	**Tokyo**	**To-ron-to**	**LSE**	**NYSE**	**NASDAQ**	**Total**
1	**Belgium**					1	1			1										3
2	**Germany**						2	1			3				1			2	6	10
3	**France**																		5	5
4	**Italy**							1										2	1	3
5	**Netherlands**				2	2					1						3	2	4	7
6	**Sweden**																	1	4	5
7	**Norway**																1	1	2	4
8	**Switzerland**	1				1			2								2	1	2	5
9	**Austria**					1						1						1		2
10	**Australia**												10			1			5	15
11	**New Zealand**											5							1	6
12	**Denmark**	1																		1
13	**Ireland**															1	5	1	3	7
14	**South Africa**				1												1		1	3
15	**Japan**					7	1										6	3	1	14
16	**Canada**								1	1	1	2		1				4	25	34
17	**UK**	1	2		1	1		4		2				2				2	15	24
18	**US**	3		1	3	3	2	2	2	1	3	3			1	3	4			27
	Total	6	2	1	7	16	6	8	5	5	8	11	10	3	2	5	22	20	75	175

Panel B: Distribution of sample companies by their country of origin

Common law countries		Civil law countries	
Australia	15	Austria	2
Canada	34	Belgium	3
Ireland	7	Denmark	1
New Zealand	6	France	5
South Africa	3	Germany	10
United Kingdom	24	Italy	3
United States	27	Japan	14
		Netherlands	7
		Norway	4
		Sweden	5
		Switzerland	5
Sub-total	116		59
Total	Common + Civil		175

Panel C: Number of sample companies in each legal system and their cross-listing location

		Host country		
		Civil law	Common law	Total
Home country	Civil law	17	42	59
	Common law	30	86	116
	No. of companies	47	128	175

Panel D: Civil versus common law firms that have cross-listed on US and LSE between 1980 and 2000

	AMEX	NASDAQ	NYSE	OTC	PORTAL	LSE	Total	%
English Law Origin	13	65	116	200	49	52	495	0.544
French Law Origin		8	36	62	23	10	139	0.153
German Law Origin		14	23	124	39	24	224	0.246
Scandinavian Law Origin		4	11	9	2	4	30	0.033
Others			1	9	7	5	22	0.024
Total	13	91	187	404	120	95	910	1

Table 2. Descriptive statistics and univariate tests for leverage

Mean, median, minimum, maximum and sample size								
	CLS_{-3}	**CLS_{-2}**	**CLS_{-1}**	**CLS**	**CLS_{+1}**	**CLS_{+2}**	**CLS_{+3}**	**$CLS_{>3}$**
Civil law companies cross listed in civil law countries (22)								
Mean	0.444	0.468	0.437	0.266	0.573	0.505	0.377	0.321
Median	0.375	0.289	0.351	0.198	0.500	0.391	0.338	0.157
Minimum	0.121	0.086	0.006	0.002	0.002	0.000	0.001	0.001
Maximum	1.038	1.533	1.262	0.664	1.734	1.690	0.970	1.849
Sample size	10	11	13	16	11	10	7	26
Civil law companies cross listed in common law countries (21)								
Mean	0.601	0.420	0.447	0.388	0.438	0.489	0.497	0.630
Median	0.508	0.323	0.382	0.088	0.423	0.331	0.328	0.594
Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	1.772	1.536	1.765	1.948	1.948	1.330	1.659	1.393
Sample size	11	18	22	41	27	20	15	20
Common law companies cross listed in civil law countries (12)								
Mean	0.211	0.175	0.270	0.261	0.205	0.233	0.280	0.422
Median	0.090	0.015	0.068	0.031	0.055	0.017	0.001	0.367
Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	0.727	1.053	1.095	1.215	0.935	1.143	1.236	1.338
Sample size	12	17	22	27	18	14	13	28
Common law companies cross listed in common law countries (11)								
Mean	0.432	0.302	0.262	0.324	0.350	0.509	0.424	0.470
Median	0.195	0.069	0.072	0.084	0.164	0.332	0.315	0.322
Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	2.000	1.451	1.812	1.949	1.546	1.752	1.745	1.887
Sample size	32	41	56	70	56	45	31	76
t-statistics for the difference in means between the groups								
(22) vs. (21)	-0.883	0.280	-0.068	-1.213	0.738	0.087	-0.658	-2.112
p-value	0.388	0.782	0.947	0.230	0.465	0.931	0.519	0.040
(12) vs. (11)	-1.754	-1.141	0.078	-0.672	-1.473	-1.807	-0.932	-0.561
p-value	0.087	0.259	0.938	0.503	0.145	0.076	0.357	0.576
Wilcoxon-Mann-Whitney p-value for the difference in means between the groups								
(22) vs.(21)	0.398	0.529	0.946	0.516	0.664	0.775	0.972	0.035
(12) vs.(11)	0.760	0.483	0.809	0.371	0.135	0.062	0.141	0.837
p-value of t-statistics for the difference in means within the same group								
Group 22		**Group 21**			**Group 12**		**Group 11**	
CLS_{+1} -CLS_{-1}	0.51	CLS_{+1} -CLS_{-1}	0.945		CLS_{+1} -CLS_{-1}	0.545	CLS_{+1} -CLS_{-1}	0.24
CLS-CLS_{-1}	0.16	CLS-CLS_{-1}	0.664		CLS-CLS_{-1}	0.936	CLS-CLS_{-1}	0.406
CLS_{+1}-CLS	0.065	CLS_{+1}-CLS	0.701		CLS_{+1}-CLS	0.59	CLS_{+1}-CLS	0.73

Notes:

1- *Leverage is the ratio of long term-debt divided by the total share capital and reserves.*
2- *p-values for the two-tailed test.*

Table 3. Descriptive statistics and univariate tests for growth

Mean, median, minimum, maximum and sample size								
	CLS_{-3}	**CLS_{-2}**	**CLS_{-1}**	**CLS**	**CLS_{+1}**	**CLS_{+2}**	**CLS_{+3}**	**$CLS_{>3}$**
Civil law companies cross listed in civil law countries (22)								
Mean	12.636	39.130	9.739	24.811	16.767	17.677	4.453	13.362
Median	6.824	5.696	10.557	13.475	7.624	4.828	-1.565	3.823
Minimum	-15.310	-1.569	-27.337	-8.878	-8.781	-27.903	-17.408	-28.060
Maximum	74.212	297.584	37.432	112.757	111.411	74.880	40.886	98.397
Sample size	11	14	15	16	13	11	8	34
Civil law companies cross listed in common law countries (21)								
Mean	112.194	53.395	32.893	159.775	24.825	19.075	11.730	11.138
Median	13.069	12.115	15.522	32.616	11.353	18.789	9.321	6.235
Minimum	-2.687	-25.064	-26.425	-7.163	-16.925	-25.819	-33.106	-13.381
Maximum	825.392	340.016	272.039	782.270	284.335	90.917	58.807	59.610
Sample size	15	22	26	33	27	19	14	22
Common law companies cross listed in civil law countries (12)								
Mean	19.357	38.679	88.271	95.569	49.558	67.847	21.411	24.389
Median	10.243	7.722	16.233	55.350	15.827	-0.040	8.507	9.956
Minimum	-4.107	-19.181	-26.944	-33.543	-56.202	-53.582	-27.361	-22.493
Maximum	50.631	335.928	582.666	310.508	297.524	850.401	169.685	490.687
Sample size	9	11	20	26	20	13	13	31
Common law companies cross listed in common law countries (11)								
Mean	23.964	32.285	46.392	90.452	55.218	40.016	36.473	14.695
Median	9.190	9.508	21.875	30.651	13.965	29.304	13.110	5.536
Minimum	-63.871	-49.271	-39.075	-43.824	-49.898	-15.909	-87.012	-56.561
Maximum	157.370	636.420	305.838	777.307	879.131	165.474	403.440	167.089
Sample size	27	35	44	57	59	48	36	85
t-statistics for the difference in means between the groups								
(22) vs. (21)	-1.600	-0.457	-1.263	-3.404	-0.483	-0.133	-0.785	0.335
p-value	0.131	0.651	0.214	0.002	0.632	0.895	0.442	0.739
(12) vs. (11)	-0.251	0.172	-1.138	-0.151	0.172	-0.423	-0.544	0.836
p-value	0.804	0.864	0.267	0.880	0.864	0.680	0.589	0.405
Wilcoxon-Mann-Whitney p-value for the difference in means between the groups								
(22) vs. (21)	0.186	0.436	0.317	0.208	0.697	0.401	0.195	0.933
(12) vs. (11)	0.784	0.528	0.873	0.372	0.565	0.060	0.556	0.998
p-value of t-statistics for the difference in means within the same group								
Group 22		**Group 21**			**Group 12**		**Group 11**	
CLS_{+1} -CLS_{-1}	0.451	CLS_{+1} -CLS_{-1}	0.643		CLS_{+1} -CLS_{-1}	0.36	CLS_{+1} -CLS_{-1}	0.70
CLS-CLS_{-1}	0.11	CLS-CLS_{-1}	0.007		CLS-CLS_{-1}	0.85	CLS-CLS_{-1}	0.092
CLS_{+1}-CLS	0.50	CLS_{+1}-CLS	0.003		CLS_{+1}-CLS	0.139	CLS_{+1}-CLS	0.197

Notes:

1- *Growth is the annual assets growth.*
2- *p-values for the two-tailed test.*

Table 4. Descriptive statistics and univariate tests for relative size (RSize) in %

Mean, median, minimum, maximum and sample size				
	CLS_{-3}	**CLS_{-2}**	**CLS_{-1}**	**CLS**
Civil law companies cross listed in civil law countries (22)				
Mean	0.220	0.285	0.305	0.434
Median	0.043	0.068	0.090	0.306
Minimum	0.022	0.018	0.022	0.022
Maximum	1.482	1.389	1.701	2.408
Sample size	11	13	13	17
Civil law companies cross listed in common law countries (21)				
Mean	1.150	0.943	0.866	1.560
Median	0.702	0.104	0.118	0.257
Minimum	0.028	0.035	0.036	0.017
Maximum	3.306	4.933	4.034	13.036
Sample size	9	13	14	42
Common law companies cross listed in civil law countries (12)				
Mean	0.118	0.110	0.085	0.093
Median	0.012	0.011	0.018	0.022
Minimum	0.000	0.000	0.000	0.000
Maximum	0.868	0.883	0.984	1.427
Sample size	15	17	23	30
Common law companies cross listed in common law countries (11)				
Mean	0.162	0.171	0.184	0.440
Median	0.037	0.028	0.020	0.046
Minimum	0.000	0.001	0.001	0.000
Maximum	2.368	2.211	1.801	14.095
Sample size	38	47	55	84
t-statistics for the difference in means between the groups				
(22) vs. (21)	-1.973	-1.493	-1.418	-2.286
p-value	0.079	0.158	0.175	0.027
(12) vs. (11)	-0.372	-0.566	-1.120	-1.163
p-value	0.711	0.573	0.266	0.247
Wilcoxon-Mann-Whitney p-value for the difference in means between the groups				
(22) vs. (21)	0.087	0.137	0.159	0.269
(12) vs.(11)	0.418	0.330	0.065	0.007

Notes:

1- *Relative size is the ratio of the annual average market value of the company divided by the market value of all domestic firms listed on the home stock exchange at the end of the year multiplied by 100.*
2- *p-values for the two-tailed test*

Table 5. Descriptive statistics and univariate tests for share turnover

Mean, median, minimum, maximum and sample size								
	CLS_{-3}	**CLS_{-2}**	**CLS_{-1}**	**CLS**	**CLS_{+1}**	**CLS_{+2}**	**CLS_{+3}**	**$CLS_{>3}$**
	Civil law companies cross listed in civil law countries (22)							
Mean	0.054	0.041	0.044	0.100	0.092	0.057	0.088	0.046
Median	0.018	0.019	0.020	0.027	0.025	0.018	0.023	0.035
Minimum	0.006	0.006	0.002	0.000	0.000	0.000	0.000	0.001
Maximum	0.281	0.192	0.282	0.382	0.441	0.344	0.342	0.141
Sample size	9	10	12	17	13	10	9	34
Civil law companies cross listed in common law countries (21)								
Mean	0.037	0.071	0.019	0.067	0.039	0.041	0.023	0.019
Median	0.024	0.019	0.008	0.028	0.015	0.026	0.016	0.012
Minimum	0.003	0.002	0.000	0.000	0.001	0.002	0.000	0.001
Maximum	0.083	0.386	0.056	0.651	0.217	0.283	0.063	0.096
Sample size	6	8	8	37	30	20	15	30
Common law companies cross listed in civil law countries (12)								
Mean	0.086	0.122	0.089	0.124	0.072	0.056	0.069	0.132
Median	0.030	0.053	0.049	0.037	0.030	0.035	0.052	0.060
Minimum	0.002	0.000	0.000	0.000	0.005	0.006	0.000	0.002
Maximum	0.374	0.568	0.494	0.885	0.417	0.243	0.342	0.603
Sample size	13	16	20	30	23	14	14	31
Common law companies cross listed in common law countries (11)								
Mean	0.025	0.027	0.041	0.054	0.029	0.029	0.038	0.026
Median	0.011	0.014	0.016	0.018	0.016	0.019	0.019	0.023
Minimum	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.000
Maximum	0.145	0.116	0.348	0.813	0.316	0.319	0.348	0.105
Sample size	31	39	49	75	63	50	39	84
t-statistics for the difference in means between the groups								
(22) vs. (21)	0.463	-0.674	0.873	0.905	1.336	0.539	1.634	3.182
p-value	0.651	0.51	0.394	0.370	0.204	0.594	0.140	0.003
(12) vs. (11)	1.695	2.305	1.757	1.825	1.884	1.771	1.540	3.467
p-value	0.114	0.035	0.092	0.076	0.071	0.081	0.130	0.002
Wilcoxon-Mann-Whitney p-value for the difference in means between the groups								
(22) vs. (21)	0.768	0.859	0.354	0.955	0.597	0.495	0.270	0.022
(12) vs. (11)	0.026	0.093	0.024	0.010	0.020	0.037	0.039	0.000
p-value of t-statistics for the difference in means within the same group								
Group 22		**Group 21**			**Group 12**		**Group 11**	
CLS_{+1} -CLS_{-1}	0.30	CLS_{+1} -CLS_{-1}	0.282		CLS_{+1} -CLS_{-1}	0.611	CLS_{+1} -CLS_{-1}	0.244
CLS-CLS_{-1}	0.215	CLS-CLS_{-1}	0.265		CLS-CLS_{-1}	0.483	CLS-CLS_{-1}	0.492
CLS_{+1}-CLS	0.887	CLS_{+1}-CLS	0.23		CLS_{+1}-CLS	0.26	CLS_{+1}-CLS	0.119

Notes:

1- *Share turnover is the ratio of the annual average volume of trading shares in thousands divided by the number of shares outstanding at the end of the year.*
2- *p-values for the two-tailed test.*

Table 6. Logit model: Regulated versus unregulated foreign listing

Investor protection measures	Accounting standards	Anti-director rights	CIVIL/COMMON
Intercept	-6.9556***	-4.2572***	-2.7427***
	(0.000)	(0.000)	(0.000)
Accounting standards	0.0634***		
	(0.000)		
Anti-director rights		0.3585***	
		(0.000)	
French Law Dummy			-0.4847*
			(0.082)
German Law Dummy			-1.5107***
			(0.000)
Scandinavian Dummy			-0.4301
			(0.388)
DEVMD	0.1221	0.4471*	0.6030**
	(0.673)	(0.088)	(0.021)
LNMV	0.3236***	0.3294***	0.3663***
	(0.000)	(0.000)	(0.000)
ROA	-0.0116*	-0.0140**	-0.0151**
	(0.097)	(0.045)	(0.037)
N	509	520	525
Max-rescaled R^2	0.1599	0.1598	0.2084
Pseudo-R^2	0.1128	0.1128	0.1448

Notes:

1. The accounting standards variable is the rating of accounting standards in the home country of the CL firm taken from La Porta (1998).
2. The anti-director rights variable is an index developed by La Porta et al. (1997; 1998).
3. The French origin dummy, German origin dummy, and Scandinavian origin dummy are dummy variables that each take the value of one if the firm is from French law origin, German law origin, and Scandinavian law origin, respectively, and zero otherwise.
4. LNMV is the natural Log of the firm's market value at day -60 (two months before cross-listing.
5. DEVMD is a dummy variable that equals one if the firm is from a developed country and zero otherwise.
6. ROA is the average of the three year return on assets in the pre cross-listing period.
7. N is the number of observations (firms) in the regression.
8. IPM stands for investor protection measures.
9. ***, **, and * indicate significance at the 1%, 5%, and 10% significance level.

CORPORATE CHARACTERISTICS, SOCIAL RESPONSIBILITY REPORTING, AND FINANCIAL PERFORMANCE: EVIDENCE IN THAILAND

*Muttanachai Suttipun**

Abstract

This study aims to test the relationship between corporate characteristics, social responsibility reporting, and financial performance. The 2011-2012 annual reports of 220 Thai listed companies are used to measure the extent of corporate social responsibility reporting by word counting. The results indicate that there are significant differences in the level of corporate social responsibility reporting between groups of auditor type and corporate social responsibility award. The type of auditor and a previous corporate social responsibility award have a significant effect on the level of corporate social responsibility reporting. The level of corporate social responsibility reporting, and the type of industry are found to significantly influence corporate financial performance.

Keywords: Corporate Social Responsibility Reporting, Financial Performance, Thailand

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1. Introduction

Corporations are being pressured not only by shareholders and investors but also by other stakeholders such as customers, creditors, suppliers, society and community, and the environmental lobby. This reflects increased demands from many stakeholder groups, and the increasing impact of social and environmental issues related to globalization (Soderstrom, 2013). Therefore, corporations in today's world have to serve their stakeholders by balancing economic, social, and environmental performance and work towards the goal of sustainable reporting (GRI, 2011). It is notable that in a 2008 survey, KPMG found that the number of corporations providing corporate social responsibility (CSR) reporting is tending to increase, with the proportion of the 250 world class corporations surveyed providing CSR information increasing from 64 to 80 percent between 2005 and 2008 (KPMG, 2008).

CSR reporting provides mostly non-financial information to all stakeholders, and may play a role for investors' and shareholders' decisions to invest in a corporation (De Klerk and De Villiers, 2012). However, even though there have been many literatures related to CSR reporting in developed countries explained (e.g. Ho and Taylor, 2007; Lozano, 2013), few studies (See Sobhani et al., 2012) have been conducted in developing countries where CSR reporting is still developing concepts especially in Thailand where does not have CSR reporting standards and regulations (Suttipun, 2012). Therefore, the quality of the reporting still varies despite the trend towards extending the concept of corporate responsibility beyond simply that related to the economic performance of the company. Moreover, no study has so far examined the relationship between corporate characteristics, social responsibility reporting, and financial performance of listed companies in developing countries compared with developed countries (See Nakao et al., 2007). Therefore, the factor influencing CSR reporting, and the impact of CSR reporting on financial performance are still questionable and inconclusive (Chen, 2011). In Thailand, some top management still lacks understanding of the main concept of CSR reporting because they still focus to report bases on financial information rather than non-financial information (Smith et al., 2011). Moreover, traditional corporate reporting mainly aims to disclose only financial information because of the framework of Thai Financial Reporting standards (Embong et al., 2012). Even though the traditional financial reporting can serve investors, shareholders, and creditors, but it does not cover all corporate stakeholders' demands that need both financial and non-financial information reporting. In the relationship between CSR reporting and financial performance, the results of prior related studies had been muddled (Margolis and Walsh, 2003; Garcia-Castro et al., 2010). Previous studies in which different countries, different methods, and different periods were conducted in different results. For example, some literatures suggested that CSR reporting is positively related to corporate financial performance (Nakao et al., 2007; Konar and Cohen,

2001), as well that CSR reporting is negatively related to financial performance (Wright and Ferris, 1997).

The study reported herein sought to address that gap in the literature and had two main objectives: to test the different levels of CSR reporting of companies listed in developing countries by using Thailand as a proxy between groups based on industry type, auditor type, and CSR award, and to test the relationship between corporate characteristics, social responsibility reporting, and financial performance by Thai listed companies in the Stock Exchange of Thailand (SET). Therefore, there were two main research questions: are there different levels of CSR reporting of companies listed on the Stock Exchange of Thailand (SET) between groups based on industry type, auditor type, and CSR award, and are there relationships between corporate characteristics, social responsibility reporting, and financial performance.

The study provided contributes expected to the literature relating to CSR reporting in the following ways. Firstly, the study enhances understanding of the relationship between corporate characteristics, CSR reporting and financial performance particularly in developing country. Secondly, this study expands information about CSR reporting in developing countries to scholars, and researchers. It also contributes useful knowledge to investors, shareholders, and creditors who consider CSR reporting when making investment decisions. The study may lead to improvements in the working of Thai CSR reporting regulations with benefits for people, the planet, and profits. This study will also contribute legal and management scholarship by determining the impact that CSR reporting has on company performance and finally the study may motivate Thai listed companies to provide CSR reporting in their annual reports.

2. Theories

Many theories have been cited to explain the relationship between corporate characteristics, CSR reporting, and financial performance, notably agency theory (Mele, 2008), legitimacy theory (Ahmad and Sulaiman, 2004; Islam and Deegan, 2010), stakeholder theory (Gray et al., 1998; Llena et al., 2007), media setting agenda theory (Brown and Deegan, 1998), institution theory (Amran and Devi, 2008), and social political theory (Cheng and Fan, 2010). However, agency and stakeholder theories were the theories used in this study to explain these relationships.

The reason why agency theory was used in this study was to explain how CSR reporting used in developing countries represented by Thailand can close the gap and conflict between owners (principles) and managers (agents) as well as developed countries (See Nakao et al., 2007; Konar and Cohen, 2001). Therefore, the relationship between CSR reporting and financial performance was examined. On the other hand, this study used stakeholder theory to explain whether the power of stakeholder in developing countries represented by Thailand can pressure corporations providing CSR reporting in annual reports as well as developed countries (See Newson and Deegan, 2002; Stray and Ballantine, 2000). From the explanation above, different level of CSR reporting between groups of interests, the relationship between corporate characteristics, and CSR reporting, and the relationship between corporate characteristics, and financial performance were tested in this study.

2.1 Agency theory

In some corporations, there is a conflict of interest between owners (as principals) and managers (as agents). This is because, on the one hand, the owners try to maximize the return on their investment over the long term, whilst, on the other hand, the managers want to maximize their own benefits from the corporation. Moreover, the managers are interested in short term influences on their performance. However, the application of agency theory can help corporations to reduce conflicts between owners and managers (Idowu and Louche, 2011). There are four main potential areas of conflicts; insufficient effort, extravagant investment, entrenchment strategies, and self-dealing. Agency theory suggests that if the utility functions of self-serving owners and managers are aligned, both owners and managers will gain benefits. But, if they are not, agency costs will arise (Mele, 2008). Agency theory focuses on the motivation to pursue self-interest as the main cause of agency costs. However, agency theory suffers from the limitation that it is focused on only two interest groups.

Agency theory in this study was used to explain the relationship between CSR reporting and financial performance. This is because although a company incurs costs providing CSR information in its media, it may gain benefits such as higher sales, higher profits, and higher market valuation, as well as enhancing its reputation. These benefits will of course, improve the company's financial performance.

2.2 Stakeholder theory

Stakeholder theory explains specific corporate actions and activities based on a stakeholder-agency approach, and is concerned with how relationships with stakeholders are managed by companies in terms of the acknowledgement of stakeholder accountability (Cheng and Fan, 2010). As stakeholder influences become crucial for corporate image and comparative advantage, companies manage their stakeholder relationships by providing information, often in the form of voluntary disclosures in their annual reports. The justification is that stakeholders, which Collier (2008) defines as those who have a stake in an

organisation, have something at risk, as well as the power to influence the organisation, including its actions, decisions, policies or goals. Potential stakeholders include shareholders, creditors, suppliers, the government, customers, competitors, employees, employees' families, the media, the local community, local charities, and future generations (Carrol and Bucholtz, 2006).

According to Gray et al. (1996), stakeholders are identified by companies in order to ascertain which groups need to be managed to further the interests of the corporation. Stakeholder theory suggests that companies will manage these relationships based on different factors such as the nature of the task environment, the salience of stakeholder groups and the values of decision makers who determine the shareholder ranking process (Donaldson and Preston, 1995). Management will tend to satisfy the information demands of those stakeholders who are of greatest importance to the corporations' ongoing survival, so that corporations will not respond to all stakeholders equally (Nasi et al., 1997). The power of stakeholders and their expectations can change over time, so that companies have to continually adapt their operating and reporting behaviours (Deegan, 2001). In summary, stakeholder theory views corporations as part of a social system while focusing on the various stakeholder groups within society (Ratanajongkol et al., 2006).

Stakeholder theory regards the notion of CSR as a means of maximizing the wealth of corporations. For example, a corporation has to serve the demands of its shareholders and investors for economic benefit from their investments, and to maximize the market valuation of the company. On the other hand, the needs of customers and labor can also affect corporate activity and action. However, stakeholder theory posits that the level of different corporate activities and actions will be related to the stakeholder groups which demand such activities and actions, based on the power of each stakeholder.

3. Hypothesis Development

CSR reporting is the most common voluntary reporting tool of companies (De Villiers and Alexander, 2014; KPMG, 2011), although there are several reporting tools such as environmental reporting, Triple Bottom-line reporting, sustainable development reporting, and integrated reporting. Some CSR reporting literature had focused on the reasons why companies provide CSR information (See Cowen et al., 1987; Hackston and Milne, 1996). Some prior studies recognized that CSR reporting is different across countries (Jose and Lee, 2007; Kolk et al., 2001). Type of CSR reporting, and kind of news about CSR reporting were also provided (Ho and Taylor, 2007; Deegan and Rankin, 1996). Specific pressure groups (Deegan and Gordon, 1996) and media attention (Brown and Deegan, 1998) were studied on the content of CSR reporting. In this study, there are three main parts of prior researches and hypotheses; relationships between corporate characteristics and social responsibility reporting, CSR reporting and financial performance, and corporate characteristics and financial performance.

3.1 Relationship between corporate characteristics and social responsibility reporting

Using stakeholder theory, previous studies have indicated that the level of CSR reporting can be influenced by corporate characteristics such as size of company (Ho and Taylor, 2007; Deegan and Gordon, 1996), ownership status (Tagesson et al., 2009), type of industry (Newson and Deegan, 2002), age (Suttipun, 2012), type of business (Choi, 1999), type of auditor (Joshi and Gao, 2009), country of origin (Jahamani, 2003; Wanderley et al., 2008), adherence to the ISO26000 guidelines (Admad and Sulaiman, 2004), and CSR awards (Deegan and Gordon, 1996). However, this study will investigate the influence of three variables on the level of CSR reporting: type of industry, type of auditor, and CSR award.

Choi (1999) investigated CSR reporting based on classifying industries as either high or low environmentally sensitive industries. High environmentally sensitive industries are those that have high levels of social and environmental impact (Ho and Taylor, 2007). On the other hand, industries having little social or environmental impact can be classified as low environmentally sensitive industries (Newson and Deegan, 2002). Many previous studies into the relationship between the type of industry and the level of CSR reporting have found a positive relationship (e.g. Choi, 1999; Stray and Ballantine, 2000). By stakeholder theory, this was because stakeholders of corporations in high environmentally sensitive industries had more expectations about corporate financial and non-financial information reporting than other stakeholders of low environmentally sensitive companies (Gray et al., 1996). However, Suttipun (2012) did not find any significant relationship between the type of industry and the level of triple bottom line reporting in Thailand. However, in this study the following hypothesis was adopted:

H1: There is a positive relationship between type of industry, and level of CSR reporting.

Larger auditing companies are generally perceived to provide a more independent auditing service and to abide more closely by auditing standards than smaller auditing firms (Joshi and Gao, 2009) because larger auditing firms are more likely to suffer serious damage to their reputations than smaller auditors. Companies with greater potential gains from external monitoring would generally employ larger auditing firms such as the big-4 audit firms, KPMG, Price Waterhouse Cooper, Deloitte, and Ernst

&Young. Moreover, by stakeholder theory, Big-4 auditors tended to have more corporate stakeholder power to pressure corporations providing CSR reporting than Non-big-4 audit firms. However, previous findings about the relationship between type of auditor and CSR reporting are mixed. For example, Joshi and Gao (2009) and Suttipun (2012) found a relationship between the type of auditor and CSR reporting, but Inchausti (1997), could not find any correlation between them. However, the hypothesis in this study was that:

H2: There is a positive relationship between type of auditor, and the level of CSR reporting.

Since 2006, the SET has encouraged its listed companies to provide more CSR reporting by giving CSR award. By stakeholder theory, companies would like to have more attention from their stakeholder so the companies provide their actions and activities related by stakeholder demands including having CSR award. However, the results of studies into whether there is any relationship between CSR award and the level of CSR reporting have been mixed. On the one hand, Deegan and Gordon (1996) found that companies that have received social and environmental awards tend to provide more social and environmental information than other companies that have not been given such an award. On the other hand, Raar (2002) could not find any relationship between the two variables. However, this study hypothesised that:

H3: There is a positive relationship between previous CSR award, and the level of CSR reporting.

3.2 Relationship between CSR reporting and financial performance

Although there has been more than 30 years of research and more than 100 empirical studies on the issue of the relationship between CSR reporting and financial performance, the findings have been mixed (Garcia-Castro et al., 2010). In a review of 127 previous studies, Margolis and Walsh (2003) found that 109 studies treated CSR reporting as an independent variable in order to investigate if it was predictive of company's financial performance. They found that 54 studies indicated a significant positive relationship, 27 studies showed a significant negative relationship, and 28 studies revealed a non-significant relationship either way. Therefore, there have been three quite different results in studies seeking a relationship between CSR reporting and corporate performance; a positive relationship, a negative relationship, and no relationship at all.

In support of the first position, Porter and Kramer (2006) argued that companies which can reduce social and environmental problems such as natural pollution may be able to increase their productivity, and improve their reputation, and competitive advantage. Moreover, agency theory can explain that CSR reporting can close the conflict between corporate owners and managers by increasing their financial performance. Therefore, companies may earn profits which more than offset the cost of CSR disclosures. For example, in a study of 121 Japanese companies listed on the Tokyo Stock Exchange, Osaka Securities Exchange, and Nagoya Stock Exchange between 2002 and 2003, Nakao et al. (2007) found that environmental performance can positively influence financial performance. Konar and Cohen (2001) also found that corporate environmental performance had a positive impact on financial performance.

Conversely however, Connelly and Limpaphayom (2004) noted that corporations are likely to view CSR reporting as a cost acting to reduce corporate profits and that companies will provide as little CSR reporting as possible to meet the minimum legal requirement. Therefore, there would tend to be a negative relationship between CSR reporting and corporate financial performance. For example, Wright and Ferris (1997) found a negative relationship between CSR reporting and the financial performance of South African corporations between 1987 and 1990.

On the other hand, some studies have found that there is no significant relationship between CSR reporting and corporate financial performance in developing countries. For example, Rahman et al. (2010) could not find any relationship between environmental reporting and company's financial performance among 108 companies listed in Thailand, Malaysia, and Singapore. Aras et al. (2009) also tested for a relationship between CSR reporting and corporate financial performance among 100 companies listed on the Istanbul Stock Exchange between 2005 and 2007. However, they could not find any significant relationship. However, the present study hypothesized that:

H4: There is a positive relationship between the level of CSR reporting, and financial performance.

3.3 Relationship between corporate characteristics and financial performance

Some previous studies focused on companies in developing countries were unable to find any relationship between CSR reporting and company's financial performance (e.g. Rahman et al., 2010; Aras et al., 2009) as opposed to studies in developed countries which were. This may be because there are certain variables which have an effect on the relationship between CSR reporting and financial performance in developing companies such as the type of industry (Fauzi et al., 2007). Therefore, it is possible to believe that industry type can also be related to company performance. For example, Dragomir (2010) found that high environmentally sensitive companies performed better than low environmentally sensitive companies. Shergill and

Sarkaria (1999) also found a relationship between industry type and the company's financial performance of Indian companies. On the other hand, Fauzi et al. (2007) found that there was no significant relationship between the type of industry and the company performance of Indonesian companies. Therefore, this study set out to test whether:

H5: There is a positive relationship between type of industry, and financial performance.

As mentioned earlier, it is commonly believe that big-4 auditors can provide a higher quality audit than non-big 4 auditors. However, the results of studies of the relationship between auditor type and financial performance have been mixed. For example, Teoh and Wong (1993) found that corporations which changed from big-4 auditors to non-big 4 auditors had a lower number of investors responding to their announced earnings (i.e. company performance) after the change. On the other hand, Hackenbrack and Hogan (2002) found that companies which had higher-earning management never changed from non-big-4 auditors to big-4 auditors, and from big-4 auditors to non-big 4 auditors. Chan et al. (2011) found that there was no significant difference in company's financial performance based on whether companies employed big-4 or non-big-4 auditors. However, this study will test the hypothesis that:

H6: There is a positive relationship between type of auditor, and financial performance.

CSR award can function as a means by which corporations enhance their financial performance with respect to their stakeholders, for instance by increasing market valuation, sales, profits and reputation or image. This is because when a corporation receives a CSR award it will send a positive signal to their stakeholders (Brammer et al., 2009). Neely (1999) noted that national and international quality awards can affect the measurement of corporate financial performance. As mentioned earlier, CSR award in Thailand were launched in 2006 to encourage voluntary CSR reporting by Thai companies. However, the results of studies about the relationship between CSR award and company's financial performance have been mixed. Leemakdej (2013) found that a CSR award could influence the company performance (market valuation) of Thai listed companies in the case of companies with a potential agenda problem. On the other hand, Claessens et al. (2000) found that a CSR award did not affect company performance. Hendricks and Singhal (2001) were unable to find any significant differences between the company's financial performance of companies receiving a CSR award earlier or later. However, the hypothesis tested in this study is that:

H7: There is a positive relationship between previous CSR award, and financial performance.

4. Methods

Methods of this study were separated into three parts that consist of data and sample selection, dependent and independent variables used in the study, and data analysis including the equations used for study.

4.1 Data and sample selection

The population in this study was all the companies listed on the SET. Using a 95 percent confidence interval (Yamane, 1973), 220 companies out of the 489 companies listed on the SET were chosen by simple random sampling as the sample in this study. The sources of the CSR reporting information were the 2011, and 2012 annual reports of the companies selected. This source was adopted because the annual report is a conveniently available source of information and is provided regularly every year (Amram and Devi, 2008). It also represents the main form of corporate communication to stakeholders. Moreover, many previous studies relating to CSR reporting have used annual reports as their main source of information. The data were collected between July and December 2013.

4.2 Dependent and independent variables

Fiori et al. (2009) suggested that corporate financial performance can be measured by profitability, solvency, liquidity, and efficiency. The most common measures of performance are return on assets (ROA), return on equity (ROE) and Tobin's Q (Margolis and Walsh, 2001). However, ROA was used in this study because it has been commonly and widely used as an indicator of a company's financial performance in previous studies (e.g. Aras et al., 2009; Bhagat and Bolton, 2008). ROA represents the profitability of the firm with respect to the total set of assets. ROA data was collected from the website of the SET (www.set.or.th/set/commomlookup.do).

The dependent variable in this study, the amount of CSR reporting can be measured in five different ways: content analysis, questionnaire survey, reputational measures, unidimensional indicators, and ethical rating (Wood, 2010). However, content analysis was selected to be used in this study because it has been the most common method used for assessing CSR reporting (Gray et al., 1999) and has been used in many previous studies (Raar, 2002; Hackston and Milne, 1996). Moreover, Krippendorff (1980) asserted that content analysis is a technique allowing a replicable and valid inference from data according to the context. Advantages of content analysis are to provide an objective analysis of written materials, to identify meaning from text data, and to quantify qualitative data (Krippendorff, 1980). Word count from annual reports was used as the analysis unit because it can be more easily categorized (Damak-Ayadi, 2010), and needs less subjective

judgment by the researcher (Gamerschlag et al., 2011). Krippendorff (1980) stated that words are the smallest unit of measurement for analysis and can be expected to provide the maximum robustness in assessing the quantity of reporting. Moreover, words are a preferred measure when it is intended to measure the level of total space devoted to a topic and to ascertain the importance of the topic. Deegan and Gordon (1996) supported that word counting is more detailed than measuring sentence, and part-page counting, while Gray et al. (1998) words lend themselves to more exclusive analysis.

The independent variables employed in the study were: type of industry, type of auditor, and CSR award. Data in respect of these variables were all collected from the companies' annual reports which are available as published documents or on the SET website (www.set.or.th/set/commomlookup.do). The variables were classified as dummy variables. For example, companies were classified as belonging to high or low environmentally sensitive industries to determine industry type and similarly companies were classified as big-4 or non-big-4 auditors under auditor type, and CSR award or non-CSR award companies under CSR award.

4.3 Data analysis

Data was analyzed by independent sample *t*-tests, correlation analysis, and path analysis. Independent sample *t*-tests were used to test the different levels of CSR reporting in annual reports between groups based on industry type, auditor type, and CSR award. Correlation and path analysis were used to test the relationship between corporate characteristics, CSR reporting, and company's financial performance. Accordance between empirical data and confirmatory factor analysis model was tested by using fit statistics such as chi-square, root mean square of approximation (RMSEA), comparative fit index (CFI), goodness-of-fit index (GFI), and adjusted goodness-of-fit index (AGRI). The equations used for path analysis are shown below:

CSR Reporting = a + b1Industry + b2Audit + b3Award + error

Firm Performance = a + b1Industry + b2Audit + b3Award + b4CSR + error

Where:

CSR Reporting = the level of CSR reporting in annual reports measured by the number of words determined by content analysis

Firm Performance = Corporate financial performance measured by ROA

Industry = Industry type (Dummy variable 1 = high environmentally

Sensitive industry, and 2 = low environmentally sensitive industry)

Audit = Type of Auditor (Dummy variable 1 = big-4 auditors, and 2 = non-big-4 auditors)

Award = CSR award (Dummy variable 1 = company having received a CSR award, and 2 = Company not having received a CSR award).

5. Results and Discussions

There were three parts to answer the research questions. Descriptive analysis and the results of *t*-tests were used to test the different levels of corporate social responsibility reporting by the groups of interest. Correlation matrix and path analysis were used to test the relationship between corporate characteristics, social responsibility reporting, and financial performance.

5.1 Descriptive analysis and the results of t-tests

Descriptive analysis was used to show the frequency, percentage distribution, means, and standard deviations of the dependent and independent variables used in this study (see table 1). The findings show that all the companies surveyed provided CSR reporting in their annual reports in 2011 and 2012. The average words dedicated to CSR reporting during the period 2011-2012 by the Thai listed companies was 1,735 words. Of the 220 companies sampled, 67 companies were classified as being in high environmentally sensitive industries with 153 companies in low environmentally sensitive industries. 135 firms used big-4 audit firms as their external auditors, and 85 companies used non-big-4 auditors. Only 27 of the companies had received a CSR award against 193 companies which had not. Independent sample *t*-tests were used to test the different levels of CSR reporting in annual reports between groups based on industry type, auditor type, and CSR award. The results indicate that there were significant differences in the levels of CSR reporting between groups based on auditor type and CSR award at the 0.01 level. However, there was no significant difference in the level of CSR reporting between groups based on the type of industry ($P > 0.05$).

Table 1. Descriptive analysis of variables and the results of Independent sampled *t*-tests

Panel A: Dependent variables					
Variable	Mean	S.D.	Min.	Max.	N
CSR Reporting	1,734.45	3,400.74	356.00	42,836.00	220
Firm Performance	6.25	10.38	-62.91	44.82	220
Panel B: Dummy independent variables					
Variable	Frequency	Percent	Mean	*t*	P-value
Industry					
- High sensitive industry	67	30.5	1302.70	-1.782	.076
- Low sensitive industry	153	69.5	1927.83		
Audit					
- Big-4 auditors	135	61.4	2212.98	3.158	.002**
- Non-big-4 auditors	85	38.6	982.20		
Award					
- CSR award company	27	12.3	3247.85	2.805	.008**
- Non-award company	193	87.7	1526.15		

** Significant at the 0.01 level, * significant at the 0.05 level

5.2 Correlations matrix

A correlation matrix was used to test the relationship between the corporate characteristics, CSR reporting, and financial performance (see Table 2). The results indicate that auditor type and CSR award were significantly correlated with CSR reporting at respectively the 0.01 and 0.05 levels. Moreover, there were significant correlations variously between industry type, audit type, and company's financial performance, but CSR reporting was not found to be correlated significantly with company performance at the 0.05 level.

Table 2. Correlations matrix

	Industry	Audit	Award	Firm Performance	CSR Reporting
Industry	1	.079	.204**	-.194**	.085
Audit		1	.183**	-.156*	-.177**
Award			1	-.017	-.166*
Firm Performance				1	.128
CSR Reporting					1

** Significant at the 0.01 level, * significant at the 0.05 level

5.3 Path analysis

By using fit statistics such as chi-square, root mean square of approximation (RMSEA), comparative fit index (CFI), goodness-of-fit index (GFI), and adjusted goodness-of-fit index (AGRI), the study found a significant accordance between empirical data and confirmatory factor analysis model. Path analysis was used to test whether there were relationships between the company characteristics, CSR reporting, and company's financial performance among the SET listed companies surveyed. The first layer analysis investigated the relationship between corporate characteristics, and CSR reporting, The results show that the type of auditor, and CSR award have significant effects upon CSR reporting at the 0.05 level (See Model A, Table 3), but the type of industry does not influence CSR reporting. The discussion of the findings and how they relate to previous published studies would be separated into three parts. Firstly, the relationship between corporate characteristics and CSR reporting investigated in this study revealed that the type of auditor and an existing CSR award significantly influenced the level of CSR reporting in Thai corporate annual reports. With regard to auditor type, this reflects the fact that big-4 audit firms paid more attention to CSR and CSR reporting than non-big-4 auditors as well as providing financial auditing services. Moreover, they had even created CSR surveys of their clients, e.g. the KPMG International Survey of Corporate Social Responsibility, the Price Waterhouse Cooper Corporate Responsibility Practices Survey, the Deloitte CSR Report and the EY Survey Cooperation with GreenBiz Group conducted by Ernst &Young. By stakeholder theory explanation, Big-4 audit firms as corporate stakeholders had more stakeholder power than Non-big-4 auditors. Therefore, the power of Big-4 auditors made corporations provided more CSR reporting in their annual reports than other companies audited by Non-big-4 audit firms. In this area, the results from developing countries represented by Thailand were

consistent with some previous studies in developed countries (e.g. Joshi and Gao, 2009) which found that companies using big-4 auditors provided more CSR reporting than firms using non-big-4 audit firms. The finding that a previous CSR award was predictive of the level of CSR reporting was not surprising. Since 2006, CSR awards have been given by the ThaiPat Institute, which is a non-profit organization, to Thai companies listed on the SET whose actions and activities were conducive to CSR. Therefore, if a company desired a CSR award it will increase its CSR activities including CSR reporting and disclosures. By stakeholder theory, the corporations with CSR awards in both developed countries (See Deegan and Gordon, 1996), and developing countries (See the present study) would serve and get attention from their stakeholder demands by providing CSR reporting. The result was similar to the findings of Deegan and Gordon (1996) that companies with a CSR awards tended to report more social and environmental information than companies without a CSR award.

From Model B, Table 3, it can be seen that the findings indicate that CSR reporting does significantly influence corporate financial performance. Moreover, the type of industry has a direct effect on company performance at the 0.01 level. However, the study was not able to find any significant relationship between the type of auditor, CSR award, and firm performance (P > 0.05). The study also found a significant positive relationship between CSR reporting and financial performance after controlling for industry type in Thailand. This was because CSR reporting reduced social and environmental conflicts between corporations and their stakeholders, therefore, corporations could increase sales, profits, reputation, and competitive advantage by conducting CSR reporting which might lead to better financial performance. By agency theory, the result could explain how CSR reporting used in developing countries represented by Thailand closed the gap and conflict between owners (principles) and managers (agents) as well as developed countries (See Nakao et al., 2007; Konar and Cohen, 2001).This result is consistent with Nakao et al. (2007), and Konar and Cohen (2001) who found that CSR reporting has a positive impact on company's financial performance.

Table 3. Path analysis model

Model A: The first layer of full path analysis model						
		Unstandardized Coefficients		Standardized Coefficients	*t*	Sig.
		B	Std. Error	Beta		
A	(Constant)	4811.364	1468.165		3.277	.001
	Industry	963.641	495.641	.131	1.944	.053
	Audit	-1092.867	466.486	-.157	-2.343	.020*
	Award	-1700.666	704.906	-.164	-2.413	.017*
Model B: The second layer of full path analysis model						
B	(Constant)	13.091	4.574		2.862	.005
	Industry	-4.720	1.520	-.210	-3.105	.002**
	Audit	-2.744	1.436	-.129	-1.911	.057
	Award	2.265	2.172	.072	1.043	.298
	CSR Reporting	.000	.000	.135	1.987	.048*

Dependent Variable of Model A = CSR Reporting
Dependent Variable of Model B = Firm Performance
** Significant at the 0.01 level, * significant at the 0.05 level

Finally, in regard to the relationship between corporate characteristics and financial performance in developing countries represented by Thailand, the study found that whilst the type of industry (high or low environmentally sensitive) influenced company performance significantly, auditor type, and CSR award had no significant effect. By stakeholder theory, this was because stakeholders of corporations in high environmentally sensitive industries had more expectations about corporate financial and non-financial information reporting than other stakeholders of low environmentally sensitive companies. Therefore, if the companies can satisfy their stakeholders' demands, they can also improve their financial performance in respect of, for instance, income, net profit, and image. This result in developing countries was consistent with developed countries' evidence. For example, Dragomir (2010) found that high environmentally sensitive companies produced better performance than low environmentally sensitive companies.

Figure 1. The full framework of path analysis model

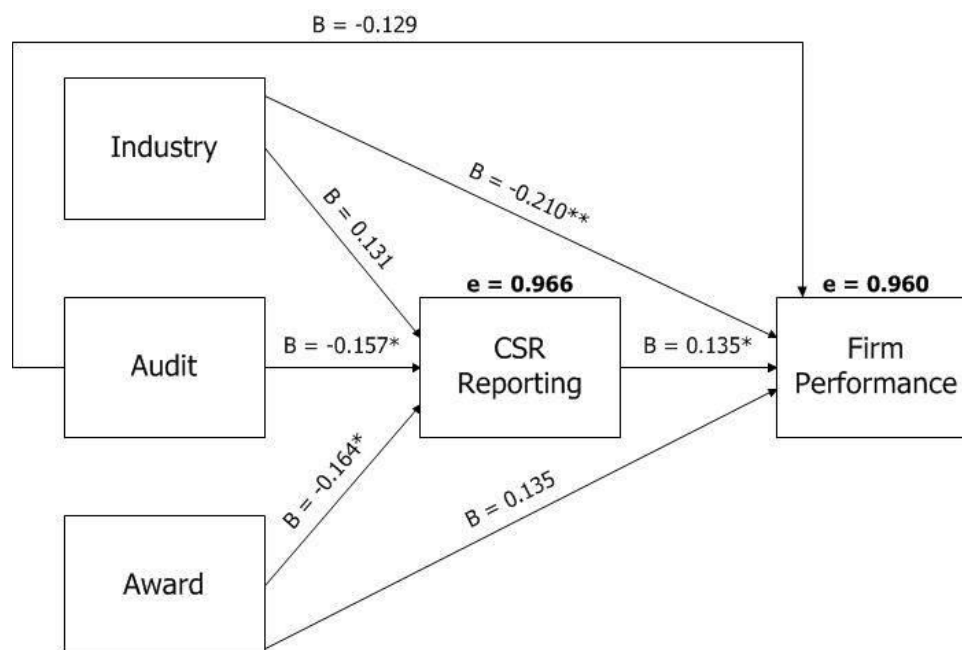

Figure 1 shows the full model of path analysis studied, with CSR reporting as the dependent variable, and the corporate characteristics, industry type, auditor type, and CSR award as independent variables. Alternatively, with firm performance as the dependent variable, the corporate characteristics, and CSR reporting can be viewed as independent variables. The results show that the e value of CSR reporting is 0.966, and that of company performance is 0.960. CSR reporting therefore has a significant influence on company performance at the 0.05 level. However, neither auditor type nor CSR award have any direct influence on company performance at the 0.05 significance level, but they do have an indirect significant effect through CSR reporting ($P < 0.05$). In addition, the type of industry has a direct influence on company performance at the 0.01 significance level.

6. Conclusions

The study's objectives were to test the different levels of CSR reporting by companies listed on the SET between groups based on industry type, auditor type, and CSR award, and to test the relationships between corporate characteristics, CSR reporting, and financial performance. The results indicated that there were significant differences in the level of CSR reporting between groups based on auditor type and CSR award. The type of auditor and a CSR award had a significant effect on the level of CSR reporting. Moreover, CSR reporting and the type of industry significantly influenced company performance. Therefore, there was a significant relationship between auditor type, corporate social responsibility award, and the level of corporate social responsibility reporting. Moreover, there was a significant relationship between industry type, the level of corporate social responsibility reporting, and financial performance.

For practical contributions, the findings provide an important reminder to the Thai government and the SET that it would be desirable to require mandatory rather than voluntary CSR reporting by Thai listed companies. The results showing a relationship between CSR reporting and company performance should motivate companies to integrate social and environmental issues into their strategic business plans and not to concentrate solely on economic issues because CSR reporting can influence their business performance. Finally, the results can benefit for financial stakeholders such as investors, shareholders, and creditors who can use non-financial information from CSR reporting when making investment decisions.

In terms of theoretical contributions, the results suggest that agency, and stakeholder theories relating to the relationship between owners and managers, and between corporations and stakeholders operate in developing countries, especially Thailand, as well as in developed countries. In more details, agency theory in this study can explain how corporations in developing countries represented by Thailand use CSR reporting as utility function to close the gap and conflict between owners and managers as well as developed countries. Moreover, the study also proved that corporate stakeholder powers in developing countries by using Thailand as a proxy can pressure companies providing CSR reporting in annual reports as well as developed countries.

Some factors must be mentioned as limitations of this study. Firstly, the study did not consider the quality of CSR reporting by Thai listed companies

because CSR reporting in Thailand is still voluntary so there is no standard relating to it nor indexes to measure the quality of CSR reporting. Next, there are other corporate characteristics which may influence CSR reporting, and financial performance in Thailand such as the size of the company, whether or not it is a family business, its age, country of origin, and the risks undertaken. Therefore, in a future study, the effect of other corporate characteristics should be tested for their effect on CSR reporting, and financial performance. Moreover, future studies should consider international CSR standards or indexes such as the Global Reporting Initiative guidelines and the ISO26000 guidelines in examining the quality of Thai CSR reporting (See Lozano and Huisingh, 2011).

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USING MATRIX MODELS FOR SIMULTANEOUS TAX PLANNING AND ACCOUNTING POLICY OPTIMIZATION WITHIN THE GERMAN LEGAL AREA

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Abstract

Matrix models have been developed in order to plan and control the effects of complex interrelationships as well as to prepare for and make optimum decisions. For the purpose of tax planning, our investigations focus particularly on simultaneous analyses of the effects and structure of corporate tax, trade tax, deferred taxes, and performance indicators within the German legal area. In addition, the models can also be useful in accounting policy optimization when taking into account the amendments to the German authoritative principle that tax accounting should be based on commercial accounting.

Keywords: Tax Planning, Accounting Policy, Germany, Law

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1. Introduction

Result-dependent successes (e.g., royalties, corporate income tax, trade tax, and deferred taxes) and the annual balance sheet result are interdependent. On the one hand, the result-dependent successes can only be determined with the final balance sheet result and, on the other hand, the final balance sheet result can only be calculated with the result-dependent successes. Therefore, it is necessary to determine these values by using an equation system with which the balance sheet result and the result-dependent successes can be calculated simultaneously. The benefits of simultaneous planning can be used as an instrument of tax planning and management (Freidank 1996, p. 148-154; Freidank and Sassen 2013, p. 93-115; Herzig and Zimmermann 1998, p. 1141-1150; Horváth 2012, p. 247-256). This system must be able to record the financial interdependencies between tax effects, the commercial-law balance sheet, distribution rules, and accounting-policy objectives at the same time. Therefore, we develop a simultaneous equation system to provide the results necessary to make the required decisions.

Furthermore, these linear equation systems can be used for recording result-dependent outcomes within the scope of balance-sheet design processes (accounting policy) in the German legal area. The developed model approaches show the effective and deferred revenue tax effects of an accounting period transparently. Thus, they are also usable in internal and external tax reporting, which includes, among other things, the planning, controlling, and reporting of tax risks (Freidank and Mammen 2008, p. 285-292; Meyer 2010, p. 353-371; Mammen 2011, p. 299-500). Additionally, the auditor may use the simultaneous equation system to review the individualized result-dependent expenses or revenues. For this purpose, only the corresponding variables (e.g., tax rates, royalty rates, and tax-law modifications) are required to determine the commercial-law result if standard software will be used.

Recent changes to the German commercial and tax law[10] have required the further development of existing simultaneous equation systems (Freidank 1990a, p. 261-279; Freidank 1999, p. 811-820; Freidank 2004, p. 447-469; Hahn and Schneider 1998, p. 333-405). Thus, we will show how these approaches must be adjusted to the current tax and commercial law provisions in order to achieve optimal decisions. The simultaneous equation systems are presented as transparent matrix models. The paper is particularly targeted at the integration of the effective tax result, deferred taxes, and the determination of royalties into the matrix models.

The remainder of this paper is organized as follows: Section 2 contains a modification of the basic model and shows adjustments of the simultaneous equation system, commercial-law conditions for the consideration of deferred taxes and an integration of deferred taxes into the model. Section 3 analyzes expansions for accounting policy optimization based on a standard approach. Furthermore, model variations are shown which take into account the novation of the German authoritative principle that tax accounting should be based on commercial accounting. Finally, section 4 summarizes the results.

[10] The paper focuses on the German Corporate Tax Act L (KStG), Solidarity Surcharge Act (SolZG), Trade Tax Act (GewStG), and the Commercial Code (HGB) in particular.

2. Modification of the Basic Model

2.1 Adjustment of the Simultaneous Equation System

Based on a preliminary annual surplus before taxes (vJvor[11]) and royalties expenses (TA), the commercial-law annual surplus (Jnach) can be defined as follows (KSt = corporate tax; GewSt = trade tax; LS = deferred tax result):

$$vJvor - KSt - GewSt - LS - TA = Jnach \quad (1)$$

$$Jnach + KSt + GewSt + LS + TA = vJvor. \quad (2)$$

The value vJvor can be taken from current accounting. It is basically made up of the preliminary annual surplus of the externally oriented accounting after realization of all annual closing entries (without result-dependent outcome). Assuming that the definite burden for corporation tax purposes (sd) = 15 % is applied to the tax base for corporation tax purposes (zvE) (sec. 23 para. 1 KStG), the following applies when taking into account a solidarity surcharge (soli) of 5.5% to the determined corporate tax (sec. 2 no. 3, sec. 3 para. 1 nos. 1, 2, sec. 4 SolZG):

$$KSt = (1 + soli) \times sd \times zvE \quad (3)$$

or with the corporate tax factor (sk) = (1 + soli) × sd

$$KSt = sk \times zvE. \quad (4)$$

Although the tax accounting should be based on commercial accounting, there are diverse exceptions to this authoritative principle. Furthermore, companies have to consider some corporate and trade tax modifications. Thus, the commercial-law annual surplus (Jnach) and the tax base for corporation tax purposes (zvE) are not identical. These deviations are marked in Fig. 1 with the variable Δk, which can have a positive or negative prefix. This depends on the deviations between the commercial and tax balances, the corporate-tax-law-related modifications, and the tax-loss deduction[12].

[11] All symbols are based on previous papers (Freidank 1990a, p. 261-279; Freidank 1999, p. 811-820; Freidank 2004, p. 447-469; Hahn and Schneider 1998, p. 333-405).
[12] The tax-loss deduction has to be corrected outside of the tax balance sheet.

Figure 1. Calculation of the tax base for corporation tax purposes

	Annual result under commercial law (Jnach)	
±	Deviations between the commercial and tax balance sheet	Δk
=	Annual result under tax law	
±	Result correction due to income- and corporate-tax-law provisions (sec. 8 para. 1 KStG in conjunction with sec. 3, sec. 4 para. 5, sec. 4h EStG; e.g., deferred tax revenue)	
+	Non-deductible tax expenses [e.g., corporate tax (sec. 10 no. 2 KStG), trade tax (sec. 4 para. 5b EStG) or deferred tax expenses]	
+	Other non-deductible expenses (sec. 9 para. 1 no. 2, sec. 10 no. 1, 3, 4 KStG)	
+	Concealed profit distributions (sec. 8 para. 3 KStG)	
–	Concealed contributions	
–	Share in profits and manager compensation of the personally liable shareholder of a partnership limited by shares (sec. 9 para. 1 no. 1 KStG)	
=	Corrected annual result under tax law	
–	Loss deduction under corporate tax law (sec. 8 para. 1 KStG in conjunction with sec. 10d EStG) (Vk)	
=	Tax base for corporation tax purposes (zvE)	

With variable Δk, this results in equation (5).

The condition (Jnach + Δk) ≥ 0 has to apply because the corporate tax (KSt) will be negative otherwise. In the case of a negative tax base for corporation tax purposes (zvE), it is under certain conditions possible to use the losses in former or prospective periods (sec. 8 para. 1 KStG in conjunction with sec. 10d EStG). The single-periodic models of this paper do not use this opportunity. They only consider loss deductions from previous tax periods.

The difference Δk contains KSt, GewSt, and LS. These components of the interdependent equation system must have a dynamic nature. If KSt, GewSt, and LS are now deducted from Δk, this results in the following constant term (equation 6), which records those deviations between Jnach and zvE that do not affect corporate tax, trade tax, and the deferred tax result.

Due to this modification, equation (5) after conversion results in equation (7).

$$\text{KSt} = \text{sk} \times (\text{Jnach} + \Delta k) \tag{5}$$

$$\Delta k^* = \Delta k - (\text{KSt} + \text{GewSt} + \text{LS}) \tag{6}$$

$$-\frac{\text{sk}}{(1-\text{sk})} \times \text{Jnach} + \text{KSt} - \frac{\text{sk}}{(1-\text{sk})} \times \text{GewSt} - \frac{\text{sk}}{(1-\text{sk})} \times \text{LS} = \frac{\text{sk}}{(1-\text{sk})} \times \Delta k^* \tag{7}$$

Fig. 2 shows the calculation of the tax base for trade tax purposes [trade revenue (GE) (sec. 7 GewStG)]. Therefore, the tax base for corporation tax purposes before loss deduction must be corrected by certain modifications under trade law and the trade loss deduction (Δg).

Figure 2. Calculation of the tax base for trade tax purposes

	Tax base for corporation tax purposes before loss deduction	
±	Modifications under trade tax law (sec. 8, sec. 9 GewStG)	Δg
–	Loss deduction under trade tax law (Vg) (sec. 10a GewStG)	
=	Tax base for trade tax purposes (trade earnings) (GE)	

The trade tax (GewSt) in equation (8) and (9) has to be calculated on the basis of trade earnings (GE) with h = rate of assessment of the municipality in % / 100 and m = trade tax index number in % / 100, and under inclusion of the formulas developed above.

The expression in brackets in formula (9) must be ≥ 0 because the trade tax (GewSt) will be negative otherwise. In the case of a negative tax base for trade tax purposes (GE), it is under certain conditions possible to use the losses in former or prospective periods (sec. 10a GewStG). The single-periodic models of this paper do not use this opportunity. They only consider loss deductions from previous tax periods. With $m \times h = sg$ (trade tax factor), equation (9) can also be written after conversion as shown in formula (10).

$$\text{GewSt} = \text{m} \times \text{h} \times \text{GE} \tag{8}$$

$$\text{GewSt} = \text{m} \times \text{h} \times (\text{Jnach} + \Delta\text{k}^* + \text{KSt} + \text{GewSt} + \text{LS} + \Delta\text{g} + \text{Vk}) \tag{9}$$

$$-\frac{\text{sg}}{(1-\text{sg})} \times \text{Jnach} - \frac{\text{sg}}{(1-\text{sg})} \times \text{KSt} + \text{GewSt} - \frac{\text{sg}}{(1-\text{sg})} \times \text{LS} = \frac{\text{sg}}{(1-\text{sg})} \times (\Delta\text{k}^* + \text{Vk} + \Delta\text{g}). \tag{10}$$

Fig. 3 shows the calculation of the assessment base for royalties. We assume that they are either directly or indirectly calculated based on the annual result under commercial law considering statutory provisions or contractual agreements (e.g., after reconciliation by accounting policy or extraordinary effects). Using the factor tb (royalties' factor), which is to be applied to the assessment basis for royalties (TB), results in the following equation (11) for royalties expenses (TA).

Figure 3. Calculation of the assessment base for royalties

	Annual result under commercial law (Jnach)
±	Changes due to royalties agreements (Δta)
=	Assessment basis for royalties (TB)

$$\text{TA} = \text{tb} \times \text{TB} = \text{tb} \times (\text{Jnach} + \Delta\text{ta}) \text{ with } 0 \leq \text{tb} \leq 1 \text{ or} \tag{11}$$

$$-\text{tb} \times \text{Jnach} + \text{TA} = \text{tb} \times \Delta\text{ta}. \tag{12}$$

Formulas (2), (7), (10), and (12), which concern corporate tax, trade tax, and royalties, describe direct dependencies between these expenses and the annual surplus under commercial law. The next section shows the relationship between the annual surplus under commercial law and the deferred tax result.

2.2 Commercial-Law Conditions for the Consideration of Deferred Taxes

The recognition and measurement differences to be considered according to sec. 274 HGB result from breaking with the authoritative principle that tax accounting should be based on commercial accounting (sec. 5 para. 1 sentence 1 EStG) (Freidank and Velte 2012, p. 33-38; Fuhrmann and Gellrich 2012, p. 107-168; Meyer 2010, p. 353-371). Therefore, certain provisions under commercial law are not valid for the determination of the profit under tax law (e.g., sec. 5 para. 6 EStG). There can be temporary and quasi-permanent differences between the commercial-law values of assets, debts, accruals, and deferrals and their tax-law values, which lead to deferred tax assets or liabilities (sec. 274 para. 1 HGB). In addition, tax loss carried forward according to sec. 274 para. 1 sentence 4 HGB may also lead to deferred taxes because it is a (future) economic benefit of the company (Herzig and Briesemeister 2012, p. 169-221).

The balance sheet value differences do not always affect the earnings. According to the temporary concept, deviations between the commercial and tax balance sheet that do not affect the result are recorded as well. They occur in purchase processes in which differences result between the commercial-law value and the relevant tax value.[13] Usually the recognition of deferred taxes affects the result. In this case the expense or revenue from the change in deferred taxes is to be shown in the profit and loss statement separately under the item "income taxes" (sec. 274 para. 2 sentence 3 HGB). In the case of deviations between recognition and measurement that do not affect the result, the affected changes of deferred taxes in the balance sheet must be shown in equity (e.g., in other retained earnings). The following models assume the usual case that deferred tax revenues and expenses affect the result.

It is possible that firms disclose deferred taxes by the net or gross method (sec. 274 para. 1 sentence 3 HGB). The calculation of deferred tax assets or liabilities is based on sg when it concerns trade tax and by taking into account the solidarity surcharge on sk when it concerns corporate tax. The amount to be recognized as a deferred tax asset or liability results from multiplication of the company's summarized individual tax rate (s = sg + sk) by the temporary balance sheet differences and benefits from chargeable loss carried forward (Fuhrmann and Gellrich 2012, p. 121-122). The following models assume that the deferred taxes are based on a (future) constant revenue tax rate at the time of reduction of the differences.

2.3 Integration of Deferred Taxes

Taking the above commercial law conditions into account, the deferred taxes can now be integrated into

[13] For example, the purchase of assets taking into account a tax investment surcharge that is recorded differently in the commercial and tax balance sheets or contributions in kind to other values in the commercial and tax balance sheets (Bertram 2012, comment 118 on sec. 274 HGB).

the model by using individual differences. This method permits a more transparent view of the company's financial situation due to the recognition of deferred tax assets and liabilities on a gross basis according to sec. 274 para. 1 sentence 3 HGB than when using the net method. This procedure generally corresponds to the international provisions on accounting of deferred taxes (IAS 12.74). Furthermore, the gross method requires separate and simultaneous calculation of the deferred asset and liability value and the deferred tax expense or revenue. If the firm maintains the corresponding difference overview (Freidank and Velte 2013, p. 808-891; Fuhrmann and Gellrich 2012, p. 119), the respective temporary and quasi-permanent differences that result from comparison of the tax and commercial balance sheet values can be taken from it. Finally, we are assuming an obligation to recognize deferred tax assets analogously to international provisions (IAS 12.24).

Fig. 4 shows the components of the assessment basis of deferred tax assets that will lead to the total of the deferred taxes asset item in the annual statement under commercial law when multiplying by the indicated tax factors.

Figure 4. Determination of the deferred tax asset item

	Components of the assessment basis	**Tax factor**
	Temporary differences that lead to the recognition of deferred tax assets (ADt)	
+	Quasi-permanent differences that lead to the recognition of deferred tax assets (ADqp)	
=	Total of those differences that lead to deferred tax assets (AD)	s
+	Loss carried forward of the previous years under corporate tax law, which may be used within the next five years (ΣKVvor5)	sk
+	Loss of the period under corporate tax law that can be carried forward (KVvor) and that arises from a negative tax base for corporation tax purposes (– zvE)	sk
+	Loss carried forward of the previous years under trade tax law, which may be used within the next five years (ΣGVvor5)	sg
+	Loss of the period under trade tax law that can be carried forward (GVvor) and that arises from a negative tax base for trade tax purposes (trade earnings) (– GE)	sg
=	Amount of the deferred taxes asset item (LESTA)	

If the current period has a negative zvE and/or GE, this affects the amount of the deferred tax assets (sec. 8 para. 1 KStG, sec. 10d para. 2, 4 EStG, sec. 10a GewStG). To simplify the model, we assume that there is no loss carry-back (sec. 8 para. 1 KStG, sec. 10d para. 1 EStG) and that the loss of the current accounting period under tax law (sec. 274 para. 1 sentence 4 HGB) can be used within the next five years. According to these assumptions, the loss under corporate and trade tax law must be fully included in the assessment basis of the deferred taxes. Therefore, we assume that the loss of the period under corporate tax law that can be carried forward (KVvor) corresponds to the negative zvE. Equation (13) applies.

According to these conditions, we assume that the loss of the period under trade tax law that can be carried forward (GVvor) corresponds to the negative GE [Equation (14)].

There are four possible cases that have to be considered when model building (Fig. 5).

$$KVvor = zvE = Jnach + KSt + GewSt + LS + \Delta k^*, \quad \text{if } (Jnach + KSt + GewSt + LS + \Delta k^*) < 0. \tag{13}$$

$$GVvor = GE = Jnach + KSt + GewSt + LS + \Delta k^* + Vk + \Delta g, \quad \text{if } (Jnach + KSt + GewSt + LS + \Delta k^* + Vk + \Delta g) < 0. \tag{14}$$

Figure 5. Possible cases for consideration of loss carried forward under tax law

Case
Case 1 zvE > 0 and GE > 0 → LESTA must be determined according to formula (15) (Fig. 7)
Case 2 zvE < 0 and GE < 0 → LESTA must be determined according to formula (22) (Fig. 8)
Case 3 zvE < 0 and GE > 0 → LESTA must be determined according to formula (24) (Fig. 9)
Case 4 zvE > 0 and GE < 0 → LESTA must be determined according to formula (26) (Fig. 10)

The temporary and quasi-permanent balance sheet differences (AD) and losses carried forward of the previous year must be assessed by using the relevant tax rates to determine the value of deferred tax asset item (LESTA).

$$LESTA = AD \times s + \Sigma KVvor5 \times sk + \Sigma GVvor5 \times sg \quad (15)$$

It is necessary to calculate the amount change of the deferred asset item between the current and the previous year (ΔLESTA) to be able to determine the amount of the deferred tax result. The amount of the deferred asset item of the previous period is expressed in the following formula by LESTAvor:

$$\Delta LESTA = LESTA - LESTAvor. \quad (16)$$

If $\Delta LESTA < 0$, the deferred tax assets item decreases and leads to deferred tax expenses in the profit and loss statement under the commercial law in the amount of ΔLESTA. If $\Delta LESTA > 0$, the deferred tax asset item increases and leads to a deferred tax revenue in the amount of ΔLESTA.

Fig. 6 shows the components of the assessment basis for deferred tax liabilities that will lead to the deferred tax liabilities item in the annual statement under commercial law when multiplied by the indicated tax rate (s).

Figure 6. Determination of the deferred liability items

Components of the assessment basis	Tax rate
Temporary differences that lead to the recognition of deferred tax liabilities (PDt)	s
+ Quasi-permanent differences that lead to the recognition of deferred tax liabilities (PDqp)	s
= Total of those differences that lead to deferred tax liabilities (PD)	s
= Amount of the deferred taxes liabilities item (LESTP)	

The temporary and quasi-permanent differences (PD) must be multiplied by the tax rate s to arrive at the deferred tax liabilities.

$$LESTP = PD \times s \quad (17)$$

The change in the deferred tax liability item between the current and previous year (ΔLESTP) must be determined to calculate the deferred tax result. The deferred tax liability of the previous period is represented by LESTPvor in the following formula:

$$\Delta LESTP = LESTP - LESTPvor \quad (18)$$

If $\Delta LESTP < 0$, the deferred tax liability item decreases and leads to deferred tax revenues of ΔLESTP in the profit and loss statement. If $\Delta LESTP > 0$, the deferred tax liability item increases and causes a deferred tax expense in the amount of ΔLESTP.

The deferred tax result of the current period (LS) is determined by the equation (19).

LS results from the change in the deferred tax assets and liabilities. If $LS > 0$, this leads to deferred tax expenses in the profit and loss statement under commercial law and reduces the annual surplus of the current period. In the case of $LS < 0$, this leads to deferred tax revenues and increases the annual surplus of the current period. Equation (19) must be transformed for the simultaneous equation system as shown in equation 20.

Finally, equations (2), (7), (10), (12), (15), (17), and (20) must be used in the simultaneous equation system that is shown as a matrix in Fig. 7.

$$LS = LESTP - LESTPvor - (LESTA - LESTAvor) \quad (19)$$

$$LS + LESTA - LESTP = -LESTPvor + LESTAvor. \quad (20)$$

Figure 7. Model 1 as a matrix

$$\begin{bmatrix} 1 & 1 & 1 & 1 & 0 & 0 & 1 \\ -\frac{sk}{(1-sk)} & 1 & -\frac{sk}{(1-sk)} & -\frac{sk}{(1-sk)} & 0 & 0 & 0 \\ -\frac{sg}{(1-sg)} & -\frac{sg}{(1-sg)} & 1 & -\frac{sg}{(1-sg)} & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 1 & -1 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 & 0 \\ -tb & 0 & 0 & 0 & 0 & 0 & 1 \end{bmatrix} \times \begin{bmatrix} Jnach \\ KSt \\ GewSt \\ LS \\ LESTA \\ LESTP \\ TA \end{bmatrix} = \begin{bmatrix} vJvor \\ \frac{sk}{(1-sk)} \times \Delta k^* \\ \frac{sg}{(1-sg)} \times (\Delta k^* + Vk + \Delta g) \\ -LESTPvor + LESTAvor \\ AD \times s + \Sigma KVvor5 \times sk + \Sigma GVvor5 \times sg \\ PD \times s \\ tb \times \Delta ta \end{bmatrix}$$

If zvE and GE are negative, the resulting loss under tax law leads to capitalization of deferred tax assets, if sufficient positive earnings will be realized within five years to offset the tax losses and under consideration of the minimum taxation condition. In this case, the following equation (21) must be used to determine LESTA.

After insertion of the corresponding expressions for zvE and GE and conversion, it results in the equation (22).

This equation must be used to modify the approach shown for matrix model 1 in Fig. 7 as explained in Fig. 8. Equations (2), (12), (17), (20), and (22) have been entered into this system. Formulas (7) and (10) for KSt and GewSt are not included in Fig. 8 because KSt and GewSt do not arise from a negative zvE and GE. We assume in this and the following cases for the royalties that its assessment basis TB is positive, because otherwise the variable TA must be removed from the matrix as well.

$$LESTA = AD \times s + (\Sigma KVvor5 - zvE) \times sk + (\Sigma GVvor5 - GE) \times sg \quad (21)$$

$$s \times Jnach + s \times KSt + s \times GewSt + s \times LS + LESTA = AD \times s + sk \times \Sigma KVvor5 - s \times \Delta k^* + sg \times (\Sigma GVvor5 - Vk - \Delta g). \quad (22)$$

Figure 8. Model 2 as a matrix

$$\begin{bmatrix} 1 & 1 & 0 & 0 & 1 \\ 0 & 1 & 1 & -1 & 0 \\ s & s & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ -tb & 0 & 0 & 0 & 1 \end{bmatrix} \times \begin{bmatrix} Jnach \\ LS \\ LESTA \\ LESTP \\ TA \end{bmatrix} = \begin{bmatrix} vJvor \\ -LESTPvor + LESTAvor \\ AD \times s + sk \times \Sigma KVvor5 - s \times \Delta k^* + sg \times (\Sigma GVvor5 - Vk - \Delta g) \\ PD \times s \\ \Delta tb \times ta \end{bmatrix}$$

If zvE is negative and GE is positive, the formula for LESTA must be modified as shown in equation 23.

After insertion of the corresponding expression for zvE, it results in the following equation (24) after conversion.

Equations (2), (10), (12), (17), (20), and (24) must be entered into the simultaneous equation system. Equation (7) for KSt is not contained in the matrix. Fig. 9 shows the changed matrix model.

$$LESTA = AD \times s + (\Sigma KVvor5 - zvE) \times sk + \Sigma GVvor5 \times sg. \quad (23)$$

$$sk \times Jnach + sk \times KSt + sk \times GewSt + sk \times LS + LESTA = AD \times s + \Sigma KVvor5 \times sk - \Delta k^* \times sk + \Sigma GVvor5 \times sg \quad (24)$$

Figure 9. Model 3 as a matrix

$$\begin{bmatrix} 1 & 1 & 1 & 0 & 0 & 1 \\ -\frac{sg}{(1-sg)} & 1 & -\frac{sg}{(1-sg)} & 0 & 0 & 0 \\ 0 & 0 & 1 & 1 & -1 & 0 \\ sk & sk & sk & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ -tb & 0 & 0 & 0 & 0 & 1 \end{bmatrix} \times \begin{bmatrix} Jnach \\ GewSt \\ LS \\ LESTA \\ LESTP \\ TA \end{bmatrix} = \begin{bmatrix} vJvor \\ \frac{sg}{(1-sg)} \times (\Delta k^* + Vk + \Delta g) \\ - LESTPvor + LESTAvor \\ AD \times s + \Sigma KVvor5 \times sk - \Delta k^* \times sk + \Sigma GVvor5 \times sg \\ PD \times s \\ tb \times ta \end{bmatrix}$$

If zvE is positive and GE negative, the equation for LESTA must be modified as shown in equation (25).

After insertion of the corresponding expression for GE and conversion, it results in the following equation (26).

Equations (2), (7), (12), (17), (20), and (26) must be inserted into the equation system, whereas formula (10) for GewSt is omitted. Fig. 10 shows the adjusted matrix model.

$$LESTA = AD \times s + \Sigma KVvor5 \times sk + (\Sigma GVvor5 - GE) \times sg \quad (25)$$

$$sg \times Jnach + sg \times KSt + sg \times GewSt + sg \times LS + LESTA = \\ = AD \times s + sk \times \Sigma KVvor5 + sg \times (\Sigma GVvor5 - \Delta k^* - Vk - \Delta g). \quad (26)$$

Figure 10. Model 4 as a matrix

$$\begin{bmatrix} 1 & 1 & 1 & 0 & 0 & 1 \\ -\frac{sk}{(1-sk)} & 1 & -\frac{sk}{(1-sk)} & 0 & 0 & 0 \\ 0 & 0 & 1 & 1 & -1 & 0 \\ sg & sg & sg & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ -tb & 0 & 0 & 0 & 0 & 1 \end{bmatrix} \times \begin{bmatrix} Jnach \\ KSt \\ LS \\ LESTA \\ LESTP \\ TA \end{bmatrix} = \begin{bmatrix} vJvor \\ \frac{sk}{(1-sk)} \times \Delta k^* \\ - LESTPvor + LESTAvor \\ AD \times s + sk \times \Sigma KVvor5 + sg \times (\Sigma GVvor5 - \Delta k^* - Vk - \Delta g) \\ PD \times s \\ tb \times ta \end{bmatrix}$$

Finally, the distribution restriction must be observed. Sec. 268 para. 8 HGB gives three scenarios that might lead to an amount blocked from distribution (Fig. 11).

Figure 11. Determination of the amount blocked from distribution

	Amount of the self-created intangible assets (sec. 248 para. 2 sentence 1 HGB) (IVGav)
–	Deferred tax liabilities formed for the amount of the self-created intangible assets (sec. 248 para. 2 sentence 1 HGB) (LSPIVGav)
+	Difference between the fair value and the acquisition costs of assets for old-age pension (sec. 246 para. 2 sentence 2 HGB) (ΔZAalt)
–	Deferred tax liability formed for the difference between the fair value and the acquisition costs of assets for old-age pension (sec. 246 para. 2 sentence 2 HGB) (LSPΔZAalt)
+	Amount of deferred tax assets (LESTA)
–	Amount of deferred tax liabilities (LESTP)
=	Asset surplus
+	Deferred tax liabilities formed for the amount of the self-created intangible assets (sec. 248 para. 2 sentence 1 HGB) (LSPIVGav)
+	Deferred tax liability formed for the difference between the fair value and the acquisition costs of assets for old-age pension (sec. 246 para. 2 sentence 2 HGB) (LSPΔZAalt)
=	Amount blocked from distribution (AG)

In this context, there are two possible scenarios. If LESTA > LESTP, the following formula must be used:

$$AG = IVGav - LSPIVGav + \Delta ZAalt - LSP\Delta ZAalt + (LESTA - LESTP + LSPIVGav + LSP\Delta ZAalt) \quad (27)$$

or

$$AG = IVGav + \Delta ZAalt + LESTA - LESTP. \quad (28)$$

If LESTA < LESTP, the following formula must be used:

$$AG = IVGav - LSPIGav + \Delta ZAalt - LSP\Delta ZAalt. \quad (29)$$

After determining the amount blocked from distribution by using expression (28) or (29), the distributable amount (AF) must be calculated by taking into account legal rules or provisions of the articles of incorporation that may provide for mandatory additions from the annual surplus to the reserves (REIN), as shown in Fig. 12 (Wulf and Bosse 2012, comment 86 on sec. 268 HGB).

Figure 12. Determination of the distributable amount

	Freely available reserves before endowment (Rfrei)
+	Annual surplus including profit or loss carried forward (Jnach – VV + GV)
–	Mandatory transfer from annual surplus to reserves (REIN)
–	Amount blocked from distribution (AG)
=	Distributable amount (AF)

Fig. 12 leads to the following equation (30).

$$AF = Rfrei + Jnach - VV + GV - REIN - AG. \quad (30)$$

Depending on the amount of LESTA and LESTP, formula (28) or (29) is now entered in formula (30). If LESTA > LESTP, it results in the following equation (31).

$$AF = Rfrei + Jnach - VV + GV - REIN - IVGav - \Delta ZAalt - LESTA + LESTP. \quad (31)$$

If LESTA < LESTP, the distributable amount is determined as shown in equation (32).

$$AF = Rfrei + Jnach - VV + GV - REIN - IVGav + LSPIGav - \Delta ZAalt + LSP\Delta ZAalt. \quad (32)$$

Two independent calculations must be performed to determine the distributable amount. In the first step, the matrix models developed above must be used to determine the variables Jnach, KSt, GewSt, LS, LESTA, LESTP, and TA. Then AF must be determined according to formula (31) or (32) in the second step. These different cases will be needed due to possible loss scenarios that cannot be integrated into the simultaneous models in the form of side conditions. If loss situations are excluded, the successive procedure can be dispensed with and the equation system can be solved simultaneously.

3. Expansions for Accounting Policy Optimization

3.1 Standard Approach

The developed models can also be used for accounting-policy objectives. In this case the preliminary annual surplus before result-dependent expenses assumes the nature of a value that can be influenced by accounting policy hereinafter referred to as policy-responsive amount. If management wants to publish an annual surplus of a specific amount, it is necessary to know at which amount the preliminary annual surplus (vJvor) must be changed to precisely indicate the intended target annual surplus (sJnach) considering the result-dependent earnings. The above formal dependency between the annual surplus and result-dependent earnings has to be changed. Thus, the equations must be transformed in order to be usable in the accounting optimization process to obtain the policy objectives. The transformation for the first version of the basic model (section 2) is shown below.

(1) Preliminary annual surplus (vJvor) depending on the annual surplus (Jnach)

(1.1) vJvor = f (Jnach) or after conversion

(1.2) vJvor – KSt – GewSt – LS – TA = Jnach

(2) Corporate tax expenses (KSt) depending on the preliminary annual surplus

(2.1) KSt = f (vJvor) or after conversion

(2.2) – sk × vJvor + KSt + sk × TA = sk × Δk*

(3) Trade tax expenses (GewSt) depending on the preliminary annual surplus

(3.1) GewSt = f (vJvor) or after conversion

(3.2) – sg × vJvor + GewSt + sg × TA = sg × (Δk* + Vk + Δg)

(4) Royalties expenses (TA) depending on the preliminary annual surplus

(4.1) TA = f (vJvor) or taking into account KSt, GewSt, LS, and after conversion

(4.2) – tb × [(1 – sk) – sg] × vJvor + tb × LS + {1 + tb × [(1 - sk) – sg]} × TA = – tb × [s × Δk* + sg × (Vk + Δg) – Δta]

The transformed equation system may now be used to obtain accounting policy objectives. There is the possibility of replacing the term Jnach with certain intended targets (e.g., target annual surplus and target distribution). The solution of the equation system then indicates the results for vJ (preliminary annual surplus before result-dependent results after use of policy-responsive amount), KSt, GewSt, LS, and TA by using the accounting policy instruments that affect the result. The policy-responsive amount required for this purpose is calculated by comparing the initial preliminary annual surplus and the final preliminary annual surplus indicated by the solutions of the simultaneous planning approach.

Fig. 13 shows the converted equation system as a matrix, which includes equations (1.2), (2.2), (3.2), (4.2), and the above equations for recording the deferred taxes [equations (15), (17), and (20) in section 2.3]. However, this procedure assumes that use of policy-responsive amount does not affect the deferred tax result. Therefore, the policy-responsive amount used changes the preliminary annual surplus before result-dependent expenses (vJvor) and the tax base for corporation tax purposes (zvE) as well as the tax base for trade tax purposes (GE) by the same amount (e.g., selection of the linear depreciation method both in commercial and tax balance sheets). This means that this standard approach has not yet established any dependency between the deferred tax result and the preliminary annual surplus.

Figure 13. Transformed equation system as a matrix

$$\begin{bmatrix} 1 & -1 & -1 & -1 & 0 & 0 & -1 \\ -sk & 1 & 0 & 0 & 0 & 0 & sk \\ -sg & 0 & 1 & 0 & 0 & 0 & sg \\ 0 & 0 & 0 & 1 & 1 & -1 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 & 0 \\ -tb \times [(1-sk)-sg] & 0 & 0 & tb & 0 & 0 & 1 + tb \times [(1-sk)-sg] \end{bmatrix} \times \begin{bmatrix} vJ \\ KSt \\ GewSt \\ LS \\ LESTA \\ LESTP \\ TA \end{bmatrix} = \begin{bmatrix} Jnach \\ sk \times \Delta k^* \\ sg \times (\Delta k^* + Vk + \Delta g) \\ -LESTPvor + LESTAvor \\ AD \times s + \Sigma KVvor5 \times sk + \Sigma GVvor5 \times sg \\ PD \times s \\ -tb \times [s \times \Delta k^* + sg \times (Vk + \Delta g) - \Delta ta] \end{bmatrix}$$

The model is able to specify a target value. In addition, it is possible to maximize or minimize Jnach. For this purpose, it is necessary to determine the available action parameters that can be used to influence the annual surplus indicated in the preliminary income statement to its limits (maximum or minimum). These data must be used to calculate the upper and lower limits of the preliminary annual surplus as follows:

(5) vJ (Max) = vJvor + total of all profit-increasing action parameters

(6) vJ (Min) = vJvor – total of all profit-decreasing action parameters.

3.2 Model Variations Taking into Account the Novation of the German Authoritative Principle

3.2.1 Legal Background

The German authoritative principle that tax accounting should be based on commercial accounting has not been changed in the scope of the novation of commercial law in 2009 by the German Bilanzrechtsmodernisierungsgesetz (BilMoG). Formerly, the reverse authoritative principle (sec. 5 para. 1 sentence 2 EStG old version) required tax values to be reported in the commercial balance sheet to ensure that these values were also reportable in the tax balance sheet. Since the novation in 2009, this reverse authoritative principle has been inapplicable, which leads to partial disconnection between the commercial and tax balance sheet. Now there is an option to utilize tax-law recognition and assessment independently of the commercial balance sheet. This triggers deferred taxes because the commercial- and tax-law values will deviate from each other in this case (sec. 5 para. 1 sentence 1 EStG).

However, the range of an autonomous tax-accounting policy is disputed in the literature (Freidank and Velte 2010, p. 185-194). The possibility of autonomously exercising the accounting options refers to both the wording of the law and the intention of the legislator only as they regard those tax accounting options that are incompliant with the German generally accepted accounting principles. Other tax-accounting options still require the authoritative principle to be applied. This means that the decision to execute a parallel commercial and tax-accounting option generally must be made in the commercial balance sheet. This does not lead to any differences between the asset or liability values under commercial and tax law. Thus, no deferred taxes need to be considered in the annual statement under commercial law.

Deviating from this assumption, some authors and the German Federal Ministry of Finance assume, according to the BilMoG, the removal of the formal relevance of commercial accounting for tax-accounting purposes (Federal Ministry of Finance, letter from March 12, 2010 – IV C 6 – S 2133/09/10001). Thus, according to no. 16 of this letter, accounting options under commercial and tax law may always be utilized differently in the commercial and tax balance sheets (e.g., the individual assessment of assets in the commercial balance sheet and according to a consumption tracking method in the tax balance sheet). The autonomous utilization of accounting options in the commercial and tax balance sheet consequently causes deferred taxes in the case of different utilization of these options. However, the Federal Ministry of Finance believes that accounting options under commercial law that do not have any independent tax provisions (e.g., loan capital interest according to sec. 255 para. 3 sentence 2 HGB; R 6.3 para. 4 EStR) should continue to be determined by the authoritative principle. We do not follow this deviating opinion in our further models because it is not covered by the intention of the authoritative principle (Freidank and Velte 2010, p. 189-191). This leads to the following consequences for the design of expanded accounting-policy matrix models.

3.2.2 Structure of the Expanded Model

Based on the standard approach from section 3.1, the following modifications are needed to include the illustrated model concept (XH = accounting policy options only permitted under commercial law; XI = accounting policy options only permitted under tax law; XK = accounting policy options permitted under commercial and tax law). The indication "+" expresses an increase in profit and "–" the reduction of profit associated with the individual accounting option groups.

$$(1)\quad vJvor - KSt - GewSt - LS - TA + XH^{+} - XH^{-} + XK^{+} - XK^{-} = Jnach$$

$$(2)\quad KSt = sk \times (vJvor - TA + \Delta k^{*} + XI^{+} - XI^{-} + XK^{+} - XK^{-}) \text{ or}$$

$$(3)\quad - sk \times vJvor + KSt + sk \times TA - sk \times XI^{+} + sk \times XI^{-} - sk \times XK^{+} + sk \times XK^{-} = sk \times \Delta k^{*}$$

$$(4)\quad GewSt = sg \times (vJvor - TA + \Delta k^{*} + Vk + \Delta g + XI^{+} - XI^{-} + XK^{+} - XK^{-}) \text{ or}$$

$$(5)\quad - sg \times vJvor + GewSt + sg \times TA - sg \times XI^{+} + sg \times XI^{-} - sg \times XK^{+} + sg \times XK^{-} = sg \times (\Delta k^{*} + Vk + \Delta g)$$

$$(6)\quad TA = tb \times (vJvor - KSt - GewSt - LS - TA + XH^{+} - XH^{-} + XK^{+} - XK^{-} + \Delta ta) \text{ or}$$

$$(7)\quad - tb \times vJvor + tb \times KSt + tb \times GewSt + tb \times LS + (1 + tb) \times TA - tb \times XH^{+} + tb \times XH^{-} - tb \times XK^{+} + tb \times XK^{-} = tb \times \Delta ta$$

It is necessary to modify the equations LESTA and LESTP (formulas (15) and (17) in section 2.3) in order to consider the effects of the accounting option groups XH and XI on the deferred taxes. The accounting option group XK is not relevant because its use changes the commercial and tax balance sheet values by the same amount and does not trigger any effect on deferred taxes. Furthermore, it is necessary to determine whether the use of the accounting option groups XH and XI changes the preliminary differences between the commercial and tax balance sheet values in terms of the deferred tax assets (AD) or liabilities (PD). The following applies:

(8) $LESTA = s \times [AD - XH^{+}(AD) + XH^{-}(AD) - XI^{+}(AD) + XI^{-}(AD)] + \Sigma KVvor5 \times sk + \Sigma GVvor5 \times sg$ or

(9) $LESTA + s \times XH^{+}(AD) - s \times XH^{-}(AD) + s \times XI^{+}(AD) - s \times XI^{-}(AD) = s \times AD + \Sigma KVvor5 \times sk + \Sigma GVvor5 \times sg$

(10) $LESTP = s \times [PD + XH^{+}(PD) - XH^{-}(PD) + XI^{+}(PD) - XI^{-}(PD)]$ or

(11) $LESTP - s \times XH^{+}(PD) + s \times XH^{-}(PD) - s \times XI^{+}(PD) + s \times XI^{-}(PD) = s \times PD$.

Each action parameter of the accounting option groups XH and XI must be inserted into equation (9) or (11). Their assignment corresponds to the changes in the preliminary differences between the commercial and tax balance sheet values. If the company decides to form a tax-free reserve [accounting option group $XI^{-}(PD)$], for example, this leads to an increase in LESTP. Furthermore, the decision to recognize self-created intangible assets (sec. 248 para. 2 sentence 1 HGB) [accounting option group $XH^{+}(PD)$] will also lead to an increase in LESTP. If management has decided to use these options even before the preparation of the preliminary annual statement, its effects on the deferred tax liabilities would already be included in PD. In the case of reversion of these options, they must be assigned to the variables $XI^{+}(PD)$ or $XH^{-}(PD)$ in equation (11).

The action parameters of the six accounting option groups must be used in the planning approach as ≤ restrictions (H^{+}, H^{-}, I^{+}, I^{-}, K^{+}, K^{-} = maximum possible policy-responsive amount of the respective option groups with $H^{+}, H^{-}, I^{+}, I^{-}, K^{+}, K^{-} \geq 0$) to meet the target of the transformed simultaneous model.

(12) $XH^{+} \leq H^{+}$

(13) $XH^{-} \leq H^{-}$

(14) $XI^{+} \leq I^{+}$

(15) $XI^{-} \leq I^{-}$

(16) $XK^{+} \leq K^{+}$

(17) $XK^{-} \leq K^{-}$

If the commercial- or tax-law provisions permit any number of interim values regarding the individual option groups, it is possible to include the restrictions for the three option groups in the planning model. If some option groups are only relevant for decisions in the amount of their maximum value or a zero amount, the restriction must be modified. In this case, the optimization of the target function must be based on a mixed integer approach to ensure that the action parameters of the three option groups can be used in the best solution with both their upper and lower limits (Freidank 1990b, p. 124-130; Freidank and Velte 2013, p. 905-906).

Fig. 14 shows the expanded model using the equations (1), (3), (5), (7), (9), (11) and (12) to (17) (Fig. 13 in section 3.1) (RS = Right side, x = variable, y = restriction, Z = target function). The simplex tableau illustrates that the previously designed matrix models can be extended to optimization approaches by taking into account a target function regarding the annual surplus and restrictions in the form of ≤ or = conditions. This is now possible by using the available policy-responsive amount of the groups XH, XI, and XK to maximize, minimize, or fix the annual surplus (Freidank 1990b, p. 76-78; Freidank and Velte 2013, p. 874-875). We assume in these designs that the commercial-law principles regarding recognition and assessment continuity (sec. 252 para. 1 no. 6 HGB) do not limit the best solutions. In the case of targeting a specific annual result (fixing approach), restriction y (14) must be included in the tableau if a target function to be maximized is assumed. In the case of a minimization approach, the coefficients of the target function must be multiplied by –1.

4. Summary

This paper has shown the development of simultaneous models with their expansion options. They are planning alternatives that firms may use for effect and design analyses of effective and deferred taxes as well as performance indicators under commercial law. The presented matrix models are decision-oriented instruments that have high efficacy according to the provisions of the German commercial and tax law regarding tax planning and accounting policy design. Furthermore, the models in their different versions offer options for the use of IT-supported solutions (e.g., spreadsheet programs). Additionally, the matrix models may be integrated into menu-controlled software packages in terms of an expert system (Freidank 1993, p. 312-323). This system must be able to determine the optimal profit and loss statement according to input of the preliminary profit and loss statement, intended target values, legal framework conditions, and the available policy-responsive amount.

A limitation of the models may be seen in their reference to the accounting provisions under German commercial and tax law and the single-period model design, but this does not limit the concept necessarily. First, the different expansions have already made clear the high flexibility of the matrix models. Thus, an adjustment to the provisions of the International Financial Reporting Standards (IFRS) (IAS 12) should not only be possible but easy. Such model expansions should mainly affect deferred taxes that do not have an effect on the result and the obligation to prepare a reconciliation statement that shows the difference between the effective tax result and the tax rate. This applies accordingly to the transfer of the matrix models to comparable situations in other legal areas as well. Second, if management plans steady earnings or specific tax results over several periods, the (transformed) matrix models may be used to determine the necessary policy-responsive amount per period in order to gain a specific result or optimal distribution or profit.

Figure 14. Expanded optimization model

	vJvor	**KSt**	**GewSt**	**LS**	**LESTA**	**LESTP**	**TA**	**XH$^+$**	**XH$^-$**	**XI$^+$**	**XI$^-$**	**XK$^+$**	**XK$^-$**	**RS**
	x1	**x2**	**x3**	**x4**	**x5**	**x6**	**x7**	**x8**	**x9**	**x10**	**x11**	**x12**	**x13**	
Z	x1	–x2	–x3	–x4			–x7	x8	-x9			x12	–x13	= Jnach
y(1)								x8						$\leq H^+$
y(2)									x9					$\leq H^-$
y(3)										x10				$\leq I^+$
y(4)											x11			$\leq I^-$
y(5)												x12		$\leq K^+$
y(6)													x13	$\leq K^-$
y(7)	x1													= vJvor
y(8)	–sk × x1	x2					sk × x7			–sk × x10	sk × x11	–sk × x12	sk × x13	= sk × Δk*
y(9)	–sg × x1		x3				sg × x7			–sg × x10	sg × x11	–sg × x12	sg × x13	= sg × (Δk* + Vk + Δg)
y(10)				x4	x5	-x6								= –LESTPvor + LESTAvor
y(11)					x5			s × x8	–s × x9	s × x10	– s × x11			= s × AD + ΣKVvor5 × sk + ΣGVvor5 × sg
y(12)						x6		–s × x8	s × x9	–s × x10	s × x11			= s × PD
y(13)	–tb × x1	tb × x2	tb × x3	tb × x4			(1 + tb) × x7	–tb × x8	tb × x9			–tb × x12	tb × x13	= tb × Δta
y(14)	x1	–x2	–x3	–x4			–x7	x8	–x9			x12	x13	= Jnach

The main work of the tax planner is not to determine the optimal profit change per period but rather the respective matching accounting options with an effect on the result (Heinhold 1985, p. 56). Therefore, the model versions would have additional importance for management when taking into account the novation regarding the German authoritative principle that tax accounting should be based on commercial accounting. In this context, this paper has shown that a differentiated simultaneous determination of the effective and deferred tax result is possible by dividing the available accounting options into three groups due to its integration in the matrix models.

Furthermore, the developed optimization models may be used to maximize, minimize, or fix given targets. In this case the equations for effective and deferred tax effects must be integrated into the target function. Thus, the optimization models can be fully replaced with regard to the integration of accounting-policy intensions as primary or secondary conditions. This offers high model flexibility.

In summary, performance capacity and the use of the IT-supported matrix models can be measured by the fact that optimal financial decisions are difficult to reach manually under realistic conditions due to the complexity of their interrelations. At the same time, these decisions have fundamental effects on central aspects such as the earnings situation, tax-result effects, distribution power, and/or royalties of the company.

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'COMPLY OR EXPLAIN' IN BELGIUM, GERMANY, ITALY, THE NETHERLANDS AND THE UK: INSUFFICIENT EXPLANATIONS AND AN EMPIRICAL ANALYSIS

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Abstract

This study analyses the level and quality of the application of the comply or explain principle for listed companies in Belgium, Germany, Italy, the Netherlands and the UK. Although the comply or explain principle has nowadays become a central element in the corporate governance of the EU, a common understanding of the scope and necessary conditions for it to work effectively has not yet been achieved. This study explains the comply or explain principle from the perspective of the economic theory (legitimacy theory and theory on market failure) and is the first study of the application of the principle in which consecutive years are analysed for multiple countries simultaneously with one research method. In previous research the quality of the explanations for the code provisions not complied with and the explanatory factors have often been overlooked, while these are the key elements of the current European debate. In this study 237 annual accounts for the years 2005-2007 are analysed for five countries. The results show that company size and the period of time the comply or explain principle has been applicable in a country predict the level and quality of compliance. Although the level of code compliance is high, the quality of the explanations for code provisions not complied with is insufficient. Further fine-tuning of the comply or explain principle is necessary to achieve the most effective application in order to make the principle work in practice as intended.

Keywords: Corporate Governance, Code, Comply or Explain Principle, Compliance, Disclosure

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1. Introduction

Through EU Directives 2006/46/EC and 2013/34/EU, the 2011 EU Green Paper on corporate governance and through national corporate governance codes, the comply or explain principle has nowadays become a central element in the corporate governance of the European Union (the EU). Nevertheless, a common understanding of the scope and necessary conditions for it to work effectively has not yet been achieved and is still a relevant and current matter of discussion. The EU Green Paper (EU Green Paper 2011) i.a. states that the explanations of deviations from the code provisions are unsatisfactory. This article reviews the quality of these explanations for the code provisions not complied with in Belgium, Germany, Italy, the Netherlands and the United Kingdom (the UK), as well as the possible explanatory factors. Until now no such study with a research period of more than one year and one research method for different countries simultaneously has existed. Moreover, in scientific literature the comply or explain principle is not or hardly explained from the perspective of the economic theory (legitimacy theory and theory on market failure). Section 2 of this article elucidates the principle from this perspective. Section 3 discusses the legal embedding of the comply or explain principle, after which section 4 shortly addresses previously performed studies on the comply or explain principle. Section 5 explains the research method and dataset used, after which in section 6 the descriptive, bivariate and multivariate results are presented. Finally, section 7 summarises the results and gives the conclusions.

2. The comply or explain principle in theory

From the viewpoint of the agency theory (Jensen & Meckling 1976) the comply or explain principle is theoretically a variation on the disclosure remedy. To minimise the agency problems between agents and principals, a number of solutions (remedies) are developed (e.g. monitoring, commitment and alignment) (Alchian & Demsetz 1972). As such a remedy disclosure hopes to avoid information asymmetry and as a consequence thereof reduces opportunistic behaviour that results in agency costs (Santen 2007). The comply or explain principle is a disclosure as such and influenced by the legitimacy theory and the theory on market failure. Those theories are reviewed below so they can be elaborated further upon when researching the application of the comply or explain principle in practice.

2.1 Legitimacy theory

The legitimacy theory throws light on the reasons why companies want and have to disclose information such as by means of the comply or explain principle. Maurer defines the theory as the process whereby an organisation (a company) justifies to a peer group or superordinate system its rights to exist (Maurer 1971). By searching for legitimacy companies increase their probability of survival which is common organisational behaviour (DiMaggio & Powel 1983) (Hooghiemstra, Van Ees et al. 2008). Today a company cannot afford to ignore society; the continuity of a company is dependable on the perception in society regarding its reputation. A company constantly needs to justify – i.a. by means of transparency - its existence and activities to society (Boot & Soeting 2004). The annual report is considered a very appropriate instrument for disclosing all this information, because of its degree of credibility not associated with other forms of advertising (Neu, Warsame et al. 1998). The development of corporate governance regulations regarding mandatory and voluntary disclosures (e.g. the comply or explain principle) can to a certain extent be clarified by the legitimacy theory. In the direct aftermath of the corporate scandals companies used i.a. the comply or explain principle to regain the trust of the shareholders and to legitimise their existence. By disclosing proper information in their annual accounts companies wanted to assure their stakeholders that their corporate governance structure was back in place, irregularities taken note of in time and scandals prevented. Nowadays companies still disclose based on the comply or explain principle for similar reasons. They want to signal to the market (by showing in annual accounts that the company fully complies with a corporate governance code or gives proper explanations for deviations) that they ‘exceed’ other companies and thus hope to attract additional investors - the signalling theory (Campbell, Shrives et al. 2001).

2.2 Theory on market failure and information asymmetry

Next to the legitimacy theory, the theory on market failure explicates the existence of disclosures and more in particular the comply or explain principle. Market failure encompasses a situation where, in any given market, the quantity or quality of a product demanded by consumers does not equate with the quantity or quality supplied by suppliers. This is a direct result of a lack of some ideal economical factors, which prevents a social optimum (Leftwich 1980). For example, the problem of information asymmetry is the lack of an ideal economical factor. No perfect financial market exists in which every agent and principal receive all the information needed (i.e. no information asymmetry) and in which moral hazard and adverse selection do not occur. Nevertheless, one tries to minimise these problems to come as close as possible to achieving the perfect financial market, for instance by disclosing (mandatorily or voluntarily) the relevant information to prevent market failure (Schön 2006). A shareholder will only make a contribution to the equity of a company when the uncertainties of his investment can be decreased to a minimum: an investor makes an investment when the asymmetric information problem between him as principal and the management as agents is brought to a satisfactory level and compliance with disclosure regulations (among which the comply or explain principle) contributes thereto.

The comply or explain principle as a form of disclosure is theoretically embedded in the legitimacy theory and the theory on market failure. By legitimising their corporate governance to their stakeholders companies try to prevent market failure (agency costs) and gain trust and investments. As an instrument of corporate governance the comply or explain principle tries to make a contribution to the minimising of agency costs/problems and enhance good corporate governance. A change in the quality of information about corporate governance (‘transparency’) could have consequences for corporate governance itself (‘behaviour’) and vice versa, since governance and information about governance are inseparably linked (Hof et al. 2013). The comply or explain principle allows investors to determine to what extent a company has or has not complied, and to assess the company’s stated reasons for non-compliance. Investor pressure would tend to be the most immediate response to non-compliance. Such instances may lead investors, particularly those who can exert significant influence on the company (e.g., due to the size of their shareholding) to seek further information or assurance from the directors (Mallin 2009).

3. Judicial embedding of the comply or explain principle

For the purpose of the interpretation of the results of the empirical research as set out in section 6, this section elaborates further on the legal embedding of the comply or explain principle in the five countries studied.

It was believed in the EU that what constitutes good corporate governance is continually evolving and ‘one size does not fit all’. Soft regulation by means of national corporate governance codes, together with the comply or explain principle, was therefore opted for. In 2006 this approach was confirmed by Directive 2006/46/EC, imposing that a listed company must include a corporate governance statement in its annual report which refers to the corporate governance code the company is subject to and also explains which parts of the code are deviated from and for what reasons. Directive 2013/34/EU - on

the annual (consolidated) financial statements and related reports of certain types of undertakings – furthermore imposes similar obligations on listed firms. The European Commission recently proposed to amend the latter directive in Directive 2014/208/EU, which was accompanied by a Recommendation on the quality of corporate governance reporting ('comply or explain'). Section III of the Recommendation explicitly states what information companies should provide for each departure from an individual recommendation of the code(s) they are subjected to. That information should moreover be sufficiently clear, accurate and comprehensive and refer to the specific characteristics and situation of the company, such as size, company structure or ownership or any other relevant features. Also, explanations for deviations should be clearly presented in such a way that they are easy to find for shareholders, investors and other stakeholders, according to the Recommendation (Galle 2014).

The EU Member States have implemented Directive 2006/46/EC in different ways which is also reflected in their application of the code (see section 6). A distinction can be made between five defined judicial corporate governance arrangements as derived from Wymeersch and Voogsgeerd (Wymeersch 2005) (Voogsgeerd 2006) (see Table 1).

Table 1. Judicial corporate governance arrangements

Serial number	Name	Characteristics	Country
A	Pure self-regulation	• Less detailed company law • No overlap between code and law • Code is alternative for legislation	Belgium until 2010
B	Supported by non-statutory norms	• Material norms in codes supported by regulation (e.g. listing rules) • Results: compliance with norms not entirely voluntary	Italy until 2005 and United Kingdom
c	Facilitation by statutory rules	• As B. but code is supported by or has basis in legislation	The Netherlands. Belgium since 2010 and Italy since 2006
D	Regulation of self-regulation (meta-regulation)	• E.g. as a result of non-compliance the legislation has more than a supporting or facilitating role	Germany
E	Pure regulation	• Codes are of no real importance • Accent on detailed national legislation	

For the UK judicial corporate governance arrangement B applies; the code and the comply or explain principle are embedded in the listing rules; code and principle are supported by non-statutory norms. Judicial corporate governance arrangement C applies for the Netherlands, and nowadays for Belgium and Italy as well: the code and principle are supported by or have a legal basis in legislation. For Germany arrangement D (meta-regulation) applies: although the code has a basis in legislation, the code is not considered very important but rather the detailed national company law (regulation of self-regulation).

In the sections below concerning the empirical research, the influence of the method of legal embedding on the extent and quality of code compliance is researched further. It is initially expected that the stricter the comply or explain principles are embedded in a country, the better the code compliance and the quality of the explanations for the deviations will be. On the other hand, matters such as the experience with the comply or explain principle in a specific country and the culture in relation to self-regulation will also play a part.

4. Previous studies on code compliance and the comply or explain principle

Studies on code compliance - unlike studies on corporate governance characteristics - are quite rare, maybe even in their infancy and (with one exception (RiskMetrics Group 2009)) focus on one country with research methods that change annually. Most studies conducted have diffuse outcomes and only concern the relationship between compliance and performance. This section briefly mentions the main results of studies that do investigate the code compliance more thoroughly.

In 2006 Arcot and Bruno conducted a study of 245 non-financial UK companies for the period 1998-2004 (Arcot & Bruno 2006). They documented the degree of compliance and more importantly the quality of the explanations provided in the case of deviations from the code provisions. Although they conclude - based on their univariate analysis - that the compliance of the companies does increase during the years under review, some drawbacks in the system are highlighted. They find that for an average of 17% of the deviations no explanations are provided.

Moreover, in 51% of the cases the explanations are standard and uninformative and this even worsens for a company in which agency problems are likely to be serious (Arcot & Bruno 2006). Von Werder, Talaulicar and Kolat examine the annual accounts of 408 companies listed at the Frankfurt Stock exchange that have to comply with the German corporate governance code as adopted in 2002 (Von Werder, Talaulicar et al. 2005). They distinguish some neuralgic code provisions of which it is expected that they will not be complied with within the near future by more than 10 per cent of the companies. These provisions concern i.a. personal liability, board compensation and the structure of the supervisory board. Moreover, Von Werder, Talaulicar and Kolat conclude that the acceptance of the code provisions tends to increase with the size of the companies, as will also be researched in the underlying study. Goncharov, Werner and Zimmermann analysed whether there is a pricing effect connected to the declared degree of compliance to the German Corporate Governance Code for 61 (big) publicly traded German companies listed in the DAX 30 and MDAX. They find that the degree of compliance is value-relevant (Goncharov et al. 2006). In their study, Goncharov, Werner and Zimmermann measured hard compliance figures without taking the level of compliance and (the quality) of the specific explanation given by companies into account. Hooghiemstra and Van Ees examined the annual accounts of 126 Dutch companies in 2005 and as a consequence thereof doubt the effectiveness of the comply or explain principle, since the explanations for non-compliance are relatively standard and not built upon firm-specific circumstances. The underlying study uses more or less the same subdivision in reasons for non-compliance as in the study of Hooghiemstra, Van Ees and Van der Laan. Hooghiemstra, Van Ees and Van der Laan conclude that an emerging 'one size fits all' approach is visible which they consider not to be in line with the fundamental logic of the comply or explain principle (Hooghiemstra, Van Ees et al. 2008). Abma & Olaerts analysed the reasons provided by the 100 largest Dutch listed companies in the financial year 2010 for the non-application of four provisions of the Dutch Corporate Governance Code. They conclude that in a large majority of the cases in which a code provision has not been applied, the reasons have been formulated in general terms, a disclaimer has been incorporated, or no reason whatsoever is given (Abma & Olaerts, 2012).

The single international study on code compliance up till now is the "*Study on Monitoring and Enforcement Practices in Corporate Governance in the Member States*" performed by the RiskMetrics Group in September 2009. They examined the compliance with the applicable codes for 270 listed companies from 18 Member States for the financial year 2008 (15 companies per country). Although no annual developments in compliance can be reviewed, the study of the RiskMetrics Group showed some interesting results (RiskMetrics Group 2009); 86 per cent of the companies they reviewed provide some kind of comply or explain information regarding a corporate governance code and 23 per cent of those companies state that they comply with all the code provisions. The companies reviewed have an average of approximately three explanations per company. Code provisions concerning the board of directors and concerning remuneration are the provisions explained most often. Other code topics repeatedly explained are shareholder rights and duties, disclosure and audits. The explanations provided for these deviations mainly involve the presence of an important shareholder, the specificity of the companies' activities and contracts set up before the implementation of the code (RiskMetrics Group 2009). The average number of deviations is higher for mid-cap companies than for large-cap companies. In the end the RiskMetrics Group concluded that the comply or explain principle enjoys wide acceptance, although the quality of explanations is mainly considered to be at an unsatisfactory level and should be remedied by strengthening the comply or explain principle itself and by strengthening the role of market-wide monitors and statutory auditors (RiskMetrics Group 2009).

Based on the studies discussed above, it can be concluded that further research should - preferably from an international perspective and covering a period of more than one year - review the different concrete forms of code conformity together with underlying causes (such as the manner in which the code is implemented, the 'one size does not fit all approach', opportunistic behaviour or company's size) for the purpose of studying code compliance and the comply or explain principle more in-depth and, ultimately, to provide sufficient recommendations.

5. Data collection and methodology

This section explains the method of data collection for the underlying research, as well as the research method and variables, after which the research results are presented.

5.1 Data collection

A total of 237 annual accounts for the years 2005-2007 are reviewed for the five countries under research (Belgium, Germany, Italy, the Netherlands and the UK) by means of content analysis.[14] [15] The annual accounts are reviewed for the application of the comply or explain principle and more specifically

[14] The research method content analysis is to be defined as a systematic, objective, quantitative analysis of message characteristics for making replicable inferences (Neuendorf 2002).

[15] The Cohen's kappa measured has a value between 0.419 and 0.807 and can be considered more than sufficient.

for the quality of the explanations provided. For the purpose of making relevant comparisons within the data collected, the annual accounts analysed concern companies listed for the three consecutive years 2005-2007 on the same stock exchange index within the same market capitalisation compartment (see Table 2). Of the companies remaining in the sample after this selection (For Belgium 56 companies, Germany 78 companies, Italy 227 companies, the Netherlands 37 companies and for the UK 384 companies.), 50 companies are selected per country. In the Netherlands only 37 companies were quoted on the same stock exchange (AEX, AMX or AMS) for three consecutive years and therefore all have been selected. The years under research are 2005, 2006 and 2007, since the comply or explain principle was applied in all the countries under research in these financial years (Not all companies have a financial year corresponding with the calendar year. However, for the purpose of this study they are grouped in homogenous periods, i.e. 2005, 2006 and 2007 (more specifically 1 January to 31 December 2005, 1 January to 31 December 2006, and 1 January to 31 December 2007) (Arcot & Bruno 2006)) (Belgium since 2005, Germany since 2002, Italy since 2004, the Netherlands since 2004 and the UK since 1993) and during this period Directive 2006/46/EC, making the comply or explain principle mandatory for listed companies, was adopted by the EU Parliament and EU Council. Outdated research data is thus not a direct threat, since other (national) studies on code compliance with more recent data come to similar conclusions, although only based on one country and often one year and with no possibilities of country comparisons. Table 2 shows an overview of the research population.

Table 2. Research population

Compartment	Number per country		rr	NL	UK	Total
	BEL	GER				
A	23	35	25	27	25	135
B	17	15	15	10	15	72
C	10	0	10	0	10	30
Total	50	50	50	37	50	237

Compartment A includes companies with a market capitalisation which exceeds 1 billion euros.
Compartment B includes companies with a market capitalisation between 1 billion euros and 150 million euros. Compartment C includes companies with a market capitalisation lower than 150 million euros.

The aim of the present study is to add to previous research, but its limitations are also acknowledged. The level of compliance of the companies under review is measured by the contents of the corporate governance-related information provided in their annual accounts. Unfortunately, companies may mention in their annual accounts that they comply with the provisions of the applicable code but they may deviate from it in practice. Material compliance with the code is hard to measure and this problem is inherent to the chosen corporate governance model. However, it is not simply the hard compliance figures that are of interest in this study, but rather the trends in the level of compliance and (the quality) of the specific explanations given by the companies. As Durisin and Puzone state regarding corporate governance research: "*There is an empirical gap in cross-national studies in the literature*" (Durisin & Puzone 2009).

5.2 Variables

Section 6 presents the most important results of the analyses conducted. A number of variables require some explanation. Firstly, the dependent variables themselves, secondly the level of compliance with the corporate governance codes and thirdly the quality of the explanations provided for the deviations from the code provisions.

The *level and quality of the compliance* with the applicable corporate governance codes is measured by the contents of the annual accounts based on what the company itself indicates about code compliance. Whenever a company indicates a deviation from a code provision, it is measured as such for the dataset. This variable is named *CodecomplianceI* in this study. Whenever the quality of the explanations of the deviations is taken into account as well, this is measured with the dependent variable *CodecomplianceII*. The explanations are distinguished into six categories of quality as presented in Table 3. These subdivisions are based on previous research (Arcot & Bruno 2007) (Galle 2012). The underlying study considers the type 1, type 2 and type 3 explanations to be insufficient. Although type 4 and type 5 need further improvement, together with type 6 they are considered 'sufficient' and thus a correct application of the comply or explain principle ('*made-to-measure*' code compliance). Therefore, variable *CodecomplianceII* consists of the number of deviations from code provisions the company gives a sufficient explanation for (types 4, 5 and 6).

Table 3. Categories of quality of explanations

Serial Number	Category of explanation
1	No explanation: No explanation is provided by the company.
2	General: A general or non-specific (to the company) explantion is provided. Often standard phrases are used that do not provide any specific details. For exampe, explanations asserting that the non- compKance is in the best interests of the company, a market practice, or simply necessary.
3	Inline: .An explanation which is general in nature but repeats phrases from the provision of the code not complied with.
4	Limited: An explanation which provides more information than General or Inline but still falls short of being unique to the company's characteristic s' circumstanc es.
5	Transitional: .An explanation which points to a transitional situation facing the company due to which it is temporarily not compliant.
6	Genuine: Explanations that are judged genuine and in the spirit of the applicable code. Such explanations are specific to the company, motivated in detail and variable.

(Arcot & Bruno 2007) (Galle 2012)

It is expected that, due to the fact that companies need *Time* to adapt to the rules as laid down in the code and time to get used to the comply or explain principle itself, the level and quality of compliance increase during the years in which the comply or explain principle is applicable. Previous research on this matter shows various outcomes: claiming that time does or does not have an effect, or sometimes a (temporary) small decrease or a point of saturation has been reached (Shabbir 2008) (Weir & Laing 2000) (Arcot & Bruno 2006). Hence, the number of years the comply or explain principle has been applicable in a country (varying from 1 to 15 years) is the variable *Time* in the analyses presented below. Moreover it is of interest to review whether the *Judicial corporate governance arrangement* as elaborated upon in section 3 is of influence on the application of the principle. It is expected that the stronger a comply or explain principle is embedded in a country the higher the level of compliance and/or quality of explanations will be, since a strong embedding (e.g. the comply or explain principle is laid down in statutory norms) possibly shows faith in and consensus about the principle and, as a consequence, more compliance. Finally, the *Firm size* (presented in three market capitalisation compartments and the country's three main stock exchange indices) is an important variable. As a result of relatively lower compliance costs and greater visibility (Pollock, Fischer et al. 2002) larger firms are expected to have a higher level of code compliance than smaller companies (Talaulicar & Von Werder 2008) (Hooghiemstra, Van Ees & Van der Laan 2008).

6. Results

6.1 Descriptive results

Table 4 shows per year and per country the level of compliance measured by the number of code provisions the company claims to comply with (*CodecomplianceI*). Code compliance can be expressed as a percentage or the number of deviations. The number of deviations in itself does not provide any substantial information since the number of code provisions per country vary considerably (from 36 provisions for Italy in 2005 to 128 provisions for the Netherlands to which the comply or explain principle is applicable). Per company an average of 2.5 code provisions not complied with were deduced. The percentages in themselves are rather high, but the manner the comply or explain principle is actually applied is not taken into account. Possibly no explanation is provided for a deviation from a code provision or only a very general explanation is provided.

Table 4. Compliance rates *CodecomplianceI* (code provisions complied with)

Country	Percentages code compliance 2005	Percentages code compliance 2006	Percentages code compliance 2007	Perce ntages code compliance 2005-2007	Number of deviations 2005-2007	Avearage number of deviations per company
BEL	96.53	96.60	96.50	96.54	397	3.01
GER	92.70	94.00	94.29	93.67	383	2.55
IT	95.83	97.65	98.11	97.48	234	1.56
NL (selected)	94.99	95.35	95.17	95.17	573	5.46
UK	96.75	97.33	97.63	97.24	199	1.33
Average for countries	95.50	96.32	96.43	96.11	1786	2.51

Table 5 provides a more informative overview since the quality of the explanations is taken into account as well (*CodecomplianceII*). Table 5 shows per year and per country the level of compliance expressed in percentages consisting of the code provisions complied with together with the deviations with a sufficient explanation (thus the highest three categories of quality of explanation, being (4) an explanation which provides more than only general information but still falls short of being unique to the company's characteristics/circumstances, (5) an explanation which points to a transitional situation facing the company due to which it is temporarily not compliant or (6) an explanation specific to the company, motivated in detail and variable). Furthermore table 5 presents the average number of insufficient explanations per company.

Table 5. Compliance rates CodecomplianceII (code provisions complied with and sufficiently explained deviations)

Country	Percentages code compliance 2005	Percentages code compliance 2006	Percentages code compliance 2007	Percentages code compliance 2005-2007	Average number of insuffient explanations per company
BEL	98.26	98.41	98.08	98.25	1.52
GER	95.90	96.50	96.83	96.41	1.45
IT	97.61	98.69	99.15	98.67	0.83
NX	99.19	99.37	98.79	99.12	1.00
UK	98.71	99.00	99.00	98.90	0.53
Average for countries	98.18	98.56	98.48	98.42	1.02

Especially the last few per cent up to one hundred per cent matter, since in these cases the comply or explain principle is not applied sufficiently: or in other words the 'explain' in the comply or explain principle fails. Table 6 presents per country the six distinguished categories of quality of explanations of code provisions not complied with expressed in percentages.

Table 6. Categories of quality of explanations expressed in percentages

Country	Percentage per category			Subtotal	Limited	Transitional	Genuine	Subtotal
	No explanation	General	Inline	insufficient				sufficient
BEL	18.62	29.08	2.55	50.26	27.55	6.38	15.82	49.74
GER	23.58	17.01	16.72	57.31	21.19	6.27	15.22	42.69
ΓΓ	14.21	36.04	0.00	50.25	38.07	2.54	9.14	49.75
NL	7.79	7.79	334	18.92	48.42	13.54	19.11	81.08
UK	13.44	25.27	0.54	39.25	3236	23.66	4.84	60.75
Average	14.98	20.07	5.15	40.21	34.87	10.19	14.74	59.79

Sufficient explanations for non-compliance are too often absent (40.2 per cent of the explanations are insufficient). Per company an average of 2.5 deviations was deduced, of which on average 1 deviation was insufficient. The underlying study does not argue for 100% application of the code provisions, but for 'applied and explained sufficiently' (apply the code provisions and, for the deviations, provide a sufficient explanation), as in that case the 'one size does not fit all' and 'made to measure' approach are taken into account, whilst the comply or explain principle is applied as intended.

6.2 Bivariate results (correlations)

6.2.1 Variable Time

As already indicated above, in this study it is expected that the level and quality of compliance are positively related to the time the comply or explain principle has been applicable in a country. Since companies need time to adapt to the rules as laid down in the code and time to get used to the comply or explain principle itself, the level and quality of compliance increase during the years in which the comply or explain principle has been applicable. Table 7 shows negative significant (at the 0.01 level) relationships: the longer the comply or explain principle has been applicable, the lower the number of deviations (with insufficient explanations).

Table 7. Correlation analysis (Pearson) between Codecompliance I and Codecompliance II and time

	CodecomplianceI	CodecomplianceII	Time
CodecomplianceI	1		
CodecomplianceII	.590(**)	1	
Time	-.226(**)	-.156(**)	1

**. = p<0.01; *. = p < 0.05; n = 711

The co-relation coefficient is Pearoris correlation since ratiovariabes are used (Van Daten 2002)
Codecompliancel: Number of deviations
Codecompliancell: Number of deviations with an insufficient explanation (categories 1, 2, 3)

Time: The period of time the principle has been applicable (varying from 1 to 15 years)

6.2.2 Variable Judicial corporate governance arrangement

In Table 1 the five possible ways of legal embedding of the comply or explain principle have already been presented (being pure self-regulation, supported by non-statutory norms, facilitation by statutory rules, regulation of self-regulation and pure regulation). It is expected that the stronger a comply or explain principle is legally embedded in a country the higher the level of compliance and/or quality of explanations is. For the regulation of self-regulation (meta-regulation) the best scores are expected compared to the other ways of legal embedding. Since the variable *Judicial corporate governance arrangement* is a nominal variable, an ANOVA-test is performed and for the purpose of better understanding, only the significant details are summarised in Table 8 (Van Dalen & De Leede 2002) (The ANOVA has a significance of 0.001 or lower and the F-value is between 5.831 and 21.707, implying that the overall ANOVA-test is significant (Field 2005)).

Table 8. Analysis (ANOVA-test) between CodecomplianceI and CodecomplianceII and the Judicial corporate governance arrangement

	Judicial arrangement I	Judicial arrangement II	Difference between I and II	Conclusion results
CodecomplianceI	Pure self-regulation (mean 2.6467)	**Non-statutory norms (mean 1.37 = lowest)**	1.27667(*)	Pure self-regulation significant lower compliance than non-statutory norms
	Pure self-regulation (mean 2.6467)	**Statutory rules (mean 3.4692 = highest)**	-.82253(*)	Statutory rules significant lower compliance than self-regulation
	Non-statutory norms (mean 1.37 = lowest)	Statutory rules (mean 3.4692 = highest)	-2.09919(*)	Statutory rules significant lower compliance than non-statutory norms
	Non-statutory norms (mean 1.37 = lowest)	Meta-regulation (mean 2.5533)	-1.18333(*)	Meta-regulation significant lower compliance than non-statutory norms
	Statutory rules (mean 3.4692 = highest)	Meta-regulation (mean 2.5533)	.91586(*)	Statutory rules significant lower compliance than meta-regulation
CodecomplianceII	Pure self-regulation (mean 1.34)	**Non-statutory norms (mean 0.61 = lowest)**	.73000(*)	Pure self-regulation significant lower compliance than non-statutory norms
	Pure self-regulation (mean 1.34)	Satutory rules (0.8815)	.45848(*)	Self-regulation significant lower compliance than statutory rules
	Non-statutory norms (mean 0.61 = lowest)	Meta-regulation (mean 1.4467 = highest)	-.83667(*)	Meta-regulation significant lower compliance than non-statutory norms
	Statutory rules (0.8815)	Meta-regulation (mean 1.4467 = highest)	-.56515(*)	Meta-regulation significant lower compliance than statutory rules

*. The mean difference is significant at the .05 level.
CodecomplianceI: Number of deviations
CodecomplianceII: Number of deviations with an insufficient explanation (categories 1, 2, 3)

The results in Table 8 show the differences in the level of compliance between two different ways of legal embedding: hence the manner of embedding is of influence on the level of compliance. Both for *CodecomplianceI* as *CodecomplianceII* (that takes the quality of the explanations into account), the companies for which the comply or explain principle has been laid down in non-statutory norms score best (lowest means (1.37 and 0.61) thus fewest deviations); they have the highest compliance rate compared to the other corporate governance arrangements. Meta-regulation or statutory rules alternately score lowest for the different levels of code compliance (highest means thus most deviations). It was expected that the stronger a comply or explain principle is embedded in a country the higher the level of compliance and/or quality of explanations will be, since a strong embedding shows faith in and consensus about the principle and likely more compliance. Therefore, one would expect the corporate governance arrangement of meta-regulation and the comply or explain principle laid down in statutory rules to achieve the highest compliance rates. Apparently the comply or explain principle laid down in non-statutory norms (e.g. listing rules) suffices for the highest compliance rates. Possibly this is concluded too easily and therefore the other variables are also included in the multivariate analyses. Of further interest are variables such as the time the principle has been applicable. For example, in the UK the judicial corporate governance arrangement involves a national corporate governance code and a comply or explain principle supported by non-statutory norms, but it also has a long period of application of the principle.

6.2.3 Variable Firm size

Firm size is considered a common predictor for code compliance; as a result of relatively lower compliance costs (Dedman 2000) and greater visibility (Pollock, Fischer et al. 2002) larger firms are expected to have a higher level of code compliance than smaller companies (Talaulicar & Von Werder 2008) (Hooghiemstra, Van Ees & Van der Laan 2008).

Tables 9a/b. Correlation analysis (Spearman's rho) between number *CodecomplianceI* and *CodecomplianceII* and *Firm size*

	CodecomplianceI	CodecomplianceII	Compartment
CodecomplianceI	1		
CodecomplianceII	.653(**)	1	
Compartment	0.024	.114(**)	1

**. = p < 0.01; *. = p < 0.05; n = 711

The correlation coefficient is Spearman's correlation since ordinal and ratiovariabes are used (Van Dalen 2002) (Field 2005)

CodecomplianceI	Number of deviations
CodecomplianceII	Number of deviations with an insufficient explanation (categories 1, 2, 3)
Compartment	The compartment the company is subject to (large caps, midcaps and small caps measured by market capitalisation)

	CodecomplianceI	CodecomplianceII	Indextype
CodecomplianceI	1		
CodecomplianceII	.653(**)	1	
Indextype	.101(**)	.093(**)	1

**. = p < 0.01; *. = p < 0.05; n = 711

The correlation coefficient is Spearman's correlation since ordinal and ratiovariabes are used (Van Dalen 2002) (Field 2005)

CodecomplianceI	Number of deviations
CodecomplianceII	Number of deviations with an insufficient explanation (categories 1, 2, 3)
Indextype	The index type the company is listed on (a country's three main stock exchange indexes)

Tables 9a and 9b show no significant relationship between market capitalisation (*Compartment*) and *CodecomplianceI* (the number of deviations indicated by the companies). However, when the quality of the explanations for the deviations is taken into account a significant positive relationship is visible; hence, the smaller the company (the lower the market capitalisation), the lower the level of compliance (the more deviations with an insufficient explanation). Next to market capitalisation the stock exchange index is also a commonly used variable in the size hypotheses (Andres & Theissen 2008) (Von Werder, Talaulicar et al. 2005). Since per country the indices and their admission criteria differ, a country's main stock exchange index is coded as 1, first to main stock exchange as 2 and second to main stock exchange as 3 (*Indextype*). For both levels of compliance, a positive relationship (at 0.01 level) with the *Indextype* can be seen, hence implying that the smaller the company (the higher the code for the stock exchange), the lower the code compliance (the more deviations) and thus confirming the stock exchange index hypothesis.

6.3 Multivariate results

This section presents the results of the regression analyses. The results of the analyses for the variables *CodecomplianceI* and *CodecomplianceII* (now expressed in percentages) with the time the comply or explain principle has been applicable in a country (varying from 1 to 15 years), the *Judicial corporate governance arrangement* and the *Firm size* (expressed in market capitalisation compartment and the three main stock exchange indices) (The meta-regulation, small caps and second to main index dummies are excluded from the models for several reasons: (i) one less dummy than the recoded groups is necessary for a linear regression model with dummies, (ii) based on the bivariate results these dummies are excluded from the models since they are considered to be of less interest, and (iii) in testing different models the current model shows most significance). Table 10 below shows the results of the linear regression (The R^2 varies from 0.156 for model CodecomplianceI and 0.157 for model CodecomplianceII stating that 16% of the total variance in the level of compliance is explained by the independent variables, i.e. the model. The F-ratio is 16.257 for CodecomplianceI and 16.368 for CodecomplianceII implying that the level of compliance can significantly be explained and predicted by the models).

Table. 10 Results of linear regression

Variable	Model CodecomplianceI	Model CodecomplianceII
Variable Intercept	91.541	94.773
	146.9413**	215.805**
Time	0.227	0.136
	4.432**	3.759**
Pure self-regulation dummy	4,130	2.689
	8.835**	8.162**
Non-statutory norms dummy	1.981	1,552
	3.857**	4.289**
Statutory rules dummy	2.978	2.83
	7.2286**	9.746**
Large caps dummy	-1.263	0.412
	(2.1769)*	1,008
Midcaps dummy	-0.725	0.024
	-1.507	0.071
Main index dummy	2.770	0.854
	4.676**	2.046*
First to main index dummy	2.442	0.803
	5.367**	2.503*
σ^2	13.900	6,907
R^2	0.156	0.157
Adjusted R2	0.147	0.148
F-statistic	16.257**	16.368**

**. = $p < 0.01$; *. = $p < 0.05$; n = 711

For both models the variable *Time* shows a positive significant correlation (p<0.01) with the level and quality of compliance, therewith predicting that the longer the comply or explain principle has been applicable, the higher the level of compliance (0.227% for *CodecomplianceI* and 0.136% for *CodecomplianceII*). With respect to the *Judicial corporate governance arrangement* both models analysed are significant (p<0.01). In model *CodecomplianceI*, self-regulation scores best (4.130). But when taking the quality of the explanations into account (model *CodecomplianceII*) the stricter corporate governance arrangement with statutory rules predicts the highest level of compliance (2.830). The explanatory variables of the market capitalisation show almost no significance, hence *Firm size* does not seem to matter. However, the stock exchange index dummies show the contrary. For both the models *CodecomplianceI* and *CodecomplianceII* it is predicted that, taking all the variables into account, the more important the index the company is listed on (in practice the larger the company), the higher the predicted increase in the level and quality of compliance.

7. Summary and conclusions

Recent study shows that the explanations for deviations from code provisions are often unsatisfactory. Often a non-company specific and uniform explanation is provided for a deviation from a provision of the national corporate governance code. The EU asks for further attention to achieve actual improvement in the application in practice. The second section of this article explains that the comply or explain principle is influenced by the legitimacy theory and the theory on market failure and information asymmetry. By applying the comply or explain principle in their annual accounts, companies want to legitimatise their corporate governance structure and attempt to minimise the information asymmetry and therewith hopefully attract investors. Section 3 discusses further that the comply or explain principle and the national corporate governance codes can be legally embedded in different ways in the national judicial systems. Nowadays the comply or explain principle is legally embedded in legislation or listing rules; which of these two possibilities depends on matters such as the experience with the comply or explain principle in a country, and culture in relation to self-regulation. Section 4 briefly describes previously conducted research of the comply or explain principle.

In this study 237 annual reports are analysed by their contents for the years 2005-2007 for the countries Belgium, Germany, Italy, the Netherlands and the United Kingdom. The level and quality of code compliance was researched further. The level of the compliance with the applicable corporate governance codes is measured by the contents of the annual accounts based on what the company itself indicates about code compliance. Whenever a company indicates a deviation from a code provision, it is measured as such for the dataset. Whenever the quality of the explanations of the deviations is taken into account as well, then the explanations are distinguished into six categories of quality of which the highest three categories are regarded as 'sufficient' explanations and therewith as a correct application of the comply or explain principle. The descriptives show that the level of code compliance in the period analysed in itself is high (from 92.70% to 98.11%) and that per company an average of 2.5 code provisions are not complied with. However, when the quality of the explanations is taken into account, it is clear that a substantial part of the code provisions not complied with is explained insufficiently (40.2%).

This study believes in the 'one size does not fit all' approach and therefore does not argue for 100% compliance. However, the explanations for the code provisions not complied with need to be sufficient. The analyses show that the period of time the comply or explain principle has been applicable in a country predicts the level and quality of compliance. The same applies for company size: the bigger the company, the higher the level and quality of compliance. Regarding the legal embedding of the comply or explain principle in a country, legal embedding in non-statutory norms (listing rules) seems most sufficient, although the legal system and cultural characteristics are not taken into account whilst probably significant. According to the EU Commission this is indeed a topic requiring further research, since improvements in the application of the comply or explain principle are deemed necessary. Recently published guidelines of the corporate governance monitoring committees in the Netherlands and the UK on how to explain non-compliance with code provisions are certainly a step forward (Monitoring Committee 2012), but further fine-tuning remains necessary to achieve a common understanding of the principle's scope and most effective form in order to make the principle work in practice as intended: enhancing the corporate governance within companies whilst making 'made to measure' compliance possible. Although a central element of EU corporate governance, the comply or explain principle is surprisingly not often a topic of research, let alone internationally researched, covering a period of more than one year. As acknowledged by the EU Commission, improvements in the application of the principle are deemed necessary; therefore further research is of interest. The users of the annual accounts are best served by understandable, company-specific and transparent statements. However, it must be kept in mind that the comply or explain principle is not a panacea and has its weaknesses. As far as self-regulation is concerned, success is only within reach when enough awareness and support exist. To end with the beginning of this article: as it is a central element of EU corporate governance, constant care is required to keep the comply or explain principle in top form.

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IMPACT OF CORPORATE GOVERNANCE ON FINANCIAL DISCLOSURES: EVIDENCE FROM INDIA

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Abstract

The paper aims at identifying impact of corporate governance variables i.e. board structure (board size, board independence, board activity and board busyness) and ownership structure (foreign promoters holding, institutional shareholding and CEO duality) on financial disclosures made by the Indian firms. Using cross sectional data of 325 listed firms for the financial year 2009-10, we compute financial disclosure score (using 171 checklist points) based on disclosure requirements of accounting standards. We find average disclosure score of 73%, maximum and minimum being 100% and 46% respectively. Our finding support agency theory in terms of monitoring role of board since board size is found to be significant however we do not find any influence of board independence on the disclosures. The study also supports resource dependency theory in terms of outside directorship which might provide exposure to different corporate environment, brings diverse perspectives and knowledge to the directors and this in turn leads to improved disclosures. We also support the notion that having foreign promoter shareholding improves disclosures.

Keywords: Financial disclosure, Board structure, CEO Duality, Ownership structure, Firm attributes

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1. Introduction

Issue of corporate disclosures has been widely discussed in recent years mainly due to financial crises and need of effective corporate governance system. Why corporates should disclose more information in financial reports has been pronounced in several theories like stakeholder theory, agency theory, legitimacy theory and political economy theory (Choi, 1973). The agency theory implies that companies increase disclosure in order to reduce conflicts between principals (shareholders) and agents (managers). In addition, companies aiming to increase their firm value may do so by increased disclosure (Lobo, 2001). Several studies have mentioned that improved disclosure reduces the gap between management and the outsiders, enhances the value of stock in the capital market, increases liquidity and reduces cost of capital (Apostolos, 2009; Karim, 1996; McKinnon, 2009).

Accounting and stock market frauds have increased importance of transparency and reliability of the financial information provided to markets (Lang M. & Lundholm R., 2000). In response to financial scandals (like Enron, WorldCom, Satyam) and accounting irregularities as seen in several scams, the regulatory authorities from several countries has taken initiative to improve information disclosures environment, mitigate conflicts of interest and ensure the independence of auditors to protect the investors interests' and increase the confidence of capital markets (Leuz, 2003). Weak corporate governance system may provide an opportunity for managers to act against the interest of shareholders. Effective corporate governance system assists in improving financial performance and corporate valuation (Klapper, 2004; Rajagopalan, 2008). As a part of corporate ethics, stakeholder calls for transparent and reliable financial disclosures.

Board of directors and ownership structure plays crucial role in monitoring managerial activities and also reduces agency costs (Fama and Jensen, 1983; Jensen & Meckling,1976). Several studies have shown evidence of a significant relation between the characteristics of the board of directors and the integrity of accounting information (Hashim, 2008; Patelli, 2007; Rahman, 2006). In corporate governance, the monitoring role of boards of directors is a critical component of internal control (Jensen, 1986). Weak governance has been found to be the prime reason of discounting emerging economies in the financial markets (La Porta, 2000).

Considering importance of corporate governance mechanism in driving firms to disclose adequate and sufficient information to the shareholders, our study aims at examining impact of effective corporate governance mechanism i.e. Board structure and ownership Structure on financial disclosures. We

focus on India as it is one of the largest emerging economies and we hope that results will also be applicable to other emerging economies as well.

The paper is motivated considering the fact that disclosures are important tool for communicating financial and non-financial information to the shareholders. It is the responsibility of the board to monitor the activities of managers. In India, Securities Exchange Board of India (SEBI) has recommended implementation of effective governance system for investors' protection to drive economic growth and development through investment in financial markets. When it comes to disclosures especially financial disclosures, several Accounting Standards (AS)/Generally Accepted Accounting Principles (GAAP) are prescribed by Institute of Chartered Accountants of India (ICAI) to be followed while preparing financial statements. Hence, an investigation of impact of effective corporate governance mechanism on financial disclosures would benefit not only the investors and other stakeholders but also to regulatory authorities for whom the study may act as feedback for existing regulatory environment.

We aim to contribute to the existing literature in several ways. First, several studies have focused on effective corporate governance mechanism through board monitoring and independence and its association with financial performance (Baysinger, 1985; Bhagat, 2008; Coles, 2001; Erhardt, 2003; Hillman & Dalziel, 2003; Jackling, 2009) and Corporate Social Responsibility (CSR) disclosures (Roshima Said et. al., 2009). However there is limited focus on impact of corporate governance on disclosure policy of the firms. Our study focuses on impact of corporate governance mechanism i.e. board structure and ownership structure on financial disclosures considering disclosure requirements of Accounting Standards/GAAP in India. We prepare checklist/questionnaire of 171 points (considering accounting standards disclosure) as a part of our disclosure index which enables us to examine the extent of financial disclosures. Second, most of the studies related to disclosures and corporate governance have focused on developed countries there is limited work done in emerging market context (especially linking corporate governance with disclosures). Our study may help to understand impact of corporate governance on disclosure environment in emerging market context since Indian corporate environment is one of the largest amongst emerging economies. Finally, earlier studies that focused on impact of disclosures on governance considered either voluntary disclosures or specific financial statements disclosers (Chen, 1998; Forker, 1992; L.L. Eng, 2003; Simon S.M Ho, 2001; Nazli A. Mohd Ghazali, 2008), whereas we focus on all the disclosures that are laid down by Indian Accounting Standards to determine the level of disclosure for each firm.

The paper is organized as follows: Section 2 provides overview of financial reporting and corporate governance environment in India. Section 3 discusses related literature on board structure, ownership structure and financial disclosures and lay down hypothesis of the study. Section 4 mentions data selection process and methodology for data analysis. Section 5 narrates results and discusses output. Section 6 provides concluding remarks.

2. Financial Reporting and Corporate Governance in India

In India, financial reporting and disclosure requirements are mainly governed by Companies Act and Institute of Chartered Accountants of India (ICAI) whereas corporate governance requirements come from Securities Exchange Board of India (SEBI). In this section we shall discuss regulatory requirements about financial reporting and corporate governance in Indian context.

2.1 Financial reporting and disclosures

Financial reporting is the communication of financial information of an enterprise to the stakeholders. Within a corporate context, financial reporting includes set of accounting statements which includes Balance Sheet, Income Statement and Cash Flow Statement. These statements are also required to fulfil statutory requirements of various regulatory authorities. Other financial statements prepared by companies based on the requirements are Consolidated Financial Statements, Segment Reporting, Environmental reporting etc.

The Companies Act, 1956 lays down the detailed provisions regarding the maintenance of books of accounts and the preparation and presentation of annual accounts. The Act also prescribes the mechanism for issuance of accounting standards.

ICAI is a statutory body having the mandate to regulate and develop the financial accounting and auditing professions. For preparation and presentation of information in the financial statement ICAI issues Accounting Standards which are reviewed and notified by National Advisory Committee on Accounting Standards (NACASA). Chartered Accountant, acting as Statutory Auditor certifies the financial statements of the companies. An unqualified/clean audit report assures the users that information contained in the annual accounts is reliable.

2.2 Corporate Governance Mechanism

The focus on issues of Corporate Governance has gained momentum in Indian Corporate Sector in the past decade. In 1991, the Indian Government enacted a series of reforms aimed at general economic

liberalization. The Securities and Exchange Board of India (SEBI), India's securities market regulator was formed in 1992. It issues guidelines and monitor corporate in the issuance of capital and transfer of securities, in addition to all intermediaries and persons associated with securities market. Listed corporations are required to comply with various provisions of SEBI and submit financial statements and reports from time to time. In addition to this SEBI plays important role of acting as a supervisory body to implement corporate governance requirements. In the year 2000, it has issued Clause 49 which sets out the detailed requirements of compliance to corporate governance principles.

The first major initiative was undertaken by the Confederation of Indian Industry (CII), India's largest industry and business association, which came up with the first voluntary code of corporate governance in 1998. Focusing mainly on Anglo-Saxon Model of Corporate Governance, CII drew up a voluntary Corporate Governance Code. The first draft of the code was prepared by April 1997, and the final document titled "Desirable Corporate Governance: A Code",[1] was publicly released in April 1998. It was voluntarily adopted by few companies.

The second major corporate governance initiative in the country was undertaken by SEBI. In early 1999, it set up a committee[2] under Kumar Mangalam Birla[3] to promote and raise the standards of good corporate governance. The committee focused on improving board structure and functioning along with improved disclosures to shareholders. SEBI accepted the recommendations of the Birla Committee and made it a statutory requirement under clause 49 of the Listing Agreement of the Stock Exchanges.

Afterwards, Naresh Chandra Committee (2002) was formed by Ministry of Corporate Affairs (MCA) which recommended about independent auditing, non-audit services provided by auditors, independent directors etc. In the wake of the Enron scandal and the adoption of the Sarbanes-Oxley Act in the United States, SEBI formed the Narayana Murthy Committee in order to evaluate the existing corporate governance requirements. The committee in its report submitted in 2003 suggested requirement of audit committee, independence of the board, training for directors etc. After Satyam scandal (2009) which was mainly due to board failure and financial irregularities regulators and industry groups started further reforms in corporate governance requirements. SEBI along with CII issued major recommendations like appointment of Chief Finance Officer (CFO) by audit committee, rotation of audit partner, appointment of remuneration committee, performance evaluation of directors etc.

3. Literature Review and Hypothesis Development

The impact of corporate governance and ownership structure on financial disclosures is driven by several theoretical foundations. Agency theory is one of the foremost theories dealing with disclosure and governance and it mentions about conflict of interest between shareholders (principals) and managers (agents) due to separation of ownership and management. Jensen and Meckling (1976) mentioned that since managers do not own resources they may create "Moral Hazard" because they would try to hide their inefficiency to avoid loss of rewards linked to their performance. To monitor agents, principals would call for effective corporate governance mechanism and adequate disclosure of information. Resource dependence view of corporate governance suggests that board of directors provides essential resources through their expertise and linkages to other firms and institutions (Hillman A. J., 2003; Pfeffer, 1972). This may encourage board to disclose relevant information to the shareholders. Signalling theory indicates that information asymmetry between a company and the investors causes adverse selection. To avoid this situation, companies disclose information voluntarily, providing signals to the market (Watts, 1986). Political process theory suggests that regulators make decisions based on the information disclosed by firms (Watts, 1986). This may also lead to study the impact of corporate governance mechanism (enforced by regulators) on disclosure policy of firms. Higher information disclosure is expected to justify a firm's large profits and thus avoid legal obligations (Giner, 1997; Lang and Lundholm, 1993). Political costs and the competitive environment also influence the level of information disclosed in an industry (Mora and Rees, 1998).

Considering theoretical foundations and related literature we construct hypothesis which are explained along with the literature discussion for each variables considered in the study.

3.1 Financial Disclosure

Agency costs are frequently cited as an explanation of why companies may disclose financial information (Chow, 1987; Hossain M. and Adams M., 1995). Such disclosures assist principals to monitor the activities of their agents (Jensen & Meckling, 1976).

Owusu Ansah (1998) defines adequate disclosure as the extent (no. of items) to which mandated applicable information is presented in annual reports of companies and the degree of intensity by which a company discloses those items in its annual report. Cerf (1961) studied the corporate-specific attributes which determines the extent of disclosure and observed that significant differences in disclosure appeared to be a function of a variety of

corporate-specific attributes including asset size, number of shareholders, and profitability. Buzby (1974) measured the disclosure of 39 selected informational items in the annual reports of 88 small and medium sized companies and concluded that the companies should give due consideration to information needs of the users of financial statements while deciding on the items to be included in the annual reports.

Seshan (1980) carried out a survey of the financial reporting practices followed by 200 public limited companies in India and concluded that many companies were not disclosing the accounting policies and the supplementary financial statements in their annual reports and laid emphasis on the inclusion of these statements in the annual reports.

Singhvi and Desai (1971) studied the association between disclosure of certain informational items and the company characteristics, such as asset size, number of stockholders, listing status, CPA firms, rate or return and earnings margin taking a sample of 100 listed and 55 unlisted US companies for the year 1965-66. They concluded from their study that extent of disclosure was lower for unlisted companies and the disclosure was positively associated with total assets, number of shareholders, CPA firm, and earnings margin. Several studies have argued that while disclosure may be mandated by regulatory bodies, sizeable scope remains in determining what information is actually provided (Wallace, 1980; Lang and Lundholm, 1993).

Nangia (2005) examined the disclosure practice of 10 Indian companies and 10 Multinational Corporations operating in India from 1992 to 2001. She studied the association between the extent of disclosure (index of 106 items) and certain company characteristics like size, profitability and type of industry. She found that while there is no association between the extent of disclosure and size and profitability of companies in both groups, type of industry has a significant association with the extent of disclosure.

In this paper Financial Disclosures are used as dependent variable considering the Disclosure score computed through disclosure questionnaire/checklist (171 points) prepared from disclosures required by each accounting standards.

3.2 Board Structure

Effective corporate governance mechanism is always designed to felicitate monitoring role of directors (Jensen,1986). Several studies have focused on size of the board, presence of independent directors in the board, frequency of board meetings as effective criteria to monitor board activities. Well-functioning board may also lead to better quality disclosure.

We consider following variables as proxy variables for board structure.

Board Size

Size of the board plays important role in monitoring the activities of managers. Large size of the board may provide better supervision and high quality corporate decisions (Pearce, 1992). Small sized board may affect the level and extent of monitoring (Davila, 2009; Ferraz, 2011). Large board may also bring in more expertise and knowledge which may be useful to financial reporting practices.

In India, as per The Companies Act a minimum of three and maximum of 15 directors are prescribed on the board. It permits more than 15 directors after passing a special resolution.

Considering the importance of board on improving quality of financial reporting and disclosures we propose following hypothesis.

H1: The size of the Board of Directors is positively associated with financial disclosures.

Board Independence

Several studies in corporate governance literature have discussed about role of independent directors in improving financial reporting and disclosure quality. Fama and Jensen (1983) and Leftwich (1981) mentioned that independent directors in the board will be more effective to control mangers and improve disclosures. Independent directors are always considered as a tool for monitoring management behaviour (Rosenstein, 1990) and they may improve disclosure of information. Forker (1992) reported that a higher percentage of outside directors on boards enhanced the monitoring of the financial disclosure quality and reduced the benefits of withholding information.

In India, the Clause 49 of the Listing Agreement mandates that for listed companies, where the chairman is an executive director (ED) or a promoter, the board should have at least 50% independent directors (IDs) and Where the Chairman of the Board is a non-executive director, at least one-third of the Board should comprise of independent directors.

Considering the monitoring and control function of independent directors we present following hypothesis.

H2: The proportion of Independent directors on the board is positively associated with financial disclosures.

Board Activeness

Board monitoring role also depends upon its activeness. Number of meeting during financial year is one of the important determinants of its activeness. Monitoring function of board gets affected if they do not meet or meet only few times (Menon, 1994). Previous studies from Adams (2003) and Garcia Lara et. al. (2009) among others supported that no. of meetings can be considered as proxy for board

monitoring. Active board is also expected to work towards safeguarding interest of shareholders and making the financial reporting process more transparent.

In India, the Companies Act and SEBI Listing Agreement prescribe a minimum of four board meetings a year. Considering the positive impact of board activeness on disclosure we present following hypothesis.

H3: Board activeness (No. of board meetings) is positively associated with financial disclosures.

Board Busyness

Directors are allowed to act on board of several companies. Multiple directorships may signal talent superiority and expertise in bringing different exposure to the board. They may generate benefits as they have many networks and access to the resources (Pfeffer, 1972). This is also supported by reputation hypothesis (Fama and Jensen, 1983; Jensen M.,1986). There is also alternate view that multiple directorships may compromise on commitment and quality of monitoring and in turn adversely affect the whole purpose of corporate governance. This view is supported by Lipton et. al. (1992) who argued about compromise on commitment and Beasley (1996) who documented about relation between multiple directorship and financial statement fraud.

In India, The Companies Act limits the maximum number of outside directorship for all directors to 10 public companies, and 20 in all.

Considering that outside directorship brings expertise and resource dependence theory view we expect positive impact on financial disclosure and set following hypothesis.

H4: Board busyness (No. of outside directorship) is positively associated with financial disclosures.

3.3 Ownership Structure and Leadership

Various aspects of ownership structure like Government ownership, foreign ownership, Institutional ownership have been considered in previous studies. Separation of ownership and control has been responsible for agency conflicts (Jensen and Meckling, 1976). It has also been observed that potential of agency problem is sever when shares are widely held as compared to when they are in the hands of few (Fama and Jensen, 1983). The type of board leadership and role of Chief Executive Officer (CEO) can also influence disclosure policy of companies. Considering role of ownership distribution and CEO leadership we propose following hypothesis.

Proportion of Institutional Shareholdings

Due to higher ownership stake, institutional shareholders may influence the decision making of board. They may even encourage higher disclosures in the financial statements. Carson (1997) studied listed companies in Australia and found a significant positive relationship between the percentage ownership by institutional investors and voluntary disclosure of corporate governance practices. Bushee (2000) reported a significant positive association between institutional shareholdings and corporate disclosures measured by the Association for Investment Management and Research (AIMR). Barako (2006) studied listed companies from Kenya and documented significant relation between institutional shareholdings and corporate voluntary disclosures.

Considering the role of Institutional investors to monitor board activities and in turn influence disclosures, we propose following hypothesis.

H5: Higher proportion of institutional ownership is positively associated with financial disclosures.

Proportion of Foreign Promoter Shareholdings

Companies with foreign promoter holding may also have to comply with financial reporting requirements from several regulators which may improve their disclosure practices. Foreign shareholding can play an important role in improving disclosures. Haniffa (2002) found a significant positive relationship between the proportion of foreign ownership and the level of voluntary disclosure by listed companies in Malaysia. Singhvi (1968) found that Indian companies with higher foreign ownership of stock presented higher quality disclosure than locally owned companies. Barako et. al. (2006) also reported significant relation between institutional shareholdings and corporate voluntary disclosures for Kenyan listed companies.

Considering the important role of foreign promoters in improving disclosures we test following hypothesis.

H6: The proportion of foreign promoter holding is positively associated with financial disclosures.

CEO Duality

Chairman of board and Chief Executive Officer (CEO) of a company play major role in the decision making of the firm. It has always been a question whether dual leadership role (chairman and CEO) in the hand of one person is beneficial for effective corporate governance mechanism. According to agency theory, the combined functions may weaken the boards' most important function of monitoring, disciplining and compensating senior managers. It also leads to managerial opportunism due to control of CEO over board decisions. Forker (1992)

empirically studied the relationship between corporate governance and disclosure quality, and presented evidence and reported a negative relationship between disclosure quality and "dominant personality" (measured as board chair and CEO combined). Even Fama and Jensen (1983) reported that CEO duality "signals the absence of separation of decision management and decision control".

Considering the possible compromise on governance by the firm with dual role in the hand of one person, we propose following hypothesis.

H7: CEO Duality is negatively associated with financial disclosures.

3.4 Firm Attributes as control variables

It has been reported in several studies that disclosure practices of a firm is driven by several firm characteristics. Considering the previous literature findings about impact on firm characteristics on disclosure practice we consider firm size, profitability, leverage, age and audit quality as control variables.

Size of a firm is assumed to positively affect the level of disclosure in the financial statements. Since cost of generating and disseminating information is higher, larger firms may be able to easily bear the cost. They have necessary resources and expertise to generate information. In the prior research, size has been found to be a significant factor in explaining the differences in the extent of disclosure (like Cooke T E, 1992, Joshi and Mudhahki, 2001 and Singhvi and Desai, 1971). Chow (1987) argued that agency costs increases with firm size and hence adequate disclosures help to mitigate the cost of agency conflicts. We consider natural logarithm of total assets and market capitalization as proxy for size of a firm.

Corporate profitability normally affects the financial disclosure positively as suggested by prior research regarding the association between the profitability and level of disclosure (Belkaoui A and Kahl, 1978; Singhvi and Desai, 1971 and Wallace R S O et. al., 1994). Profitable firms will be able to bear the cost of disclosure and would also like to continue its image amongst stakeholders. We consider return on assets (ROA) as measure of profitability.

Disclosure of information is also beneficial for the firm that uses debt as a source of finance to maintain trust and confidence amongst creditors. Lenders are likely to force the firms to disclose more. Several studies have found the relationship between leverage and the extent of disclosure is expected to be positive (Bradbury, 1992 and Jensen and Meckling, 1976). However others did not find any association between leverage and disclosure (Carson, 1997; Hossain M. and Adams M., 1995). We use debt to total capital employed (Debt + Equity) ratio in the present study as measure of leverage.

Older companies are generally expected to disclose more information since they are established in the market. Younger firms may suffer from competitive disadvantage while disclosing information. Older firms also have expert and trained manpower. Disclosure may even improve with passage of time. Owusu Ansah (1998) mentioned that older firms are in a better position to bear the cost of disclosures. We consider natural logarithm of age.

Craswell et. al. (1992) and De Angelo (1981) indicated that large auditors are likely to provide higher quality audit services to their clients because they are not economically dependent on specific client and they are also more concerned about reputation loss in case of audit failures, compared with small auditors. Several studies have documented relationship between auditor size and disclosures (Ahmed and Nicholls, 1994; Singhvi and Desai, 1971). Audit firm size is considered as dummy variable and assigned 1 if company is audited by Big 4 Auditors[4] and 0 if audited by other audit firm.

4. Data and Methodology

4.1 Data and Sample

Companies listed in India with BSE (Bombay Stock Exchange Ltd.) are chosen for study. Established in 1875, BSE Ltd. is Asia's first Stock Exchange and one of India's leading exchange groups. About 5000 companies are listed on BSE. Financial companies (about 800) like banking companies are excluded since the regulatory and disclosure requirement are different for these companies. A random sample of 400 companies was selected from the non-financial companies listed with the BSE for the financial year 2009-10. Due to non-availability of annual reports and other data, 75 companies could not be considered from the randomly selected sample. Final sample consisted 325 companies representing different industrial sectors. The sample represented about 8% of the total listed non-financial companies with BSE. Following Table 1 provides summary of industry representation by the sample companies.

Table 1. Industry Classification of Sample Companies

	No. of Non – Financial companies Listed with BSE		**No. of Non – Financial Companies In the Sample**	
Nature of industry	**No. of Companies**	**% of Total**	**No. of Companies**	**% of Total**
Food and Agro	312	7.27%	19	5.85%
Textile	403	9.39%	21	6.46%
Chemical and Chemical Products	642	14.96%	45	13.85%
Consumer Goods	130	3.03%	8	2.46%
Construction Material	134	3.12%	14	4.31%
Metal and Metal Products	311	7.25%	24	7.38%
Machinery	294	6.85%	23	7.08%
Transport	142	3.31%	15	4.62%
Diversified	76	1.77%	7	2.15%
Services (Other than Financial)	1372	31.97%	75	23.08%
Construction and Real Estate	270	6.29%	23	7.08%
Mining	38	0.89%	2	0.62%
Electricity	31	0.72%	4	1.23%
Misc. Manu.	136	3.17%	45	13.85%
Total	**4291**	**100.00%**	**325**	**100.00%**

Though companies may disclosure information in variety of ways, the annual report is considered as most effective and reliable source of information. Annual report is an authentic document as it is audited and submitted to various regulatory authorities. We have collected information related to financial disclosures and corporate governance variables from annual report. The data for the study has been collected from Annual report of individual company for the year ended 31st March 2010. In order to extract the information items, financial and non–financial items of the annual reports were considered. This included reports of directors, report of auditors, corporate governance report, statement of accounting policies, profit and loss account, balance sheet, statement of cash flows, notes to the accounts.

Data about firm characteristics like size, profitability, leverage is collected from PROWESS database maintained by the Centre for Monitoring Indian Economy (CMIE). The dataset provides comprehensive firm level information about the financial statements such as balance sheet (total assets, current assets, total debt and liabilities), income statement (sales, expenditures and taxes), and cash flow statement.

4.2 Construction of Disclosure Checklist/Questionnaire to Compute Disclosure Score

Out of 32 Accounting Standards (AS) issued by ICAI, as applicable to the companies as on 31st March 2010, all the 29 mandatory AS are considered for the purpose of present study. These Accounting Standards are required to be followed by every listed company and therefore its applicability is not dependent on nature of industry. Some of them are not applicable to financial companies however it does not affect the study as our sample includes only non-financial companies. On the basis of disclosures requirements of accounting standards a questionnaire consisting of 171 items of disclosures has been prepared. The disclosures requirements have been broken down carefully into 171 items to ensure that they can be answered objectively. Following Table 2 provides no. of points considered from each Accounting Standard.

Table 2. No. of Disclosers considered as per the requirements from each Accounting Standard

No.	Name of Standard	No. of Disclosures
AS-1	Disclosures of accounting policies	2
AS-2	Valuation of inventories	3
AS-3	Cash Flow Statements	7
AS-4	Contingencies and Events Occurring After the Balance Sheet Date	2
AS-5	Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies	2
AS-6	Depreciation Accounting	7
AS-7	Construction Contracts	3
AS-8	Research and Development (Withdrawn and included in AS 26)	0
AS-9	Revenue Recognition	2
AS-10	Accounting for Fixed Assets	6
AS-11	The Effects of Changes in Foreign Exchange Rates	6
AS-12	Accounting for government grants	4
AS-13	Accounting for investments	8
AS-14	Accounting for Amalgamations	9
AS-15	Accounting for Employee Benefits	13
AS-16	Borrowing Costs	2
AS 17	Segment reporting	11
AS-18	Related Party Disclosures	8
AS-19	Leases	16
AS-20	Earnings Per Share	5
AS-21	Consolidated Financial Statements	3
AS-22	Accounting for Taxes on Income	3
AS-23	Accounting for Investments in Associates in Consolidated Financial Statements	6
AS-24	Discontinuing Operations	11
AS - 25	Interim Financial Reporting	11
AS-26	Intangible Assets	3
AS-27	Financial Reporting of Interests in Joint Ventures	7
AS-28	Impairment of Assets	5
AS-29	Provisions, Contingent Liabilities and Contingent Assets	6
	Total	**171**

Disclosure index has been computed by unweighted approach because each item of disclosure is equally important. It also reduces subjectivity and it provides a neutral assessment of items. On the questionnaire, each item is given weightage of 1 and coded as 1 if disclosed; and 0 if not disclosed and NA if not applicable. Complete annual report for each company is read in order to understand the nature and complexity of each company's operation and to form an opinion about the company before scoring the items.

Following is the formula for computation of Disclosure Score from Disclosure Questionnaire.

DS: Disclosure Score was computed by dividing total no. of disclosures made by a company with total no. of disclosures applicable for that company.

DI = Total No. of Disclosures Made / (Total Disclosures – Disclosures Not Applicable)

4.3 Explanatory Variables

Explanatory variables used in the study are corporate governance attributes and firm attributes. Corporate governance variable included board structure variables i.e. board size (BO_SIZE), proportion of independent directors (BO_IND), no. of board meetings (BO_ACT) and average outside directorship by directors (BO_BUSY) as well as ownership and leadership variables i.e. foreign promoter holding ($FOR_HOLDING$), institutional ownership ($INST_HOLDING$) and CEO duality (i.e. CEO is also chairperson at the same time) (CEO_DUAL). Firm attributes used in the study as control variables are size of the firm (LOG_TA), profitability (ROA), debt level (LEV), quality of audit (Big 4/Non-big 4) (AUD_QUA) and age (LOG_AGE). Following Table 3 explains the variables chosen for the study and source of information.

Table 3. Explanations of Variables considered for the study

Variables	Explanation	Measurement	Source
Dependent Variable			
DS	Disclosure score measured through Disclosure Checklist/Questionnaire (171 points) prepared using disclosure requirements from Indian Accounting Standards (29 Accounting Standards)	1 if Disclosed 0 if not disclosed NA if not applicable	Accounting Standards issued by ICAI/Annual Reports
Explanatory variables			
BO_SIZE	Board Size i.e. no. of directors in the board	Natural logarithm of board size	Annual Reports
BO_IND	Board Independence i.e. no. of Independent directors in the board	Proportion of Independent Directors out of total board size	Annual Report
BO_ACT	Board Activeness i.e. no. of meetings conducted by board in a financial year	Natural logarithm of board meetings	Annual Report
BO_BUSY	Board Busyness i.e. Average Outside directorship by board members	Total Outside directorship/Board Size	Annual Report
FOR_HOLDING	Proportion of shares held by foreign promoters shareholders	% of Foreign promoter Shareholding	PROWESS
INST_HOLDING	Proportion of shares held by Institutional shareholders	% of Institutional Shareholding	PROWESS
CEO_DUAL	CEO Duality i.e. CEO is also a Managing Director (MD)	1 if CEO is also MD 0 otherwise	Annual Report
LOG_TA	Size - Total Assets of the firm	Natural logarithm of Total Assets	PROWESS
ROA	Profitability - Return on Assets	Profit after tax/Total Assets	PROWESS
LEV	Leverage i.e. level of Debt raised by the firm	Debt/Debt + Equity	PROWESS
AUD_QUA	Quality of Audit based on Audit firm size i.e. Big 4/Non Big 4	1 if Audited by Big 4 0 if Audited by Non-Big 4	Annual Report
LOG_AGE	Age i.e. no .of years since incorporation till 31.03.2010	Natural logarithm of company age	PROWESS

4.4 Model Construction

In order to determine the effect of Board Structure, Ownership and Leadership Structure and firm attributes on financial disclosures following models are used.

Model 1

The relationship between financial disclosure score and board structure variables are tested (using firm attributes as control variables) using following model.

$$DS = \alpha + \beta_1 BO_SIZE + \beta_2 BO_IND + \beta_3 BO_ACT + \beta_4 BO_BUSY + \beta_5 LOG_TA + \beta_6 ROA + \beta_7 LEV + \beta_8 AUD_QUA + \beta_9 LOG_AGE + \varepsilon \quad (1)$$

Model 2

The relationship between financial disclosure score and ownership and leadership variables are tested (using firm attributes as control variables) using following model.

$$DS = \alpha + \beta_1 FOR_HOLDING + \beta_2 INST_HOLDING + \beta_3 CEO_DUAL + \beta_4 LOG_TA + \beta_5 ROA + \beta_6 LEV + \beta_7 AUD_QUA + \beta_8 LOG_AGE + \varepsilon \quad (2)$$

Model 3

The relationship between financial disclosure score, board structure, ownership variables and firm attributes are tested using following model.

$$DS = \alpha + \beta_1 BO_SIZE + \beta_2 BO_IND + \beta_3 BO_ACT + \beta_4 BO_BUSY + \beta_5 FOR_HOLDING + \beta_6 INST_HOLDING + \beta_7 CEO_DUAL + \beta_8 LOG_TA + \beta_9 ROA + \beta_{10} LEV + \beta_{11} AUD_QUA + \beta_{12} LOG_AGE + \varepsilon \quad (3)$$

5. Results and Discussions

5.1 Descriptive Statistics

Descriptive statistics of the variables considered in the study are provided in following Table 4:

Table 4. Descriptive Statistics

	Maximum	Minimum	Mean	Std. Deviation
DS	1	0.46	0.73	0.18
BO_SIZE	24	3	8.39	3.63
BO_IND	12	1	4.23	1.76
BO_ACT	23	4	6.64	3.00
BO_BUSY	15	0	3.14	3.45
FOR_HOLD	89.48	0	5.40	15.89
INST_HOLD	87.46	0	8.88	13.90
CEO_DUAL	1	0	0.30	0.46
Total assets (In Millions)	732820.5	0.1	28862.50	79538.26
Profitability –ROA	2.977	-2	0.02	0.23
Debt (In Millions)	126378.50	0.00	5107.34	15962.70
Age (No. of Years)	147	2	29.88	20.14
Audit Quality (Dummy)	1.00	0	0.19	0.39

DS: Disclosure score. BO_SIZE: Natural logarithm of no. of directors in the board. BO_IND: Proportion of Independent Directors out of total board size. BO_ACT: Natural logarithm of board meetings. BO_BUSY: Total Outside directorship/Board Size. FOR_HOLD: % of foreign promoter Shareholding. INST_HOLD: % of Institutional Shareholding. CEO_DUAL: 1 if CEO is also MD, 0 otherwise

It can be observed that average Disclosure Score (DS) of overall sample is 73%. Highest disclosure is 100% and lowest is 46%. Maximum board size of 24 and minimum 3 is reported. This shows that all the companies in sample complied with minimum board size of 3 members as required by Indian Companies Act. Minimum board activity i.e. no. of board meetings has been found to be 4 which is in line with the regulatory requirement. When it comes to board busyness i.e. outside directorship, it has been observed that maximum average directorship is 15 which are also within the limit set by regulators. We did not notice any non-compliance with Corporate Governance norms.

5.2 Financial Disclosure score and variable descriptions

To check the level of compliance, disclosure questionnaire is constructed using disclosures required by each accounting standards. Disclosure Score has been assigned to each company. Following Table 5 provides range of disclosure achieved by companies.

Table 5. Range of Disclosure Score

DS	No. of Companies	% of Companies
91-100	72	22.15%
81-90	55	16.92%
71-80	37	11.38%
61-70	47	14.46%
51-60	82	25.23%
41-50	32	9.85%
	325	**100.00%**
DS: Disclosure Score		

It has been observed that 25.23 % of companies have score between 51 to 60% and 22.15% of companies could achieve score between 91 to 100%. About 10% of the sample companies had very law score between 41 to 50%.

We also provide variable description for different range of disclosure score in Table 6.

Table 6. Variable Description at different Disclosure score level

DS	No. of Companies	% of Companies		Board Size	Inde. Direc.	Prop IDs	No. of meetings	Outside Directorship	Avg. Outside Directorship	Foreign Promoter Holding	Institutional Investor Holding
91-100	72	22.15%	Mean	10.03	4.58	0.53	6.42	38.87	3.84	9.45	12.94
			Max	23	12	1	17	140	15	89.48	87.46
			Min	4	2	0.15	4	0	0	0	0
			SD	4.24	2.28	0.24	2.90	32.49	3.24	22.29	17.13
81-90	55	16.92%	Mean	8.45	4.40	0.58	6.78	35.00	3.82	8.62	7.80
			Max	20	9	1	18	140	15	79.98	42.53
			Min	3	1	0.09	4	0	0	0	0
			SD	3.66	1.71	0.22	3.10	37.08	4.47	19.54	12.47
71-80	37	11.38%	Mean	8.05	4.22	0.58	6.68	34.29	3.98	9.61	10.81
			Max	19	7	1	15	119	14.33	69.45	43.18
			Min	3	2	0.18	4	0	0	0	0
			SD	2.83	1.36	0.23	2.56	33.46	4.04	19.84	12.66
61-70	47	14.46%	Mean	7.77	4.02	0.55	6.87	24.85	2.92	2.48	6.84
			Max	16	8	1	17	121	11.80	45.99	53.05
			Min	3	1	0.13	4	0	0	0	0
			SD	2.80	1.65	0.21	3.31	23.02	3.09	9.55	12.19
51-60	82	25.23%	Mean	7.62	4.12	0.57	6.89	20.18	2.18	1.35	8.54
			Max	16	8	1	23	61	12.20	33.80	48.32
			Min	3	2	0.15	4	0	0	0	0
			SD	2.93	1.58	0.19	3.33	16.85	2.67	5.28	14.22
41-50	32	9.85%	Mean	7.87	3.68	0.55	5.84	16.78	2.23	0.41	3.10
			Max	24.00	7	1	11	51	10.75	8.49	35.45
			Min	4	2	0.17	4	0	0	0	0
			SD	4.62	1.40	0.23	2.05	15.77	2.68	1.69	7.26
	325	**100.00%**									

We can observe that companies with higher board size (mean of 10.3) and outside directorship (mean of 38.87) have achieved higher disclosure score (between 91 to 100%). The average proportion of independent directors remains almost same at different level of disclosure score. This may be because most of the companies have just complied with the regulatory requirement (Mean is 57% to 61% across different ranges of disclosure scores). Higher average of foreign promoter holding (mean between 8 to 10%) is observed for companies with higher disclosure range (71 to 100%). Average institutional ownership is higher (12.94 and 10.81%) for the firm with higher disclosures score range (91 to 100 and 71 to 80%).

5.3 Correlation Analysis

We present Pearson correlations in Table 7 to identify possible correlations between variables considered in the study.

Table 7. Pearson Correlations

	DS	BO_SIZE	BO_IND	BO_ACT	BO_BUSY	FORPROM_HOLD	INST_HOLD	CEO_DUAL	ASSETS	ROA	LEV	AUD_QUA	AGE
DS	1												
BO_SIZE	.274**	1											
BO_IND	-.021	-.498**	1										
BO_ACT	.056	.108	.068	1									
BO_BUSY	.217**	-.037	.063	-.013	1								
FOR_HOLDING	.231**	.053	-.004	.074	.175**	1							
INST_HOLDING	.151**	.144**	-.028	.078	.407**	.152**	1						
CEO_DUAL	-.015	.010	.004	.065	-.072	-.056	-.025	1					
LOG_TA	.270**	.184**	.034	.068	.595**	.248**	.530**	.029	1				
ROA	.183**	.218**	.055	.169**	.151**	.182**	.207**	.052	.228**	1			
LEV	-.001	.033	.068	.173**	.098	.184**	.189**	.034	-.066	.120*	1		
AUD_QUA	.293**	.183**	.008	.019	.211**	.193**	.287**	-.009	.303**	.120*	.061	1	
LOG_AGE	.030	-.017	.016	-.048	.253**	.150**	.137*	-.061	.237**	.029	.001	.018	1
**. Correlation is significant at the 0.01 level (2-tailed).													
*. Correlation is significant at the 0.05 level (2-tailed).													

DS: Disclosure score. BO_SIZE: Natural logarithm of no. of directors in the board. BO_IND: Proportion of Independent Directors out of total board size. BO_ACT: Natural logarithm of board meetings. BO_BUSY: Total Outside directorship/Board Size. FOR_HOLD: % of foreign promoter Shareholding. INST_HOLD: % of Institutional Shareholding. CEO_DUAL: 1 if CEO is also MD, 0 otherwise. LOG_TA: Natural logarithm of Total Assets. ROA: Profit after tax/Total assets. LEV: Debt/Debt + Equity. AUD_QUA: 1 if Audited by Big 4 and 0 if Audited by Non-Big 4. LOG_AGE: Natural logarithm of company age.

The results suggest that disclosure score is correlated with board size, board busyness, foreign holding and institutional holding. Amongst firm attributes; size, profitability and audit quality are found to be significantly correlated with disclosure score.

Higher correlations (.59) have been found between board busyness and size of the firm and also between institutional holding and size of the firm (.53). Other significant correlations are highlighted in the table. Considering several significant correlations amongst variables, we have also tested the data for multicollinearity by calculating VIF values. The results are presented in Table 8 along with regression results and shows that Maximum VIF is 2.33 amongst all the models used in the study. Since the VIF is less than 10, multicollinearity problem is not cause of concern (Myers, 1990).

5.4 Regression Results

We present regression results in for models tested using OLS in Table 8.

Model 1 considers board structure variables as independent variables along with firm characteristics as control variables. We find positive association between board busyness and disclosures as well as between board size and disclosure. Our results support resource dependency theory which suggests that board of directors provide essential resources in the form of knowledge and expertise and agency theory which suggests the monitoring role of directors (Hillman & Dalziel, 2003; Nicholson et. al., 2007). Several studies have also indicated that larger boards reduce dominance of CEO (Forbes and Milliken, 1999; Goodstein et. al., 1994) which may encourage more disclosures for stakeholders. However, we do not find any association between board independence and disclosure as well as between board activeness and disclosure.

Model 2 considers ownership structure variables as independent variables along with firm characteristics as control variables. We find positive association between foreign shareholding and disclosures. This may be because firm with foreign holdings are mainly multinationals and accountable to various regulatory requirements. Haniffa (2002) and Singhvi (1968) also found proportion of foreign ownership as significantly related level of disclosure. We do not find any association between institutional investors' shareholding and disclosures. Our result do not see any impact of CEO duality (CEO also being MD) on disclosures and it does not support that CEO duality will negatively affect disclosures.

Table 8. Regression Results

Regression Estimates (Dependent Variable: Disclosure Score) (N=325)						
	Model 1		**Model 2**		**Model 3**	
	Coefficients	**t-stat**	**Coefficient**	**t-stat**	**Coefficients**	**t-stat**
BO_SIZE	0.220	3.329***			0.235	3.591***
BO_IND	0.065	1.271			0.075	1.475
BO_ACT	-0.009	-0.162			-0.016	-0.292
BO_BUSY	0.008	2.284**			0.008	2.439**
FOR_HOLDING			0.002	2.804***	0.002	3.144***
INST_HOLDING			0	-0.061	0	-0.228
CEO_DUAL			-0.002	-0.076	0.005	0.239
LOG_TA	0.008	0.789	0.021	2.004**	0.004	0.33
ROA	0.089	1.906*	0.101	2.175**	0.089	1.925*
LEV	0.001	0.454	0.001	0.434	0.001	0.45
AUD_QUA	0.092	3.668***	0.101	3.996***	0.083	3.296***
LOG_AGE	-0.020	-0.571	-0.023	-0.660	-0.031	-0.891
Constant	0.462	4.609	0.664	12.406	0.47	4.704
R2	0.165		0.148		0.192	
Adj R2	0.141		0.126		0.16	
F value	6.839		6.781		6.091	
P value	0		0		0	
Max. VIF	1.817		1.662		2.223	
*** Significant at 0.01 level						
** Significant at 0.05 level						
*Significant at 0.1 level						

DS: Disclosure score. BO_SIZE: Natural logarithm of no. of directors in the board. BO_IND: Proportion of Independent Directors out of total board size. BO_ACT: Natural logarithm of board meetings. BO_BUSY: Total Outside directorship/Board Size. FOR_HOLD: % of foreign promoter Shareholding. INST_HOLD: % of Institutional Shareholding. CEO_DUAL: 1 if CEO is also MD, 0 otherwise. LOG_TA: Natural logarithm of Total Assets. ROA: Profit after tax/Total assets. LEV: Debt/Debt + Equity. AUD_QUA: 1 if Audited by Big 4 and 0 if Audited by Non-Big 4. LOG_AGE: Natural logarithm of company age.

In model 3 we consider all the board structure variables, ownership Structure variables and firm characteristics as independent variables. Our results are consistent with model 2 and 3 as we find board size, board busyness and foreign shareholding as significant variables positively affecting disclosures. Amongst firm characterists as control variables (in model 2, 3 and 4), audit quality is significant for all models, however size is significant only in model 2. Profitability is also significant consistently (at 10% level in Model 1 and 3 and at 5% level in Model 2). We do not find any association between age and disclosures.

6. Conclusions

Considering the importance of disclosures and effective corporate governance in increasing investors' confidence and bring accountability to the stakeholders, the study aims at identifying possible impact of board structure, ownership structure and firm attributes on financial disclosure. We find that average disclosure score for listed Indian companies are low (73%) the minimum being just 46%. These scores indicate that there are many companies who do not comply with disclosure requirements of accounting standards. This is alarming, considering the fact that we have only considered listed companies which are audited and supervised by the Stock exchange and Securities and Exchange Board of India (SEBI). However, we did not notice any non-compliance with Corporate Governance norms.

We provide mixed evidence for agency theory and resource dependence theory when we test impact of board structure variables on financial disclosure controlling for firm attributes. We find board size and board busyness (outside directorship) to be positively related to financial disclosure. Larger board plays effective monitoring role (agency theory) and also brings knowledge and expertise which improves

disclosures (resource dependency theory). Their exposure to different business environments through outside directorship (resource dependency theory) is also found to be positively affecting disclosures. We do not find any influence of board independence (agency theory) and board activity on disclosures.

Considering ownership concentration variables we find foreign promoter holding to be associated with disclosures. This may be because foreign promoters have to comply with various regulatory requirements from different countries. We do not find any influence of higher institutional ownership on financial disclosure. Our findings do not support the view that CEO duality may compromise the disclosure (agency theory). We do not find any impact CEO duality (CEO and MD being same) on disclosures.

Findings of the paper are subject to a few limitations. We had to exclude several companies due to non-availability of annual report. The compliance level of such companies may be low but we are unable to capture the same. We rely on financial statements and other information as published in the annual report. We are unable to know the correctness of such information. We have considered accounting standards disclosures which are mainly financial disclosures. This study can be further extended by considering non-financial disclosures made by the companies.

Despites limitations, our study provides useful insights for policy makers and regulators. It can act as feedback to standard setting bodies and regulators. The low disclosure scores signal the need for better monitoring by SEBI and ICAI. We also see influence of corporate governance variables on disclosures and this may help policy makers to frame appropriate policies so that effective corporate governance also leads to improved disclosures.

Notes

1. The Confederation of Indian Industry (CII) released a final report entitled “Desirable Corporate Governance: A Code” in April 1998. Available at http://www.acga-asia.org/public/files/CII_code_1998.pdf.
2. “Report of Committee Appointed by SEBI on Corporate Governance under the chairmanship of Shree Kumar Mangalam Birla” (Birla Committee Report). Available at http://www.sebi.gov.in/commreport/corpgov.html.
3. Kumar Mangalam Birla is an Indian industrialist and the Chairman of the Aditya Birla Group, one of the largest conglomerate corporations in India.
4. Big 4 Auditors considered in the paper are Deloitte, PwC, E & Y and KPMG based on their revenues from professional audit and related services provided by them globally.

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LEADERSHIP EFFECTIVENESS IN MANAGING CHANGE, MOTIVATING EMPLOYEES AND COMMUNICATION AND THE INFLUENCE OF LEADERSHIP STYLES

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Abstract

This study assesses first line supervisors' perceptions of the effectiveness of leadership in managing the change process. This is analyzed in terms of employee's perceptions of the effectiveness of leadership communication, ability to motivate staff and to effectively manage change. The prevailing leadership styles are also assessed. The study was undertaken in a municipal fire and emergency services division in KwaZulu-Natal, South Africa and the population comprises of 60 first line supervisors from which a sample of 52 employees was drawn using the systematic sampling technique. Data was collected using an established questionnaire that was modified for the purposes of this study. The psychometric properties of the questionnaire (validity and reliability) were assessed using Factor Analysis and Cronbach's Coefficient Alpha respectively. Data was analyzed using descriptive and inferential statistics. The results indicate that first line supervisors believe that the leadership of the organization is able to effectively manage change though improvement is needed in terms of their ability to motivate employees and communicate effectively. The dominant leadership style is autocratic leadership followed by impoverished leadership styles which explains the lower concern for motivation and communication that surfaced in this organization. The study also found that only team/participative leadership style correlates significantly with leaders' potential to motivate employees, communicate and manage change respectively. Recommendations are made to enhance leadership effectiveness.

Keywords: Leadership Style, Motivation, Communication, Managing Change

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Introduction

In a rapidly changing and challenging environment employees require continuous guidance in order to perform optimally. Leadership by its very nature ought to provide a clear path for employees to be able to cope with new and seemingly uncertain goals and challenges. Such is the case in the target municipal fire and emergency services division that is undergoing a restructuring process which involves the incorporation of other local authorities into a single entity under one management structure. The added complication of the 'Unicity' concept creates further problems as the boundaries of the division increases dramatically. The previously under-serviced areas that have been included in the Unicity require the same high levels of services which increases the burden due to the tight budgetary constraints. Furthermore, the move from a three-shift to a four-shift system and resultant lower manning levels on all emergency response vehicles will have a huge impact on the manner in which employees operate in the future. Service delivery with limited resources could become a major problem. Morale of employees appears to be at the lowest and management recognizes this as a major obstacle to the change process. In addition, the retention of skilled, well trained and experienced staff is a challenge. Effective leadership is perhaps the only solution to the challenges being faced in the division.

This study therefore assesses first line supervisors' perceptions of the effectiveness of leadership in managing the change process. This is analyzed in terms of employee's perceptions of the effectiveness of leadership communication, ability to motivate staff and to effectively manage change. The prevailing leadership styles are also assessed.

Leadership and leadership styles

Leadership can be described as influencing and motivating the behaviour of individuals and groups (House, 1999) and facilitating individual and collective efforts in such a way that they are willing to pursue the shared objectives and goals of the organization (Yukl, 2002). It is the process of influencing other employees so that they will strive willingly and enthusiastically towards the attainment

of shared goals (Akinbode & Fagbohungbe, 2012). Leadership involves, amongst others, such activities as formulating the organization's mission, objectives and plans and explaining these to subordinates, giving direction and guidance to subordinates, supervising their work, taking steps to improve performance, disciplining subordinates, dealing with conflict and most of all ensuring that plans are successfully implemented. Leadership characteristics include having drive, the desire to lead, self-confidence, and cognitive ability.

Leadership and management are distinct but complementary and interdependent. Kotter (1990) explains that management is about coping with complexity and that without good management, complex enterprises tend to become chaotic in ways that threaten their existence and emphasizes that leadership is about coping with change. As organizations are becoming engulfed with continuous competition and change such as technological advancements and the changing demographics of the workforce, making small improvements is no longer a recipe for success; instead increasing rates of change demand more effective leadership. Organizational restructuring to meet an ever increasing demand for services places enormous demands on leaders to transform the organization effectively. Very often organizational restructuring is accompanied by employee resistance to the change process and leaders face the challenge of making the transition from the old order to the new order as painless as possible for employees. Leaders have to develop a vision that is clear, compelling and highly appealing to followers and articulate a strategy for bringing that vision to life; a clear vision guides followers toward achieving organizational goals and makes them feel good about doing so (Yukl, 2002). They need to provide employees with a sense of mission, instill pride, gain respect and trust. High expectations must be communicated and important purposes expressed in simple ways. Intelligence, rationality and careful problem solving must be promoted. Personal attention and individual treatment of employees together with coaching, advising and motivating will assist in achieving success. Robbins (2005) highlights the importance of transformational leaders and their ability to pay attention to the concerns and developmental needs of individual followers, to change followers' awareness of issues by helping them to look at old problems in new ways and to be able to excite, arouse and inspire followers to put out extra effort to achieve group goals. This description underpins the notion that leadership is also a social influence process (Erkutlu, 2008).

The effectiveness of the leadership especially during a change process largely depends on the leadership style which relates to the type of relationship wherein someone uses his/her rights and methods to influence numerous employees to work together towards the attainment of a shared goal (Buble, Juras & Matić, 2014). Bosiok and Sad (2013) maintain that each style of leadership is a mix of different kinds of behaviour and qualities of leaders. The Blake Mouton Managerial Grid identified two dimensions of leadership behaviour, namely, 'employee-oriented' and 'production-oriented'. Employee-oriented leaders are described as being high on interpersonal relations, that is, they take a personal interest in the needs of subordinates and accept differences among individuals (Smit and Cronje, 2002). Production-oriented leaders' main concern is to accomplish their groups' tasks with very little consideration for employees' needs and individual differences. Hence, the two main behavioural dimensions in the Managerial Grid are concern for people and concern for results and plotting these on axes generates five different leadership styles with various levels of concern for people and for results, namely, impoverished management (low results/low people), country club management (high people/low results), autocratic management (high results/low people), middle-of-the-road management (medium results/medium people) and team/participative leadership (high production/high people). Therefore, each style has a degree of authority that can be applied by the leader and a corresponding degree of freedom within which subordinates can act. Although the grid has five main leadership styles, it is really divided into nine possible positions on each axis thereby, creating eighty-one possible positions into which a leader's style may fall. Movement through the leadership grid from left to right and bottom to top indicates a change from autocratic to democratic leadership (Smit and Cronje, 2002). The ideal style appears at the top right corner where production is optimized as a result of democratic management and a team of well motivated workers.

Leadership effectiveness

Central to the debate on leadership is the question of which factors affect the effectiveness of leadership to the greatest extent. Harari (1996, p. 36) believes that "great leaders are almost always great simplifiers, who can cut through argument, debate and doubt, to offer a solution everybody can understand". In a change environment, the ability of the leader to effectively communicate the solution, the change process and its impact in a compelling manner will motivate, inspire and energize employees towards its successful implementation and realization. This study therefore, assesses leadership effectiveness in terms of ability to motivate, communicate, manage change and the prevailing dominant leadership style.

Motivation

A crucial aspect of organizational behaviour that most managers and leaders have to address is what drives

their subordinates to perform in order to achieve organizational goals, that is, what motivates employees? According to Greenberg and Baron (2000), motivation is described as the set of processes that arouse, direct and maintain human behaviour toward attaining some goal. Therefore, motivation is the formulation of goal directed behaviour where employees are encouraged to achieve individual, team and organizational goals which are interlinked such that the achievement of one indirectly but concurrently means the achievement of other goals (Buble et al., 2014). The performance of employees who are low in motivation is equivalent to those who have low ability; yet, high motivation leads to high performance. Furthermore, Binfor, Boeteng, Abbey, Osei, Swanzy and Gyeip-Garbrah (2013) maintain that the effects of leadership and motivation on employees' performance have a large impact on the overall wellbeing of the attitude of workers in general. However, contrary to this, Almansour (2012) believes that it is difficult to maintain with certainty that a motivated workplace means that the organization would attain high performance and higher revenue.

Various theories of motivation emphasize the importance of recognizing employee needs and fulfilling them in order to remove a tension state and restore satisfaction. Maslow's hierarchy of needs explains individuals' progression through 5 levels of needs, namely, physiological needs, safety or security needs, social or belongingness needs, self-esteem needs and self-actualization needs. Alderfer (1972) categorized needs into existence, relatedness (interpersonal) and growth needs. The Hawthorne studies conducted by Elton Mayo and his team discovered that answers to motivation lay not in the production aspects of the job but in the way people felt management viewed them. Obtaining and implementing employees' suggestions made them feel important, part of the operation and of the future of the organization. Herzberg's theory is that people have two different categories of needs that are independent of each other and affect behaviour in different ways, namely, motivators (which relate to the job itself and include achievement, recognition of accomplishment, challenging work, increased responsibility, growth and development) and hygiene factors (which relate to the environment and include policies and administration, supervision, working conditions, interpersonal relations, money, status and security) (Hersey & Blanchard, 1993).

From the aforementioned theories, it is evident that employees may be motivated by meeting their needs, by setting goals and by ensuring that fairness prevails in the workplace. It is also important to alter employees' expectations and this can be done by clarifying people's expectations that their effort will lead to performance, by administering rewards with valence to employees and by clearly linking valued rewards to performance (Greenberg & Baron, 2000). Employees may also be motivated by structuring jobs to make them more interesting and this may be achieved by combining tasks, opening feedback channels, establishing client relationships and by loading jobs vertically and giving employees greater responsibility for the particular job. According to Kotter (1990), just as direction setting signals the path for action and effective alignment channels employees down the path, successfully motivating employees ensures that they will have the drive to surpass obstacles.

Communication

Communication is the process of interaction and exchange between people and has to do with the transmission of meaning and intentions to others such that those receiving the messages, in turn, have to interpret them so as to give them meaning (Misselhorn, 1998). According to Smit and Cronje (2002), the ultimate goal of all communication is to obtain a response from the recipient of the message or to evoke a certain behavioural reaction. This would lead to the execution of a task and is an inherent part of the communication process. The aspects of the behavioural reaction include thinking, talking, listening, perceiving and acting. The communication message contains one or more of three specific aims, namely, to inform, to persuade and/or to remind. According to Peter Drucker, cited in Lowy and Reimus (1996), 60% of all management problems occur as a result of faulty communications. This emphasizes the need for the relationship between employees and the organization to be the pinnacle of management thinking. It is pointless having a well-developed business plan if employees are unware of it and are not working cohesively towards achieving its goals. Effective communication is pivotal to the optimal functioning of the organization and to optimally utilize the organization's human capital; good communication is the "lifeblood" of any organization (Hersey & Blanchard, 1993, p. 327). Similarly, Buble et al. (2014) maintain that the enhancement of communication in the organization significantly influences its business performance. Greenberg and Baron (2000) maintain that the communication techniques adopted by an organization influences the structure, extent and scope of the organization. Ekman (1990) emphasizes that whilst most people believe communication to be verbal, it is only 7% verbal, 37% tonality determined by the tone and pitch of voice and 56% body language. Barrett (2006) believes that leadership communication uses a full array of communication skills and resources to overcome disturbances and to formulate and transmit clear messages that guide, direct, and energize others into action. A leader will be able to measure the influence of the communication through the amount of impact, action or change in the receiver caused by the communicated message. The effectiveness of the communicated

message can be measured by how well the message is received and understood by the recipient. Effective communication can only be attained if the Chief Executive Officer of the organization is philosophically and behaviourally committed to the notion of communicating with employees (Robbins, 2005) and ensures that effective communication is ingrained into the organizational culture.

According to Hersey and Blanchard (1993), leaders can use the unique communication systems within their organizations to communicate effectively and efficiently. In order to satisfy organizational members' needs for information, leaders need to provide for formal communication in three distinct directions, namely, upward, downward and horizontal communication. Informal communication channels also exist and consist of an assortment of facts, opinions, suspicions and rumours which bypass the formal lines of communication but can supplement it, for example, the grapevine and social networks. Verbal and non-verbal interpersonal communications and written and electronic communications are also important sources of communication. Fundamental to most communication channels is the need for active listening which can avoid misunderstandings in communication that often results in complicated and costly setbacks.

Managing Change

Change is inevitable and because of the uncertainty it brings with it, change is perceived as being 'bad. However, change is bad if leaders ignore it but if leaders prepare for it and exploit it, change can be beneficial to the organization (Lucas, 1997). In other words, leaders cannot let change occur as it will, if they hope to be effective. Instead they have to develop strategies to plan, direct, control change and analyze the demands of the change on their environment in order to adapt their leadership styles to fit these demands so that they can proactively manage change (Hersey & Blanchard, 1993; Smit & Cronje, 2002; Misselhorn, 1998). It is important to note that change does not occur in a vacuum and does not take place within a short space of time; instead it is deliberate, involves a tremendous amount of work and takes time (Okantey, 2012). Change creates an extremely dynamic business environment, thereby requiring leaders to ensure that the change management process is also adaptive (Belias & Koustelios, 2014). There are numerous forces of change that leaders need to respond to by adjusting their leadership styles and thinking and these include changing competition, technological advancements, economic shocks, changing nature of the workforce, social trends, world politics, population growth and the process of urbanization, international trade relations and consumer preferences and behaviour (Robbins, 2005; Smit & Cronje, 2002). Pryor, Taneja, Hymphreys, Anderson and Singleton (2008) categorize these forces of change into the global environment (uncontrollable), domestic environment (uncontrollable), political/legal forces, competitive structure and economic climate.

According to Smit and Cronje (2002), the management of change can be depicted as a systematic process that can be broken down into sub-processes. This involves Lewin's three step process of:

- *unfreezing* the status quo which involves recognizing the forces of change, recognizing the need for change and diagnosing the problem,
- implementing the necessary *change* processes which involves identifying alternative organizational development methods, recognizing limiting conditions, selecting the appropriate method for change to take place and overcoming resistance for change, and
- *refreezing* the desired new state which entails implementing and monitoring change (Hersey & Blanchard, 1993; Robbins, 2005; Smit & Cronje, 2002).

Most change efforts experience some form of resistance due the uncertainty that the change brings with it. Two types of resistance to change include individual and organizational resistance. Individual resistance to change lies in the employees' perceptions, personalities and needs and may be triggered by habit, perceived threat to their security, economic factors, fear of the unknown and selective information processing (Robbins, 2005). Organizational resistance particularly occurs in conservative organizations that resist change such as government departments and educational institutions and this kind of resistance may be triggered by structural inertia, limited focus of change, group inertia, threat to expertise, threat to established power relationships and threat to established resource allocations (Robbins, 2005). Numerous strategies may be adopted to overcome resistance to change, namely, education and communication, participation, facilitation and support, negotiation and agreement, manipulation and co-optation and coercion and their use must be carefully considered and may be utilized in different situations and in varying combinations (Smit & Cronje, 2002). By identifying which resistance factors affect employees the most during the change process and employing the appropriate mechanism to address this issue, leaders will greatly reduce the severity of the trauma created by change and hence, enhance the effectiveness of change management. Binfor et al. (2013) believe that effective leadership and motivation is fundamental to altering employees' perceptions from viewing change as a threat to viewing it as an exciting challenge and Belias and Koustelios (2014) emphasize that change resides at the core or heart of leadership. Pryor et al. (2008) summarize that irrespective of the speed of organizational change, it is the motion of an organization from its current plateau toward a desired

future state that is aimed at enhancing efficiency and effectiveness in the organization.

Aims of the Study

This study assesses first line supervisors' perceptions of the effectiveness of leadership in managing the change process. This is analyzed in terms of employee's perceptions of the effectiveness of leadership communication, ability to motivate staff and to effectively manage change. The prevailing leadership styles are also assessed.

Research Design

Respondents

The study was undertaken in a municipal fire and emergency services division in KwaZulu-Natal, South Africa and the population comprises of 60 first line supervisors from which a sample of 52 employees was drawn using the systematic sampling technique. According to Sekaran's (2003) population-to-sample size table, for a population of 60 the corresponding minimum sample of 52 is needed, thereby confirming the adequacy of the sample of 52 first line supervisors used in the study.

The sample may be differentiated based on age, gender, race, length of service in the organization (tenure) and division/section. With regards to age, half of the sample (50%) is between 30-39 years old, followed by 40-49 years (40.4%), 20-29 years (5.8%) and 50 years and over (3.8%). Evidently, the majority of the sample is between 30-49 years old (90.4%). Due to the nature of the work in the fire and emergency services division and the stringent physical fitness requirement, 98.1% of the sample comprises of males and only 1.9% consists of females. In terms of race, the majority of the sample (50%) is Indian, followed by White (26.9%), then African (19.2%), and then Coloured (3.8%). With regards to tenure, 40.4% of the first line supervisors worked in the organization for over 15 years, followed by those who are serving the organization for 12-15 years (36.5%), then 4-7 years (13.5%), then 8-11 years (7.7%) and finally those with a tenure of 0-3 years (1.9%). Evidently, the majority of the employees have long tenure, that is, 12 years and over (76.9%). In terms of division, the majority of the employees are in Operations (75%), followed by Fire Safety (15.4%) followed by Training (9.6%).

Measuring Instrument

Data was collected using an established, pre-coded, self-administered questionnaire by Devraj (2000) that was adapted for the purpose of this study and consists of two sections. Section A relates to biographical data (age, gender, race, tenure, division/section) and was assessed using the nominal scale with precoded option categories. Section B relates to first line supervisors' perceptions of the effectiveness of leadership in managing the change process. This is analyzed in terms of employee's perceptions of the effectiveness of leadership communication (9 items), ability to motivate staff (8 items) and to effectively manage change (7 items). The prevailing leadership styles are also assessed (13 items). Section B was measured using the Likert Scale ranging from strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4) to strongly agree (5). The questionnaire was formulated on the basis of identifying recurring themes that surfaced while conducting the literature review. These ensured face and content validity. Furthermore, in-house pretesting was adopted to assess the suitability of the instruments. Pilot testing was also carried out on 8 first line supervisors using the same protocols that were utilized for the larger study to test the process, the appropriateness of questions and employees' understanding thereof. No inadequacies were reported and the final questionnaire was considered appropriate in terms of relevance and construction.

Research procedure

The research was only conducted upon completion of the pilot study.

Reliability of the questionnaire

The validity of the questionnaire was assessed using Factor Analysis. A principal component analysis was used to extract initial factors and an iterated principal factor analysis was performed using SPSS with an Orthogonal Varimax Rotation. Only items with loadings >0.5 were considered to be significant and when items were significantly loaded on more than one factor only that with the highest value was selected. Four factors with latent roots greater than unity were extracted from the factor loading matrix. Factor 1 relates to motivation and accounts for 17.86% of the total variance, Factor 2 relates to communication and accounts for 8.56% of the total variance, Factor 3 relates to leadership style and accounts for 7.52% of the total variance and Factor 4 relates to managing change and accounts for 6.75% of the total variance in determining leadership effectiveness. The reliability of the questionnaire was assessed using Cronbach's Coefficient Alpha. The items were reflected as having a high level of internal consistency and reliability, with the Cronbach's Coefficient Alpha being 0.8185.

Statistical analysis of the data

Descriptive statistics (percentages, mean, standard deviation, minimum, maximum) and inferential statistics (correlation) were used to evaluate the objectives and hypothesis of the study.

Results

First line supervisors' perceptions of the effectiveness of leadership in terms of communication, their ability to motivate staff and to manage change was assessed (Table 1).

Table 1. Descriptive Statistics: Effectiveness of leadership in terms of communication, motivation and managing change

Dimension	Mean	Std. Deviation	Minimum	Maximum	Critical Range
Motivation	2.375	0.6163	1	4	2.20 – 2.55
Communication	2.374	0.5511	1	4	2.22 – 2.53
Managing Change	4.35	0.6229	3	5	4.18 – 4.53

Table 1 reflects that first line supervisors believe that the leadership of the organization are able to effectively manage change. Although leaders are perceived as being able to motivate employees (Mean = 2.375) and to communicate (Mean = 2.374) at an almost equal extent, the mean score values against a maximum attainable score of 5 shows that there needs to be a lot of room for improvement in these areas.

In order to engage in deeper analysis of first line supervisors' perceptions of the leadership effectiveness in terms of communication, their ability to motivate staff and to manage change, frequency analyses were undertaken. With regards to managing change, 90.4% of the first line supervisors were convinced that leaders do counsel employees on their personal concerns and 84.6% felt that leaders supported employees during the change process. The majority of employees also felt that leaders view change as a challenge and initiate change. Whilst a significant segment of employees felt that leaders challenge outdated process/procedures and regulations/norms, not all employees shared this view.

With regards to motivating employees during the process of change and in general, 88.5% of the employees believed that leaders in their organization reward individuals for excellent performance, 86.5% felt that leaders in their section promote an equitable reward system, 77% felt that leaders give recognition if objectives are achieved and 73.1% respectively were of the opinion that leaders stimulate/enable employees to achieve objectives and appreciate their employees' contributions. However, employees were not convinced that leaders are supportive of their development, identified their strengths and developmental areas or provided them with the challenge that they seek.

With regards to communication, 86.5% of the employees felt that leaders provide them with the necessary information about the organization's strategy, 82.7% believed that leaders are never too busy to communicate with employees on important issues, 78.8% were convinced that the leadership communicates a shared vision and that they receive more valuable information from leaders than via the grapevine. Furthermore, 73% of the employees felt that leaders in their section provide regular feedback on agreed objectives. However, employees were not convinced that the roles/responsibilities are explicitly communicated by leaders, that objectives are clearly stated, that priorities are explicitly communicated and that strategic/relevant information is shared with team members.

The leadership styles adopted by the leaders were also assessed using the leadership grid (Table 2).

Table 2. Descriptive Statistics: Perceptions of first line supervisors of the prevailing leadership styles

Leadership Style	Mean	Std. Deviation	Minimum	Maximum	Critical Range
Autocratic	3.71	0.99	1	5	3.44 – 3.99
Team/Participative	1.74	0.51	1	3	1.60 – 1.88
Middle-of-the-road	1.76	0.56	1	3	1.60 – 1.91
Impoverished	3.05	0.70	1	5	2.86 – 3.24
Country Club	1.3	0.54	1	3	1.15 – 1.45

Table 2 reflects that the autocratic leadership style (Mean = 3.71) is perceived as prevailing in most sections of the organization, followed by the impoverished leadership style (Mean = 3.05), then the middle-of-the road leadership style (Mean = 1.76), negligibly followed by the team/participative leadership style (Mean = 1.74) and lastly, the country club leadership style (Mean = 1.3). This implies that the majority of the leaders are perceived as demanding performance with minimum consideration of people (autocratic leadership style) and as exerting minimum effort to get work done (impoverished management). Only a small segment of leaders are viewed as attaining adequate performance by means of a combination of pressure for performance and adequate job satisfaction (middle-of-the-road). Minor

segments of leaders are identified as engaging in team or participative management or, leaders who pay attention to the needs of people and sound relations that lead to a pleasant atmosphere and workplace (country club). Evidently, the leaders in this organization are more task-oriented than employee-oriented.

The relationship between the leadership styles and the leaders' potential to motivate staff, communicate and manage change were also assessed.

H 1. There is a significant relationship between the respective leadership styles and leaders' perceived potential to motivate staff, communicate and manage change (Table 3).

Table 3. Relationship between team/participative leadership style and leaders' potential to motivate employees, communicate and manage change

Leadership Style	**r** **p**	**Motivation**	**Communication**	**Manage Change**
Autocratic	r **p**	0.146 **0.301**	0.185 **0.188**	0.098 **0.487**
Team/Participative	r **p**	0.396 **0.004***	0.578 **0.000***	0.318 **0.022****
Middle-of-the-road	r **p**	0.319 **0.021****	0.131 **0.356**	0.086 **0.546**
Impoverished	r **p**	-0.092 **0.519**	0.006 **0.965**	-0.134 **0.344**
Country Club	r **p**	0.113 **0.427**	0.319 **0.021****	0.062 **0.662**

*** $p < 0.01$**
**** $p < 0.05$**

Table 3 reflects that there is a significant relationship between team/participative leadership style and leaders' potential to motivate employees, communicate and manage change at, at least the 5% level of significance. There is also a significant relationship between the middle-of-the-road leadership style and leaders' ability to motivate employees at the 5% level of significance. In addition, there is a significant relationship between the country club leadership style and communication at the 5% level of significance. No other significant relationships were noted. Hence, hypothesis 1 may only be accepted in terms of the team/participative leadership style and partially accepted in terms of the middle-of-the road and country club leadership styles.

Discussion of Results

First line supervisors believe that the leadership of the organization is able to effectively manage change though improvement is needed in terms of their ability to motivate employees and communicate effectively.

With regards to managing change, first line supervisors were convinced that leaders do counsel employees on their personal concerns and support them during the change process. They also believed that leaders view change as a challenge and initiate change. This is imperative since Binfor et al. (2013) maintain that leaders should be a substance of change and uncertainty and take cognisance of its impact on its people. However, in this study, first line supervisors were not convinced that leaders challenge outdated process/procedures and regulations/norms. This is of concern as Curtis, Vries & Sheerin (2011) maintain that leaders not only innovate, develop and inspire but also challenge the status quo and concentrate on a long-term vision. Furthermore, Von Eck and Verwey (2007) believe that a leader operating in a constantly changing environment should have cognitive, emotion and spiritual intelligence in order to successfully lead people through change and uncertainty.

With regards to motivating employees during the process of change and in general, leaders were complemented for recognizing and appreciating employees' contributions, for equitable rewards and for stimulating employees to achieve their objectives. Similarly, Buble et al. (2014) found that the dominant aspect for employees' motivation is their participation in decision-making that makes them feel responsible, and they also find material rewards to be a significant motivation. However, in this study, first line supervisors were not convinced that leaders are supportive of their development, identified their strengths and developmental areas or provided them with the challenge that they seek. Perhaps, the shortage of staff and the fast pace of work in the fire and emergency division leaves leaders with little time to engage with employees on self development issues. Likewise, Bezuidenhout and Schultz (2013) found the constant pressure to be productive results in leaders in the mining industry being unable to engage with employees and suggest that leaders have to pay individual attention to followers, provide balanced feedback and provide opportunities for growth and

development. Detert and Burris (2007) emphasize the importance of subordinate voice and feedback in ensuring a dynamic leader-employee relationship.

With regards to communication, leaders were complemented for communicating the organization's strategy and a shared vision and for never being too busy to communicate with employees on important issues. Employees also believed that they receive more valuable information from leaders than via the grapevine and provide regular feedback on agreed objectives. Buble et al. (2014) found from their research that communication is both horizontal and vertical whereby subordinates willingly accept information given by managers and also inform them of their personal problems thereby ensuring that senior levels of management are fully aware of the problems experienced at the lower levels. However, in this study, first line supervisors were not convinced that the roles/responsibilities are explicitly communicated by leaders, that objectives are clearly stated, that priorities are explicitly communicated and that strategic/relevant information is shared with team members.

The results also reflect that the leaders in this organization are more task-oriented than employee-oriented and the autocratic and impoverished leadership styles dominate with the focus respectively being on demanding performance with minimum consideration of people (autocratic leadership style) and on exerting minimum effort to get work done (impoverished management) as opposed to team/participative leadership which focuses on achieving goals via highly motivated employees who dedicatedly pursue organizational goals and where joint decision-making is central. The prevailing dominant leadership style being autocratic explains the lower concern for motivation and communication that surfaced in this organization. The focus on task may also be due to the nature of work in the fire and emergency division where response time, service quality and immediately attending to the task at hand automatically becomes priority. The impoverished management may be due to the mindset of minimal work for pay which does prevail in a public sector organization where close monitoring may be absent. Similary, de Vries, Bakker-Pieper and Oostenveld (2010) found that charismatic and human-oriented leadership are mainly communicative while task-oriented leadership is significantly less communicative. In their study, Buble et al. (2014) found that amongst Croation managers a soft authoritarian leadership style with numerous aspects of consultative leadership style dominates such as participation, rich communication and superior-subordinate interaction. Buble et al. (2014) found from their research that amongst Croation managers, only decision-making as an aspect of the manager's leadership style is constant and that other dimensions like motivation and communication vary according to the level of management. This perhaps explains why Bowery (2004) emphasizes the need to differentiate between leadership as personal quality and as organization function. A study undertaken by Alkahtani, Abu-Jarad, Sulaiman and Nikbin (2011) found that Malaysian managers that are achievement-oriented and persistent predominantly utilise the consultative leadership style and even those that use the autocratic leadership style tend to be open to experience. Inandi, Tunc and Gilic (2013) found that autocratic and laissez-faire leadership behaviours reduces resistance to change but cautions that this does not mean that they support change. Furthermore, in this study, it was found that only team/participative leadership style correlates significantly with leaders' potential to motivate staff, communicate and manage change respectively, which is expected as it is characteristic and typical of this category of leadership.

Recommendations and Conclusion

From the results of the study, it is evident that first line supervisors believe that the leadership of the organization is able to effectively manage change though improvement is needed in terms of their ability to motivate employees and communicate effectively. The dominant leadership style is autocratic leadership followed by impoverished leadership styles, thereby indicating that the leadership predominantly focuses on the task and results rather than people. This would explain the lower concern for motivation and communication that surfaced in this organization. The study also found that only team/participative leadership style correlates significantly with leaders' potential to motivate employees, communicate and manage change respectively. The recommendation therefore, is that every effort should be made to train and transform the leadership culture to inculcate in its daily practice a concern for people just as much as for the task at hand as the nature of work in the fire and emergency division demands. The bonus is that when the leadership culture changes, the organizational culture also changes thereby benefiting the human capital in the organization. Leaders will thus, motivate and communicate with employees more effectively thereby, having the potential to enhance the overall effectiveness of the organization.

Recommendations For Future Research

This study was undertaken in one public sector division. Future studies should compare the prevailing leadership styles in a public sector and private sector organization in order to assess key differences and provide insight into the leadership characteristics that bring about a combination of greater concern for people and results and thus, generate enhanced organizational effectiveness.

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RELATIONSHIP BETWEEN AUDIT COMMITTEE CHARACTERISTICS, EXTERNAL AUDITORS AND ECONOMIC VALUE ADDED (EVA) OF PUBLIC LISTED FIRMS IN MALAYSIA

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Abstract

Malaysia is a developing economy which is one of the corporate leaders in South East Asian countries. Practicing audit committee is mandatory for public listed firms in Malaysia according to Bursa Malaysia Listing Requirements as well Malaysian Code of Corporate Governance. The purpose of this paper is to examine the association between audit committee characteristics and firm performance among public listed firms in Malaysia. This study employed EVA as performance measurement tool. The sample is 75 firm year observations and covers fiscal years 2008-2010. The study found that audit committee independence is positively associated with firm performance while audit quality is negatively associated in Malaysia. Overall, audit committee characteristics have a positive effect on firm performance. This study contributes to the literature as well as in empirical evidence on audit committee characteristics and firm audit quality. The results suggest that Big 4 firms have a negative impact on value based measure in Malaysia.

Keywords: Audit Committee Characteristics, Audit Quality, EVA

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1. Introduction

The purpose of financial reports is to deliver information on the financial ground, performance corporate governance practices of a firm that is handy for investors and creditors to make investment decisions. The primary roles of the audit committee include overseeing the financial reporting process and to monitor the management, because management intends to manipulate figures for their own interest. Accordingly, external auditors play the role of giving independent opinions on financial statements of firms; if the financial statements are prepared with due care in order to avoid any material bias or misstatements. Hence, audit committee and external auditors play significant role in ascertaining the validity, acceptability and reliability of financial statements. However, due to collapse of corporate skyscrapers for instance, firms such as Enron, WorldCom and Satyam, effectiveness of audit committee and external auditors have been questioned by regulators in ensuring that financial statements are fairly stated to reduce ineffectiveness. Helen and Arnold (2011) asserted that the audit committee can play a significant role in overseeing the audit process and helping to mediate disputes between board and the auditor.

The Bursa Malaysia Listing Requirements and the Malaysian Code of Corporate Governance (2000) recommendation for audit committee composition are aimed to lead effective committee. Consequently, this study investigates the effects of audit committee and external auditors on firms' performance based in terms of true economic profit of the firms. Number of studies reported the significance of audit committee characteristics as monitoring mechanis. Managers intend to manipulate earnings of firms for greater incentives (Wiwanya and Aim, 2008). As audit committee members and auditors are good monitors and expected to oversee the financial reporting, hence, this study contributes in investigating the effect of audit committee characteristics on firm performance based on PLCs in Malaysia.

2. Literature and Hypotheses

Audit Committee Independence and Firm Performance

Cadbury committee (1992) recommended establishing oversight committees including audit committee for the auditing of financial statements and appointment of directors which are supported by agency theory. It considered board committees were an additional control mechanism that increased accountability; thereby enhance the assurance that the interests of the shareholders were being safeguarded. Cadbury committee report (1992) stated that audit committee should be staffed by non-executive directors, because of their independent view on important decisions. Outside directors are believed to ensure decisions made by the executive directors are in the best interest of the principals (shareholders) (Cotter et al., 1997; Weisbach, 1988; Weir and Laing, 2001). And a good audit committee practicing good accounting can ensure effectiveness in an organisation (Joseph at el., 2011). Good audit committee is defined in terms of financial expertise of committee members and their independence while good accounting is defined as less earnings management or the absence of fraudulent financial reporting and restatements. Hence, auditor's independence is cornerstone for auditors and crucial element in corporate reporting process and key prerequisite which adds value to audited financial statements (Ping et al., 2011). Helen and Arnold (2011) emphasised on audit committee strength which can have big impact on audit process and internal control. Jeffrey et al., (2011) audit committee independence is significant in ensuring the integrity of the financial reporting process. This is because management may tend to manipulate the accounts for their self interest, whereas an independent audit committee is the one which can ensure the fairness of the financial reporting.

Bursa Malaysia (Kuala Lampur Stock Exchange) enacted that the PLCs are required to establish an audit committee since 1st August 1994. Section 344A (2) of the Bursa Malaysia Listing Requirement requires audit committee to consist a minimum of three members, a majority of which must be non-executive directors. In code (PARA 15.10 (1) (i) (c) & 15.16 (3) (c)) it states that the committee should form with at least three members from whom majority are to be non-executive directors. Malaysian code on corporate governance (2001) requires companies to have audit committee. The code (Part 2, AA III) states that the committee composition must have at least one-third independent non-executive directors. Malaysian code on corporate governance (Revised 2007) requires the companies to form an audit committee of at least three members, among whom majority are independent.

Studies in Malaysia found that audit committee composition is important, which affect firm performance. The main functions of an audit committee are to meet regularly with the external and internal auditors to review the financial statements, audit process and internal controls of the firm. This helps to lessen agency problems by the timely release of unbiased accounting information by managers to shareholders and others who rely on such information for making decisions, thus reducing information asymmetry between insiders and outsiders. Existence of audit committee is considered while making investment in company. There is an undue impact of audit committee composition on the firm performance (Saleh, Iskander and Rahmat, 2007). Saleh, Iskander and Rahmat (2007) concluded that from Malaysian context, companies should establish 100% audit committee independence from the management. It further stated that audit committees in firm should possess three qualities i.e.:- majority of members are independent, a high proportion of the members possess accounting knowledge and lastly, high frequency of meeting. All these three qualities are expected to improve the monitoring function of the committee. Malaysian boards' sub-committees are dominated by non-executive directors (Abdullah, 2001).

Klein (2002) argued that in order to produce unbiased financial reports, audit committee members are appointed to act independently in order to resolve conflicts between the managers and outside auditors. When situation comes where alternative accounting procedures need to be chosen, conflict may arise between managers and outside auditors. Beasley et al., (2000) suggests that financial statement frauds are more likely to occur in firms with lesser-audit committee independence.

Zainal et al., (2009) found that a higher proportion of independent non-executive directors enhance firm performance, due to their diverse background, attributes, characteristics and expertise, which may improve decision making processes. Non-executive directors are thought to be in a better position than executive directors to fulfil their monitoring function because they are independent and concerned with maintaining their reputation in the external labour market (Fama and Jensen, 1983). Consistent with this proposition, a positive relation is expected between firm performance and proportion of non-executive directors on the audit committee. Ameer, Ramli and Zakaria, (2010) concluded that firms with outside directors is expected to possess a better performance compared to those firms that have a majority of insider executive and affiliated non-executive director in the audit committee. The same was found by Wild (1994). In order to minimize agency problems, because of the independence compared to executive directors, non-executive directors are empowered to do better job in monitoring and controlling the management, hence

resulting improvement in firm performance (Walsh and Seward, 1990).

Chouchene (2010) summarised that the presence of independent directors in the committee composition is more important. Byrd and Hickman, (1992) claimed that the greater the proportion of non-executive directors, the better the stock market response to a firm's tender offer for other firms, while Bonn (2004) found that there is positive relationship between ratio of non-executive directors and firm performance. The same result was found by Rosenstein and Wyatt (1990), Hossain et al., (2001), and Aggarwal et al., (2007). A notable review study based on 250 papers conducted by Joseph et al., (2011) concluded that governance mechanisms in terms of good audit committee is negatively associated with fraud.

However there are also evidences, those found there is negative relationship between the outside (independent non-executive) directors in the audit committee and performance. Franks et al., (2001) and De Jong et al., (2005) concluded that the percentage of independent non-executive directors in the audit committee is associated negatively with the firm performance, while Dechow et al., (2010) concluded that firms with a minority of outside directors and with no audit committee are more likely to commit fraud than firms in the same industry and of similar size, but with a majority of outside directors and an audit committee.

Relying on the above discussion, corporate governance claims that the audit committee should consist of non-executive directors. Therefore, based on the arguments above, following hypotheses are developed to be tested:

H_0: There is no relationship between the number of independent non-executive directors in the audit committee and firm performance;

H_1: There is a relationship between the number of independent non-executive directors in the audit committee and firm performance.

Audit Committee Meeting Frequency and Firm Performance

Best practice stated that audit committee meeting should be held at least once a year without the presence of executive board members. However, the total number of meetings depends on the company's terms of reference and the complexity of the company's operation. On the other hand, Malaysian Code on Corporate Governance (2000) suggests that at least three or four meetings should be planned to correspond to the audit cycle and the timing of published annual reports in addition to other meetings in response to circumstances that arise during the accounting year.

Empirical evidences shows that the audit committee meeting frequency plays a significant role in mitigating various issues including the agency problem ultimately influencing the firm performance, though there are mixed findings on this issue (Wiwanya and Aim, 2008; Anthony, 2007; Saleh et al., 2007; Rashidah, 2006; Xie et al., 2003). Studies in Malaysia found that audit committee meeting frequency is another significant mechanism, which affects firm performance (Saleh et al., 2007; Rashidah, 2006). The main functions during the audit committee meeting is overseeing the firms' financial reports, internal accounting control, the audit process and more recently, its risk management practices. In order to pursue these functions, audit committee is to meet regularly with the external and internal auditors to review the financial statements, audit process and internal controls of the firm. Another important issue to bring in to the audit committee meeting is the quarterly results and year-end financial statements.

There are number of research conducted on relationship between audit committee meeting frequency and the firm performance. Empirical evidences on meeting frequency and firm performance is unclear as there are mixed findings. Vafeas (1999) found positive relationship between meeting frequency and firm performance, which is due to influence of meeting on board members. This finding was subsequently supported by Anthony (2007). This research found that the frequency of audit committee meetings (activity intensity) has a positive and significant relationship with market based performance measure of Tobin's q but seems to have no relationship with return on asset (ROA) which is an accounting based performance measure. The positive effect on Tobin's Q is apparently driven by the South African and Nigerian samples conducted by Anthony (2007). It could be due primarily to the fact that audit committees are generally perceived to serve the interest of shareholders and the public at large. Thus, when they meet frequently it further re-affirms the position of the organization in dealing with transparency and working to promote shareholder value.

Morrissey (2000) suggests four meetings in a year for audit committees. It further claims that best quality of financial reports can be assured, if four sittings are held during the year. Also, it has been argued by Menon and Williams (1994) that for audit committees to be effective monitors, it is not enough just to be independent and that they must be active. Active could be measured by the frequency of their meetings. Interestingly, the frequency of audit committee meetings has a significant negative effect on ROA in the Ghanaian sample (Menon and Williams, 1994).

Evans et al., (2002) found that there is a poor firm performance by significantly increasing board meeting frequency. This could be due to the increased costs for holding frequent meeting as well as the reverse in changes of decision taken in earlier meetings. In subsequent research, Anderson et al., (2004) found that there is a negative relationship

between costs of debt and audit committee meeting frequency, whereas Rebeiz and Salameh (2006) found there is no relationship between audit committee meeting frequency and firm performance. The finding was subsequently supported in research conducted by Sharma et al., (2009). This research found that the number of audit committee meetings held is negatively linked with multiple directorships, audit committee independence, and an independent audit committee chair.

Companies generally report the number of board meetings in the proxy statement, and take this as a measure of board activity. The audit committee is responsible for monitoring financial performance and reporting, and having outside corporate members is associated with this committee's ability to monitor. The number of audit committee meetings has a significant negative coefficient (Rashidah and Mohamad, 2006). On the other hand, Saleh et al., (2007) argued that audit committee with small number of meetings is less likely to possess good role of monitoring. These results are as expected, and imply that a more active audit committee is associated with a reduced level of discretionary currently accruals (Xie, et al., 2003). Due to the mixed results between these two variables, this study developed two hypotheses which are as follows:

H_0: There is no relationship between the audit committee meeting frequency and firm performance;

H_2: There is a relationship between the audit committee meeting frequency and firm performance.

Financial Expertise of Audit Committee Members

The Blue Ribbon Panel (1998) concerned on audit committee knowledge and financial expertise as it can affect their effectiveness. The panel states that members of audit committee should be financially expert; as a result it can affect the monitoring process and possible financial fraud. Financial literacy appears to be more effective in diversified firms and in firms with mandatorily established audit committees (Yoon et al., 2012). It further states that the term "financial literacy" can be used to describe financial background more loosely than financial expertise. Joseph at el., (2011) asserted that audit committee accounting expertise appears to be valued by investors.

The Sarbanes Oxley Act of (2002) (SOX) imposes, in the U.S. a number of corporate governance guidelines for all public listed firms, particularly, it stipulates that the board to be composed of the majority of independent directors and in addition, the audit committee consists entirely of independent directors in which at least one financial expert is included in the audit committee.

Malaysian Code on Corporate Governance (2000) states that audit committee members should have sufficient understanding of financial issues. Bursa Malaysia Listing Requirements, Chapter 15.10 sub-section 1 (c) stipulates that at least one member of the audit committee must be a member of the Malaysian Institute of Accountants (MIA) or if he or she is not a member of MIA, it must have at least three years' working experience. It further states that otherwise, the member must have passed the examinations specified in Part I of the first Schedule of the Accountants Act 1967 or the individual must be a member of one of the associates of accountants specified in Part II of the first Schedule of the Accountants Act 1967.

McDaniel et al., (2002) argue that financial reporting quality becomes better, if audit committee members are financially literate. Xie et al., (2003) claim that financially literate audit committee members are able to better understand the accounts and monitor the financial system in firms. Davidson et al., (2004) found that there is positive relationship between financially literate audit committee members and firm performance. This finding is confirmed in subsequent research (Mir & Souad, 2008). This is explained as with financial expertise complements strong governance which helps to enhance shareholder wealth, through increased monitoring the management as well as the accounting policies. Defond et al., (2005) pointed that audit committees may complement strong governance to enhance shareholder wealth. Jaime & Micheal (2013) concluded that financial expertise of audit committee is important because it audit committee is responsible for financial reporting process. Authors further claimed that audit committees with financial expertise can offer significant value to the client, since their financial knowledge is advantage of detecting any manipulation.

However, the expertise of audit committee members in accounting and/or financial management is positively related to the quality of financial reporting and timeliness (Krishnan, 2005; Saleh et al., 2007; Zhang, Zhou & Zhou, 2007; Krishnan & Visvanathan, 2008). Accordingly, Raghunandan and Rama (2007) asserts that having experienced members on the audit committee contributes to significantly less misreporting and more effective monitoring. Earlier empirical evidence claims that greater independent director with experience and audit knowledge results with more reliable reports (Dezoort, 1998). There was a contradictory opinion about the relationship between audit committee and the earnings management. Rashidah & Mohamed (2006) found that the audit committee members with experience in financial institutions are effective monitors in reducing earnings management. This study further added that audit committees have an insignificant role in preventing the incidence in listed companies in Malaysia has yet to achieve success in its monitoring role.

The Malaysian Code on Corporate Governance follows the Listing Requirement of Bursa Malaysia

that audit committee will comprise at least three directors. If there is any intention to manipulate the financial statements, it is unlikely that firm will comprise their audit committee with members who have financial expertise. Financial reporting quality is better when financial experts being part of the audit committee. It is because members of audit committee with financial experience and training are expected to be able to understand the earnings management and act accordingly. Hence based on two sided discussion above, this study hypothesised:

H_0: There is no relationship between financial expertise of audit committee members and firm performance;

H_3: Audit committee members with financial expertise are associated with firm performance.

Audit Committee Size and Firm Performance

In addition, this study also includes audit committee size as audit committee size is likely to have significant effect on firm performance. Accordingly, the Code of Corporate Governance (2000) also requires the audit committee to be comprised of at least three members. However, Saleh et al., (2007) raised question whether larger audit committee can result effective monitoring or not. There are number of studies reported positive relationship between board size and firm performance. Dalton et al., (1999) found a positive association between size and monitoring process of the board that result in higher performance, whereas Saleh et al., (2007) asserted that audit committee with more members likely to possess diverse skills and knowledge which is likely to enhance monitoring. This finding was subsequently supported by Mir & Souad (2008).

Raghunandan & Rama (2007) argued that the size of audit committee increases the number of meetings. This increase in meeting frequency is argued to provide more effective monitoring and hence better firm performance. In contrast, Belkhir (2008) claimed that size is unlikely to have any effect on firm performance.

On the other hand, Vafeas (1999) argued that larger audit committee can lead to inefficient governance, because of yielding frequent meetings which leads to increased expenses. Hence, larger audit committee can negatively affect firm performance. This study was based on the US firms. Because of such mixed empirical findings, this study hypothesised:

H_0: there is no relationship between audit committee size and firm performance;

H_4: there is a relationship between audit committee size and firm performance.

Audit Quality and Firm Performance

Audit quality is also considered to have effect on firm performance (Ping et al., 2011) where, Becker et al., (1998) measured audit quality in terms of audit firm size. Brian et al., (2012) emphasised on audit partner's rotation in order to increase the audit quality. Furthermore, authors claimed that audit quality depends on audit partners. The Big 4 or non-Big 4 firms have been used as proxy for quality auditors, because quality auditors are more likely to restrict on fraud and account manipulation (Francis et al., 1999; Kim et al., 2003). Among all the audit firms Big 4 auditors possess the substantial market share on Malaysian public listed firms including other countries. Hence, to retain their reputation and increase market share, Big 4 auditors are more likely to be mean and stricter on accounting fraud and manipulation. Jaime & Micheal (2013) found that dark periods are shorter for the firms those employ by Big 4 auditors.

Wiwanya & Aim (2008) claim that client of Big 4 auditors are less likely to have errors and irregularities in their accounts. Accordingly, Francis et al., (1999) claimed that even though the clients of the Big 4 have higher level of total accruals, they have less estimated discretionary accruals. Hence this study developed the following hypotheses:

H_0: Audit quality possesses no significant effect on firm performance;

H_5: Audit quality possesses positive effect on firm performance.

3. Methodology And Research Design

Data Description

Sample includes 32 Sarawak based companies listed in the Bursa Malaysia. The years from 2008 to 2010 were selected. In addition, the Securities Commission issued an improved code by enhancing and revising some specific paragraphs in Part of the Best Practices in Corporate governance. One of these paragraphs is on audit committee composition. Revised code on Corporate Governance was launched on 1st October 2007. Therefore this study intends to explore the performance of after the launch of revised code of corporate governance in Malaysia. We employ financial and non-financial data on a sample of 32 listed companies on the Bursa Malaysia Stock Exchange. In addition, this study also depends on Bursa Malaysia website (www.bursamalaysia.com) and newspapers for their electronic data. Here it is noteworthy to mention that selection of the 32 companies are Sarawak oriented and based on convenience and data were elicited from the annual financial report based on what governance variables were convinced. In this study, performance variable Economic Value Added (EVA) was largely computed based on the companies' annual financial report

downloaded from Bursa Malaysia website. However, most of governance variables were also obtained from the audited annual financial report. The reason behind using annual financial reports for data collection is that the reports are audited, have been published reports that are publicly available. In addition, data can be accessed through Bursa Malaysia website. Furthermore, annual reports of PLCs are presented uniformly and data is subject to comply with Bursa Malaysia regulations and companies act 1965. Companies that were sampled covered the industrial, manufacturing, agricultural, financing and service sectors.

This study begins with the identification of the population of the study, which includes the sample firms listed on Main market and second board of Bursa Malaysia. There were 843 companies listed in main market on Bursa Malaysia as at 31 December 2011. From 843 companies 32 companies are based on Sarawak which is the biggest state in Malaysia. However, due to incomplete financial and corporate governance data number of companies was reduced to 25 from 32. Final list of the sample contains 25 PLCs for this study, and totally 75 observations for three consecutive years. PLCs were selected because of their publicly published annual reports which are available on Bursa Malaysia website. In addition, annual reports are prepared and presented in a uniform way as the data presentation is subject to be complied with Companies act 1965, Bursa Malaysia regulations and corporate governance. Data on audit committees' characteristics and audit quality are obtained from company's annual financial report published in Bursa Malaysia web site.

Measuring EVA

Ratios appear to be widely used in Malaysia. However, ratios are not able to measure and capture the value created on shareholder's investment (Abdullah, 2004). In fact, Issham (2011) claims that Malaysia is suffering from having a suitable performance measurement tool which can help the investors to assess value created on their investment. As a contribution, this study has been inspired to employ a value based performance measurement tool, hence selected EVA for this study.

This study measured the economic profit of Sarawak based public listed companies. EVA is "a measurement of the true economic profit generated by a firm" (Sharma & Kumar, 2010; Stewart, 1994, pp. 73) and is calculated by comparing a firm's net operating profit after tax (NOPAT) to the total cost all its forms of capital which includes debt as well. If NOPAT exceeds the cost of capital, it gives a positive EVA and vice versa. The word capital includes all the assets invested in the firm taking into consideration the deduction of the current liabilities which are not entitled to any interest from those assets and the equity.

This study employs two methods. Firstly, proposed study will calculate EVA of selected public listed companies in Malaysia. Adjustments will be made on financial data (Stewart, 1991). Though 164 adjustments are suggested, only 15-25 are adjusted due to lack of information and data availability. This number is as few as five are made in real life business (Mouritsen, 1998; Stern, Stewart & Chew, 1997; Yong, 1997). In fact, depending on the industry, firm is operating in; firms might not be required to make any adjustment in calculating EVA (Hoque, Akter & Shil, 2004). However, this study intends to make as many as adjustments possible based on data availability at the same time.

This study used the model which is proposed by Stewart (1991) to calculate EVA. Proposed model is as follows:

$$EVA = NOPAT - (WACC \times Invested\ Capital) \quad (1)$$

WACC stands for weighted average cost of capital. Capital charges are calculated by multiplying the cost of debt and cost of equity WACC with the company's invested capital. This generates unadjusted form; EVA is equivalent to what generates by subtracting cost of capital from net income and that is called economic profit which is residual income from accountant's perspective (Young, 1997). The only difference between EVA and residual income are solely the accounting adjustments based on company's generally accepted accounting principles based financial statements.

EVA Formula and Calculation

Stewart (1991) stated that EVA is the deduction of cost of capital from NOPAT. In this calculation, firms are required to make as many as adjustments possible based on the accounting figures from financial statements. EVA model proposed by Stewart (1991) requires following number of steps in order to figure out EVA. The steps are mentioned below:

Gathering Required Data

EVA is calculated based on financial data of firms where income statements, balance sheet, cash flow statement and other financial notes are available. All the annual reports were collected from Bursa Malaysia website. A total of 32 selected PLCs were taken as sample based on Sarawak.

Adjustment and NOPAT

NOPAT is a measure of the company's operating profit. However, before arriving NOPAT, it requires to make as many as adjustment possible on accounting figures based on data availability (Young, 1997). Therefore, this study made adjustments on depreciation, interest expense, and goodwill. NOPAT

is also called as earnings before interest and tax (EBIT). Operating income is calculated by subtracting all operating expenses (cost of sales, selling, general and administrative expenses) from sales. Finally after deducting tax from EBIT, it generates NOPAT (Yahaya & Mahmood, 2011).

Invested Capital

Invested capital is the sum of money invested in a firm. There are more than one approaches proposed in calculating invested capital (Young & O'Byre, 2001). However, this study used the formula proposed by Young & O'Byrne (2001) as follow in order to calculate invested capital.

$$\text{Invested capital} = \text{total debt (short-term debt + long-term debt)} + \text{total equity} \quad (2)$$

Cost of Debt

EVA requires calculation of cost of debt in order to consider the tax benefit of debt. The study stated that the portion of interest is exposed in income statement and subtracted from taxable income before it calculated tax liability, whereas cost of debt is calculated on after tax basis and cost of equity is calculated on before tax basis.

Recent study argued that the determination of cost of capital should be based on marginal borrowing rate. However in real life, it is difficult to identify the marginal rate as firms generate debts from more than one source for different purpose with different interest rates. This is because the firm might have good relation with the lenders or banks, who are willing to issue loan on lower interest charges. Therefore, in order to make the calculation more realistic this study has decided to find the average interest rate for each company based on their different terms of loan.

$$\text{Cost of debt } (K_d) = \text{average interest rate} * (1 - \text{Tax}) \quad (3)$$

Cost of equity capital

Stewart (1991) asserted that investment of money in firms has opportunity cost that shareholders forgo by making the investment in and the opportunity cost is represented by cost of capital. Measuring cost of capital is relatively difficult as there are arguments against and for cost of capital. However, Roztocki & Needy (2008) proposed a formula in calculation of cost of capital. The formula as below:

$$\text{Cost of capital } (K_e) = \text{Risk free rate} + \text{Risk premium} \quad (4)$$

Risk free rate refine as: - Return and risk models, in finance start off with an asset. Risk free rate is nothing but the investors expect the return on that asset investment. However, there is always risk on investment, either its low or comparatively more. Expected returns on risky investment are measured relatively risk free rate based on the expected risk premium that is added to the risk free rate. The variance in actual returns and the expected returns are used for the view of risk in finance.

However, its only government who possess the control on the currency printing, hence that is the only securities those have chance of being risk free. Liebenberg (2004) suggested the average return on government security for risk free rate. Therefore, this study employed interest rates of treasury bills issued by bank Negara Malaysia in order to determine the risk free rate.

Risk premium reflects the risk which results from investing in the equity of a firm. Roztocki & Needy (2010) stated the level of risk a company bearing depends on the ability to repay their current liability. The term current liability was used because, long term debt may not the concern as firms can finance for the long term liability through various sources. However, for short-term debts cash flow is the source to repay. Therefore, the level of risk premium a firm bearing depends on their net cash held at the end of the year to repay their debt. Roztocki & Needy (2010) suggested several risk premium ranges depending on investment risk which are tabulated in Table 1.

Table 1. Risk Premium Range

Investment Risk
Extremely low risk, established profitable company with extremely stable cash flows
Low risk, established profitable company with relatively low fluctuation in cash flows
Moderate risk, established profitable company with moderate fluctuation in cash flows
High business risk

Source: Rozkocki & Needy (2010)

The fluctuation of cash flow is estimated by looking at the result of the cash and cash equivalents held at the year-end of financial statement. According to Roztecki & Needy (2010), investment bears extremely low risk and suggested risk premium is 6 per cent of less for that specific company, if the cash

flow of the company is extremely stable. The company which has low fluctuations in cash flow is categorised as in the risk premium level in between 6% and 12%. Accordingly, the company that possesses moderate fluctuation in cash flow has been labelled between 12% and 18% of risk premium. Finally, the riskier investment with vulnerable cash flow has been categorised as the high business risk premium with 18% and above.

Cost of Capital

Sharma & Kumar (2010) argued that if the firms are unable to identify true cost of capital, they actually destroy value, as they generate less than the total cost of capital. In real life, firms usually do not realise true cost of capital. Firms, employing traditional performance measures, are healthy in terms of profitability, as they fail to measure costs for capital. However in reality, those firms are unlikely to create value to the shareholders' investment. The most common two types of capital employed by firms are borrowed loan and equity. Cost of borrowed loans is interest charged on those loans provided by the lenders, whereas equity capital is provided by shareholders (Yahaya & Mahmood, 2011).

Therefore, this study used the following formula to calculate WACC:

$$WACC = [K_d \ x\ Debt/ (Debt + Equity)] + + [K_e \ x\ Equity/ (Debt + Equity)] \quad (5)$$

Economic Value Added (EVA)

EVA results is interpreted according to Stewart (1991)

EVA> 0

This term depicts that return on invested capital is higher than the cost of capital. In other words firm has created true profit leading to increase in shareholder value.

EVA < 0

On the other hand, the above term presents that return on invested capital is lower than the cost of capital. In other words, firms who generated lesser EVA than the cost of capital created negative true profit for and hence destroyed shareholders wealth.

Regression Model

This study developed the following regression model to examine the association between audit committee characteristics audit quality and firm performance:

$$EVA = \beta_0 + \beta_1 ADIN + \beta_2 ACEX + \beta_3 ACMF + \beta_4 ACSZ + \beta_5 ADQU + \in$$

Table 2. Variables Measurement

Economic Value Added (EVA)	
Audit Committee Independence (ADIN)	number of independent directors held in audit committee
Audit Committee Meeting Frequency (ACMF)	number of meetings held by audit committee members
Audit Committee Size (ACSX)	number of members held in audit committee
Audit Committee Expertise (ACEX)	number of financial/accounting expert held in audit committee
Audit Quality (ADQU)	whether the firm auditor held by Big 4 or non-Big 4 (indicator variable valued at 1 if the auditor is held by Big 4 firms, otherwise 0)

EVA = economic value added;

ADIN = number of independent directors held in audit committee;

ACEX = number of financial/accounting expert held in audit committee;

ACMF = number of meetings held by audit committee members;

ACSX = number of members held in audit committee;

ADQU = whether the firm auditor held by Big 4 or non-Big 4 (indicator variable valued at 1 if the auditor is held by Big 4 firms, otherwise 0).

Descriptive Statistics

Table 3 depicts descriptive statistics results for the variables employed in this study. The mean EVA is 0.03 of total invested capital. Results reports that the mean independent members in audit committee is 3.35 with 2 and 5 minimum and maximum audit committee members held in PLCs in Malaysia. Accordingly, mean audit committee meeting frequency is 5.07 which greater than the Malaysian code of corporate governance. Average audit committee size in Malaysia is 3.44, whereas the code of corporate governance states it's to be minimum 3.

Table 3. Descriptive Statistics

	Minimum	Maximum	Mean	SD
Audit Committee Independence	2	5	3.35	0.67
Audit Committee Meeting Frequency	2	10	5.07	1.30
Audit Committee Size	3	5	3.44	0.62
Audit Committee Expertise	1	4	2.09	0.68
Audit Quality	0	1	0.89	0.31
EVA	-0.89	0.35	0.03	0.15

Note: the figures have been changed to two decimal places. SD stands for standard deviation

Mean number of members sitting in audit committee with accounting/ financial knowledge is 2.09; while code of corporate governance and Bursa Malaysia Listing Requirements state that the minimum one member must possess financial/accounting knowledge in the audit committee. The result shows that average 89% PLCs employ Big4 accounting firms as their external auditors while only 11% PLCs employ non-Big4 as their external auditors in Malaysia.

Regression Results

Table 4 shows the regression results where dependent variable is EVA. The model is significant with F-value of 6.240 while $p < 0.00$. The model is moderate with adjusted R square of 26.1% which is consistent with prior research (Xie et al., 2003; Saleh et al; 2007; Rashidah 2006).

Table 4. EVA as Dependent Variable

Variables	Coefficient (Std Error)	t-Statistic (Prob.)
Audit Committee Independence	0.248 (0.049)	5.032 (0.000)
Audit Committee Meeting Frequency	0.002 (0.012)	0.134 (0.894)
Audit Committee Size	0.249 (0.054)	4.608 (0.000)
Audit Committee Expertise	0.039 (0.030)	1.287 (0.202)
Audit Quality	0.184 (0.053)	3.468 (0.001)
Observation	75	
R-square	0.311	
Adj. R-square	0.261	
F-statistics	6.240	
Prob. (F-stat)	0.000	

The coefficient results show that there is positive relationship between audit committee independence and firm performance in terms of EVA with F-value of 5.032 while $p<0.000$. This result is consistent with Saleh et al., (2007) where the study concluded that there is positive relationship between audit committee independence and firm performance. Hence this study rejects the null hypothesis (H_0), accepting the alternative hypothesis (H_1) which states that there is a relationship between audit committee and firm performance based on PLCs in Malaysia.

However the result for audit committee meeting frequency shows that there is no association with firm performance with F-value of 0.134 and $p > 0.894$. This result is consistent with Rashidah & Mohamed (2006) where the study found that there is no relationship between audit committee meeting frequency and firm performance. This could be due to the increased amount of expenses incurred due to the greater number of meetings held. Therefore, this study rejects the alternative hypothesis (H_2), of a relationship between audit committee meeting and firm performance in term of EVA.

The coefficient results also show that accounting/financial experts sitting on the board does not influence the firm performance in Malaysia with F-value of 1.287 and $p > 0.202$. The same finding was concluded by Rashidah & Mohamed (2006). However, previously held study by Beasley (1996) concluded that financial expertise and experience helps in reducing discretionary accruals, which contradicts with the results in this study. Hence the study concludes that there is no association between accounting/financial experts sitting in audit committee

and firm performance and accepted the null hypothesis (H_0).

On the other hand, audit committee size coefficient results provide that there is a negative relationship with firm performance with F-value of 4.608 and $p < 0.000$. This finding is consistent with the earlier study held on audit committee characteristics and firm performance (Saleh et al., 2007; Rashidah & Mohamed, 2006; Anthony 2007). Hence based on the above results this study accepts the alternative hypothesis (H_4) which states that there is a relationship between audit committee size and firm performance.

The last independent predictor is audit quality employed in this study. The results depict that the F-value is 3.468 and $p < .001$, where it specifies that there is a negative relationship between audit quality and firm performance in terms EVA in Malaysia. Hence the study accepts the alternative hypothesis (H_5).

Conclusions

This study aimed to examine the relationship between audit committee characteristics and firm performance in terms of EVA based on selected PLCs in Malaysia.

The study found significant association between audit committee characteristics and firm performance and also with audit quality. However, the study reports that not all the audit committee characteristics are associated with firm performance. Meeting frequency and accounting and financial expertise of audit committee members do not possess any influence on firm performance.

Moreover, the study also aimed to examine the compliance of code of corporate governance and Bursa Malaysia Listing Requirements by PLCs in Malaysia in terms of audit committee characteristics. The code states that the majority of the members are to be independent in audit committee, there should be minimum of 3 members in audit committee composition, at least one member should possess accounting or financial knowledge which could be measured in terms of their professional degree and minimum 4 meetings should be held by the audit committee members in an accounting year. In response to these requirements, this study found that the PLCs in Malaysia comply with code of corporate governance and Bursa Malaysia Listing Requirements (Table 2).

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A REVIEW OF CAUSES OF SCHOOL DROPOUTS IN BRICS COUNTRIES: A SOUTH AFRICAN CASE

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Abstract

This paper presents a review of causes of school dropout in BRICS countries – Brazil, Russia, India, China and South Africa. This review is apposite considering that previous literatures have not closely dwelt on such a comparative stance, but given that this group of countries have some economic interest in common, that also translates to social development, it is thus pertinent to review similarities in their school dropout factors. Insight from the literature indicates that school dropout in BRICS countries is an amalgam of closely related factors that culminate to learners dropping out of school. These factors include inter alia, poverty, disability, family configuration, orphan-hood, teenage pregnancy, drug abuse, lack of effective teaching method, poor academic performance, and child labour. The paper goes beyond the review and evaluates the relationship between school dropout, government education expenditure and poverty in South Africa. The result indicates that a combination of poverty and low government expenditure on education may aggravate school dropout. This thus suggests that government education expenditure should be formulated to effectively accommodate the rural poor communities.

Keywords: BRICS countries, South Africa, Education, Dropouts

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Introduction

This paper presents a comparative review of school dropout rates in Brazil, Russia, India, China, and South Africa (BRICS). Given that education is a key to social cohesion, social and economic development; the rate with which learners drop out of school has been described as alarming (Alexandra, 2008; UNESC, 2013). Accordingly, effective policies for reducing the rate of school dropout requires a knowledge of the causative factors across nations that share some economic and social interests as a common agenda for development. Such interests currently exists amongst the BRICS countries, and this makes it imperative to review some common factors catalyzing school dropout in these countries since such common factors may lead to synergies in educational policies across these countries.

Thus the major aim of this paper is to explore the causes of school dropout in the BRICS countries, and to offer suggestions towards alleviating the rate of school dropouts. Whilst the literature has explored several factors leading to school dropout rates in different BRICS countries, this paper offers a brief syntheses of these researches, and in addition, looks specifically at the relationship between school dropout rate, government expenditure and poverty in South Africa. This examination of relationship appears unique from other dropout related literatures in South Africa as it offers a nuanced dimension for analysing school dropout from the perspective that the poor needs adequate support from government educational budget, and as well, from the private sector, especially as poverty and inequality is still rife in South Africa (Finn et al, 2014), and education is a catalyst for desired skills production (Mavuso, 2014); such potential skills productivity does not only reside amongst the rich class, but budding skills also abound amongst the poor communities who need educational assistance to develop such skills. The paper thus adds a modest policy implication around education for the poor and reduction of inequality.

This paper is structured as follows: the section following the introduction presents a brief review of related literature, this is followed by an analysis of possible relationship between school dropout rate, government expenditure and poverty in South Africa. The last section presents the conclusion and recommendation.

Related Literature

In their research on the impact of poverty on school dropout in China, Brown & Park (2002) divided family unit and school study information from poor areas in six Chinese territories to look at the impacts of poverty, intra-family choice making, and school quality on learners' performance; in conclusion, Brown & Park (2002) found that poverty fundamentally influences both the ability of parents to

meet the educational needs of their children, and that learners from families that are poor are three times as prone to drop out of school more than others. Furthermore, they find that girls with poor performance at primary school are more prone to dropout than their boys' counterparts; women's empowerment towards enrolment choices reduces the likelihood of school dropout; siblings enrolled in the same school have lower propensity to drop out of school; and that the quality of schools affects the completion time of learners. These findings were corroborated by Connelly& Zheng (2003) who evaluated the "*determinants of school enrolment and completion in China"* Connelly& Zheng (2003, p. 379) and found amongst others that that rural learners have a lower rate of enrolment and graduation; and that parents' education, enrolment of siblings in the same school and income level influences the school enrolment and completion time of learners. Another study by (Li et al, 2013) discover that peer influence is a factor that may also lure learners to drop out of school; thus according to (Li et al, 2013) there is a correlation between peers' dropout and learners dropout of school and that such effect is more pronounced in older students. Whilst looking at dropout from grandparenting perspective, Zeng & Xie (2014) found that grandparents' "*sociopsychological"* (p.599) standing has a direct influence on grandchildren's educational enrolment and completion outcome in china. This finding has an important lesson for many South African young women who are in the habit of keeping their school age children under the care of their grandparents.

Similar to the above studies in China, other studies conducted in Russia such as Roshchina (2010) and (García, 2013) studied the factors affecting school progression in Russia and found that education of parents and income are major determinants of learners' school progression in Russia; this finding is closely related to Konstantinovskiy, 2012) who found that inequality is a factor that limits learners access to education in Russia. Also in another related study in Kyrgyz, Eversmann (2000) found that factors that contribute to school drop incorporates marriage separation, liquor abuse in the home, or the demise of mother or father, and often, the bereaved offspring of these families are frequently exceptionally deprived. Destitution thus implies that some learners are more prone to be working whilst in school. They might not have sufficient dresses for school or be not able to pay school charges, thus encountering the disgrace and derision that goes hand in hand with these circumstances. These components therefore lead to weird learning participation and poor scholastic execution which are forerunners to dropping out of school (Eversmann, 2000).

Other researchers have looked at the causes of school dropout in Brazil with almost similar results like those conducted in China and Russia. In these researches, child labour has been linked with school dropout; in their study, Duryea & Arends-Kuenning, 2003) found that wages for teenagers in the metropolitan areas of Brazil was seen to grow higher as neighborhood employment prospects increase, hence learners develop the penchant to drop out of school due to attractive wages. Similarly, in another Brazilaian study Cardoso & Verner, 2006) confirmed earlier studies and found amongst others, that premature marriage has a solid effect in causig teens to leave school without completion. Startling deprivation and or poverty is also discovered as a factor that limits learners' school participation, as learners who go through starvation and malnourishment eventually in their lives are less inclined to go to class.

Other studies conducted in India corroborate findings in other BRICS countries. However one finding in India that is not very common in all the BRICS countries is that teenager nuptial engagement contributes to factors causing learners' dropout in India (Kurz et al, 2013); similarly , in their research on the possible causes of female school dropout in India, (Bashir et al, 2014) found amongst others that there are three major factors that cause learners' school dropout; they opine that these include "*personal, school and family factors"* (p. 299). According to Bashir et al, 2014) individual elements that may cause learners' dropout includes amongst others, low family income, early marriage, apprehension of getting discipline at school, poor scholastic execution in class, and low enthusiasm toward studies. Bashir et al, (2014) also found that school factors which prompt drop out were poor school settlement, poor seating plan, segregation on the premise of sex, corporal discipline, amd lack of school dresses and books. The research also found that family influences that contribute to dropout includes lateness to school, preponderance of illiterate parents and thus little curiosity of parents for education, divorce amongst parents and low family income.

Similarly, researches in South Africa has pointed closely to the same factors leading to school dropout in other BRICS countries. For instance, Grant & Hallman (2008) found some association between teenage pregnancy and school dropout in South Africa. Furthermore, as in previous studies, financial handicaps and learners being older than their grades at school have been found to associate strongly with school dropout in South Africa (Branson, et al. 2014). In the same vein, Spaull (2013) refer to poverty and inequity as factors causing school dropout in South Africa. Other research find that drug related abuse contribute significantly to school dropout in South Africa (Townsend et al. 2007).

Method and Analysis

Using the regression statistics, the analysis sought to measure the relationship between school dropout in

South Africa, government expenditure on education and poverty. Data is sourced from the UNESCO Institute of Statistics (UIS) (2014) education data base. Existing literature on school dropout rate in South Africa is inundated with several factors that have also been found in BRICS countries as causing school dropout. It is needless therefore to duplicate the same analysis in this paper. Therefore to make a nuanced contribution to existing research on school dropout in South Africa, this paper chose to examine a relationship that is not common in South African school dropout literature. This paper's contribution is based on the premise that if a learner is from a poor family and does not receive enough government educational assistance, such a learner could thus be regarded as having been double-stricken with destitution. Hence in the analysis in Figure 1, the paper looks at how primary school dropout rate is related to a combination of poverty and government expenditure for education in South Africa.

The ten years data on poverty, school dropout and government expenditure on education was collected from the UNESCO Institute of Statistics data base on global education. The analysis used the regression statistics to examine possible relationship.

Variables:

X1: poverty; (poverty head count ratio at $2 per day (PPP)[(% of population])

X2: Government Expenditure on Education as Percentage of GDP

Y: School Dropout (out of school children of primary school age).

Table 1. Relationship Between Primary School Dropout Rate, Government Expenditure on Education and Poverty in South Africa

Regression Statistics								
Multiple R	0.75417746							
R Square	0.56878364							
Adjusted R Square	0.445578966							
Standard Error	39912.17656							
Observations	10							
ANOVA								
	df	*SS*	*MS*	*F*	*Significance F*			
Regression	2	14708240822	7.35E+09	4.61658	0.052654234			
Residual	7	11150872866	1.59E+09					
Total	9	25859113688						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Ipper 95.0%*
Intercept	-998623.1101	462587.5703	-2.15878	0.06773	-2092468.9	95222.68	-2092468.9	95222.68
Ex%GDP	206427.5998	81628.70493	2.52886	0.0393	13406.38447	399448.8	13406.3845	399448.8
Poverty	6039.130824	2987.035666	2.021781	0.08291	-1024.08615	13102.35	-1024.0862	13102.35

The analysis in Table1 indicates that a combination of poverty and the level of government educational expenditure may lead to primary school dropout rate in South Africa. This may be plausible since a learner from a poor family will rely on government support to stay at school, and if the government support is not effective, there is therefore the tendency that the learner might drop out of school. It thus becomes imperative that government educational funding should be formulated to effectively reach the poor in rural communities.

Conclusion

This paper draws conclusion from the literature and from the analysis of data. Findings from the literature suggests that causes of school dropout in BRICS countries are largely similar in nature. Literature sources from the BRICS countries confirm that school dropout is an amalgam of closely related factors that culminate to learners dropping out of school. These factors include inter alia, poverty, disability, family configuration, orphan-hood, teenage pregnancy, drug abuse, lack of effective teaching method that stimulate and make learning interesting to learners, poor academic performance, child labour (Strassburg et al, 2010; Flesich et al, 2010; Dichaba, 2013), , . Findings from the analysis in Table1 shows that a combination of poverty and low government educational expenditure may lead to primary school dropout rate. This is not surprising since a learner from a poor family will depend on on government sustenance to stay in school, and if the government

funding is not effective, there is therefore the propensity that the learner might drop out of school.

Given the uniqueness of causes of school dropout, the paper recommends *inter alia,* introduction of more designated free-fee-paying schools in rural and townships areas, free textbooks in public schools, school nutrition in public schools, and the introduction of drug testing and counseling in schools, early identification of learners at-risk and effective teaching methods adapted to the needs of learners at risk. Furthermore given that many learners from less privileged families enroll in private schools due to limited spaces in public schools, these learners may not be left completely to the somewhat profit penchant of private educational entrepreneurs, but government can assist learners in private schools by providing free textbooks to these learners.. The provision of books to learners in private schools has become very important as some private schools in the country fail to supply learners with books even after paying costly school fees. Education support fund is highly needed from the private sector in South Africa to assist government educational objective; the Business Partners Limited has already launched a R150 million education fund to support private educational entrepreneurs in South Africa (Mavuso, 2014). Such educational assistance is needed from more private entities and NGOs in South Africa to provide the needed infrastructure for learners to have effective access to education.

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