THE MODERATING IMPACT OF CORPORATE GOVERNANCE ON THE RELATIONSHIP BETWEEN THE MANAGEMENT CONTROL SYSTEMS AND CORPORATE FINANCIAL PERFORMANCE; AN EMPIRICAL STUDY OF SRI LANKAN LISTED MANUFACTURING COMPANIES IN COLOMBO STOCK EXCHANGE

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ABSTRACT

In this study investigated the moderating impact of corporate governance on the relationship between the Management Control System and the financial performance of the listed Manufacturing companies in Sri Lanka. Forty-One Manufacturing sector companies in the Colombo Stock Exchange (CSE) were selected for the research and financial report figures of those companies of two years were selected to measure the effect of Management Control System and the corporate Governance on the financial performance. Corporate governance variables and Management Control System variables were considered as independent variables. Corporate Financial performance, such as ROE and ROA, variables were considered as dependent variables. Total assets and leverage were used as control variables. The research hypothesis formulated and tested was whether there are any significant influence of the Management control system and corporate governance on the listed manufacturing firm financial position.

A literature review was carried out to identify factors of Management Control System and the corporate Governance on the financial performance. Descriptive statistics were used to examine the importance of identifying Management Control System, corporate Governance and financial performance factors, and correlation and regression analyses were performed to identify mutual relationships between independent variables and dependent variables. Finally, it is concluded that there is no significant impact of Corporate governance on the relationship between Management Control System and corporate financial performance.

Key words: Corporate governance, Management Control system, Manufacturing industry, Financial Performance

INTRODUCTION

Management Control System (here after MCS) and Corporate Governance (here after CG) concepts are brought a new dimension to the financial performance of an organizations. MCS and CG concern with the sharing the power among shareholders and the protection of the shareholder interest and comply with the expectation of such shareholders. While Corporate Governance includes activities of the board of directors and audit committee, which ensures the probity of the financial reporting process, Management Control System includes the activities and attitudes of management related to controls. CG basically concern with how an organization directed and controlled through the practices, rules and processes which the company adopted while MCS performing an intermediate role of gathering and using the information to evaluate the performances of the resources like Human resource and financial.

Organizations which are operates in Manufacturing industry are profoundly involved in handling the higher level of investments in Sri Lanka. There is more concern about the manufacturing companies in relation with the ethics and social responsibility. They generate a vital necessity for the confirmation of the accountability and transparency as any shortfall of accountability and transparency results in the financial health of the country being severally affected.

Research problem

The research problem for the studies is “whether the Corporate Governance has the moderating impact on the relationship between the Management Control Systems and Corporate Financial Performance”

Research objectives

According to the research problem the research objectives have been defined, such as;

1. Measure the level of Management Control Systems, Corporate Governance and Corporate Financial Performance of Sri Lankan listed manufacturing companies in Colombo Stock Exchange
2. Examine the direct relationship between the Management Control Systems and Corporate Financial Performance
3. Examine the moderating impact of Corporate Governance in relation to the Management Control Systems and Corporate Financial Performance

Specific Aims

In addition to the main research objectives the sub objectives have been created, such as;

- ✓ To measure the corporate governance practices in manufacturing industries.
- ✓ To find out the impact of corporate governance in the firm performance.
- ✓ To find out the major indicators of corporate governance.
- ✓ To find out the major indicators of corporate Management Control System.
- ✓ To find out the major indicators of Firm performance.

Significance of the study

The research study focusses on to measure the moderating impact of Corporate Governance on the relationship between the Management Control Systems and Corporate Financial Performance. The lack of research studies undertaken in Manufacturing sector with regard to management control system and the corporate governance and their Impact on financial performances in Sri Lankan context as well as the corporate scandals arose in Sri Lanka in this particular sector emphasize the importance of carrying out a research in the respective field with reference to the corporate governance practices and management control system therefore this study will contribute to the existing body of knowledge on the impact of corporate governance characteristics, and the management control system on firm financial performances.

In the CSE, 295 Companies have been listed under the 20 business sectors, from the 20 business sectors the manufacturing industry were selected to the purpose of the research studies, under manufacturing sector 41 companies as at 1st January 2017.

The rest of the paper is organized as follows: first, we review previous empirical literature in the theoretical framework, defining the hypotheses to be tested; secondly, we present the methodology, sample characteristics and justification of the variables used; thirdly, we perform the analysis of the results, and finally, the main conclusions reached.

LITERATURE REVIEW

Under the literature review Corporate Governance, Management Control System and Corporate Financial Performance are discussed.

Management Control System

Management Control System its basically allows the management to gather use the information in relation to various organizational resources for the example human resource, Physical resources, financial resources etc... as a whole in light of the organizational strategies pursued. Apart from that the most important factor is management control system influences the behaviour of organizational resources to implement organizational strategies. Being adopted by the organization in a formal or informal way it has a significant influence in the overall performance of the organization.

Regarding the definition of the Management Control System (MCS), there is only agreement in the current literature is the term itself was first outlined in the seminal work of Robort Anthony (1965). He defined management control as “the process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organization’s objectives” (Robort Anthony 1965).

“The management control systems as formal, information based routines and procedures used by the mangers in order to alter the activities in the organizations and suggested a comprehensive framework of how the managers in the organizations control strategies with 4 levers of control: Belief systems, Boundary systems, Diagnostics control systems and interactive control systems” (Simons 1994). The objective of management control systems is to alter and influence the employee behaviour towards achievement of organizational objectives. Furthermore, one of the research study has stated that “Management control systems as package categorize the control systems in five components such as cultural control, planning, cybernetic control, reward & compensation and administrative control” (Malmi & Brown 2008).

Diagnostic and Interactive controls are the two complementary uses of management control systems (Henri 2006). The diagnostic controls refer to monitoring the performance variables and thus analyzing the variances in order to achieve the intended organizational outcomes and generally considered to have a negative approach. While interactive controls are considered to use the positive enforcement through dialog and interactive learning among the managers.

Alvesson & Kärreman (2004) identified and questioned the assumption that the technocratic and socio- ideological controls are mutually exclusive by studying the control systems at global management consultancy firm. The present research is based on the typology suggested by Brown (2005), which identifies 5 types of controls considering the MCS as a comprehensive package: Cultural controls, Planning, Cybernetic Controls, Rewards and compensation and administrative control.

“Management control systems (MCS) represent organization's means to achieve its objectives by providing useful information to assist in decision making, planning and performance evaluation” (Anthony & Govindarajan 2007).

Governance structures form a component of the administrative controls of the MCS packages. Administrative control includes the organizational design, structures, managerial remuneration, board composition and other controls in order to affect the behaviour of the employees of the organization. Governance structures consist of formal lines of authority, accountability and systems (Abernethy & Chua 1996).

Abernethy considered the control system as a package and empirically studied how the strategic choices of the dominant coalitions and institutional environment affect the control system design apart from the technical environment. Contingency theory suggests that the control systems are dependent on the organizational setting and suggested that a better match between the two can result in the improved organizational performance (Fisher 1998).

The management control systems influence the strategy formulation, implementation and change by using comparative case study approach and also pointed out the importance of manager' perception in influencing the strategic change process and the MCS design (Smith 1997). The moderating impact of interactive use of MCS on the relationship between the product innovation and performance and found support for the relationship (Bisbe & Otley 2004). Studied the sample of US retailers to identify the purpose of investing in the control systems and categorized the same as Basic MCS, Cost MCS, Revenue MCS and Risk MCS (Sandino 2007).

Corporate Governance

Corporate Governance was being gradually developed in the nineteenth century and came a way forward to become an interesting focus of the study for many scholars in the up came twentieth century to become one most sought after conceptual practice in the followed twenty first (Hilt 2008). The concept was subject to being addressed into different extents and given different interpretations. As Cadbury Committee (1992) states, Corporate Governance means the way an organization is directed and controlled refers to Corporate Governance as a certain set of mechanisms through which outside investors protect themselves against expropriation by the insiders (La Porta et al. 2000). Now a day the separation of ownership & control leads to potential agency problem, which recognizes the need of control systems, in other words the studies on the Corporate governance influenced by Agency theory. The Agency theory is the bigger topic of corporate governance and used to understand the relationship between two parties in an organization who are agents and principals. The manager or director are not owner of an organization but the agent of the owner (shareholders), they must to act best interest of the owner without self-interest. Agents may not perfectly act in the interest of the principals it leads to various problems within the organizations as well as it leads to Agency cost.

Based on the study of Management Control System and Corporate Governance: A theoretical review (Palka Chhillar & Pradip Banerjee 2012) , they found out The a moderating impact of the governance structures on the association between the two types of control systems (cybernetic control and cultural control) and the organizational performance, in other words The proposed theoretical model suggests that the governance structures, which form an important component of administrative controls, have a moderating impact on the relationship between the other two forms of control (cybernetic and cultural controls) and the organizational performance. Cybernetic controls categorized as the budgets, financial measures, nonfinancial measures and the hybrid systems are found to have a positive association with the organizational performance. Similarly, cultural controls are also found to have a positive impact on the organizational performance.

Also, this study suggests that various components of governance structures categorized as internal governance mechanism (board structure, board composition, organizational structure, organizational design, managerial incentives) and external governance mechanisms (Financial systems, legal systems) impact the organizational performance. Hence it can have a moderating impact on the relationship between the cybernetic controls, cultural control and the organizational performance.

The management control philosophy and corporate governance both are related to the sharing of power among stakeholders and the protection of shareholders' interests. While corporate governance mechanism includes those oversight activities of the board of directors and audit committee, which ensures the integrity of the financial reporting process, management control philosophy includes the activities and attitudes of management related to controls, and the actions taken to convey their importance throughout the organization (Cohen & Hanno 2000).

Corporate Governance as defined by is a collection of mechanisms designed and adopted to control the management decisions and activities, to positively enhance the firm’s performance, firm’s market value, and its capital resources (Claessens & Yurtoglu 2013).

Firms are adopting CG to assure the firms’ accountability to the shareholders and to improve the transparency of financial reports (Tariq & Abbas 2013). Other studies found that well-governed firms attract more foreign investors (Kim et al. 2010).

Corporate governance tells “ways of bringing the interests of investors and managers into line and ensuring that firms are run for the benefit of investors (Mayer 1997). Corporate governance is concerned with the relationship between the internal governance mechanisms of corporations and society’s conception of the scope of corporate accountability (Deakin & Hughes 1997). It has also been defined by Keasey et al. (1997) to include ‘the structures, processes, cultures and systems that engender the successful operation of organizations’. From the foregoing analysis, they argue that corporate governance is represented by the structures and processes laid down by a corporate entity to minimize the extent of agency problems as a result of separation between ownership and control. Good corporate governance maximizes the profitability and long-term value of the firm for the shareholders (Khumani et al. 1998).

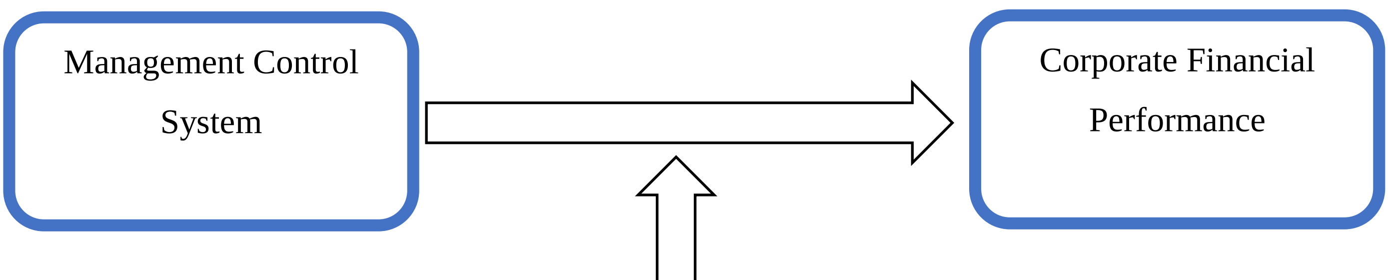
As the mechanisms of corporate governance, ownership and structure of the board of directors affect the method by which the firm is managed and controlled. Thus, this corporate governance could affect its performance. The ownership of the firm's directors in their shares helps putting the investors' interests in line with the directors' (Jensen & Meckling 1976). In this relation that there is a positive relation between the firm performance and the ownership of the biggest shareholders and institutional shareholders also showed that management and institutional ownership are directly dependent on firm performance (Shahiki Tash & Kazemi 2012). Other studies also found out that there is a positive and significant relation in the controversy existing between leadership and firm's value, but no significant relation was found regarding the firm performance (Moradi & Rostami 2012). There are also studies that show that the characteristics of the board of directors are effective on the firm performance, for example "The presence of independent directors improves the firm performance" (Mashayekhi *et al.* 2008) and (Moradi & Rostami 2012).

Some theoretical studies investigate the effect of corporate governance and some effects of Competition on the firms' performance. Among these, less attention is paid to the interaction relation of corporate governance and industrial competition on firm performance. The goal of corporate governance is to overcome some motivational issues due to separation of ownership and control in the firms. Meanwhile, corporate governance cannot always be effective. Factors such as ownership concentration, capital structure and structure of board of directors cause the owners to sustain costs for implementation of effective corporate governance (Januszewski *et al.* 2002).

The impact of corporate governance on two different measures of firm performance: accounting and market measures. ROA and ROE are the accounting measures of short-term operating performance of the firm, reflecting a tangible, balance-sheet effect with the effect of corporate governance already incorporated in the accounting value. On the other hand, Tobin's Q and MBV reflect the long-term value of the firm and have more to do with market perceptions about the value of corporate governance. Market measures of performance are considered to be more reliable, as accounting measures can be very easily manipulated at the management discretion (Cochran & Wood 1984).

Conceptual diagram

Based on literature carried on the conceptual diagram has developed



Research Question/Hypothesis

Based on the conceptual framework hypothesis of the study have established;

1. A positive significant association between the Management control system and the firm performance
2. The positive and significant association between Management control with organizational performance is moderated by the governance structures
3. There is an association between corporate governance characteristics and the financial performance
4. There is an association between corporate governance characteristics and the Management control system

RESEARCH DESIGN AND METHODS

Research Approach and Justification

This research is expected to be as a quantitative research. Highly structured methods such as structured questionnaires, focused interviews, annual reports were used to collect the data and analyzed them (collected data) by using SPSS 23 to reach the conclusion.

Population and sample

The population of the study represented all the manufacturing companies which are listed in the CSE as at 1st January 2017 also all the listed manufacturing companies have been selected as sample to our study to enhance the accuracy of the finding.

Data collection

For this research study listed manufacturing companies from the website of Colombo Stock Exchange(CSE) were selected, In this studies structured questionnaires and the focused interviews were used to collect the data about the Management Control System, it is a the primary data collection method also have used annual reports to collect data about Corporate governance and audited financial statements to collect the data about the corporate financial performance of selected listed manufacturing company, it also referred as a secondary data collection method.

Data collection about corporate governance and the corporate financial performance of these manufacturing companies was collected from the period of two years' annual reports of related companies, that has published on CSE website. The two years refer two thousand fifteen (2015) and two thousand sixteen (2016).

Reason behind the selection of above stated two years is to increase the reliability of the findings because of These years are closed to the current financial years

Five companies had selected for the pilot survey to enhance reliability of the variables of Management Control System for the study based on the survey some variables were included into the questionnaire such as Budgetary control in purchase requisition, New product development, Annual market research and staff training and monitoring. The new questionnaire was established and sent through the E-Mail to collect the data and variables for Corporate Governance and Firm Financial performance were determined from the annual reports of respective manufacturing company.

Selected variables for the studies

Management Control System

Marginal Costing pricing decision, Cost accounting implementation, Multiple overhead cost pool Budgetary, Controls in purchase requisition, Activity Based Costing, Vision and mission, Dress code, Code of conduct, Strategic planning, Management Information System, Performance measures, customer satisfaction level, Budget control, Strategic planning, Short range planning, New Product development, Annual Market research, Staff Training and monitoring, Long Range planning, Operational Auditing, Inventory control, Employee based measure, quality control implementation, Standard cost, analysis of variance, Timely delivery and Reliable delivery, Internal Auditing, Bench marking and Managerial staff composite reliability.

Corporate Governance

1. Board of directors
   - Non-executive directors
   - Executive directors
2. Remuneration committee
3. Audit committee

Corporate Financial Performance

1. Return on Investment (ROI)
2. Return on equity (ROE)

Control variables

1. Total Assets
2. Leverage

Testing strategy

The collected dataset contained considerable no of observations, which belongs to 30 companies and from two fiscal years; 2015 and 2016. This classification made the dataset as a panel dataset. This study contains three objectives, first objective is measure the level of Management Control system (MCS), Corporate Governance (CG) and Corporate financial performance of Sri Lankan listed manufacturing companies in Colombo Stock Exchange, descriptive statics analysis has been proposed and performed for accomplish this objective as well as to accomplish second and third objectives correlation analysis, panel regression analysis have been performed. Corporate financial performance, such as Return on Assets(ROA) and the Return on Equity (ROE), of the dataset were proposed to be winsorized at 5th and 95th percentiles for removing the effect of outliers and winsorized dataset was used to perform panel regression analysis on STATA.

Two techniques; fixed effect and random effect were available to analyses the panel datasets. Hausman test was used to decide whether fixed effect model or random effect model technique to be used based on this test random effect technique was used for the analysis. Financial performance (ROA and ROE) of the companies use as the dependent variable of the regression and MCS variables and corporate governance variables use as the independent variables of the regression while control variables are Natural log (LN) of the total assets and leverage. The basic regression model used in random effect is as follows:

$$ROA = \propto + \beta_1 MCS + \beta_2\, MCS * CG + \beta_3 CG + \beta_4 LV + \beta_5\, logTA + \varepsilon$$

$$ROE = \propto + \beta_1 MCS + \beta_2\, MCS * CG + \beta_3 CG + \beta_4 LV + \beta_5\, logTA + \varepsilon$$

Where,

ROA=Return on assets, ROE=Return on equity, CG= Corporate Governance, LV= Leverage TA=Total assets and MCS*CG= interactive variables.

ANALYSIS AND DISCUSSION

Before conducting the regression analysis, which was performed for accomplished Objective second and third of this study, several other statistical analyses were conducted to identify the nature of the collected dataset and ensure the validity of the sample. Results of descriptive statistics, correlation analysis and regression analysis and related discussions on the results are presented below.

Table 1 Descriptive Statistics for Management Control System variables

Variables	N	Mean	Minimum	Maximum	Std. Deviation	Kurtosis	
						Statistic	Std. Error
Marginal Cost Price Decision	60	3.867	1.0	5.0	.6235	14.307	.608
Cost Accounting Implementation	60	4.000	3.0	5.0	.4510	2.284	.608
Multiple Overhead Cost Pool	60	3.833	3.0	5.0	.4572	.932	.608
Budgetary Control in Purchase Requisition	60	4.100	3.0	5.0	.3992	2.890	.608
Activity Based Costing	60	3.167	2.0	5.0	.8268	-.822	.608
Vision and Mission	60	4.667	4.0	5.0	.4754	-1.526	.608
Dress Code	60	4.067	4.0	5.0	.2515	11.071	.608
Code of Conduct	60	4.433	4.0	5.0	.4997	-1.991	.608
Strategic Planning	60	4.300	4.0	5.0	.4621	-1.241	.608
Management Information System	60	4.467	4.0	5.0	.5031	-2.051	.608
Performance Measures	60	4.367	4.0	5.0	.4860	-1.737	.608
Customer Satisfaction Level	60	4.900	3.0	5.0	.3992	17.083	.608
Budget Control	60	4.300	3.0	5.0	.5304	-.594	.608
Short Range Planning	60	3.267	2.0	5.0	.8995	-.584	.608
New Product Development	60	4.033	3.0	5.0	.3171	7.553	.608
Annual Market Research	60	3.967	0.0	5.0	.8018	19.628	.608
Staff Training and Monitoring	60	4.167	4.0	5.0	.3758	1.413	.608
Long Range Plan	60	4.167	2.0	5.0	.5871	4.876	.608
Operational Auditing	60	4.067	4.0	5.0	.2515	11.071	.608
Inventory Control	60	4.133	4.0	5.0	.3428	2.996	.608
Employee Based Measures	60	4.100	4.0	5.0	.3025	5.671	.608
Quality Control Implementation	60	4.233	4.0	5.0	.4265	-.339	.608
Standard Cost and Analysis of Variance	60	3.967	3.0	5.0	.4103	3.328	.608
Timely Delivery	60	4.833	4.0	5.0	.3758	1.413	.608
Reliable Delivery	60	4.833	4.0	5.0	.3758	1.413	.608
Internal Auditing	60	4.100	4.0	5.0	.3025	5.671	.608
Bench Marking	60	3.367	0.0	5.0	.9561	3.517	.608
Managerial Staff Composite reliability	60	4.000	3.0	5.0	.3682	5.006	.608
Valid N (list wise)	60						

Table 2 Descriptive Statistics for Corporate Governance variables

Variables	N	Mean	Minimum	Maximum	Std. Deviation	Kurtosis	
						Statistic	Std. Error
Board size (No of directors)	60	.583	0.0	1.0	.4972	-1.946	.608
No of independent directors	60	.583	0.0	1.0	.4972	-1.946	.608
No of Executive directors	60	.700	0.0	1.0	.4621	-1.241	.608
No of Non-Executive directors	60	.533	0.0	1.0	.5031	-2.051	.608
Independent Non-Executive Director	60	.600	0.0	1.0	.4940	-1.889	.608
No of board meetings	60	.650	0.0	1.0	.4810	-1.640	.608
Size of audit committee	60	.583	0.0	1.0	.4972	-1.946	.608
Existence of compensation committee	60	.800	0.0	1.0	.4034	.379	.608
Existence of nomination committee	60	.200	0.0	1.0	.4034	.379	.608
Whether CEO member of the compensation committee	60	.100	0.0	1.0	.3025	5.671	.608
Existence of audit committee	60	1.000	1.0	1.0	0.0000		
No of members in the audit committee	60	.583	0.0	1.0	.4972	-1.946	.608
Number of the meetings of the audit committee	60	.700	0.0	1.0	.4621	-1.241	.608
Whether auditor is a big four	60	.950	0.0	1.0	.2198	16.494	.608
Whether at least one in the audit committee member has financial expertise	60	.850	0.0	1.0	.3601	2.114	.608
CG Total index	60	9.517	4.0	13.0	2.2055	-.475	.608
Valid N (list wise)	60						

Table 3 **Descriptive Statistics for corporate financial performance**

Variables	N	Mean	Minimum	Maximum	Std. Deviation
ROA	**60**	**9.7218**	**-14.08**	**26.51**	**9.53953**
ROE	**60**	**13.7130**	**-26.70**	**37.86**	**15.88824**
Valid N (list wise)	**60**				

Table 4 **Descriptive Statistics for control variables and interactive variables**

Descriptive Statistics					
	N	**Mean**	**Minimum**	**Maximum**	**Std. Deviation**
Leverage	**60**	**31.3917**	**0.00**	**98.21**	**29.88591**
Total assets (ln)	**60**	**21.4158**	**19.32**	**23.77**	**1.12459**
CG*MCS (Interactive variables)	**60**	**39.19**	**20.74**	**54.17**	**8.92**
Valid N (list wise)	**60**				

Descriptive analysis of MCS variables suggest that customers satisfaction level in manufacturing company in Sri Lanka on average 4.9% and reliable delivery, timely delivery, vision and mission, management information system, code of conduct and performance measures are 4.833 %, 4.833 %, 4.667%, 4.467% ,4.433 % and 4.367%, respectively. This result of statistical analysis of MCS indicates that most of the companies consider Customer satisfaction level as a major variable.

Descriptive statistics of CG variables of the dataset suggest that board size of listed manufacturing companies is 58.3%. The board includes 70% of members are non-executive directors. 65 % board meetings are held in every year. Also, all manufacturing companies have an audit committee and compensation committee. The audit committee consist of 58.3 % of members while compensation committee consist of 80% of members.

The mean value of ROA and ROE is 9.72% and 13.71 while Standard deviation is 26.51% and 37.86. Mean of control variables such as Leverage, and total assets are 31.39% and 21.41% respectively.

Correlations

Correlation analysis used to measure the relationship between two variables. In the correlation analysis, certain variables are considered to perform correlation analysis.

Table 5 Correlation

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Marginal Cost Price Decision	-															
2 Multiple Overhead Cost Pool	-.317*	-														
3 Performance Measures	-.172	-.178	-													
4 Customer Satisfaction Level	-.327*	-.093	-.157	-												
5 Short Range Planning	-.177	.110	.160	-.208	-											
6 Employee Based Measures	-.288*	368**	438**	477**	399**	-										
7 Timely Delivery	-.096	.230	-.031	.113	.033	.149	-									
8 Bench Marking	.538**	-.323*	.071	-.080	-.037	-.246	-.110	-								
9 Board size (No of directors)	.146	-.012	-.199	.043	-.051	.282*	-.106	.291*	-							
10 No of independent directors	.091	-.012	339**	.299*	-.202	394**	-.015	.291*	520**	-						
11 No of Executive directors	-.082	-.080	347**	-.074	.196	.218	390**	.023	-.111	332**	-					
12 No of Non-Executive directors	-.094	.025	-.051	.186	-.207	-.134	-.149	.045	429**	.294*	-.175	-				
13 Existence of compensation	-.040	-.092	.294*	-.126	.103	.167	.112	.193	.085	-.085	.127	-.050	-			
14 Existence of nomination committee	-.229	.092	.225	-.189	.271*	528**	-.112	.281*	-.085	338**	.055	-.033	.250	-		
15 ROA	.110	.011	.137	-.028	.062	-.053	-.186	355**	-.036	.027	-.184	-.188	.205	.078	-	
16 ROE	.100	.098	.089	-.014	.025	-.032	-.178	.323*	-.025	.025	-.213	-.151	.247	.092	953**	-

*. $p< 0.05$
**. $p< 0.01$

According to the above table showing correlations, there are statistically significant positive correlations between managerial cost price decisions and bench marking, Multiple overhead cost pool and employee base measures, Performance measures and employee base measures, Performance measures and no of independent directors, Performance measures and no of executive directors, Performance measures and existence of compensation, Customer satisfaction level and employee base measures, customer satisfaction level and no of independent directors, Short range planning and employee base measures, Short range planning and existence of nomination committee, Employee base measures and Board size, employee base measures and no of independent directors, employee base measures and existence of nomination committee, Timely delivery and no of executive directors, Bench marking and board size, Bench marking and board size and ROA, Board size and no of executive directors, Board size and no of independent directors were observed.

Meanwhile there are statistically significant negative correlations between managerial cost price decisions and multiple overhead cost pool, managerial cost price decisions and customer satisfaction level, managerial cost price decisions and employee based measures, multiple overhead cost pool and Bench marking, were observed.

When the relation between alternative dependent variables and corporate governance measures, corporate financial performance and corporate management control systems are considered, it could be observed that No of independent directors is positively correlated with Customer satisfaction level, Performance measures, Employee base measures and Bench marking ($p<.01$). While it is negatively correlated with multiple overhead cost pool, Short range planning and timely delivery.

As correlation analysis was performed considering only two variables at a time and not considering the effect of the control variables it is not possible to arrive a conclusion of this study. Therefore, a panel regression analysis (by using STATA) was carried out as further analysis. Panel regression analysis allows using independent variables dependent variable and controlling variables at a time, due to that it is superior to the correlation analysis.

Panel Regression Analysis

The data collection contains two years (2015 and 2016) period. Therefore, multiple regression analysis is used to estimate the impact of corporate governance between the relationship of management control system and firm performance. There are two techniques namely fixed effect and random effect used to analyse panel data sets. To decide which method was to be employed, Hausman test was performed and Hausman test results indicated that the random effect technique should be used. Therefore, the random effect technique was used. The following table represents the results obtained through the multiple regression analysis.

Table 6

	Model 1 (ROA)			Model 2 (ROE)		
	Coef.	**z**	**p**	**Coef.**	**z**	**p**
CG total index	**2.145**	**0.370**	**0.715**	**1.453**	**0.160**	**0.872**
MCS Average	**8.639**	**0.490**	**0.627**	**9.361**	**0.350**	**0.727**
Leverage	**-0.039**	**-0.850**	**0.393**	**-0.045**	**-0.660**	**0.508**
Total assets	**2.862**	**1.810**	**0.070**	**5.559**	**2.350**	**0.019**
CG*MCS interactive variable	**-0.541**	**-0.360**	**0.717**	**-0.343**	**-0.150**	**0.881**
Constant	**-84.727**	**-1.150**	**0.252**	**-142.132**	**-1.280**	**0.202**
R^2	**0.17**			**0.197**		
N	**60**			**60**		

CG total index refers to summation of all the corporate governance index as well as MCS average refers to average value of the MCS variables and the total assets refers to natural logarithm of total assets CG MCS interactive variables refers to multiplication of the MCS and CG variables.

As per the results obtained above, in the Model 2 p value of the total assets is lower than 5% therefore it can be considered as significant variable with positive relationship, although in the model 1 (ROA) p value of the total assets is 7 % although it higher than 5 %. Furthermore, there is no impact of Other variables on firm financial performance.

Discussion

Only total asset has the significant impact on ROE, Therefore, it is concluded that these two variables (MCS and CG) do not have significant impact over the firm financial performance. Furthermore, there are is no impact of Corporate Governance variables on the relationship between Management Control System and Corporate Financial Performance.

Table 7

No.	Hypothesis	Dependent Variable	Supported or not
1	A positive significant association between the Management control system and the firm performance	ROA	Not Supported
		ROE	Not Supported
2	The positive and significant association between Management control with organizational performance is moderated by the governance structures	ROA	Not Supported
		ROE	Not Supported
3	There is an association between corporate governance characteristics and the financial performance	ROA	Not Supported
		ROE	Not Supported
4	There is an association between corporate governance characteristics and the Management control system	ROA	Not Supported
		ROE	Not Supported

CONCLUSION AND LIMITATIONS

This study empirically evaluates the results of ‘moderating impact of corporate governance on the relationship between management control system and corporate financial performance. To evaluate this, this study addressed three objectives firstly, measure the level of Management Control Systems, Corporate Governance and Corporate Financial Performance of Sri Lankan listed manufacturing companies in Colombo Stock Exchange, secondly Examine the direct relationship between the Management Control Systems and Corporate Financial Performance and finally Examine the moderating impact of Corporate Governance in relation to the Management Control Systems and Corporate Financial Performance.

Data was obtained through the questionnaire and annual reports that was published in CSE website, this data collection related to two years. To evaluate hypotheses panel data regression analyses were performed. Financial performance (ROA and ROE) of the companies were used as the dependent variable MCS and CG used as the independent variables of the regression while control variables are total assets, leverage.

Result of this study concluded as there is no any impact of corporate governance on the relationship between management control system and the corporate financial performance.

This study however involved several limitations such as primary data collection was carried out only through questionnaires. If other types of data collection methods such as interviews could be incorporated in the study, the analysis could be more reflective and valid in this respect. Also, the research study was carried out only for the listed manufacturing companies ‘In Sri Lanka. When making inferences to this sector, it is valid only for the listed companies in that sector and not for each company in that sector which are not listed. And, Service sector companies are not included in the sample because they have not been considered under the sampling frame. Due to the limitations stated above, it is recommended that an in-depth study using the case study method be carried out. Also, the study is limited by lack of prior research literature related to the study is limited in Sri Lankan context; can be considered as a main limitation.

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APPENDICES

Appendix 1: Questionnaire

Please indicate the use of following Management Control System (MCS) in your business for last two years.

Not Used	**0**
Under Used	**1**
Widely Used	**5**

Management Control System Variables	**0**	**1**	**2**	**3**	**4**	**5**
1.Cost Allocation						
Marginal Costing pricing decision						
Cost accounting implementation						
Multiple overhead cost pool						
Budgetary Controls in purchase requisition						
Activity Based Costing						

2.Strategic Implementation						
Vision and mission						
Dress code						
Code of conduct						
Strategic planning						
Management Information System						
Performance measures						
Customers’ satisfaction level						
3.Future Forecast						
Budget control						
Strategic planning						
Short range planning						
New Product development						
Annual Market research						
Staff Training and mentoring						
Long Range planning						
4.Operationnal Controls						
Operational Auditing						
Inventory control						
Employee based measure						
quality control implementation						
Standard cost and analysis of variance						
Timely delivery						
Reliable delivery						
5.Industrial compliance, Laws and Regulative control						
Internal Auditing						
Bench marking						
Managerial staff composite reliability						