CA Journal of Applied Research

The Institute of Chartered Accountants of Sri Lanka

Vol 01, 2017 ISSN 2613-8255

Corporate Governance, Sustainability Assurance and Forensic Accounting in Sri Lanka

CA | THE INSTITUTE OF CHARTERED ACCOUNTANTS OF SRI LANKA

CA Journal of Applied Research
The Institute of Chartered Accountants of Sri Lanka

Corporate Governance, Sustainability Assurance and Forensic Accounting in Sri Lanka

CA Journal of Applied Research
The Institute of Chartered Accountants of Sri Lanka
Vol. 01, 2017

Disclaimer

The responsibility for the opinions expressed in the articles of this Journal rests solely with their authors. They do not necessarily reflect the views of the Institute of Chartered Accountants of Sri Lanka. The ownership of the journal lies with the Institute.

Assistance in compilation and page-setting: Ms. Buddhini Chandrasena

124 Pages

ISSN 2613-8255

Published by the Institute of Chartered Accountants of Sri Lanka

President’s Message

I am pleased to send this message to the inaugural Research Journal of the Institute of Chartered Accountants of Sri Lanka (CA Sri Lanka).

Transformation and change are words that is relevant to our profession and there is an increasing need for research and be privy to the need for transformation and change if we are to remain relevant as a profession. Therefore, the inaugural Research Journal of the institute, is among the important steps taken to fulfill this endeavor.

As a leading professional institute, it is our prime responsibility to work towards upholding standards in the public interest while ensuring excellence in education & the profession. The institute has ventured in to research activities with the aim of further enhancing the accounting profession.

This publication carries six research papers under the areas of Corporate Governance, Forensic Accounting and Sustainability Assurance, and I believe it will be very insightful to the readers, while also giving them an important and perhaps an all new perspective on these pertinent subjects.

Any new initiative needs hard work, and this inaugural publication also is the result of enormous dedication and commitment from a cross section of groups and contributors, and I believe the effort by these groups is reflected in this edition. Therefore, I wish to express my sincere appreciation and acknowledge the valuable contribution made by the Research Committee Chairman Mr. Nishan Fernando and its Committee Members, Researchers, Research Supervisors as well as the support given towards this endeavor by the technical division of the institute in producing this publication expeditiously.

Lasantha Wickremasinghe
President
The Institute of Chartered Accountants of Sri Lanka

20 December 2017

Chairman’s Message

As the country’s premier national accounting professional organization with the core beliefs of wisdom and innovation, the Institute of Chartered Accountants of Sri Lanka has taken a prominent initiative to engage in applied research on contemporary issues. This inaugural Journal of Applied Research is the result of that initiative. The Journal has been published in conjunction with the first research conference of CA Sri Lanka.

It is my honour and privilege to provide this message as the first Chairman of the Research Committee appointed by the Council of CA Sri Lanka to drive its research initiative. The journal carries six research papers on contemporary issues in relation to the accounting profession which will be presented at the conference. The key areas addressed in this Journal are Corporate Governance, Sustainability Assurance, and Forensic Accounting.

Research is an area which is somewhat lacking in most professional accounting curricula but is an important element that a comprehensive professional accountant should possess. This initiative will open the avenues for CA Members and SAB Graduates to engage in research and publish the research papers in a recognized research journal. This research conference will feature two CA members, one CA Finalist and three SAB undergraduates.

I have been fortunate to have an excellent committee and immense blessings of the President, Vice President and the Council. The contribution made by Dr. Roshan Ajward, Editor in Chief in getting this journal at this level of quality is invaluable. It is also my pleasure to appreciate the excellent coordination of all activities connected to the journal and the conference displayed by Ms Diluka Pathiranage, Secretary to the Committee.

I trust that the research papers will provide valuable findings in the respective areas which could be useful in various means. I wish that this initiative would prosper in coming years so that CA applied research will form a critical component of the intellectual knowledge base of the country.

I wish all success for the research conference.

Nishan Fernando
Chairman
Research Committee

20 December 2017

Table of Contents

ISSUES OF CORPORATE GOVERNANCE PRACTICES IN SRI LANKA: PERCEPTIONS OF PROFESSIONALS

W.A.N.C.M. Weerasinghe
School of Accounting and Business, Institute of Chartered Accountants of Sri Lanka

Roshan Ajward
Department of Accounting, University of Sri Jayewardenepura

Abstract
This study aims at identifying the professional perception of the contemporary issues of corporate governance in Sri Lanka as well as to ascertain the differences in the perception of such issues between and among various demographical groups. A structured questionnaire was sent out to professionals to ascertain the issues, and 87 usable responses were received. The study uses One-way ANOVA and *t*-test analyses to identify changes in perceptions based on demographic factors and uses mean ranking to identify corporate governance issues most agreed on and most disagreed on. The most highlighted issue was that policy, rules and regulations are often not prepared in consultation with the public, shareholders and other stakeholders, implying a lack of stakeholder consultation in formulating regulations. The second most highlighted issue was a lack of periodical assessment of the Board of Directors. The issue that was the least highlighted was that foreign shareholders receive insufficient notice of general meetings unlike domestic shareholders. Further, in terms of changes in the perception of professionals of these issues based on their demographic characteristics, although statistical significant differences were not observed on a *systematic* basis, some differences were observed about certain issues such as gender, age, nature of firm employed in, nature of audit firm employed in, experience in current capacity, and status in current organization. The findings of the study are expected to have significant policy implications.

Key words: Corporate Governance Issues, Demographic factors, Professionals perceptions

1. Introduction

Corporate governance involves a set of relationships between a company's management, its board, its shareholders and other stakeholders (Organisation for Economic Co-operation and Development - OECD 2004). OECD (2004) also notes that corporate governance provides the structure through which the objectives of the company are set and the means of attaining them and monitoring performance. In Sri Lanka, the Institute of Chartered Accountants of Sri Lanka first introduced corporate governance guidelines by way of a code of best practice on matters related to financial aspects of corporate governance, in December 1997, which was later on updated in March 2003 (The Institute of Chartered Accountants of Sri Lanka & Securities and Exchange Commission of Sri Lanka 2008). In June 2008, a revised code of best practice of corporate governance was issued as a joint initiative of the Institute of Chartered Accountants and the Securities and Exchange Commission of Sri Lanka (Seneratne & Gunaratne 2008). The committee for corporate governance initially formed in 2005 performed reviews of the UK Corporate Governance Code 2010 Version, Report of the New York Stock Exchange Commission on Corporate Governance, Code of Corporate Governance – Singapore, Corporate Governance Principles and Recommendations of the Australian Securities Exchange, the Malaysian Code of Corporate Governance and Corporate Governance Voluntary Guidelines – India (The Institute of Chartered Accountants of Sri Lanka & Securities and Exchange Commission of Sri Lanka 2008). The latest revision to this code was made in 2013 also as a joint initiative of the Institute of Chartered Accountants and the Securities and Exchanges Commission of Sri Lanka.

In regard to governance, weak corporate governance is perceived as a structural flaw in most Asian economies, and it was considered the main cause of the 1997 Asian economic crisis (Nam et al. 1999). The codes of corporate governance highlight the agency theory which explains dissimilar interests between principal and agent, which, in the context of companies, would be shareholders and management (Association of Chartered Certified Accountants - ACCA 2017). Several conglomerates in Sri Lanka are owned and operated by families which makes the agency theory less applicable (Senaratne 2009), thus rendering the code of best practices less applicable. Okpara (2010) identified a number of barriers to development and effective corporate governance practices in Nigeria, a developing country. They include 'Shareholders' rights are often not protected', 'Minority shareholders' rights are often violated' and 'Preferential treatment is given to large shareholders'. Senaratne and Gunaratne (2008) concluded that implementation of specific provisions of the model was problematic mainly due to the ownership structure of the Sri Lankan capital market and many issues identified in the existing corporate governance model. However, as far as the researchers observe, there is a dearth of empirical studies that find the existing practices of Corporate Governance in Sri Lanka being still undermined by weaknesses and issues. Hence, this study aims to ascertain the contemporary issues with current Corporate Governance practices in Sri Lanka; and accordingly, the main objective is to examine the views of professionals on the contemporary issues of corporate governance practices based on their knowledge and experience.[1]

The study would have substantial implications from both practical and theoretical viewpoints. Practically, the findings of this research could be utilized by policy makers in reforming the code of best practices of corporate governance by prioritizing issues highlighted by the professionals. Theoretically, this study attempts to fill the empirical gap and the dearth of research in the Sri Lankan context can be observed in the local literature. With the increasing number of limited liability companies being established in the Sri Lankan economy, the country is increasingly attracting investment, both local and foreign (Board of Investment 2013). The amount of investments flowing into the country will not be sustainable if the companies that are being invested in are not governed under appropriate rules and procedures. In the past, corporate scandals that occurred in poorly governed companies have harmed their corporate image and as well as the relevant industry the company is engaged in. Furthermore, such corporate scandals have proved to have significant negative effects on industry profits, consumer surplus and social welfare (Sadka 2006). A method of resolving this issue is to establish better controls of governance throughout all the companies in the economy. It is important that deficiencies in the current best practices be identified and addressed during the implementation of the next codes of best practices.

This research is structured as follows. Section 2 explains the previous studies performed on this subject and the research gap that is to be filled through this study. Section 3 identifies the methodology adopted to address the identified research objective, while discussing the population, sample, development of the questionnaire and the strategy adopted to analyze the data collected. Section 4 discusses the results of the data analyses obtained via implementing the suggested methodology; and the final section provides the concluding remarks, recommendations and policy implications.

[1]Professionals, for the purpose of this report, are defined as practicing and non-practicing CA Sri Lanka members and graduates of the University of Sri Jayewardenepura who had followed a corporate governance course.

2. Literature review

This section on the literature review first defines the main concept of corporate governance, and then discusses the local and international literature on issues pertaining to governance models and systems. Finally, it identifies the gap in the existing literature, which will be addressed in this study.

2.1 Corporate governance

The review of literature indicates that there is no universally accepted definition of corporate governance. Van den Berghe (1999) have discovered a range of definitions. However, a common definition is that corporate governance is the 'system by which companies are directed and controlled' (Cadbury Committee 1992, p.15). Okeahalam and Akinboade (2004) claim that the main basis of corporate governance is the agency theory, when there is a separation of ownership from management; in other words, there is a conflict of interest between owners of the company and its managers. Furthermore, Okeahalam and Akinboade (2004) state that corporate governance refers to the manner in which power of a corporation is exercised in the stewardship of the corporation's total portfolio of assets and resources with the objective of maintaining and increasing shareholder value and satisfaction of other stakeholders through its corporate mission. Cochran and Wartick (1988, p.36) define corporate governance as 'an umbrella term that includes specific issues arising from interactions among senior management, shareholders, boards of directors and other corporate stakeholders'. The definition of Cochran and Wartick (1988) is much broader as it appreciates the fact that the concept of corporate governance should encapsulate stakeholders who affect and are being affected by the respective entities.

2.2 Corporate governance in Sri Lanka

The current structure of the market in Sri Lanka is characterized by a large number of bank-led financing along with concentrated ownership resembling the characteristics of a relationship-based model (Seneratne & Gunaratne 2008). Further, they indicate that Sri Lanka, being a former British colony, have adopted the Anglo Saxon approach to corporate governance. The latest code of best practices of corporate governance issued in 2013 is widely used in Sri Lankan companies. The adoption of a code of corporate governance is not mandatory for limited companies, with the exception of the companies listed on the Colombo Stock Exchange and licensed commercial banks overseen by the Central Bank of Sri Lanka. Manawaduge (2012) suggests that the current theoretical perspectives provide insights into different aspects of governance and only deal with certain issues while ignoring others. It is recognized that researchers place emphasis on the importance of carrying out further research covering a broader perspective of governance, including regulatory levels of laws and regulations, advisory levels involving involuntary codes, and personal levels covering an individual's belief and behaviour. Van den Berghe (1999) identify three aspects: the first defines corporate governance in terms of governance policy and supervision; the second focuses on the relationships of the parties involved and balancing their interests; and the third focuses on the mission of the enterprise and its outcomes. Each definition denotes that there is indeed a conflict of interest between the agent and the principal, which is mainly derived from the separation of ownership and control.

Many reforms have been carried out in Sri Lanka through best practice codes on corporate governance, which advocate core corporate governance perspectives such as improvement of integrity, accountability, transparency and efficiency that the companies should peruse to safeguard their sustainability (Seneratne & Gunaratne 2008, p.1). All of the reforms that have been introduced resemble the Anglo-Saxon model of corporate governance (Manawaduge 2012).

Previous research (Healy & Palepu 2003) shows that despite stringent regulations, corporate scandals are still possible. In the case of Enron, one of the most massive corporate scandals in the global context, good corporate governance factors were present but these practices were not perfectly fixed in the culture of the organization and therefore allowed opportunity for scandals (Healy & Palepu 2003).

2.3 Broader theories on corporate governance

Arising from various practices of corporate governance, several theories were established to identify concurrent practices; this section discusses two of such important competitive theories.

One of them is the agency theory, which examines the relationship between the principal (shareholders) and the agent (management). Jensen and Meckling (1976, p.5) define an agency relationship 'as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent. If both parties to the relationship are utility maximizers, there is good reason to believe that the agent will not always act in the best interests of the principal'. Thus, a basic conclusion of agency theory is that ultimate return will be sought by management; thereby not enabling maximization of shareholder wealth as management generally holds executive power (Turnbull 1997). However, the agency theory provides a broad analytical framework which allows the examination of how successful corporate governance systems can stimulate management interests in order to align management and shareholder interests to secure a fair return on investment (Manawaduge 2012).

On the other hand, the stakeholder theory suggests that a representative of each set of stakeholders on the Board of Directors will satisfy their claims successfully (Ping & Wing 2011). Corporate governance can be perceived from the stakeholder theory point of view as a control mechanism designed for efficient operation of a corporation on behalf of its stakeholders (Manawaduge 2012). Compared to the agency theory, this theory suggests a more holistic view of corporate governance, which adopts a broad perspective to corporate governance as opposed to a narrow view based on shareholders only. Corporate governance best practices should be able to protect the interests of all stakeholders and not only of shareholders (Senaratne & Gunaratne 2008).

2.4 Contemporary corporate governance issues

2.4.1 Sri Lankan context

Senaratne and Gunaratne (2008) argue the major weakness of the corporate governance system to be the presence of several regulations for compliance, and lack of uniform direction for listed companies in Sri Lanka. Furthermore, Manawaduge (2012) revealed that the current state of corporate governance practices do not meet stakeholder expectations. Stakeholders have mentioned that the Sri Lankan corporate governance practices fail in comparison to those of a developed country or even another Asian country. The majority of shareholders agree that investors would pay a premium price for a company with better corporate governance structures (Manawaduge 2012). Stakeholders identified the current issues of corporate governance as 'a lack of education in and awareness of corporate governance; inadequate regulations and enforcement; a lack of integrity and independence of directors; insufficient ethical standards; a lack of transparency; ownership concentration; and, political interventions, insider trading and corruption as significant corporate governance problems in Sri Lanka' (Manawaduge 2012, p.222). Furthermore, Gunathilake, De Zoysa, and Chandrakumara (2011) explain that the transparency is mainly restricted by political intervention in Sri Lanka, and therefore they argue that to develop a better code of corporate governance, political interventions must first be eradicated.

Mapitiya, Ajward, and Seneratne (2015, p.115) find that there is a 'high level of concentration of ownership in most Sri Lankan public listed companies with the presence of a controlling shareholder'. Further, most Sri Lankan companies are family-owned enterprises, which question the validity of the best practices of corporate governance mainly based on the agency theory. Therefore, Mapitiya, Ajward, and Seneratne (2015) conclude that the regulators of corporate governance should promote ‘an optimal ownership structure’ which will eliminate the existence of abuse through family-owned enterprises and other concentrated ownerships.

The codes of best practice do not prohibit the roles of the CEO and the Chairman being held by the same individual, provided disclosure is made. However, studies show that this prohibition has been a major factor in differentiating between companies that have good corporate governance practices and companies that have failed in corporate governance (Lakshan & Wijekoon 2012). Thus, it may be suggested that any reforms to the code of corporate governance should include a mandatory separation of duties of the Chairman and the CEO.

The earliest and most primary solution in the context of Sri Lanka as suggested by Senaratne and Gunaratne (2008) is to adopt a broad perspective in the light of corporate governance instead of focusing on shareholder primacy. Manawaduge (2012) suggests the enforcement of strict regulations through regulatory monitoring, sufficient education for senior management, judicial enforcement, increased ethical standards and prevention of political intervention to address the issues created by weak corporate governance.

2.4.2 International contexts

In a general context, Okeahalam and Akinboade (2004) identified that the constraints of corporate governance are derived from the structure of ownership and control, interlocking relationships with the government and financial sector, weak civil and judicial systems, absence of or underdeveloped monitoring authorities and limited human resources in Nigeria.

Previous literature on this subject suggests certain strategies and practices to overcome the current issues of corporate governance. Linner (2009) in a study of corporate governance challenges in Kenya recommended certain practices which good corporate governance should entail: teamwork, consultation, board steering strategic planning, transparency, accountability, good communication, board diversity, conflict resolution and declaration of interest.

Okpara (2010) identified several constraints that hinder the implementation and promotion of better corporate governance in Nigeria. These factors were absence of law enforcement mechanims, abuse of shareholder rights, lack of commitment on the part of Board of Directors to their responsibilities, lack of adherence to the regulatory framework, weak enforcement and monitoring systems and lack of transparency and disclosure.

2.5 Research gap

Studies have been done to identify many issues of corporate governance in several contexts, both local and foreign. Local studies on this issue were all prior to the contemporary reforms in corporate governance in Sri Lanka and recent major developments in the national and international contexts such as Non-Compliance with Laws and Regulations - NOCLAR (International Auditing and Assurance Standards Board - IAASB 2016). Further, the perception of professionals were not adequately considered in such studies. Accordingly, it was observed that there is a dearth of empirical studies on this subject to substantiate the issues prevalent in the corporate governance practices in Sri Lanka.This study attempts to fill this empirical gap, and the next section elaborates on the methodology adopted in the current study.

3. Methodology

This section discusses the research approach, population and sample, development of the questionnaire and the analytical strategies used in this study.

3.1 Research approach

A positivistic, quantitative approach was used as this study aims to capture the *general* perception of the professionals. This approach was widely used in previous studies of this nature. Okpara (2010) and Afolabi (2013) used this approach to assess the perceptions of stakeholders of contemporary issues of corporate governance. Further research done in the local context used this approach as well (Manawaduge 2012). Accordingly, this approach is deemed appropriate for a study of this nature with a wide sample to assess the sentiments of the professionals on issues of corporate governance in Sri Lanka.

3.2 Population and sample

The population for this study comprises Chartered Accountants currently practicing or non-practicing and Sri Jayewardenepura University graduates who had followed a corporate governance course. A total of 87 respondents responded to our questionnaire. The demographics of the sample are presented in Section 4 of this report.

3.3 Questionnaire development

The questionnaire was developed based on the literature and using the assessment tool published by the OECD (Organization for Economic Co-operation and Development, 2007), as well as issues identified by Okpara (2010) and Afolabi (2013). Accordingly, 83 issues were identified, modified and classified with the objective of adapting them to the local context. This approach was also followed in similar studies done by Okpara (2010) and Afolabi (2013). In order to assess the applicability and relevance of the questionnaire to the local context, the expert opinions of two senior academics and a senior Chartered Accountant were sought, and the questionnaire was amended accordingly. Thereafter, a pilot survey was conducted by colleagues of the researchers in order to receive further feedback on the length, readability and quality of the questionnaire. Finally, the questionnaire was fine-tuned and distributed among the professionals using the central mail system of the Institute of Chartered Accountants of Sri Lanka (refer Appendix 1 for the final version of the issues included in the questionnaire).

The first section of the questionnaire aimed at collecting the demographics of the professionals with the objective of ascertaining whether changes in perception occurred on the basis of various demographic background: age, gender, education and qualifications, nature of employing firm, level of employment and experience of the individual in the current capacity and in the capacity of a board member, if applicable. The next section of the questionnaire used a five-point Likert scale (1 = *'strongly agree'* to 5 = *'strongly disagree'*) requesting participants to rate their agreement on the existence of contemporary issues in the Sri Lankan corporate governance system. The issues were classified into ten sections: duties and responsibilities of the directors, enforcement and monitoring by regulators, equitable treatment of shareholders, regulatory framework, shareholder rights, stakeholder rights in corporate governance, transparency and disclosure, external auditors, independence, and assessment and training of directors.

3.4 Analytical strategy

This section describes the analytical strategies used for analyzing the data collected from the questionnaire survey.

Primarily, descriptive statistics were used to analyze the demographics and also the issues of corporate governance. Using descriptive statistics helps to analyze the basic features of the data collected. The mean rank method was used to identify the top highest and bottom lowest means of the answers provided. Furthermore, a one-sample *t*-test was used to assess whether the mean value is statistically significantly different from the neutral value '3'. Finally, an independent sample test and One-way ANOVA test were used to highlight any differences between and among selected demographic characteristics (age, gender, highest academic qualification, professional qualifications, nature of industry employed/engaged, experience in current capacity, whether a board member and past experience as a board member).

The resulting descriptive statistics and other results are shown in the following section.

4. Findings and discussion

This section analyses the demographic variables of the sample representation, identifies the most agreed and most disagreed statements on issues, the statistical significance of the findings and differences between and among selected demographic characteristics. These analyses were performed using the methodology outlined in Section 3 above.

4.1 Descriptive statistics and differences of perception of demographics

4.1.1 Descriptive statistics

This section describes the statistics of the analysis done using the data collected from the respondents to the questionnaire. The table below summarizes the demographic variables of the respondents:

Table 1: Demographic variables

Demographics	Categories		N	%
Age	18 – 25		24	27.6
	26 – 30		24	27.6
	31 – 40		18	20.7
	41 – 50		10	11.5
	Over 50		11	12.6
	Total		**87**	**100.0**
Gender	Male		57	65.5
	Female		30	34.5
	Total		**87**	**100.0**
Highest academic qualification	GCE A/L		18	20.7
	Basic degree		48	55.2
	Post graduate degree		21	24.1
	Total		**87**	**100.0**
Professional qualifications	Foundation	ICASL	2	2.3
		ACCA	0	0
		CIMA	0	0
	Intermediate	ICASL	3	3.4
		ACCA	1	1.1
		CIMA	1	1.1
	Final	ICASL	7	8.0
		ACCA	6	6.9
		CIMA	4	4.6
	Passed Finalist	ICASL	8	9.2
		ACCA	5	5.7
		CIMA	6	6.9
	Associate Member	ICASL	42	48.3
		ACCA	1	1.1
		CIMA	3	3.4
	Fellow Member	ICASL	14	16.1
		ACCA	2	2.3

		CIMA	5	5.7
	Total	**ICASL**	**76**	**87.4**
		ACCA	**15**	**17.2**
		CIMA	**19**	**21.8**
Nature of the industry employed/engaged	Big three audit firms		16	18.4
	Other audit firms		13	14.9
	Non-audit firms		58	66.7
	Total		**87**	**100.0**
Experience in current capacity	Less than 2 years		32	36.8
	2 – 5 years		30	34.5
	5 – 10 years		11	12.6
	10 – 15 years		4	4.6
	More than 15 years		10	11.5
	Total		**87**	**100.0**
Whether a board member	Yes		6	6.9
	No		81	93.1
	Total		**87**	**100.0**
Past experience as a board member	Yes		16	18.4
	No		71	81.6
	Total		**87**	**100.0**

As shown above, 27.6% of the respondents were aged from 18 to 25 and another 27.6% of the respondents from 25 to 30, followed by 20.7% in the 31 – 40 age group. Gender-wise, 65.5% of the respondents were males and 34.5% females. In respect of the educational and professional qualifications, 55.2% had a basic academic degree as their highest academic qualification and 87.4% were qualified or part qualified in Chartered Accounting offered by ICASL, 48.3% were Associate Members and 16.1% Fellow Members. 33.3% of the respondents were from Audit firms, 55.2% of whom were currently employed in the Big three audit firms (KPMG, EY or PWC). 36.8% of the respondents were less than two years in the current capacity, followed by 34.5% who had 2 to 5 years of experience. 12.6% had 5 to 10 years of experience while 4.6% had 10 to 15 years and 11.5% of the respondents had over 15 years of experience in the current capacity. It should be highlighted that 18.4% of the respondents had experience as a member in the Board of Directors of an entity and 6.9% respondents are currently serving on the Board of Directors of an entity. The above information shows that the sample is heterogeneous and having a diverse representation.

4.1.2 Differences of perceptions based on selected demographic characteristics

This section presents the *t*-test and One-way ANOVA results that examine the differences in perception of corporate governance issues of professionals based on selected demographic characteristics.[2] In the interests of parsimony, only differences that are statistically significant are reported in this research (i.e., gender, age, nature of firm employed, nature of audit firm employed, experience in current capacity, level in current organization, whether a board member, and whether having experience being a board member).

Gender

Table 2 depicts the results of the *t*-test analysis, which examines whether male and female professionals differ in their perceptions of the 20 dimensions (most agreed and most disagreed statements). The analysis was performed for all the demographic variables in the questionnaire; however, Table 2 highlights the differences that are statistically significant ($p<.05$). The results of the analysis suggest that there is a significant difference ($p<.05$) between the responses of the two genders to the statements that refer to the following issues: *'Board members do not*

[2] 20 issues on corporate governance were identified as per Section 4.2 – Table 8 of this study.

undergo initial and ongoing training relevant to the performance of their duties', 'Disclosures are selectively made by companies', 'No means to withdraw authorization given to auditors if found incompetent', 'No clear rules for proxy solicitation', 'External auditors are not accountable for work performed', 'Relationship between custodians/nominees and their clients is vague and often disrupted' and *'Insufficient notice is given to foreign shareholders to have opportunities similar to domestic shareholders'.* It should be highlighted that, except for '*Disclosures are selectively made by companies',* males agreed more strongly than females on these issues.

Table 2*: t*-test results based on gender

		N	Mean	SD	Mean difference
Board members do not undergo initial and ongoing training relevant to the performance of their duties	Male	57	2.3333	1.12335	$-.56667^{*}$
	Female	30	2.9000	1.42272	
Disclosures are selectively made by companies	Male	57	2.8421	1.19208	$.50877^{*}$
	Female	30	2.3333	.92227	
No means to withdraw authorization given to auditors if found incompetent	Male	57	3.1404	1.15633	$-.65965^{*}$
	Female	30	3.8000	1.18613	
No clear rules for proxy solicitation	Male	57	3.1228	1.25457	$-.77719^{*}$
	Female	30	3.9000	1.62629	
External auditors are not accountable for work performed	Male	57	3.1930	1.14078	$-.67368^{**}$
	Female	30	3.8667	1.00801	
Relationship between custodians/nominees and their clients is vague and often disrupted	Male	57	3.1579	1.34681	$-.80877^{*}$
	Female	30	3.9667	1.51960	
Insufficient notice is given to foreign shareholders to have opportunities similar to domestic shareholders	Male	57	3.2982	1.37536	-1.10175^{**}
	Female	30	4.4000	1.40443	

$^{*}p<.05$; $^{**}p<.01$

Nature of the firm employed in

Results of the independent sample *t*-test, which was performed to identify statistically significant differences between respondents employed in audit firms and respondents employed in non-audit firms are presented in Table 3. Except for the dimension *'Shareholders might not be given the right to participate and vote in general meetings'*, no statistical significant differences ($p>.05$) were observed in the other dimensions.

Table 3: *t*-test results based on nature of firm employed

		N	Mean	SD	Mean difference
Shareholders might not be given the right to participate and vote in general meetings	Audit	31	3.3226	.83215	$-.53456^{*}$
	Non-audit	56	3.8571	1.05190	

$*p<.05$; $**p<.01$

Status in organization

Statistically significant differences were tested for perception changes based on the status of the professionals in their respective organizations using the One-way ANOVA test. It was noted that, except for the dimension which states '*External auditors are not accountable for work performed',* no other statistical significant ($p>.05$) differences were identified in this demographic characteristic.

Table 4: One-way ANOVA results based on level in organization

		N	Mean	SD	F-statistic
External auditors are not accountable for work performed	Operational	11	2.5455	.82020	4.170**
	Lower management	20	3.8500	.98809	
	Middle management	23	3.6957	1.14554	
	Senior management	33	3.2727	1.15306	

*p<.05; **p<.01

Age

The One-way ANOVA analysis done to examine the statistically significant differences among the five age groups (18 – 25 years; 26 – 30 years; 31 – 40 years; 41 – 50 years; and Over 50 years) selected and the results are presented in Table 5. There were significant differences (p<.05) in the responses among the age groups to the statements: *'Board members do not undergo initial and ongoing training relevant to the performance of their duties'* and *'Disclosures are selectively made by companies'*. For other dimensions, no statistically significant differences (p>.05) were noted among the age groups of the selected sample.

Table 5: One-way ANOVA results based on age

		N	Mean	SD	F-statistic
Board members do not undergo initial and ongoing training relevant to the performance of their duties	18 – 25	24	3.0000	1.28537	2.846*
	26 – 30	24	2.7500	1.42188	
	31 – 40	18	1.8333	.78591	
	41 – 50	10	2.5000	1.35401	
	Over 50	11	2.1818	.87386	
Disclosures are selectively made by companies	18 – 25	24	2.5000	.88465	2.963*
	26 – 30	24	2.5833	1.01795	
	31 – 40	18	2.2222	1.00326	
	41 – 50	10	3.4000	1.57762	
	Over 50	11	3.2727	1.19087	

*p<.05; **p<.01

If employed in audit firm, nature of audit firm

In examining the statistically significant differences among the audit sector in respect of the 20 dimensions, the One-way ANOVA results are depicted in Table 6. An interesting result is that auditors from the other audit firms perceive that policies, rules and regulations are adopted without consultation with all stakeholders, which might imply that the viewpoints of auditors in smaller audit firms may not be considered in adopting policies, rules and regulations. Furthermore, there was a significant difference between the responses from individuals in the Big three audit firms and smaller audit firms for the observation which states, "*Employees who report illegal or unethical practices are often not protected*." This may imply the lack or inadequacy of whistleblowing policies in smaller scale firms which are generally audited by smaller audit firms, while large firms which are generally audited by the Big three audit firms might have robust whistleblowing policies.

Table 6: One-way ANOVA results based on nature of audit firm employed

		N	Mean	SD	F-statistic
Policy, rules and regulations are not prepared in consultation with the public, shareholders and other stakeholders	Big three audit firms	16	2.6250	1.20416	4.281*
	Other audit firms	13	1.8462	.68874	
Employees who report illegal or unethical practices are usually not protected	Big three audit firms	16	3.1250	1.50000	6.878**
	Other audit firms	13	1.9231	.75955	

*$p<.05$; **$p<.01$

Experience in current capacity

The fifth demographic factor selected was *experience in the current capacity* and the One-way ANOVA results obtained to examine the differences among the selected tenure ranges in terms of the 20 dimensions are depicted in Table 7. However, the other 16 dimensions do not show a statistically significant difference ($p>.05$) among the experience groups concerned.

Table 7: One-way ANOVA results based on experience in current capacity

		N	Mean	SD	F-statistic
Policy, rules and regulations are not prepared in consultation with the public, shareholders and other stakeholders	Less than 2	32	2.6875	1.20315	2.684*
	2 – 5	30	2.0000	.78784	
	5 – 10	11	2.7273	1.48936	
	10 – 15	4	1.5000	.57735	
	Over 15	10	2.2000	.78881	
Enforcement authorities do not have integrity and are often not transparent	Less than 2	32	2.5313	1.01550	2.848*
	2 – 5	30	2.3333	.84418	
	5 – 10	11	3.0000	1.73205	
	10 – 15	4	1.7500	.50000	
	Over 15	10	2.7000	1.15950	
Disclosures are selectively made by companies	Less than 2	32	2.8750	.90696	4.290**
	2 – 5	30	2.1333	.77608	
	5 – 10	11	3.3636	1.74773	
	10 – 15	4	2.0000	1.41421	
	Over 15	10	3.1000	1.10050	
Auditors are generally not competent	Less than 2	32	3.5000	1.07763	3.072*
	2 – 5	30	3.9000	1.06188	
	5 – 10	11	3.7273	1.55505	
	10 – 15	4	2.0000	.81650	
	Over 15	10	4.1000	.99443	

*$p<.05$; **$p<.01$

Academic and professional qualifications

The results of the One-way ANOVA test performed to identify if there are any significant mean differences in responses based on academic and professional qualifications for the 20 dimensions revealed no statistical differences ($p>.05$) among the groups.

If currently a board member

The results of the sample t-test performed to identify if there are any significant mean differences in responses among professionals who are currently board members and those who are not for the 20 dimensions revealed no statistical differences (p>.05) between the two groups. This dispels the notion that professionals currently being board members would lead to biased opinions.

Past experience as a board member

The results of the sample *t*-test performed to identify if there are any significant mean differences in responses between individuals who have past experience serving as a board member of a limited liability company and individuals who do not, revealed no statistical differences (p>.05) between the two groups. This also dispels the notion that professionals currently having board experience would lead to biased opinions.

This section of the report presented the results of the *t*-test and One-way ANOVA analyses performed to highlight statistical differences between results within the group of respondents.[3] The next section of the report presents the mean rankings of the highlighted statements of corporate governance issues in the context of Sri Lanka.

4.2 Mean ranking and one sample *t*-test

In regard to issues of corporate governance, the table below indicates the twenty issues that were included in the questionnaire which the respondents have marked as the 'most agreed statements' and the 'most disagreed statements'. The mean values derived were interpreted based on the Likert scale used for the questionnaire, i.e. *1 – Strongly Agree*, *2 – Agree*, *3 – Neutral*, *4 – Disagree* and *5 – Strongly Disagree*.

Table 8: Mean ranking

Issue	*N*	Mean^{a}	SD
Panel A - Most agreed statements			
1. Policy, rules and regulations are not prepared in consultation with the public, shareholders and other stakeholders	87	2.3448**	1.09786
2. There is a lack of periodical assessment of the Board of Directors	87	2.3908**	1.03829
3. There is no clear division of responsibility among different authorities in Sri Lanka	87	2.4713**	.99813
4. Enforcement authorities do not have integrity and are often not transparent	87	2.5057**	1.08771
5. Board members do not undergo initial and ongoing training relevant to the performance of their duties	87	2.5287**	1.25605
6. Legal requirements are weakly understood, unforeseeable and do not constitute a transparent system	87	2.5517**	.99719
7. Employees who report illegal or unethical practices are usually not protected	87	2.5862**	1.27180
8. Enforcement authorities lack resources to operate effectively	87	2.6207**	1.25050
9. Process of selecting external auditor is not overseen by an independent party	87	2.6437**	1.13072
10. Disclosures are selectively made by companies	87	2.6667**	1.12753

[3]Qualitatively similar findings of the independent sample *t*-test and One-way ANOVA analyses were obtained under the Mann-Whitney U test and Kruskal-Wallis H test, respectively. The results are not tabulated.

Panel B –Most disagreed statements			
1. Insufficient notice is given to foreign shareholders to have opportunities similar to domestic shareholders	87	3.6782**	1.47455
2. Auditors are generally not competent	87	3.6667**	1.17796
3. Shareholders might not be given the right to participate and vote in general meetings	87	3.6667**	1.00772
4. Laws, rules, and regulations for appointing and removing auditors are frequently violated	87	3.4828**	1.22818
5. Disclosure of companies' objectives are not made	87	3.4598**	1.00931
6. Relationship between custodians/nominees and their clients is vague and often disrupted	87	3.4368**	1.45235
7. External auditors are not accountable for work performed	87	3.4253**	1.13744
8. Absence of clear rules for proxy solicitation	87	3.3908*	1.43346
9. No means to withdraw authorization given to auditors if found incompetent	87	3.3678**	1.20189
10. Amendments to basic governing documents of the company do not need shareholder approval	87	3.3333*	1.25445

[a]Based on the one sample *t*-test performed, the significance of the difference between the test value of 3 and the mean values are also indicated, where $^{**}p<.01$ and $^{*}p<.05$.

The primary issue highlighted by the respondents is that codes of corporate governance and other policies, rules and regulations in the context of governing entities in Sri Lanka have not been prepared in consultation with the public, shareholders and other stakeholders (mean value of 2.3448). The respondents believe that future reforms and policies adopted by regulatory institutions should consider the viewpoints of stakeholders that are eventually affected by entities to which these policies are applicable. This may highlight low coordination of regulatory institutions and policy makers related to the system of corporate governance.

The second most highlighted issue is that board members are not being assessed on a regular basis (mean value of 2.3908) implying the weaknesses of the boards and relevant committees assigned to evaluate the performance of the Board of Directors. Further issues highlighted include a lack of clear division of responsibility among different institutions in Sri Lanka designed for public welfare, lack of transparency and lack of authority of institutions established to enforce corporate governance practices and directors do not undergo training that would enable them to perform their duties effectively. Further, legal requirements were unclear for most individuals implying a lack of promotion of corporate governance practices, lack of safety for whistleblowers, lack of resources for enforcement authorities, process of selecting an external auditor not being overseen by an independent third party and also that companies disclose only what they wish to disclose. It should be further highlighted that respondents placed a lower level of importance to issues such as '*Insufficient notice is given to foreign shareholders to have opportunities similar to domestic shareholders*', '*Auditors are generally not competent*', '*Shareholders might not be given the right to participate and vote in general meetings*', '*Laws, rules and regulations for appointing and removing auditors are frequently violated*' and '*Disclosure of company's objectives are not made*'. Finally, it should be also noted that based on the one sample *t*-test performed, all the 20 statements were statistically significantly different with a test value of 3 and their respective mean values.

4.3 Discussion

This section discusses the key findings of the analyses performed and highlights the consistency or inconsistency of the findings with the extant literature on this subject. This study examined the contemporary issues of corporate governance in the perception of professionals in Sri Lanka and also identified the changes in perception arising from various demographic factors.

This study first described the effects of demographic variables on the perceptions of issues of corporate governance in Sri Lanka. It should be noted that the following demographics were tested for significant differences between and among different demographic groups, i.e., gender, age, academic qualifications, professional qualifications, audit industry or mercantile industry, if audit firm: nature of audit firm employed, experience in current capacity, whether currently a board member and whether having experience being a board member. Significant differences were found between groups according to gender, age, nature of audit firm employed and experience in current capacity. However, no significant differences were found between individuals who have board member experience and individuals who do not. As observed by the researchers, previous research studies on this subject do not reveal such differences. Based on the analysis performed on demographic factors, it was identified that not all the 20 dimensions have significant differences; however certain dimensions do have statistically significant differences.

Subsequent to the demographic analyses performed, the study identified the most and least significant issues in corporate governance in the Sri Lankan context. Various factors are ranked in Table 8, out of which the factors mentioned below are regulatory framework-related. Respondents held the primary perception that the regulatory framework had various shortcomings. The most highlighted issue was that policy, rules and regulations are not prepared in consultation with the public, shareholders and other stakeholders. Further, the shortcomings of the regulatory framework were identified through weakly understood legal requirements, the lack of a transparent legal system, enforcement authorities lacking integrity, resources and transparency and a lack of a clear division of responsibility among different authorities in Sri Lanka. These findings relating to the issues pertaining to the regulatory framework are consistent with those of previous studies by Okpara (2010) and Afolabi (2013), who expose the inefficiencies of the regulatory agencies in Nigeria.

Moving on to the other factors that were ranked as strongly agreed issues, the respondents believed that there was a lack of periodical assessment of the Board of Directors and that Directors do not usually undergo initial and ongoing training relevant to the performance of their duties. This finding is also consistent with the findings of Okpara (2010), who speculates that most board members do not have the necessary qualifications to be on the board, and usually avoid training and assessments due to the political connections they possess.

Further, the perceptions highlighted that the selection of external auditors does not usually go through the formality of being overseen by an independent party. This issue has not been highlighted in previous researches performed on this subject, but researchers have identified that respondents believed auditing to be an area of major weakness in the system of corporate governance (Okpara 2010, Afolabi 2013). This deficiency might be largely reduced if the appointment of auditors is performed through a more transparent and independent mechanism. The perceptions of the respondents further indicated that disclosures are selectively made by companies. These findings are consistent with that of Okpara (2010), who states that 92% of the respondents agreed that lack of transparency and disclosure were a main barrier to achieving good corporate governance practices in Nigeria. Our respondents also believed that stakeholder rights are not often protected as many employees are not secure with a whistleblowing policy once they report illegal or unethical practices. This finding has not been highlighted in previous studies on the subject.

5. Conclusion

Earlier codes of corporate governance published in the context of Sri Lanka were primarily based on the perspective of shareholders while the viewpoints of other stakeholders were largely disregarded. Studies done on this research area state the existence of issues in the corporate governance system but there is a dearth of empirical studies to identify these issues amongst contemporary reforms in corporate governance in the context of Sri Lanka and other recent international developments. Thus, issues of corporate governance persist, and this research study examines the views of professionals on these contemporary issues based on their knowledge and experience. This study further examines the effects of respondent demographics on the perception of current corporate governance issues. Accordingly, in order to achieve the main objective of examining the views of professionals on the contemporary corporate governance issues, a structured questionnaire was developed based on a comprehensive literature review and refined with expert opinion. Eighty-seven usable questionnaires were secured.

Initially, descriptive statistics were used to identify the demographic representation of the sample, following which the impact of demographic characteristics of professionals on the perceptions of issues of corporate governance were considered. There was a statistical significant difference in terms of gender, age, nature of firm employed, nature of audit firm employed, status in the current organization, and experience in the current capacity. Certain results emerging from this analysis were noted as noteworthy findings. For instance, auditors from the smaller audit firms perceive that policies, rules and regulations are adopted without consultation with all stakeholders, which might imply that the viewpoints of auditors in smaller audit firms may generally be ignored in adopting policies, rules and regulations. Furthermore, there was a significant difference between the responses of persons in the Big three audit firms and smaller audit firms to the observation which states, “Employees who report illegal or unethical practices are often not protected”. However, *overall*, it should be noted that *systematic* differences were not observed regarding the perceptions of the professionals on corporate governance issues based on their demographic characteristics.

Following the above analyses, a mean ranking analysis was done on the data received to identify the *most agreed with* and *most disagreed with* issue statements. The least mean ranked issue (most significantly perceived issue) was that *policy, rules and regulations are not prepared in consultation with the public, shareholders and other stakeholders*. This highlights the inefficiencies of the regulatory framework and the regulatory agencies who do not consider all stakeholders’ perceptions prior to publishing new policies, rules and regulations. It should be highlighted that out of the top ten most agreed statements of issues, five relate to the regulatory framework. Other issues that relate to the regulatory framework include there is no clear division of responsibility, enforcement authorities do not have integrity and transparency, legal requirements are weakly understood and enforcement authorities lack resources to operate effectively. Similar findings have been reported in previous studies done by Okpara (2010) and Afolabi (2013). The highest mean ranked issue (least significantly perceived issue) was that *insufficient notice is given to foreign shareholders so as to provide opportunities similar to those of domestic shareholders*. The main issues highlighted by the respondents can be mainly described as resulting from a weak regulatory framework, inadequate assessment of the Board of Directors, lack of auditor independence, inadequate stakeholder rights and lack of transparency and disclosure. The findings also indicate that the respondents placed the least level of importance to issues such as ‘*Insufficient notice is given to foreign shareholders to have opportunities similar to domestic shareholders’*, and ‘*Auditors are generally not competent*’. Finally, it was also observed that based on the one sample *t*-test performed, all the 20 issues (i.e., both highest agreed and disagreed by the professionals) were statistically significantly different with a test value of 3 and their respective mean values.

The findings of this study are expected to have significant policy implications, particularly in terms of the reforms in the contemporary corporate governance regulations. A limitation of this study is that only one group of stakeholders was considered. However, the study was based on the perception of the professionals due to the great exposure faced by them on corporate governance practices. For future research, however, it is suggested that the perception of other stakeholders that may have an impact of the corporate governance regulations be also considered and a larger sample size be obtained.

References

Association of Chartered Certified Accountants (ACCA) 2017, *Corporate governance - from the inside out*, viewed 2 October 2017 http://www.accaglobal.com/lk/en/student/exam-support-resources/professional-exams-study-resources/p1/technical-articles/corpgov-insideout.html

Afolabi, AA 2013, *The key challenges of the corporate governance of firms: empirical evidence from Sub-Saharan African Anglophone (SSAA) countries*, Brunel University, UK.

Board of Investment, 2013, *Annual report*: Board of Investment, Colombo.

Cadbury Committee, 1992, *Report of the committee on the financial aspects of corporate governance*, Burgess Science Press, London.

Cochran, P & Wartick, S 1988, *The corporate governance issue: a review of the literature*, The Financial Executives Research Foundation, Morristown, NJ.

Gunathilake, W, De Zoysa, A & Chandrakumara, PMKA 2011, 'Corporate governance in Sri Lanka: the status quo', *Issues in Global Research in Business and Economics*, pp. 97-117, Global Academy of Business and Economic Research, Dubai.

Healy, PM & Palepu, KG 2003, 'The fall of Enron', *Journal of Economics Perspectives*, vol. 17, no. 2, pp. 3-26.

International Auditing and Assurance Standards Board (IAASB) 2016, *Non-compliance with laws and regulations*, IAASB, New York.

Jensen, MC & Meckling, WH 1976, 'Theory of the firm: managerial behavior, agency costs and ownership structure', *Journal of Financial Economics*, vol. 3, no. 4, pp. 305-360.

Lakshan, AMI & Wijekoon, WMHN 2012, 'Corporate governance and corporate failure', *Procedia Economics and Finance*, vol. 2, pp. 191-198.

Linner, N 2009, Corporate governance practices and challenges: a study of international NGOs in Kenya, Master of Business Administration Thesis, Department of Business Administration, School of Business, University of Nairobi.

Manawaduge, ASPG 2012, Corporate governance practices and their impacts on corporate performance in an emerging market; the case of Sri Lanka, Wollongong.

Mapitiya, GS, Ajward, RA & Seneratne S 2015, 'Ownership concentration and degree of compliance with corporate governance best practices of public listed companies in Sri Lanka', *NSBM Journal of Management*, vol. 1, no. 1, pp. 113-118.

Nam, IC, Kang, Y & Kim, JK 1999, *Comparative corporate governance trends in Asia*, OECD.

Okeahalam, CC & Akinboade, OA 2004, '*Corporate governance and disclosure in Africa: Issues and challenges*', *Journal of Financial Regulation and Compliance,* vol. 12, no. 4, pp. 359-370.

Okpara, JO 2010, 'Perspectives on corporate governance challenges in a Sub-Saharan African economy', *Journal of Business & Policy Research,* vol. 5, no. 1, pp. 110-122.

Organisation for Economic Co-operation and Development (OECD) 2004, *OECD Principles of Corporate Governance*, OECD Publications, Paris.

Organisation for Economic Co-operation and Development (OECD) 2007, *Methodology for assessing the implementation of the OECD principles of Corporate Governance*. OECD Publications, Paris.

Ping, Z & Wing, C 2011, 'Corporate governance: a summary review on different theory approaches', *International Research Journal of Finance and Economics*, no. 68, pp. 7-13.

Sadka, G 2006, 'The economic consequences of accounting fraud in product markets: theory and a case from the US telecommunications industry (Worldcom)', *American Law and Economics Review*, vol. 8, no. 3, pp. 439-475.

Senaratne, S 2009, 'Existing corporate governance model development in Sri Lanka: the need to reconceptualise', Conference Proceedings, International Research Conference on Management and Finance, Faculty of Management and Finance, University of Colombo.

Seneratne, S & Gunaratne, P 2008, 'Corporate governance development in Sri Lanka: Prospects and problems', Conference Proceedings, International Research Conference on Management and Finance, Faculty of Management and Finance, University of Colombo.

The Institute of Chartered Accountants of Sri Lanka & Securities and Exchange Commission of Sri Lanka 2008, *Code of best practice on corporate governance*, Colombo.

The Institute of Chartered Accountants of Sri Lanka & Securities and Exchange Commission of Sri Lanka 2013, *Code of best practice of corporate governance*, Colombo.

Turnbull, S 1997, 'Corporate governance: its scope, concerns and theories', *Corporate Governance: An International Review*, vol. 5, no. 4, pp. 180-205.

Van den Berghe, L 1999, *International standardisation of good corporate governance: best practices for the board of directors*, Kluwer, Boston, MA.

Appendix 1: List of issues used in the questionnaire

Duties and responsibilities of the Board of Directors
Board members do not show a concern about proper monitoring and enforcement of laws, rules, and regulations of corporate governance practices
Conflicts of interest are not monitored by BoD using appropriate internal controls
Board members are not fully committed to reviewing and guiding corporate strategy
Board members do not adequately supervise the process of disclosure and communications
Board members often demonstrate a lack of concern as to the integrity of the corporation's financial reporting system
Board members are not effectively committed to their responsibilities
Board members does not take in to account interests of stakeholders
Board members show lack of concern in ensuring a formal and transparent board nomination and election process
Board members do not pay adequate attention to executive compensation
Enforcement and monitoring by regulators
Lack of investigation on complaints by shareholders about mismanagement
Lack of investigation on non-compliance with laws/regulations
Lack of investigation on the oppression of minority shareholders
Equitable treatment of shareholders
Insufficient notice is given to foreign shareholders to have opportunities similar to domestic shareholders
Companies do not often use technology that facilitate voting by foreign shareholders
Lack of protection for investors against abusive self-dealing by insiders
Relationship between custodians/nominees and their clients is vague and often disrupted
Different groups of shareholders are treated differently during decision making of the board
Regulatory framework
Authorities have not adapted the framework in a consistent and compatible manner
Cost of compliance is excessive
There is no clear division of responsibility among different authorities in Sri Lanka
Enforcement authorities do not have integrity and are often not transparent
Enforcement authorities lack resources to operate effectively
Policy, rules and regulations are not prepared with consultation from public, shareholders and other stakeholders
Professional standards, rules and procedures for transactions are not in place
Operation of capital market is not transparent
Legal requirements are weakly understood, unforeseeable and do not constitute a transparent system
No clear rules for proxy solicitation
No mechanisms exist to enforce legal rights of stakeholders
No mechanisms exist to evaluate remedies in case of breach of legal stakeholder rights
No proper mechanism for employees to report illegal or unethical practices
Lack of organization to enforce auditing standards who is independent of audit profession, transparent and appropriate
There is no well-defined concept of the duty of loyalty and care from board members to the company and shareholders
No well-defined concept of duty of loyalty towards shareholders from board members/officers
Stock market listing rules and corporate codes of conduct are abused and often ignored
Market trading rules fail to prevent market manipulation
Credit rating agencies have ongoing conflicts of interests
Rules and regulations regarding board members' independent composition are often violated
Shareholder rights
Shareholders might not be given the opportunity to elect and remove members of the BoD
Chairpersons often ignore minority shareholders at general meetings
Minority shareholder rights are not protected
Minority shareholders are often not allowed to express their views at general meetings
Aggrieved shareholders often do not have a recourse
Shareholders might not be given the right to participate and vote in general meetings
Amendments to basic governing documents of the company do not need shareholder approval
Shareholders asking questions/ making proposals are not encouraged
Shareholders are not allowed to participate in nomination/election of board members
Shareholders are not allowed to contribute to deciding the director and key executive remuneration

Shareholders who wish to speak at company general meetings are often allowed to speak only if they are known to side with the board of directors
Distribution of profits is not methodical or transparent
Shareholders are differently treated with respect to voting
It is difficult for shareholders to obtain relevant and material information
Stakeholder rights in corporate governance
Stakeholders have inadequate access to relevant, sufficient, timely and reliable information on a regular basis
Creditor rights are vaguely defined and high costs exist for enforcement of these rights
Creditor rights are not fulfilled and no participation is allowed in restructuring decisions
Employees who report illegal or unethical practices are usually not protected
Legal rights of stakeholders are not enforced and remedies are unavailable in case of breach
Transparency and disclosure
Corporate governance report is not published at least annually by companies
Board members and key executives often fail to disclose that they have material interest in certain transactions
Disclosures are selectively made by companies
Comprehensive disclosure about each board member is usually not made
Disclosures on all material information to investors are not made
Disclosure of recorded shareholders and who has a substantial ownership not made
Disclosure of companies' objectives are not made
Factors affecting financial condition, results of operation, known trends are not disclosed
Reasonably foreseeable material risks are not disclosed
Related party transactions are not fully disclosed
Full disclosure is not made with regards to all board committees
Remuneration policy is not transparent or linked to the longer term interest of the company
Rules and regulations for a formal and transparent board nomination and election process are often ignored
Rules and regulations for disclosure and communications are not often followed
External auditors
Relationship between BoD and external auditors usually hinders the audit's integrity and competence
External auditors are not independent of all management, board members and shareholders
Process of selecting external auditor is not overseen by independent party
Auditors are generally not competent
No means to withdraw authorization given to auditors if found incompetent
Shareholders are not being reported on the non-audit work carried out by the external auditor
External auditors are not accountable for work performed
External auditors who fail to complete audit with due care and competence are not properly penalized
Laws, rules, and regulations for appointing and removing auditors are frequently violated
Independence
The BoD usually does not include a sufficient amount of non-executive directors
The BoD usually does not include a sufficient amount of independent non-executive directors
Assessment and training of Directors
There is a lack of periodical assessment of the BoD
Board members do not undergo initial and ongoing training relevant to the performance of their duties

SELECTED BOARD CHARACTERISTICS AND PERFORMANCE OF LISTED HOSPITALITY FIRMS IN SRI LANKA

P.M.C.H.K. Senanayake
School of Accounting and Business, Institute of Chartered Accountants of Sri Lanka

Roshan Ajward
Department of Accounting, University of Sri Jayewardenepura

Abstract
This study examines the relationship between board characteristics and performance of hotel firms listed in the Colombo Stock Exchange during the period 2013 to 2016. Nine board characteristics (i.e., board number, board meetings, diversity, CEO-Chair duality, number of non-executive directors, total skill base of the board, existence of a nomination committee, existence of an audit committee and existence of a remuneration committee) and three firm performance measures (i.e., measured in terms of ROA, ROE and Occupancy rates) were selected while controlling for four control variables (i.e., growth, age, size and leverage of firms). Overall, the governance characteristics of duality, diversity, total skill of the board and existence of a nomination committee had a positive relationship with firm performance with a significance of $p<.05$ (under correlation and respective regression analyses) while a higher presence of non-executive directors showed a negative association with the firm's financial performance (for ROA and ROE under correlation analysis) with a significance of $p<.05$. However, these findings do not converge, and thus, it could be concluded that the evidence is mixed on the association between the selected board characteristics and firm performance of the hospitality sector firms in Sri Lanka. The study is expected to have significant policy implications.

Key words: Board Characteristics, Corporate Governance, Firm Performance, Hospitality Sector

1. Introduction

In relation to the Sri Lankan economy, the hospitality industry has a strong reform agenda that needs building on strong infrastructure (*Nation* 16 January 2016). There are 38 companies listed on the Colombo Stock Exchange in the Hotels and Travels sector as at August, 2017. The sector has showed a growth rate of 17.8% by 2015 over the previous year and it expected 2.2 million tourist arrivals by 2016 providing evidence of continuous growth (Lamba 2016 as cited in *Nation* 2016). The existing literature suggests that to boost and maintain growth and performance, organizations should practise good corporate governance. The literature suggests that hospitality firms are more likely to face agency problems than other sector firms and require corporate governance practices to reduce such problems and improve firm performance (Iyengar & Oak 2016). This is because real estate ownership and management may cause conflict of interest (Basak et al. 2010), high capital investment and low operating inventory management associated with liquidity and financial inflexibility (Defranco & Lattin 2006) and the unique pressure on management by shareholders based on long-term and short-term objectives, where management focuses more on long-term while shareholders focus on short-term objectives (Reich 1994).

Developing economies including Sri Lanka place greater emphasis and focus on corporate governance in the face of financial scandals and frauds that took place in the past. Further, corporate governance guidelines such as the Code of Best Practice on Corporate Governance (The Institute of Chartered Accountants of Sri Lanka & Securities and Exchange Commission 2013), Cadbury Committee (1992) and OECD Principles (Organisation for Economic Co-operation and Development - OECD 1999) have placed a major emphasis on the board of directors. Meanwhile, the researchers have observed a dearth of studies that examine board characteristics and firm performance in the fast-growing hospitality sector in Sri Lanka. Thus, the problem addressed in this study is whether board characteristics influence firm performance in the hospitality industry. Accordingly, this research addresses two main objectives, namely, to identify the level of corporate governance in terms of board characteristics and to examine the relationship between board characteristics and performance in the listed hospitality firms. The findings of the study are expected to be useful to all the stakeholders of the Sri Lankan hospitality sector including investors, policy makers, regulators and society as a whole in decision making, improving and implementing policies to establish better maintenance and control through corporate governance practices, guidelines and the firm performance. It will also contribute to the limited literature on the subject both internationally and locally.

The remaining sections of this study are structured as follows. The next section discusses the existing literature followed by a discussion of the approach, sample and the analysis in section three. Section four discusses the key findings of the study. The final section presents the conclusions and also notes the limitations and future research directions.

2. Literature review

This section looks at the local and international literature on the subject of the current study and also the gap in the existing literature, and how this study contributes to reducing it.

2.1 Corporate governance

Corporate governance is defined by many authors and in different corporate governance guidelines. According to the Cadbury Report (1992, p.14) '[c]orporate governance is the system by which companies are directed and controlled', which is a commonly cited definition. On the other hand, according to Johnson et al. (2008, p.133), corporate governance is '[t]he structure and systems of control by which managers are held accountable to those who have a legitimate stake in an organization'. This definition focuses on the managers' responsibility towards the stakeholders. The OECD (1999) defines corporate governance as a system which 'involves a set of relationships between a company's management, its board, its shareholders and other stakeholders' (p.9) and states that 'corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined.' (p.9). It further states that '[c]orporate governance is affected by the relationships among participants in the governance system. Controlling shareholders, which may be individuals, family holdings, bloc alliances, or other corporations acting through a holding company or cross shareholdings, can significantly influence corporate behavior' (p.10). Accordingly, the OECD Code elaborates on shareholder rights, equitable treatment of shareholders, and the role of stakeholders in corporate governance and disclosure and transparency. The OECD definition could be considered a holistic and comprehensive definition on corporate governance.

2.2 Corporate governance in Sri Lanka

Senaratne and Guneratne (2008) indicate that Sri Lankan corporate governance falls under the Anglo-Saxon model. Manawaduge (2012) recalls that in 1996, the Institute of Chartered Accountants of Sri Lanka formed a committee to create the first code of best practices relating to the financial aspects of the corporate governance, which was introduced as a voluntary code. Later several amendments and new codes were introduced through the years. Senaratne and Guneratne (2008) point out that the existing set of rules on corporate governance in Sri Lanka is a mixture of both mandatory (e.g., Companies Act, Listing Rules, Central Bank Directions) and voluntary (e.g., ICASL-SEC Code of Best Practice) rules. They also note that the mandatory listing of rules on corporate governance is a significant move towards the development of governance practices of listed companies in Sri Lanka in the context of significant variations in compliance with the previous voluntary code of best practice (Senaratne and Gunaratne 2008). Dissabandara (2010) has elaborated the corporate governance structure as shown in Figure 1. According to him, the Sri Lanka corporate governance structure consists of government, foreign, institutional and individual investors, customers, creditors, shareholders and external auditors.

The next section elaborates theoretical foundations on corporate governance.

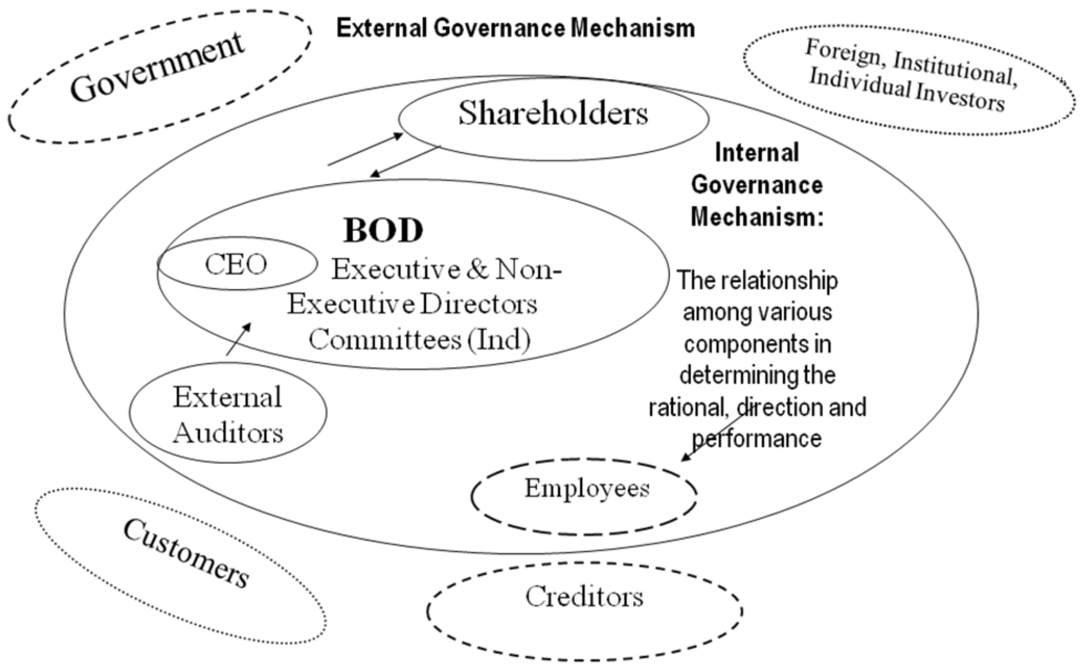


Figure 1: Structure of corporate governance in Sri Lanka
Source: Dissabandara (2010, p. 11)

2.3 Theories on corporate governance and performance

Different theories could be used to explain the need for corporate governance and to link it with the performance of entities. The agency theory postulates the relationship between the principal and the agent (Jensen & Meckling 1976). In public companies, the separation of ownership and control could be clearly observed leading to conflict of interest arising between the agents (i.e., shareholders) and the principals (i.e., managers), which creates agency problems and costs. On the other hand, corporate governance mechanisms could be used to mitigate the agency problems in organizations (Berle & Means 1932), and thereby increase corporate performance (Tricker 2012).

Alternatively, the stakeholder theory argues that the management of a firm should serve a broad social purpose rather than only considering shareholder needs and wants (Kiel & Nicholson 2003), which is contrary to the agency perspective. Accordingly, the stakeholder theory focuses on a broad spectrum of stakeholders involved in an organization rather than on shareholders only. Thus, corporate governance would ensure that the interests of the stakeholders are addressed by the management. When stakeholder needs are met, performance improves (Berman et al. 1999), and therefore makes a direct positive impact on the firm's performance (Donaldson & Preston 1995, Hillman & Keim 2001).

2.4 Empirical studies on corporate governance and firm performance

This section discusses the extant literatures related to the research topic and includes both local and international studies. They are categorized into studies that show a positive relationship, a negative relationship and no relationship between the selected board characteristics and the firm's performance.

Ajanthan (2013) found a positive relationship between board size, board composition and CEO duality with ROE and ROA; similarly, Marn and Romuald (2012) suggested that board size had a positive association with the firm's performance. Oconnel and Cramer (2010) stated that non-executive directors on the board had a positive impact on firm performance, supporting the extant findings. Leung, Richardson and Jaggi (2014) produced similar results on board independence with a positive association between board independence and firm performance in the context of non-family businesses. Confirming these findings, Muchemwa, Padia and Callaghan (2016) provided evidence that ROE is positively associated with the proportion of non-executive directors. There is also evidence on the association between board meetings with the firm's performance. A study by Hoque, Islam and Azam (2009) pertaining to Australia pointed out that audit committee meetings and remuneration committee meetings had positive association with ROA and ROE, while strategic committee meetings showed no such association. In addition to these studies, Erhardt, Werbel and Shrader (2003) conducted a study on the relationship between board diversity based on ethnicity and gender and the firm's financial performance, and their findings suggested that the two variables had a positive association and could be used to minimize potential agency costs. Similar studies on gender diversity done by Vafaei, Ahmed and Mather (2015) and Talijaard, Ward and Muller (2015) supported the argument that board diversity had a positive impact on the firm's financial performance. In addition to these findings, Ujunwa (2012), who studied gender diversity, nationality, and ethnicity, showed that board nationality and board ethnicity are positively associated with the firm's performance. This study also provides evidence that the board's skill had a positive impact on the firm's performance.

The above studies indicate that there are several board characteristics that show a positive relationship with the firm's performance; they include board size, CEO-Chair duality, board composition, board meetings, diversity and the board's skill.

Contrarily, some studies suggest a negative relationship between certain board characteristics and the firm's performance. Rodríguez-Fernández (2015) revealed a strong negative relationship between firm size and financial performance, arguing that the generic recommendation "one size fits all" cannot be applied in all cases, and that there is an optimal constant number of board members. A further conclusion drawn is that board size depends on additional factors such as company specifics. Similar studies by O'Connell and Cramer (2010) and Yeh and Trejos (2015) suggest that board size shows a significant negative association with the firm's performance and the relationship between the board size and performance had a significantly less negative impact on smaller firms. Ujunwa (2012) found that board size, CEO duality and gender diversity were negatively linked with the firm's performance. The findings of Tsogtbaatar (2014) indicate that outsider directors and board size show a significant negative relationship between board size and hotel performance in non-family hotels and an insignificant negative relationship between board size and hotel performance in family hotels in Taiwan. Jeramias and Gani (2014) conducted a study on board dependency and duality which produced results similar to those of the study done by Ujunwa (2012), namely, a negative impact of CEO duality and board dependency on performance.

Contrary to the study findings indicated in the earlier discussion, the above studies have indicated that board characteristics such as board size, duality, composition and diversity have a negative relationship with the firm's performance.

The above discussions point to a positive or a negative association between certain governance mechanisms and corporate performance. However, certain studies find no significant relationships. The meta-analytical review of Dalton et al. (1998) on board composition, leadership structure and financial performance indicates that board composition and financial performance had no relationship at a meaningful level. Leung and Jaggi (2014) also provide evidence that there exist no significant association between board or committee independence and firm performance in family-owned firms. Another study by Muchemwa, Padia and Callaghan (2016) suggest that non-executive directors are not significantly associated with Tobin's Q and ROA, and board size is not significantly associated with Tobin's Q, ROE and ROA. The findings of Chapple and Humphrey (2014) indicate that board gender diversity and financial performance show no correlation between having women on a firm's board and returns, and their findings indicate that firms that hire women tend to face lower risk but there are no differences in the performance of the boards that have or do not have women.

The studies discussed above show that board characteristics such as board composition and gender diversity have no significant relationship with the firm's performance.

The existing literature reveals that different studies have shown different outcomes on the relationship between board characteristics and the firm's performance. Therefore, it could be concluded that the extant literature provides mixed results about the relationship between board characteristics and performance. Furthermore, it could be noted that board characteristics such as board size, board meetings, number of non-executive directors, duality, gender diversity, total skills base of the board, existence of a nomination committee, an audit committee and a remuneration committee, have been commonly used, and they will be used in this study, too.

2.5 Theoretical gap

As observed in section 2.4, evidence regarding the relationship between board characteristics and financial performance is mixed with some studies indicating a positive relationship and other studies depicting negative or no significant relationship. Thus, the relationship observed between board characteristics and the firm's financial performance is inconclusive, and needs further examination. It was also noted that there is a dearth of studies on the effect of board characteristics on performance in hospitality firms both local and international. Thus, it is hoped that this study will contribute to the extant local literature and fill the gap observed. The next section explains the methodology adopted in the present study.

3. Methods

This section discusses the research approach, population and sample, operationalization of the variables and the analysis adopted in the study.

3.1 Research approach

Since the study examines the relationship between the board characteristics and the firm's performance, a quantitative approach was adopted as in the extant literature (Oconnel & Cramer 2010, Ujunwa 2012).

3.2 Population and sample

The population for this research consists of all companies listed in the Colombo Stock Exchange under the Hotels and Travel sector. As of August 2017, there were 38 listed companies of which 25 were selected as the research sample that was considered under the Return on Assets (ROA) and Return on Equity (ROE) as performance measures, and 20 companies based on the Occupancy Rate as the performance measure, covering the period 2013 to 2016. Both these samples were chosen on the basis of information availability, and no biases were observed based in the omitted firms. The data on corporate governance characteristics and firm's performance were gathered from the published annual reports of the companies, downloaded from the Colombo Stock Exchange.

3.3 Conceptual diagram

The conceptual diagram is shown in Figure 2 below based on the literature review (see Section 2).

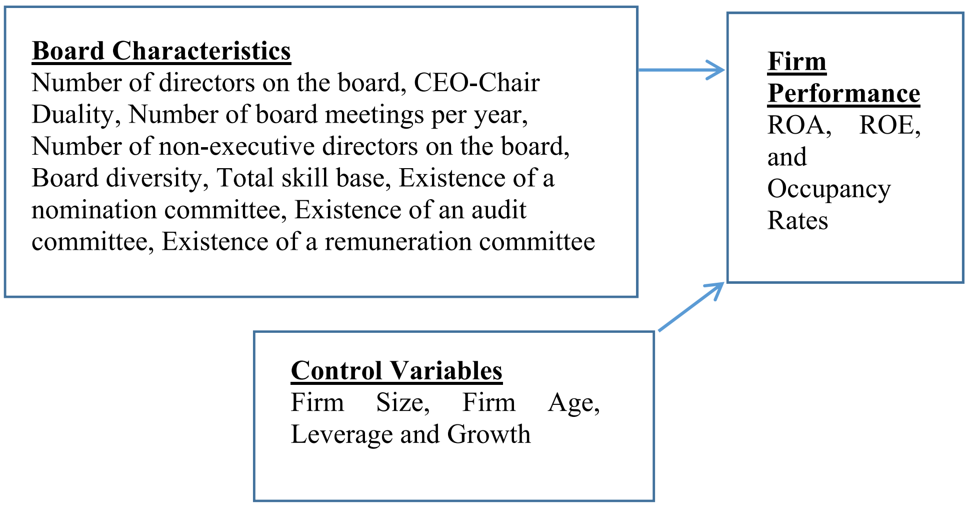


Figure 2: Conceptualization diagram

3.4 Hypotheses

The following hypotheses were derived from the extant literature discussed in Section 2.

H_1: The Number of directors on the board has an association with the firm's performance (ROA/ROE/Occupancy Rate).
H_2: Separation of CEO and Chairperson (CEO-Chair Duality) has an association with the firm's performance (ROA/ROE/Occupancy Rate).
H_3: Board meetings per year have an association with firm performance (ROA/ROE/Occupancy Rate).
H_4: The Number of non-executive directors has an association with the firm's performance (ROA/ROE/Occupancy Rate).
H_5: Board gender diversity has an association with the firm's performance (ROA/ROE/Occupancy Rate).
H_6: The Total skills base of the directors has an association with the firm's performance (ROA/ROE/Occupancy Rate).
H_7: Existence of a nomination committee has an association with the firm's performance (ROA/ROE/Occupancy Rate).
H_8: Existence of an audit committee has an association with the firm's performance (ROA/ROE/Occupancy Rate).
H_9: Existence of a remuneration committee has an association with the firm's performance (ROA/ROE/Occupancy Rate).

The next section discusses the operationalization of the variables stated in Sections 3.3 and 3.4 above.

3.5 Operationalization

The following Table elaborates on the operationalization of the variables considered in this study (Sections 3.3 and 3.4).

Table 1: Operationalization of variables

Variable and Denotation	Measurement	Related Studies
Board Characteristics		
1. Number of directors on the board $(BODNO_{i,t})$	Number of directors on the board for the firm *i* and period *t*.	Muchemwa, Padia and Callaghan (2016)
2. CEO-Chair Duality $(DUALITY_{i,t})$	Indicated as '1' if there is a separation of CEO and Chairperson of the Board, and '0' if not, for the firm *i* and period *t*.	Ramos and Olalla (2011)
3. Number of board meetings per year $(BODM_{i,t})$	Number of board meetings held per year for the firm *i* and period *t*.	Hoque. Islam and Azam(2009)
4. Number of non-executive directors on the board $(NEX_{i,t})$	Number of non-executive directors on the Board for the firm *i* and period *t*.	Oconnel and Cramer (2010)
5. Board gender diversity $(DIVERSITY_{i,t})$	Number of women directors on the board for the firm *i* and period *t*.	Erhardt, Werbel and Shrader(2003)
6. Total skills base$(SKILL_{i,t})$	Number of directors with MBA or higher qualifications and professional qualifications related to Business, Accounting and Finance as a proportion of the total number of members on the Board for the firm *i* and period *t*.	Ujunwa(2012)
7. Existence of a nomination committee $(NOMCOM_{i,t})$	Indicated as '1' if there is a nomination committee or else '0' for the firm *i* and period *t*.	Hutchinson, Mack and Plastow (2015)
8. Existence of an audit committee $(ADTCOM_{i,t})$	Indicated as '1' if there is an audit committee or else "0" for the firm *i* and period *t*.	
9. Existence of Remuneration committee $(REMCOM_{i,t})$	Indicated as '1' if there is a remuneration committee or else '0' for the firm *i* and period *t*.	
Firm Performance		
1. Return on Assets $(ROA_{i,t})$	Calculated as: $\frac{Net\ Income_{i,t} + Interest\ Expense_{i,t}}{Total\ Asstes\ _{i,t}}$	Hidayat and Utma (2016)

2. Return on Equity ($ROE_{i,t}$)	Calculated as: $\frac{Net\ Income_{i,t}}{Shareholder\ Equity_{i,t}}$	Vafaei, Ahmed and Mather (2015)
3. Occupancy Rate ($OCC_{i,t}$)	Calculated as: $\frac{Rooms\ Occupied_{\ i,t}}{Rooms\ Available_{i,t}}$	
Control variables		
1. Firm size ($SIZE_{i,t}$)	Natural logarithm of total assets for the firm *i* and the end of period *t*.	Hidayat and Utma (2016)
2. Growth ($GROWTH_{i,t}$)	Calculated as: $\frac{Sales_{i,t} - Sales_{i,t-1}}{Sales_{i,t-1}}$	Jermias and Gani (2014)
3. Leverage ($LEVER_{i,t}$)	Calculated as: $\frac{Debt_{i,t}}{Total\ assets_{i,t}}$	Oconnel and Cramer (2010)
4. Firm age ($AGE_{i,t}$)	Natural logarithm of number of years a firm has been in operation after incorporation.	Leung, Richardson and Jaggi (2014)

3.6 Analytical strategies

In terms of analytical strategies, first, descriptive statistics regarding the variables will be used to obtain an overall idea of the sample firms. Then, to achieve the first objective of the present study (Section 1), i.e., assessing the degree of selected corporate governance characteristics, descriptive statistics including measures of central tendencies and dispersions will be used; and in the achievement of the second objective, i.e., examining the relationship between those selected corporate governance characteristics and firm performance, correlation and multivariate linear regression analyses will be done. To achieve the second objective, as an additional analysis, a panel regression will be done by controlling for fixed or random effects. The general regression equation is as follows (the definitions of variables are presented in Table 1), and based on the alternative dependent variables, the specific regression models: Model 1 for ROA, Model 2 for ROE and Model 3 for Occupancy Rate are identified and denoted as:

$$\begin{aligned} &ROA_{i,t}/\ ROE_{i,t}/\ Occupancy\ Rate_{i,t} \\ &= \boldsymbol{\alpha}\ + \beta_1 BODNO_{i,t} + \beta_2 BODM_{i,t} \\ &+ \beta_3 DUALITY_{i,t}\ +\ \beta_4 DIVERSITY_{i,t}\ +\ \beta_5\ NEX_{i,t}\ + \beta_6 SKILL_{i,t}\ + \beta_7 NOMCOM_{\ i,t} \\ &+ \beta_8 ADTCOM_{\ i,t} + \beta_9 REMCOM_{\ i,t} + \beta_{10} LEVER_{i,t} \\ &+ \beta_{11} AGE_{i,t}\ + + \beta_{12} SIZE_{i,t}\ + \beta_{13}\ GROWTH_{i,t} + \varepsilon \end{aligned}$$

Note: the definitions of variables indicated in the above equation are presented in Table 1.
The findings and discussion are presented in the next section.

4. Findings and discussion

This section presents the findings based on descriptive statistics, correlation and regression analyses, referred to in the preceding section and a discussion of those findings.

4.1 Descriptive statistics

The descriptive statistics pertaining to the sample of 25 companies is presented in Table 2.[4] In terms of the board number ($BODNO_{i,t}$), the average number of board of directors was found to be nine directors of the 25 firms selected for the period 2013 to 2016. The variable representing separation between CEO and Chairperson functionalities $\left(DUALITY_{i,t}\right)$ is shows an average of 50%, which means that this duality is observed only in half of the observations, which is contrary to the best practices on corporate governance where such a duality is suggested. The average number of meetings held per year $\left(BODM_{i,t}\right)$ is five and the number of non-executive directors $\left(NEX_{i,t}\right)$ show an average of seven, which follows the stipulated best practices on corporate governance. The variable representing diversity $\left(DIVERSITY_{i,t}\right)$ indicates an average of 0.88 indicating that a board has an average of one female director, which is considered to be quite low. Total skills base of the board ($SKILL_{i,t}$), the average is 0.5793 indicating that 57.93% of board members have skills in the field of accounting, business and finance in terms of Master's and higher qualifications and/or related professional qualifications, which is quite impressive.

Table 2: Descriptive statistics

Variables*	Mean	Median	Std. Deviation	Skewness	Kurtosis
Board number ($BODNO_{i,t}$)	8.7500	9.0000	2.3540	0.4200	0.0150
Duality ($DUALITY_{i,t}$)	0.5000	0.5000	0.5030	0.0000	-2.0410
Board meetings ($BODM_{i,t}$)	4.4900	4.0000	2.0930	2.2680	5.8200
Non-executive directors$\left(NEX_{i,t}\right)$	6.6800	6.0000	2.5300	0.62500	0.1900
Diversity ($DIVERSITY_{i,t}$)	0.8800	1.0000	1.2170	2.0880	5.1260
Total skills base($SKILL_{i,t}$)	0.5793	0.6125	0.2767	-0.0060	-1.2082
Nomination Committee ($NOMCOM_{i,t}$)	0.2400	0.0000	0.4290	1.2360	-0.4820
Audit Committee ($ADTCOM_{i,t}$)	1	1	0		
Remuneration Committee ($REMCOM_{i,t}$)	1	1	0		
Occupancy Rate($OCC_{i,t}$)**	0.6661	0.6600	0.1085	-.1000	-0.1550
ROA($ROA_{i,t}$)	0.0687	0.0590	0.0560	1.8766	9.9620
ROE($ROE_{i,t}$)	0.0757	0.0672	0.0968	0.9700	6.6360
Leverage($LEVER_{i,t}$)	0.2335	0.1711	0.1861	0.9370	-0.1740
Size($SIZE_{i,t}$)	21.5460	21.4500	1.0554	-0.0293	-0.3735
Growth($GROWTH_{i,t}$)	0.1285	0.0898	0.2087	0.8952	1.0374
Age($AGE_{i,t}$)	3.4648	3.5264	0.6490	-1.3609	5.3822

*Definitions of these variables are given in Table 1.
**For the sample of 20 firms (see Section 3.2).

The variable representing the presence of nomination committees $\left(NOMCOM_{i,t}\right)$ shows an average of 0.24, indicating that only 24% of the firms in the sample have a nomination committee, which is quite low while the audit $\left(ADTCOM_{i,t}\right)$ and remuneration committees $\left(REMCOM_{i,t}\right)$ score an average of 1, with no standard deviation, due to all firms in the sample having these two committees. Occupancy Rate ($OCC_{i,t}$) for the sector shows an average of

[4]It should be noted that qualitatively similar statistics were observed for the sample of 20 firms that are considered under the performance metric, occupancy rate, and thus not tabulated to ensure parsimony.

66.61% for the 20 firms that selected this performance matrix. The average value for ROA is 0.0687 and the average for ROE is 0.0757. The variables, Occupancy Rate, ROA and ROE show no major difference between mean and median values indicating the absence of major outliers. The mean and standard deviation respectively for leverage ($LEVER_{i,t}$) is 0.2335 and 0.1861, indicating that companies have low levels of debt compared to their total assets, with an 18% deviation. Growth ($GROWTH_{i,t}$) shows a 0.1285 average with a standard deviation of 0.2087, indicating that the growth sector is on an average of 12%, which is impressive, but with deviations among the firms.

4.2 Relationship between selected board characteristics and firm performance

This section focuses on the correlation and regression analyses and their results.

Correlation analysis

Table 3 shows that the board number ($BODNO_{i,t}$) show a weak and significant negative association (p<0.05) with ROA of the companies. Board meetings ($BODM_{i,t}$), Duality ($DUALITY_{i,t}$) and Diversity ($DIVERSITY_{i,t}$) show no significant (p>0.05) associations with the firms' ROA and ROE performance matrices. The number of non-executive directors ($NEX_{i,t}$) on the board shows a highly significant *unexpected* negative association (p<0.01) on both ROA and ROE of the firms. Total skills base of the board ($SKILL_{i,t}$) depicts no significant association with firms' ROA and ROE. Existence of a nomination committee ($NOMCOM_{i,t}$) shows a significant positive association (p<0.01) with both ROA and ROE, which may indicate that the careful selection of board members via a qualified committee will affect the firm's financial performance positively. Occupancy Rate as a non-financial matrix and board characteristics of Duality (p<0.05), Diversity (p<0.01), Total skills base (p<0.01) show positive associations, while the existence of a nomination committee shows an *unexpected* negative association (p<0.01) with Occupancy Rate. Other corporate governance characteristics show no significant association with the Occupancy Rate.

Table 3: Correlation analysis

	Variables[a]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Board number ($BODNO_{i,t}$)	1															
2	Board meeting ($BODM_{i,t}$)	-.270*	1														
3	Duality ($DUALITY_{i,t}$)	.440**	.028	1													
4	Nonexecutive directors $\left(NEX_{i,t}\right)$	.724**	-.228*	-.079	1												
5	Diversity ($DIVERSITY_{i,t}$)	.130	-.176	.380**	-.259**	1											
6	Total skill base ($SKILL_{i,t}$)	-.355**	.339**	-.206*	-.094	-.019	1										
7	Nomination committee ($NOMCOM_{i,t}$)	-.130	-.077	.000	-.310**	-.002	-.317**	1									
8	Audit committee ($ADTCOM_{i,t}$)	-	-	-	-	-	-	-	-								
9	Remuneration committee ($REMCOM_{i,t}$)	-	-	-	-	-	-	-	-	-							
10	Leverage ($LEVER_{i,t}$)	.159	.242*	-.164	.476**	-0.172	.113	-.252*	-	-	1						
11	Firm age ($AGE_{i,t}$)	0.176	-.563**	.022	.136	-.049	-.270**	.231*	-	-	-.017	1					
12	Growth ($GROWTH_{i,t}$)	-.036	.176	.038	-.023	-.023	-.009	-.008	-	-	.101	.048	1				
13	Firm size ($SIZE_{i,t}$)	.069	.007	-.162	-.048	.214*	-0.194	.368**	-	-	-.164	.103	-.166	1			
14	ROA ($ROA_{i,t}$)	-.227*	.023	.082	-.287**	0.181	.047	.343**	-	-	-.109	.089	.341**	-.056	1		
15	ROE ($ROE_{i,t}$)	-0.168	.012	0.169	-.287**	0.176	-.024	.288**	-	-	-.066	.080	.218*	-.089	.904**	1	
16	Occupancy rate ($OCC_{i,t}$)[b]	-.069	.200	.257*	-0.195	.453**	.376**	-.302**	-	-	-.087	-.122	0.211	.037	.360**	.389**	1

[a]The definitions of these variables are indicated in Table 1.

[b]For the sample of 20 firms (see Section 3.2).

$^{*}p<0.05$; $^{**}p<0.01$

Regression analysis

OLS Linear Regression Analysis

The following table shows the OLS linear regression analysis of the three dependent variables.[5]

Table 4: Regression analysis

Models	***ROA* (Model 1)**			***ROE* (Model 2)**			***OCC* (Model 3)[b]**		
	Coeff.	**Std. Error**	**VIF**	**Coeff.**	**Std. Error**	**VIF**	**Coeff.**	**Std. Error**	**VIF**
Board number[a] $(BODNO_{i,t})$	-.009	.007	8.861	-.016	.011	8.861	-.009	.015	13.046
Duality $(DUALITY_{i,t})$	.012	.021	3.647	.050	.035	3.647	.096**	.041	3.625
Board meetings $(BODM_{i,t})$	-.003	.004	2.830	-.012	.007	2.830	-.007	.009	3.300
Nonexecutive directors$(NEX_{i,t})$	.004	.006	6.456	.001	.009	6.456	.003	.011	7.583
Diversity $(DIVERSITY_{i,t})$	.020*	.008	1.760	.023	.014	1.760	.036*	.018	2.348
Total skills $(SKILL_{i,t})$	.044	.029	2.113	.029	.048	2.113	.214**	.086	5.000
Nomination committee $(NOMCOM_{i,t})$	.054**	.017	2.106	.069*	.029	2.106	.002	.050	5.033
Leverage $(LEVER_{i,t})$	.046	.043	1.821	.225**	.071	1.821	.035	.093	2.210
Size $(SIZE_{i,t})$	-.001	.007	1.663	.002	.011	1.663	.003	.018	2.615
Growth $(GROWTH_{i,t})$	.088**	.027	1.156	.089	.046	1.156	.118	.051	1.146
Age $(AGE_{i,t})$	-3.252	.012	2.129	-.015	.019	2.129	-.024	.022	2.352
F-value		3.685			3.135			3.135	
Adjusted R^2		0.275			0.231			0.231	
N		100			100			67	

[a]The definitions of these variables are indicated in Table 1.
[b]For the sample of 20 firms (see Section 3.2).
*$p<0.05$; **$p<0.01$

According to multivariate regression analysis for Model 1, Diversity ($p<0.05$) and Existence of a Nomination committee ($p<0.01$) have a positive impact on ROA. Other variables show no significant impact with ROA (Model 1). Considering the analysis on ROE, the Existence of a Nomination Committee shows positive association with ROE ($p<0.05$) (Model 2). The regression analysis on Occupation Rate under Model 3, Duality ($p<0.01$), Diversity ($p<0.05$) and Total Skills base ($p<0.01$), shows a positive association with Occupancy Rate.

Panel regression

As an additional analysis, the panel regression was carried out on the three dependent variables (Table 5). The panel regression on ROA identifies no significant association between any of the independent variables and ROA.

[5]Before and when carrying out the regression analyses on the three dependent variables, diagnostic tests that included multi-collinearity, normality, heteroscedasticity and linearity were performed, and no significant anomalies were found.

The panel regression results for ROE shows that the independent variables do not have significant associations with ROE except for the number of board meetings. Even though previous analyses suggest that board meetings are not associated with any of the three performance measures, this analysis shows an *unexpected* negative and significant association between Board meetings and ROE. The results for Occupancy Rate also suggest that none of the independent variables have a significant association with the Occupancy Rate variable.

Table 5: Panel regression analysis

Models	***ROA* (Model 1)**		***ROE* (Model 2)**		***OCC* (Model 3)[b]**	
	Coef.	**Std. Err.**	**Coef.**	**Std. Err.**	**Coef.**	**Std. Err.**
Board Number ($BODNO_{i,t}$)[a]	-0.006	0.009	-0.006	0.015	-0.016	0.021
Board meetings ($BODM_{i,t}$)	-0.005	0.005	-0.023^{**}	0.009	0.002	0.012
Duality ($DUALITY_{i,t}$)	0.016	0.027	0.045	0.043	0.076	0.051
Non-executive directors ($NEX_{i,t}$)	0.000	0.008	-0.011	0.013	0.004	0.018
Diversity ($DIVERSITY_{i,t}$)	0.008	0.013	-0.003	0.020	0.032	0.028
Nomination Committee ($NOMCOM_{i,t}$)	0.040	0.031	0.053	0.049	-0.060	0.085
Total Skills base ($SKILL_{i,t}$)	0.042	0.050	0.029	0.080	0.092	0.141
Leverage ($LEVER_{i,t}$)	0.016	0.058	0.237^{*}	0.094	0.006	0.134
Growth ($GROWTH_{i,t}$)	0.091^{***}	0.024	0.099^{*}	0.040	0.110	0.043^{*}
Size ($SIZE_{i,t}$)	0.004	0.011	0.008	0.018	0.017	0.030
Age ($AGE_{i,t}$)	0.000	0.019	-0.032	0.030	0.003	0.040
R^2	0.329		0.268		0.391	
Wald chi2	21		18.12		14.35	
Prob> chi2	0.000		0.079		0.214	
N	79		79		67	

[a]The definitions of these variables are indicated in Table 1.
[b]For the sample of 20 firms (see Section 3.2).
$^{*}p<0.05$; $^{**}p<0.01$

From the results obtained under the above analyses, it is apparent that certain hypotheses (see Section 3.4: H_1 to H_9) are supported under certain analyses. Accordingly, governance characteristics of duality, diversity, total skill base of the board and the existence of a nomination committee had a positive relationship with the firm's performance with a significance of $p<.05$ (under correlation and respective regression analyses) while the higher presence of non-executive directors shows a negative association with the firm's financial performance (for ROA and ROE under correlation analysis) with a significance of $p<.05$. However, it should be noted that, since all analyses do not provide conclusive results on the board characteristics and firm performance, it is safe to conclude that there is mixed evidence on the association between the selected board characteristics and the firm's performance. The next section discusses the study findings.

4.3 Discussion

According to the descriptive statistical analyses, the average number of directors on a board is nine in the Sri Lankan hospitality sector, which is observed to be higher compared to extant literature that suggests six board members (Jarboui, Guetat & Boujelbene 2015), thus indicating a comparatively higher number in Sri Lanka. Further, the results suggest that the number of Board meetings per year is five in the Sri Lankan hospitality sector and the supporting literature suggests this to be six times per year (Tsogtbaatar 2014), which is quite similar. The descriptive results of this study on the board's outside members or non-executive directors show an average of seven directors while the extant literature indicates the presence of two non-executive members on a board of six directors (Jarboui, Guetat & Boujelbene 2015). This indicates that the proportion of non-executive directors is comparatively higher in Sri Lanka. On the other hand, the total skills proportion of a board on average showed 58% indicating that the majority of board members have skills in the fields of accounting, business and finance with Masters and higher qualifications and/or the professional qualifications. Although this is a high number, the extant international literature suggests an average of 79% (Jarboui, Guetat & Boujelbene 2015).

According to the OLS linear regression analysis, CEO-Chair duality was found to have a positive impact on Occupancy Rate ($p<0.01$) and no significant association with either ROA or ROE. Diversity shows a significant ($p<0.05$) positive impact on ROA, which is consistent with the literature (Erhardt, Werbel & Shrader 2003; Vafaei, Ahmed & Mathar 2015; Talijaard, Ward & Muller 2015) and Occupancy Rates ($p<0.05$). Contrary to these findings, a study by Ujunwa (2012) and Jermias and Gani (2014) suggest that duality and gender diversity are negatively associated with the firm's performance while Ajanthan (2013) suggests that duality is positively linked with performance. The total skills base of directors also indicated a significant positive association ($p<0.01$) with Occupancy Rate under the OLS regression analysis but no association with ROA and ROE. The existence of the nomination committee depicted a significant positive impact on ROA ($p<0.01$) and ROE ($p<0.05$) but no association with Occupancy Rate (Hutchinson, Mack and Plastow 2015). Supporting the results of this study, Dalton et al. (1998) indicate that non-executive directors do not have a significant impact on the firm's financial performance. However, Muchemwa, Padia and Callaghan (2016) suggest that non-executive directors are not associated with ROA, but are positively associated with the firm's ROE. Another study by Oconnel and Cramer (2010) suggests that non-executive directors are positively associated with the firm's performance. The findings of this research suggest that board meetings do not have a significant association with the firm's performance. However, Ramos and Olalla (2011) suggest a weak positive association between board meetings and the firm's performance in founder-led organizations.

Based on the discussion above, it is observed that certain hypotheses (see Section 3.4: H_1 to H_9) are supported under certain analyses but do not provide conclusive results. Accordingly, the governance characteristics of duality, diversity, total skill base of the board and the existence of a nomination committee had a positive relationship with the firm's performance with a significance of $p<.05$ (under correlation and respective regression analyses) while the higher presence of non-executive directors shows a negative association with the firm's financial performance (for ROA and ROE under correlation analysis) with a significance of $p<.05$. However, since the results all analyses do not converge, it is safe to conclude that there is mixed evidence on the association between the selected board characteristics and the performance of the hospitality sector firms, which is also the case in the extant literature.
The next section of the study provides a summary of the study, findings, conclusions, limitations and future research directions.

5. Conclusion

The Sri Lankan hospitality sector is noted to be fast growing and the literature suggests that it may face more severe agency problems. To avoid such occurrences the literature recommends adopting corporate governance mechanisms within such organizations. Various corporate governance guidelines and stipulations, focus on *board* characteristics among different corporate governance mechanisms. Accordingly, this study was carried out to assess the degree of board-related corporate governance characteristics and to examine whether such board characteristics have an impact on the firm's performance in the listed Sri Lankan firms in the hotels and travel sector. A sample of 25 listed companies of a population of 38 listed companies under the hotel and travel sector was chosen as a sample under the analysis for ROA and ROE and a sample of 20 listed companies chosen under the analysis for the Occupancy Rate, both samples covering the period from 2013 to 2016.

The study indicated that the average number of directors on the board of a listed hospitality firm in Sri Lanka is nine, which was considered to be a comparatively high number compared to the literature (Jarboui, Guetat & Boujelbene 2015). The findings also indicated that only 50% of the firms have CEO-Chair duality, which is below the stipulated best practices on corporate governance. Number of board meetings per year is five and non-executive directors number an average of seven, which is above par in terms of corporate governance best practices. In regard to gender diversity, there is an average of one female director on a board, which is considered to be quite low. On the other hand, the total skills base, measured by skills in the fields of accounting, business and finance (with Master's and higher qualifications and/or the professional qualifications) of the total of board members, indicates an average of 58%, which is quite impressive. However, only 24% of the companies had a nomination committee, which is below the norm of the best practices on corporate governance. On the other hand, the entire sample of firms had both audit and remuneration committees, which is in line with the best practices.

The correlation between board characteristics and firm performance indicates that CEO-Chair duality has no significant impact on ROA and ROE, while having a positive association with Occupancy Rates ($p<0.05$). On the other hand, this analysis indicates that the number of non-executive directors has an unexpected significant negative association ($p<0.01$) with the two financial performance measures, ROA and ROE. Further, the correlation analysis indicates that gender diversity (i.e., having a female board member on the board) has a significant positive association ($p<0.01$) with Occupancy Rate; and having a nomination committee shows a highly significant positive association ($p<0.01$) with the two financial performance measures, ROA and ROA; and the total skills base of the board shows a significant positive association ($p<0.01$) with Occupancy Rate.

Based on the OLS regression analysis, duality was found to have a significant positive impact ($p<0.01$) on Occupancy Rates and gender diversity showed a significant *positive* impact ($p<.05$) on ROA and Occupancy Rate. The total skills proportion of directors also showed a significant positive association ($p<.01$) with Occupancy Rates under the regression analysis but no association with ROA and ROE. The existence of a Nomination Committee showed a significant positive impact on ROA ($p<.01$) and ROE ($p<.05$) but no association with Occupancy Rate. The results of the panel regression analysis indicated no significant positive associations between the selected board characteristics and the firm's performance.

Accordingly, overall, the governance characteristics of duality, diversity, total skill base of the board and the existence of a nomination committee had a positive association with the firm's performance with a significance of $p<.05$ (under correlation and respective regression analyses) while the higher presence of non-executive directors showed a negative association with the firm financial performance (for ROA and ROE under correlation analysis) with a significance of $p<.05$. However, it should be noted that these results were observed under the respective analyses and the results of these analyses do not converge, and thus, it is safe to conclude that mixed evidence is available on the association between the selected board characteristics and firm performance of the hospitality sector firms in Sri Lanka, which was also observed in the literature.

The findings of this study are expected to benefit policy makers and contribute to the process of corporate governance development in Sri Lanka. Policy makers could take necessary action to promote CEO-Chair duality, women representation on the board and establishment of a nomination committee within the firms, as these were observed to be below par of the stipulated corporate governance best practices. Further, since the study does not find *conclusive* evidence on the expected positive association between board characteristics and performance of the hospitality sector, policy makers may need to examine the reasons for such absence and strengthen the stipulated guidelines, regulations and laws on corporate governance.

The study however has certain limitations, where certain board characteristics and performance measures are concerned, and the study only considered the hotels and travel sector. As for future research directions, more board characteristics and performance measures need to be considered together with other sectors as well.

References

Ajanthan, A 2013, 'Impact of corporate governance practices on firm capital structure and profitability: a study of selected hotels and restaurant companies in Sri Lanka', *Research Journal of Finance and Accounting*, vol. 4, no. 10, pp. 115-126.

Basak, D, Seo, K, Kucukusta, D & Lee, S 2013, 'CEO duality and firm performance in the U.S. restaurant industry: Moderating role of restaurant type', *International Journal of Hospitality Management*, vol. 33, pp. 339-346.

Berle, A & Means, G 1932, *The modern corporation and private property*, NY: Macmillan, New York.

Berman, SL, Wicks, AC, Kotha, S & Jones, TM 1999, 'Does stakeholder orientation matter? the relationship between stakeholder management models and firm financial performance', *Academy of Management Journal*, vol. 42, no. 5, pp. 488-506.

Cadbury Committee, 1992, *Report of the committee on the financial aspects of corporate governance*, Burgess Science Press, London.

Chapple, L & Humphrey, J 2014, 'Does board gender diversity have a financial impact? evidence using stock portfolio performance', *Journal of Business Ethics*, vol. 122, no. 4, pp. 1-15.

Dalton, D, Catherine, M, Ellstrand, A & Johnson, J 1998, 'Meta-analytic reviews of board composition, leadership structure, and financial performance', *Strategic Management Journal*, vol. 19, pp. 269-290.

DeFranco, A & Lattin, T 2006, *Hospitality financial management,* Wiley, New Jersey.

Dissabandara, D 2010, *Current views on corporate governance in Sri Lanka: evidence from Sri Lankan corporate boards,* viewed 20 November 2017, http://www.cmetsec.gov.lk/wp-content/uploads/2012/05/Current-Views-on-Corporate-Governance-in-Sri-Lanka-Evidence-from-Srilankan-Corporate-Bonds.ppt

Donaldson, T & Preston, L 1995, 'The stakeholder theory of the corporation: concepts, evidence, and implications', *Academy of Management Review*, vol. 20, no. 1, pp. 65-91.

Erhardt, N, Werbel, J & Shrader, C 2003, 'Board of director diversity and firm financial performance', *Corporate Governance: An International Review*, vol. 11, no. 2, pp. 102-111.

Garcia-Ramos, R & Garcia-Olalla, M 2011, 'Board characteristics and firm performance in public founder- and non-founder-led family businesses', *Journal of Family Business Strategy*, vol. 9, pp. 220 - 231.

Hillman, A, Keim, G & Luce, R 2001, 'Board composition and stakeholder performance: do stakeholder directors make a difference?', *Business & Society*, vol. 40, no. 3, pp. 295-314.

Hoque, M, Islam, R & Azam, M 2013, 'Board committee meetings and firm financial performance: an investigation of Australian companies', *International Review of Finance*, vol. 13, no. 4, pp. 503-528.

Hutchinson, M, Mack, J, Plastow, K 2015, 'Who selects the 'right' directors? an examination of the association between board selection, gender diversity and outcomes', *Accounting and Finance,* vol. 55, no. 4, pp. 1071-1103.

Jarboui, S, Guetat, H & Boujelbene, Y 2015, 'Evaluation of hotel performance and corporate governance mechanisms', *Journal of Hospitality and Tourism Management*, vol. 25, pp. 30-37.

Jensen, MC & Meckling, WH 1976, 'Theory of the firm: managerial behavior, agency costs and ownership structure', *Journal of Financial Economics*, vol. 3, no. 4, pp. 305-360.

Jermias, J & Gani, L 2014, 'The impact of board capital and board characteristics on firm performance', *The British Accounting Review*, vol. 46, pp. 135-153.

Kiel, G & Nicholson, G 2003, 'Board composition and corporate performance: how the Australian experience informs contrasting theories of corporate governance', *Corporate Governance: An International Review*, vol. 11, no. 3, pp. 189-205.

Leung, S, Richardson, G & Jaggi, B 2014, 'Corporate board and board committee independence, firm performance, and family ownership concentration: an analysis based on Hong Kong firms', *Journal of Contemporary Accounting & Economics*, vol. 10, pp. 16-31.

Manawaduge, ASPG 2012, Corporate governance practices and their impacts on corporate performance in an emerging market; the case of Sri Lanka, Wollongong.

Marn, J & Romuald, D 2012 'The impact of corporate governance mechanism and corporate performance: A study of listed companies in Malaysia', *Journal for the Advancement of Science & Arts*, vol. 3, no. 1, pp. 31-45.

Muchenwa, M, Padia, N, & Callaghan, C 2016, 'Board composition, board size and financial performance of Johannesburg', *South African Journal of Economic and Management Sciences*, vol. 19, pp. 497-513.

Nation 2016, 'Report on Sri Lanka's hospitality industry', 16 January, viewed 12 November 2017, http://nation.lk/online/2016/01/16/report-on-sri-lankas-hospitality-industry.html.

Oak, S & Iyengar, J 2015, 'Investigating the differences in corporate governance between hospitality and nonhospitality firms', *Advances in Hospitality and Leisure*, vol. 5, pp. 125–140.

O'Connell, V & Cramer, N 2010, 'The relationship between firm performance and board characteristics in Ireland', *European Management Journal*, vol. *28*, pp. 387 - 399.

Organisation for Economic Co-operation and Development (OECD) 1999, *OECD principles of corporate governance*, OECD, Paris.

Reich, A 1994, ‘Applied economics of hospitality production: reducing costs and improving the quality of decisions through economic analyses’, *International Journal of Hospitality Management*, vol. 12, pp. 337-352.

Rodríguez-Fernández, M 2015, ‘Company financial performance: does board size matter? case of the EUROSTOXX50 index’, *Cuadernos De Gestión*, vol. 15, no. 2, pp. 15-38.

Seneratne, S & Gunaratne, P 2008, ‘Corporate governance development in Sri Lanka: Prospects and problems’, Conference Proceedings, International Research Conference on Management and Finance, Faculty of Management and Finance, University of Colombo.

Taljaard, C, Ward, M, & Muller, C 2015, ‘Board diversity and financial performance’, *South African Journal of Economic and Management Sciences*, vol. 18, no. 3, pp. 425 - 448.

The Institute of Chartered Accountants of Sri Lanka & Securities and Exchange Commission (2013). *Code of best practice on corporate governance*, Colombo.

Tricker, B 2012, *Corporate governance principles, policies and practices,* 2nd edn, Oxford University Press, New York.

Tsogtbaatar 2014, The impact of outside directors and board size on firm performance of family and non family hotels in Taiwan, National Chung Cheng University.

Ujunwa, A 2012, ‘Board characteristics and the financial performance of Nigerian quoted firms’, *The International Journal of Business in Society*, vol. 12, no. 5, pp. 556-674.

Vafaei, A, Ahmed, K & Mather, P 2015, ‘Board diversity and financial performance in the top 500 Australian firms’, *Australian Accounting Review*, vol. 25, no. 4, pp. 413-427.

Yeh, C & Trejos, B 2013, ‘The influence of governance on tourism firm performance’, *Current Issues in Tourism*, vol. 18, no. 4, pp. 299-314.

THE RELATIONSHIP BETWEEN SELECTED CORPORATE GOVERNANCE MECHANISMS AND DEGREE OF EARNINGS MANAGEMENT IN SELECTED SRI LANKAN LISTED COMPANIES

A.B. Sakura De Silva
School of Accounting and Business, The Institute of Chartered Accountants of Sri Lanka

Athula Manawaduge
Department of Accounting, University of Sri Jayewardenepura

Roshan Ajward
Department of Accounting, University of Sri Jayewardenepura

Abstract
The main purpose of this research study is to examine the relationship between selected corporate governance mechanisms and the degree of earnings management in selected Sri Lankan listed companies. Seventy-seven listed companies in the Colombo Stock Exchange (CSE) were selected based on the highest market capitalization for the period covering 2014 to 2016 and representing the diversified, beverage, food & tobacco and manufacturing sectors, which had accounted for 47% of the total market capitalization of CSE. This study first assessed ten selected corporate governance characteristics and level of earnings management, and examined how these selected corporate governance characteristics impact the level of earnings management in selected listed companies in Sri Lanka. It was found that most of the corporate governance mechanisms considered in this study have complied with the baseline stipulations of corporate governance best practices, and that earnings management practices via discretionary accruals were observed in the selected firms. Further, a negative relationship was found between the board's financial and accounting expertise and the degree of earnings management (i.e., absolute discretionary accruals), while other selected corporate governance mechanisms did not affect the level of absolute discretionary accruals. These findings are expected to have significant policy implications.

Key words: Audit committee characteristics, Board characteristics, Corporate governance, Discretionary accruals, Earnings management.

1. Introduction

Several large-scale firms such as Enron and WorldCom collapsed as a result of inefficient corporate governance practices and poor quality financial reporting (Leventis & Dimitropoulos 2012). In Sri Lanka, Pramuka Savings and Development Bank and Golden Key Credit Card Company (Edirisinghe 2015) collapsed as a result of poor corporate governance mechanisms. Bekiris and Doukakis (2011, p.450) note that a high level of corporate governance mechanisms will lead to a lower level of earnings management, and ultimately result in a higher level of reporting quality in firms listed on the Athens, Milan and Madrid stock exchanges. Studies carried out on Taiwanese and Chinese listed firms (Chen et al. 2006, Jian & Wong 2005, as cited in Liu & Lu 2007) indicate that most of the manufacturing firms manage earnings mainly through discretionary items such as accruals. Liu and Lu (2007) indicate that good corporate governance practices deter earnings management by mitigating the conflicts between controlling shareholders and the minority shareholders.

However, there are also studies that are contrary to the above findings suggesting a negative impact of corporate governance characteristics on earnings management practices. According to Ramachandran et al. (2015), in Singapore, large board sizes lead to higher levels of collusion among directors resulting in a positive relationship between board size and the level of earnings management. The extant literature on certain corporate governance practices and earnings management provide mixed evidence. There is also a dearth of studies on the important contemporary issue of the impact of corporate governance mechanisms on earnings management practices.

Accordingly, in light of mixed evidence available and dearth of literature pertaining to the Sri Lankan context, the problem statement of this study could be termed as investigating whether there is a relationship between selected corporate governance mechanisms and earnings management activities in selected listed companies in Sri Lanka. Thus, this study mainly aims to investigate how selected corporate governance mechanisms such as board and audit committee characteristics affect earnings management behaviours through discretionary accruals in the selected Sri Lankan listed companies. In addition to this main objective, this study also expects to assess their corporate governance mechanisms and level of earnings management practices.

This study is expected to contribute to knowledge of the subject and to fill the gap in the local literature so as to, help all stakeholders, especially policy makers and regulators, to evaluate businesses in terms of the use of effective corporate governance mechanisms and make informed decisions with greater confidence. Therefore, this study will facilitate restoring investor confidence in listed Sri Lankan companies that use effective corporate governance mechanisms.

The reminder of this study is organized as follows. The second section reviews the extant literature and develops the research hypotheses. The third section describes the conceptual framework and methodology adopted in this study. The fourth section covers the data analysis and results. The conclusions are explained in the last section.

2. Theoretical foundations and literature review

This section reviews the literature on corporate governance and earnings management in order to ascertain the theoretical and empirical relationship between corporate governance mechanisms and earnings management. It also states the hypotheses of the study.

2.1 Definition of concepts

The definition of earnings management and corporate governance is discussed below.

Earnings management

Healy and Wahlen (1999, as cited in Epps & Ismail 2009), state that earnings management is determined by managers who use their judgment in recording and structuring transactions, in order to mislead stakeholders or to influence contractual outcomes. Riwayati, Markonah and Siladjaja (2016) indicate that earnings management can be identified as a method of using managerial judgments in structuring transactions in order to manipulate financial reports. Furthermore, they note the earnings information in the financial statements is very important for users to assess the risk of investments and credit. According to Xie, Davidson and DaDalt (2003), earnings management occurs when accrual accounting techniques are used to record the financial impact of any transaction or any other event which has cash consequences for the entity, not only in the period in which cash was paid or received but also in the period in which such transaction or any other event had occurred.

Corporate governance
According to the Cadbury Report (1992, p.14) "[c]orporate governance is the system by which companies are directed and controlled". This concept is also defined as "the structure of relationships and corresponding responsibilities among a core group consisting of shareholders, board members and managers designed to best foster the competitive performance required to achieve the corporation's primary objective" (OECD 1999, p.198, as cited in Manawaduge 2012). Corporate governance is also defined as "the rules and practices that govern the relationship between managers and shareholders as well as stakeholders like employees and creditors that contributes to growth and financial stability by underpinning market confidence, financial market integrity and economic efficiency" (OECD 2004, p.1, as cited in Manawaduge 2012). In these definitions, the Cadbury Committee (1992) emphasizes the direction and control aspects of governance while OECD emphasizes the relationships among the stakeholders. The latter definition has a broader perspective.

2.2 Corporate governance in Sri Lanka
Senaratne (2011) states that the Sri Lankan corporate governance code had been developed in line with the Anglo-Saxon model. As a result, Sri Lankan corporations have a one-tier board structure, which refers to both the supervisory and executive responsibilities carried out by one board. The role of the board of directors is more important in managing the relationship between management and the shareholders as there is a separation between ownership and control. Senaratne and Gunaratne (2009) also state that, the open economy policy introduced in 1977 turned the corporate sector into a dominant force in the Sri Lankan economy. Moreover, the emergence of the corporate sector has provided more focus on improving the efficiency and effectiveness of corporate governance practices in the listed companies. Senaratne and Gunaratne (2009) state that the Institute of Chartered Accountants of Sri Lanka developed the first Sri Lankan code of best practices on corporate governance in 1997, to mainly deal with financial aspects in line with the Cadbury Code (1992) of the UK. Thereafter, in 2003, the existing code was replaced by a new code of best practices on corporate governance covering not only financial aspects but also many other aspects of corporate governance covering directors, shareholders and auditors. Furthermore, this replaced code was influenced by the Hampel Report (1998) of the UK (Senaratne & Gunaratne 2009). Senaratne (2011) states that both the code of best practices on corporate governance introduced in 1997 and 2003 were issued as voluntary codes. On the other hand, Dharmadasa, Gamage and Herath (2014) indicate that a new code of best practices on corporate governance was issued in 2006 by the Institute of Chartered Accountants of Sri Lanka (ICASL) and the Securities and Exchange Commission (SEC). They also posit that in 2007 this code was incorporated into the Colombo Stock Exchange listing rules. Thereafter, from 2008 onwards, the code of best practices on corporate governance became a mandatory part of the listing rules of the Colombo Stock Exchange. In 2013, this code was revised by ICASL and SEC.

Accordingly, several elements of Sri Lankan corporate governance framework are in operation:
1. The code of best practice on corporate governance – This was jointly issued by ICASL and SEC issued in 2013. It categorizes corporate governance characteristics into seven areas.
2. The mandatory code of corporate governance by the Central Bank of Sri Lanka. This was issued in 2008 and all the licensed commercial banks in Sri Lanka were expected to comply fully with it by January 1, 2009 (Senaratne 2011, as cited in Manawaduge 2012).
3. Companies Act No. 7 of 2007. This revised Companies Act was incorporated with the formulation of mandatory corporate governance code in 2008. It deals with matters relating to: directors' duties, transparency, accountability and protecting the interest of all stakeholders (Senaratne 2011, as cited in Manawaduge 2012).
4. Colombo Stock Exchange (CSE) Listing Rules

The following section elaborates on extant literature on corporate governance and earnings management.

2.3 Corporate governance and earnings management

2.3.1 Theoretical relationship between the board characteristics and earnings management

In modern corporations, the control over its business affairs is effectively exercised by the management and they are significantly independent of the shareholders and other stakeholders (Chalevas & Tzovas 2010). In this context, the management of these entities may be motivated to pursue its personal goals rather than maximizing the economic value of the firm. As a result, the management may tend to provide a favourable picture by influencing the reported figures of the firm's financial statements (Chalevas & Tzovas 2010). Riwayati, Markonah and Siladjaja (2016) argue that the agency theory provides a valid basis on corporate governance. Further, the owners are the capital providers and the managers are the agents, who utilize the capital provided with the best interest of the owners in mind. However, as management has authority to utilize resources, there is a possibility of managers misusing their authority in order to gain personal benefits at the expense of the owners (Riwayati, Markonah & Siladjaja 2016). Many corporations have adopted corporate governance as a mechanism to restrain managers from following value-reducing policies and encourage them to maximize the firm's value (Chalevas & Tzovas 2010). Senaratne (2011) notes that the role of the board of directors is important in maintaining the relationship between company management and the shareholders because the ownership and management are separate. Furthermore, the directors are responsible for monitoring the performance of the top management, being positioned at the top of the monitoring system (Fama & Jensen 1983, as cited in Mohamad, Rashid & Shawtari 2012). Accordingly, it is apparent that the agency theory provides a theoretical basis for the need for corporate governance mechanisms in curtailing discretionary management practices such as earnings management.

2.3.2 Empirical studies on board characteristics and earnings management

This section discusses the relationship between board characteristics and earnings management practices.

Jensen's observation in 1993 (as cited in Mohamad, Rashid & Shawtari 2012) saw a positive association between board size and earnings management since larger board sizes could result in inefficient coordination and communication. As a result, CEOs can easily exercise control over the board of directors. Ramachandran et al. (2015) indicate that larger board size leads to higher levels of collusion among board directors in Singapore. As a result, there is a positive relationship between board size and the level of earnings management as operationalized via recorded discretionary accruals. On the other hand, in the USA, Xie, Davidson and DaDalt (2003) found that board size is negatively associated with the level of discretionary accruals, as a large number of board members with varied expertise leads to effective and synergetic monitoring. On the other hand, a study conducted in China found no relationship between board size and earnings management through income smoothing practices (Yang, Tan & Ding 2012).

In terms of board independence, in a study based on the New York Stock Exchange, Klein (2002) found a negative relationship between board independence and abnormal accruals. Furthermore, Xie, Davidson and DaDalt (2003) concluded that a board of directors with a higher proportion of independent directors is negatively associated with the discretionary accruals in the USA, and their findings posit that a higher number of independent directors is related with better monitoring, ultimately resulting in a reduction in discretionary accruals. Contrary to these findings, some researchers have found out a positive or no relationship between board independence and discretionary accruals. In a study conducted of Chinese listed firms, Yang, Tan and Ding (2012) found a positive relationship between the presence of independent directors on the board and earnings management through income smoothing behaviors as such independent directors are appointed by the People's Republic of China government. Moreover, the findings of the study by Abdul and Ali 2009 (as cited in Ebaid 2013) indicate no significant relationship between earnings management and board independency in Malaysia. In addition, Mohamad, Rashid and Shawtari (2012) found that in Malaysian listed companies there is no relationship between board independence and earnings management.

In CEO-Chair duality in corporate governance, Mohamad, Rashid and Shawtari (2012) found that the separation of the CEO and Chairman leads to a lower level of earnings management in Malaysia, as it reduces the controlling power of the CEO. Contrary to these findings, a study conducted in China indicate that CEO-Chairman duality is not associated with the earnings management (Yang, Tan & Ding 2012).

In regard to the number of meetings, Xie, Davidson and DaDalt (2003) found a negative association between earnings management and frequency of board meetings in the USA context. Similarly, a study conducted in Malaysia noted a significant negative relationship between frequency of board meetings and earnings management as more frequent board meetings allow more time to discuss issues such as earnings management (Mohamad, Rashid & Shawtari 2012). However, contrarily, a study conducted in China found no relationship between board meeting frequency and earnings management (Yang, Tan & Ding 2012).

In respect of financial and accounting expertise, Xie, Davidson and DaDalt (2003) observe that when the board is comprised of members with a background in finance, corporations and law there is a lower level of discretionary accruals. Furthermore, Ebaid (2013) disovered a negative relationship between board financial literacy -especially expertise in accounting- and earnings management in Egyptian firms as financial literacy contributes to board effectiveness.

On the other hand, Klein (2002, as cited in Mohamad, Rashid & Shawtari 2012), noted that the audit committee performs a vital role in monitoring the integrity and transparency of the financial reporting process. In this study conducted in the New York Stock Exchange, it was found that audit committee independency is negatively associated with the level of earnings management (Klein 2002). On the other hand, other researchers found no systematically significant relationship between audit committee independence and earnings management (Peasnell et al. 2005, Yang & Krishnan 2005, as cited in Bekiris & Doukakis, 2011). Further, Xie, Davidson and DaDalt (2003) also assert that when the audit committee is comprised of more independent outside directors with high financial expertise, earnings management is less likely to occur. The findings of Xie, Davidson and DaDalt (2003) suggest a negative relationship between the frequency of audit committee meetings and the level of earnings management. Abbott et al. (2004, as cited in Ebaid 2013), claim that earnings management is less likely to occur when the firm has more independent audit committee with at least one financial expert and also meets at least four times per year.

In the literature above, it is observed that there are several board and audit committee characteristics that influence the level of earnings management such as size of the board of directors, independence of the board of directors, CEO-Chairman duality, frequency of board meetings, board finance and accounting expertise, size of the audit committee, its independence, frequency of meetings, and its expertise in finance and accounting. However, the results of these studies are mixed.

2.3.3 Control variables and earnings management

In terms of control variables, researchers have used several control variables including leverage, being audited by the Big three audit firms, size of the firm and growth. The effect of leverage is often controlled because some companies in financial distress use leverage to manage earnings downward to get more concessions from creditors (DeAngelo et al. 1994, as cited in Chen, Elder & Hsieh 2007). Another reason cited is that managers may engage in discretionary accruals to satisfy debt covenant requirements (DeFond & Jiambalvo 1994, Sweeney 1994, as cited in Chen, Elder & Hsieh 2007). Previous researchers also have found that firms hiring Big Five auditors have lower levels of earnings management (Becker et al. 1998, Francis et al. 1999, Kim et al. 2003, Fan & Wong 2005, as cited in Chen, Elder & Hsieh 2007). On the other hand, Chen, Elder and Hsieh (2007) indicate that larger firms have more discretionary accruals than smaller companies in certain instances. Nevertheless, they indicate that larger firms have fewer incentives to engage in earnings management since they are subjected to more scrutiny from investors and financial analysts. Ji, Ahmed and Lu (2015) categorised firm growth as one of the control variables in terms of earnings management, and cite growth as an important determinant. It should also be noted that there is mixed evidence of the effect of these control variables on earnings management practices.

2.4 Theoretical and empirical gap

The above literature review shows that most of the previous studies have investigated the relationship between corporate governance and earnings management in different countries but not in Sri Lanka. Although the relationship between corporate governance and earnings management through discretionary accruals has been examined extensively in developed markets such as USA and Europe, there is a dearth of studies that focus on this association in emerging markets. Moreover, the evidence is inconclusive. The purpose of this research is to bridge the gap identified in the literature and investigate the relationship between selected corporate governance mechanisms and earnings management in selected listed companies in Sri Lanka. According to the above analysis, ten board and audit committee characteristics have been identified as having a significant impact on earnings management. Hence, hypotheses can be developed that there is a negative association between selected corporate governance mechanisms and earnings management, which is dealt with in the next section on the research methodology.

3. Research methods

This section covers the research methodology of this study, the selected sample and how data was collected, the conceptual framework and operationalization of the variables and measurements.

3.1 Research approach

Since this study investigates the relationships between selected corporate governance characteristics and degree of earnings management, a quantitative approach was followed. Furthermore, most of the prior research studies (Chen, Elder & Hsieh 2007, Klein 2002, Xie, Davidson & DaDalt 2003) have used a similar quantitative approach in investigating the relationship between corporate governance characteristics and earnings management.

3.2 Population and sample

The sample for this study was selected from companies listed in Sri Lanka, except banks, finance and insurance companies because they are highly regulated and follow a different form for their financial statements. A total of 77 companies out of 226 formed the sample. It was based on the highest market capitalization in three market sectors, namely, diversified, beverage food and tobacco and manufacturing. They were listed companies on the Colombo

Stock Exchange for the period from 2014 to 2016, where the financial period ended on March 31.

Table 1: Sample selection

Sector	Sector market capitalization as a % total market capitalization	Number of firms
Diversified	21%	19
Beverage Food & Tobacco	19%	21
Manufacturing	7%	37
Total	**47%**	**77**

Source: Colombo Stock Exchange Website (2017)

All the financial statement data and corporate governance data were collected from each company's annual reports published in the Colombo Stock Exchange website.

3.3 Conceptual framework

Figure 1 below gives the conceptual framework of the study, which is based on the literature review discussed in Section 2.3, depicts the relationship between selected corporate governance mechanisms and earnings management.

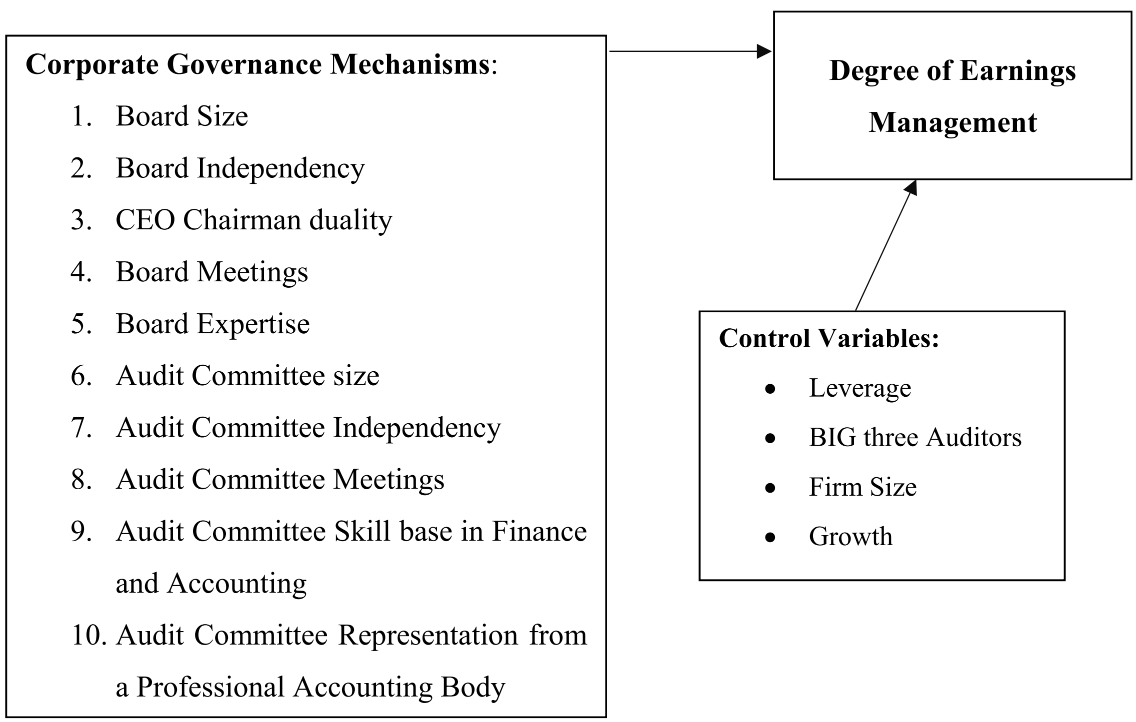


Figure 1: Conceptual framework

3.4 Operationalization

Table 2 below illustrates the operationalization of the selected dependent, independent and control variables.

Table 2: Operationalization

Variable	Measurements	Extant studies
Earnings management ($ADA_{i,t}$)	Absolute Discretionary Accruals for firm *i* and period *t*. (See Section below on '*Measurement of the Accrual-based Earnings Management*' for the measurement.	(Mohamad, Rashid & Shawtari 2012)
Corporate governance mechanisms		
Board Size ($BSIZE_{i,t}$)	Total number of board of directors for firm *i* and period *t*.	(Xie, Davidson & DaDalt 2003; Yang, Tan & Ding 2012)
Board Independency ($INDBD_{i,t}$)	Number of independent non-executive directors on the board for firm *i* and period *t*.	(Xie, Davidson & DaDalt 2003;Klein 2002)
CEO Chairman duality ($CEOCHAIR_{i,t}$)	Coded as '1', if CEO and chairman roles are separated, and '0' otherwise, for firm *i* and period *t*.	(Mohamad, Rashid and Shawtari 2012;Yang, Tan & Ding 2012)
Board Meetings ($BMEET_{i,t}$)	Number of board meetings for firm *i* and period *t*.	(Xie, Davidson & DaDalt 2003; Yang, Tan & Ding 2012)
Board Expertise ($BFAEXP_{i,t}$)	Number of members with financial or/and accounting qualifications for firm *i* and period *t*.	(Ebaid 2013)
Audit Committee size ($AUDCSIZE_{i,t}$)	Number of members in the audit committee for firm *i* and period *t*.	(Xie, Davidson & DaDalt 2003)
Audit Committee Independency ($INDAC_{i,t}$)	Number of independent non-executive directors on the Audit Committee for firm *i* and period *t*.	(Klein 2002)
Audit Committee Meetings ($ACMEET_{i,t}$)	Number of audit committee meetings for firm *i* and period *t*.	(Xie,Davidson & DaDalt 2003)
Audit Committee Skill base in Accounting and Finance ($ACFAEXP_{i,t}$)	Number of members with Finance or/and Accounting qualifications in the audit committee for firm *i* and period *t*.	(Xie,Davidson & DaDalt 2003)
One audit committee director is a member of a professional accounting body ($ONEDMPAB_{i,t}$)	Coded as '1' if at least one director is a member of a professional accounting body, and '0' otherwise, in the audit committee for firm *i* and period *t*.	(Abbott et al. 2004, cited in Ebaid 2013)
Control Variables		
Leverage ($LEV_{i,t}$)	Ratio of total debt at the end of the period *t*to the total assets at the end of the period *t* of firm *i*.	(Chen, Elder & Hsieh 2007)

BIG3 ($BIG3_{i,t}$)	Coded '1' if the auditor is a Big three audit firm, and '0' otherwise of the firm *i* for the period *t*.	(Chen, Elder & Hsieh 2007)
Firm Size ($FSIZE_{i,t}$)	Natural logarithm of Sales of firm *i* for the period *t*.	(Chen, Elder & Hsieh 2007)
Growth ($GROWTH_{i,t}$)	Sales growth of firm *i* form the period *t-1 to t*.	(Ji, Ahmed & Lu 2015)

Measurement of the accrual-based earnings management

The dependent variable of this study is earnings management measured as the absolute value of the discretionary accruals. Most of the prior researches have used accrual-based earnings management techniques, when studying the relationship between earnings management and corporate governance (Chen, Elder & Hsieh 2007, Mohamad, Rashid & Shawtari 2012).

There are also different models to estimate discretionary accruals, and Dechow, Sloan and Sweeney (1995) provide evidence that the Modified Jones model is a preferred model compared to other alternative models to observe earnings management.

Accordingly, the absolute value of discretionary accruals is measured as follows:

Step 1 – Total accruals are measured by subtracting cash flows from operating activities from net income.

$$TA_{i,t} = NI_{i,t} - CFO_{i,t} \qquad \textbf{\textit{Equation 1}}$$

Step 2–The coefficient parameters (industry average α values – see *Equation 2* below) under each industry were separately calculated by regressing *Equation 2* (Modified Jones model) below.

$$\frac{TA_{i,t}}{A_{i,t-1}} = \alpha_1\left(\frac{1}{A_{i,t-1}}\right) + \alpha_2\left(\frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}}\right) + \alpha_3\left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) + \varepsilon_{i,t} \qquad \textbf{\textit{Equation 2}}$$

Step 3 – Imputed above calculated industry average α values to each of the firm year variables using the *Equation 3*, to calculate non-discretionary accruals for each firm year separately.

$$\frac{NDA_{i,t}}{A_{i,t-1}} = \alpha_1\left(\frac{1}{A_{i,t-1}}\right) + \alpha_2\left(\frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}}\right) + \alpha_3\left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) \qquad \textbf{\textit{Equation 3}}$$

Step 4 – The *discretionary accruals* are calculated by subtracting Non-Discretionary Accruals (calculated under *Equation 3*) from Total Accruals (calculated under *Equation 1*). Then, the absolute value of the discretionary accruals ($ADA_{i,t}$) is obtained, which is considered as the measure of earnings management in this research.

$$\frac{DA_{i,t}}{A_{i,t-1}} = \frac{TA_{i,t}}{A_{i,t-1}} - \frac{NDA_{i,t}}{A_{i,t-1}} \qquad \textbf{\textit{Equation 4}}$$

$TA_{i,t}$ = Total Accruals of the firm *i* at the end of year *t*.
$NI_{i,t}$ = Net income before discontinued segments of the firm *i* for the year *t*.
$CFO_{i,t}$ = Cash flows from operations of the firm *i* for the year *t*.
$\Delta REV_{i,t}$ = Change in revenue for the firm *i* from year *t-1* to *t*.
$\Delta REC_{i,t}$ = Change in receivables for the firm *i* from year *t-1* to *t*.
$PPE_{i,t}$ = Net value of the property, plant and equipment for the firm *i* at the end of year *t*.

$A_{i,t-1}$ = Total assets for the firm i at the end of year t.
$NDA_{i,t}$ = Non-Discretionary Accruals for company i in year t.
$DA_{i,t}$ = Discretionary Accruals for company i in year t.
$\varepsilon_{i,t}$ = Residual for company i in year t.

All accrual variables are deflated by lagged total assets in order to control for potential scale bias. The changes in revenue are adjusted for changes in accounts receivables in order to control the normal level of working capital accruals related to sales.

Moreover, the normal level of related deferred tax accruals and depreciation expenses are controlled through property, plant and equipment.

3.5 Hypotheses

In the literature ten board and audit committee corporate governance mechanisms were identified as significant predictors of earnings management, which included: board size (Xie, Davidson & DaDalt 2003, Yang, Tan & Ding 2012), board independency (Xie, Davidson & DaDalt 2003, Klein 2002), CEO-Chairman duality (Mohamad, Rashid & Shawtari 2012, Yang, Tan & Ding 2012), frequency of board meetings (Xie, Davidson & DaDalt 2003; Yang, Tan & Ding 2012), board financial and accounting expertise (Ebaid 2013), audit committee size (Xie, Davidson & DaDalt 2003), audit committee independency (Klein 2002), audit committee meetings (Xie, Davidson & DaDalt 2003), audit committee skill base (Xie, Davidson & DaDalt 2003) and whether at least one audit committee director is a member of a professional accounting body (Abbott et al. 2004, as cited in Ebaid 2013). Accordingly, the following hypotheses were developed:

H_1: There is a negative relationship between board size and earnings management.
H_2: There is a negative relationship between board independency and earnings management.
H_3: There is a negative relationship between CEO Chairman Duality and earnings management.
H_4: There is a negative relationship between frequency r of board meetings and earnings management.
H_5: There is a negative relationship between board financial and accounting expertise and earnings management.
H_6: There is a negative relationship between audit committee size and earnings management.
H_7: There is a negative relationship between audit committee independency and earnings management.
H_8: There is a negative relationship between frequency of audit committee meetings and earnings management.
H_9: There is a negative relationship between audit committee financial and accounting expertise skill base and earnings management.
H_{10}: There is a negative relationship between having at least one audit committee director who is a member of a professional accounting body and earnings management.

3.6 Analytical strategies

In order to satisfy the objective of examining the selected corporate governance mechanisms and the level of earnings management, descriptive statistics such as mean, median, maximum, minimum and standard deviation will be used. Then, to examine the relationship between the selected corporate governance characteristics and the degree of earnings management, bivariate correlation analysis will be applied. Further, using both the OLS linear and panel versions of the regression analyses, this relationship will be examined, while controlling the effect of leverage by auditing by Big three auditors or not, size and growth of the company as control variables. The regression model that will be applied is as follows:

$ADA_{i,t}$=α+ β1$BSIZE_{i,t}$+ β2$INDBD_{i,t}$+β3$CEOCHAIR_{i,t}$+ β4$BMEET_{i,t}$+β5$BFAEXP_{i,t}$+ β6$AUDCSIZE_{i,t}$+β7$INDAC_{i,t}$+β8$ACMEET_{i,t}$+β9$ACFAEXP_{i,t}$+ β10$ONEDMPAB_{i,t}$+ β11$LEV_{i,t}$+β12 $BIG3_{i,t}$+ β13$FSIZE_{i,t}$+ β14$GROWTH_{i,t}$ + $\varepsilon_{i,t}$

$$ADA_{i,t} = \alpha + \beta_1 BSIZE_{i,t} + \beta_2 INDBD_{i,t} + \beta_3 CEOCHAIR_{i,t} + \beta_4 BMEET_{i,t} + \beta_5 BFAEXP_{i,t} + \beta_6 AUDCSIZE_{i,t} + \beta_7 INDAC_{i,t} + \beta_8 ACMEET_{i,t} + \beta_9 ACFAEXP_{i,t} + \beta_{10} ONEDMPAB_{i,t} + \beta_{11} LEV_{i,t} + \beta_{12} BIG3_{i,t} + \beta_{13} FSIZE_{i,t} + \beta_{14} GROWTH_{i,t} + \varepsilon_{i,t}$$

Definitions of each variable are provided in Table 2 on operationalization. The findings obtained by the application of these analysis strategies are discussed in the next section.

4. Data analysis and results

This section contains the results obtained from the statistical analysis suggested under Section 3 above as well as a discussion of the findings. Accordingly, the results of the descriptive analysis, correlation analysis and the OLS and panel versions of regression analyses are presented with the resulting discussion in this section.

4.1 Descriptive statistics

Table 3 below provides the results of descriptive statistics for the selected sample.

Table 3: Descriptive statistics

Variables[a]	*N*	Minimum	Maximum	Mean	Median	Std. Deviation
$ADA_{i,t}$[b]	207	0.004	0.236	0.077	0.060	0.065
$BSIZE_{i,t}$	207	3	12	8.060	8	1.808
$INDBD_{i,t}$	207	1	7	3.060	3	1.203
$CEOCHAIR_{i,t}$	207	0	1	0.850	1	0.352
$BMEET_{i,t}$	207	2	15	6.300	5	3.023
$BFAEXP_{i,t}$	207	0	7	3.130	3	1.516
$AUDCSIZE_{i,t}$	207	0	6	2.960	3	0.826
$INDAC_{i,t}$	207	0	5	2.550	2	0.786
$ACMEET_{i,t}$	207	0	18	4.530	4	2.039
$ACFAEXP_{i,t}$	207	0	6	1.460	1	0.777
$ONEDMPAB_{i,t}$	207	0	1	0.990	1	0.120
$LEV_{i,t}$	207	0.008	0.845	0.351	0.359	0.210
$BIG3_{i,t}$	207	0	1	0.910	1	0.289
$FSIZE_{i,t}$[b]	207	0	24.210	19.781	20.887	5.176
$GROWTH_{i,t}$[b]	207	-0.356	0.700	0.098	0.069	0.228

[a]Definitions of these variables are indicated in Table 2.
[b]These variables were winsorized at 5% due to the presence of outliers.

The results of the descriptive statistics satisfy the two ancillary objectives of the study which are to examine the selected corporate governance mechanisms and the level of earnings management. Accordingly, the average value of absolute discretionary accruals ($ADA_{i,t}$) is 0.077 and the median value is 0.060; while the standard deviation of this variable is recorded as 0.065. The results indicate that there are no significant variations. In terms of number of board of directors($BSIZE_{i,t}$), the results indicate that on average there are eight directors on the board, and three of them are independent non-executives ($INDBD_{i,t}$). Accordingly, it could be claimed that the proportion of outside directors is not quite up to the stipulations on corporate governance best practices. Further, 85% of firms are observed to have CEO-Chairman duality ($CEOCHAIR_{i,t}$), where these firms had complied with corporate governance best practices. Six board meetings have been conducted by those selected firms, which is in compliance with the baseline requirements of the code of best practices. Furthermore, the board consisted of an average of three directors with accounting and financial expertise ($BFAEXP_{i,t}$) during the specific year.

When considering descriptive statistics on audit committee characteristics, there are three directors($AUDCSIZE_{i,t}$) on the audit committee, and the mean and the median of numbers of audit committee meetings ($ACMEET_{i,t}$) are respectively 5 (approx.) and 4. Further, on average, there is one director with accounting and financial expertise ($ACFAEXP_{i,t}$) on the audit committee as well as one director on average with membership of a recognized professional body ($ONEDMPAB_{i,t}$). On average, the sample firms were noted to be financed through 35% of debt ($LEV_{i,t}$). In addition, 91% of sample firms use Big three auditors ($BIG3_{i,t}$) as their auditors, and the average sales growth rate is 9.8% ($GROWTH_{i,t}$).

4.2 Relationship between earnings management and corporate governance

Correlation analysis

Pearson's bivariate correlation indicates the relationship between two variables. Table 4 depicts the results of this bivariate analysis, which enables identifying the corporate governance characteristics which have a significant systematic relationship with the level of absolute discretionary accruals.

It is noted that the board's financial and accounting expertise ($BFAEXP_{i,t}$) shows a systematic (weak) significant (p<0.10) negative relationship with the absolute discretionary accruals. It shows that when the board has more directors with financial and accounting expertise, earnings management is less likely to take place.

The other board and audit committee characteristics have no significant systematic relationship with the absolute discretionary accruals at any of the significant levels of (p> 0.01, p>0.05, p>0.10). In terms of control variables, it is observed that Big three auditors and the firm's growth are not systematically related with absolute discretionary accruals. On the other hand, there is a systematic significant (p<0.05) positive relationship between leverage and absolute discretionary accruals. It shows that a higher level of leverage results in a higher level of earnings management. Moreover, firm size has a significant (p<0.01) negative association with the level of earnings management.

Table 4: Correlation matrix

Variables[a]	$ADA_{i,t}$	1	2	3	4	5	6	7	8	9	10	11	12	13
1 $BSIZE_{i,t}$	-0.073													
2 $INDBD_{i,t}$	0.022	0.547***												
3 $CEOCHAIR_{i,t}$	0.022	-0.127*	-0.122*											
4 $BMEET_{i,t}$	-0.020	0.104	0.121*	-0.037										
5 $BFAEXP_{i,t}$	-0.124*	0.516***	0.336***	0.039	-0.018									
6 $AUDCSIZE_{i,t}$	0.010	0.476***	0.545***	0.019	0.172**	0.264***								
7 $INDAC_{i,t}$	0.030	0.312***	0.579***	0.048	0.083	0.086	0.695***							
8 $ACMEET_{i,t}$	-0.017	0.294***	0.235***	-0.131*	0.155**	0.155**	0.103	0.045						
9 $ACFAEXP_{i,t}$	0.040	0.100	0.302***	0.125*	0.027	0.419***	0.466***	0.252***	-0.062					
10 $ONEDMPAB_{i,t}$	0.053	0.071	0.074	0.064	0.004	0.198***	0.239***	0.188***	0.091	0.228***				
11 $LEV_{i,t}$	0.171**	-0.058	-0.041	-0.160**	0.166**	-0.053	0.134*	0.057	-0.048	0.044	0.073			
12 $BIG3_{i,t}$	-0.003	-0.064	0.100	-0.085	0.061	0.182***	0.064	0.095	0.07	0.05	0.101	-0.077		
13 $FSIZE_{i,t}$	-0.288***	-0.054	-0.114	0.133*	0.051	0.025	0.150**	0.137**	0.055	0.130*	0.012	0.179***	0.110	
14 $GROWTH_{i,t}$	-0.001	-0.047	-0.022	-0.035	-0.045	-0.079	0.051	0.038	0.030	0.022	-0.065	0.090	0.026	0.125*

[a]Definitions of these variables are indicated under Table 2.

*p<0.10; **p<0.05; ***p<0.01

As per Pearson's correlation analysis, only three variables, namely, board's financial and accounting expertise, leverage and firm size show a systematic relationship with absolute discretionary accruals.

OLS multivariate regression analysis

Table 5 gives the OLS multivariate linear regression results on the absolute discretionary accruals as the dependent variable and board and audit committee corporate governance characteristics as the independent variables.

Table 5: OLS multivariate regression analysis

	Coef.	*t*	Collinearity Statistics	
			Tolerance	VIF
Intercept	0.094^{**}	1.993		
$BSIZE_{i,t}$	0.001	0.294	.396	2.526
$INDBD_{i,t}$	-0.001	-0.261	.421	2.373
$CEOCHAIR_{i,t}$	0.021	1.648	.851	1.174
$BMEET_{i,t}$	-0.001	-0.916	.900	1.111
$BFAEXP_{i,t}$	-0.009^{**}	-2.204	.487	2.055
$AUDCSIZE_{i,t}$	-0.003	-0.341	.328	3.047
$INDAC_{i,t}$	0.005	0.600	.393	2.542
$ACMEET_{i,t}$	0.002	1.021	.821	1.217
$ACFAEXP_{i,t}$	0.013	1.747	.540	1.853
$ONEDMPAB_{i,t}$	0.009	0.239	.856	1.168
$LEV_{i,t}$	0.081^{***}	3.697	.842	1.188
$BIG3_{i,t}$	0.022	1.359	.830	1.204
$FSIZE_{i,t}$	-0.005^{***}	-5.298	.818	1.223
$GROWTH_{i,t}$	0.000	0.017	.953	1.049
F-value	3.175			
Sig. of F-value	0.000			
R^2	0.188			
N	207			

[a]Definitions of these variables are indicated in Table 2.
$^{*}p<0.10$; $^{**}p<0.05$; $^{***}p<0.01$

The above regression analysis shows that all the identified board corporate governance characteristics except board financial and accounting expertise do not presenting a systematic relationship with the absolute discretionary accruals. As noted, there is a systematic significant ($p<0.05$) negative relationship between the number of board of directors with financial and accounting expertise and the level of discretionary accruals as was the case in the results under correlation analysis. It indicates that, when the board consists of more directors with financial or accounting expertise, it leads to a lower level of earnings management through discretionary accruals.

Furthermore, there is no systematic relationship between audit committee corporate governance characteristics and absolute discretionary accruals, and also the situation is the same with Big three auditors and growth levels. However, there is a systematic significant ($p<0.01$) positive relationship between the level of leverage and absolute discretionary accruals while firm size represents a significant (p<0.01) negative relationship as was observed under the correlation analysis too.

From the above analysis, it can be concluded that only three variables, namely, board's financial and accounting expertise, leverage and firm size have shown a systematic relationship with earnings management through discretionary accruals.

Panel regression

Table 6 below presents the panel regression analysis of this study.

Table 6: Panel regression analysis

Variables	Coefficients	z
$BSIZE_{i,t}$	0.001	0.290
$INDBD_{i,t}$	-0.001	-0.260
$CEOCHAIR_{i,t}$	0.021	1.650
$BMEET_{i,t}$	-0.001	-0.920
$BFAEXP_{i,t}$	-0.009**	-2.200
$AUDCSIZE_{i,t}$	-0.003	-0.340
$INDAC_{i,t}$	0.005	0.600
$ACMEET_{i,t}$	0.002	1.020
$ACFAEXP_{i,t}$	0.013	1.750
$ONEDMPAB_{i,t}$	0.009	0.240
$LEV_{i,t}$	0.080***	3.700
$BIG3_{i,t}$	0.022	1.360
$FSIZE_{i,t}$	-0.005***	-5.300
$GROWTH_{i,t}$	0.094	0.020
Prob>chi2	0.995	
R^2	0.188	
N	207	

[a]Definitions of these variables are indicated under Table 2.
$^{*}p$<0.10; $^{**}p$<0.05; $^{***}p$<0.01

The panel regression results also comply with the results of both the linear regression and correlation analysis. As the above table shows, the board's financial and accounting expertise represents a significant (p<0.05) negative relationship with the level of absolute discretionary accruals. However, all the other selected corporate governance mechanisms are not systematically related with the absolute discretionary accruals. In addition, leverage represents a significant (p<0.01) positive relationship while firm size represents a significant (p<0.01) negative relationship with the level of absolute discretionary accruals. Also, Big three and growth variables do not show a systematic relationship with the level of absolute discretionary accruals.

According to the above results, the only hypothesis that was supported by the outcomes of this study is (H_5), i.e., there is a negative relationship between board financial and accounting expertise and earnings management. Pearson's correlation analysis has identified a significant negative relationship between these two variables at the significant level of 0.1. In addition, both the OLS linear regression and panel regression analyses have also shown that there is a significant negative relationship between the board's financial and accounting expertise and the level of earnings management at the 0.05 significant level. Chen, Elder and Hsieh (2007) suggest that directors with higher financial expertise cause lower levels of earnings management through discretionary accruals in the listed firms. Xie, Davidson and DaDalt (2003) find that when the board comprises members with a background in finance, there is a lower level of discretionary accruals. Accordingly, the results obtained are consistent with the extant literature.

This section statistically analysed how selected corporate governance mechanisms - board and audit committee characteristics- impact the level of discretionary accruals in selected Sri Lankan listed companies. The above analyses indicate that the only corporate governance characteristic that significantly affects the level of earnings management through discretionary accruals in selected Sri Lankan listed companies, is the board's financial and accounting expertise. Thus, when the board consists of more directors with financial and accounting expertise, there is a lower level of discretionary accruals. The next section gives the conclusion to the study.

5. Conclusion

There are many global as well as local large-scale corporates that collapsed due to poor corporate governance practices. On the other hand, extant studies indicate that corporate governance practices will reduce the level of earnings management. Therefore, this study examined whether certain corporate governance characteristics (i.e., size of the board of directors, independence of the board of directors, CEO-Chairman duality, frequency of board meetings, board finance and accounting expertise, size of audit committee, independence of audit committee, number of audit committee meetings, skills base in finance and accounting in audit committee, and at least one director from a professional accounting body in the audit committee) are associated with low levels of earnings management. The sample consisted of 77 companies listed in the Colombo Stock Exchange (CSE) selected basis of the highest market capitalization for the period 2014 to 2016 and representing the diversified, beverage, food & tobacco and manufacturing sectors, which had accounted for 47% of the total market capitalization of CSE.

This study first examined the selected corporate governance characteristics as well as assessed the level of earnings management in the selected Sri Lankan listed companies by using descriptive statistics. Then, by using correlation, multivariate OLS and panel regression models, the study examined the relationship between these selected corporate governance mechanisms and the degree of earnings management (i.e., measured using absolute value of discretionary accruals) in the selected Sri Lankan listed companies.

In terms of the corporate governance characteristics, the results of the descriptive statistics indicated that most of the selected governance features complied with the stipulated corporate governance best practices at least at the baseline levels in the selected listed companies. Further, these results indicated the presence of discretionary accruals (i.e., earnings management) in the selected listed firms. The results of this study also indicated that the only corporate governance characteristic that significantly impacted the level of earnings management in selected Sri Lankan listed companies is the number of board directors with the financial or/and accounting qualifications. Xie, Davidson and DaDalt (2003) explain that when the board comprises members with a background in finance, there is a lower level of discretionary accruals. Accordingly, it is concluded that when the board comprises more directors with qualifications in accounting and finances, earnings management is less likely to occur. On the other hand, it is also noted that any of the other board characteristics or audit committee characteristics did not have an effect in reducing earnings management in selected Sri Lankan listed companies.

The above findings are expected to have significant policy implications. Policy makers and regulators should implement mechanisms to promote recruitment of directors--especially independent non-executive directors--with adequate finance and accounting expertise so that adverse earnings management practices could be curtailed. Furthermore, policy makers and regulators should deeply examine why the majority of corporate governance characteristics did not have a significant impact on reducing the levels of earnings management in the listed companies and take remedial measures.

Finally, it should be noted that this research study is subject to certain limitations, and the findings should be interpreted subject to these. Firstly, this study has selected only certain board characteristics and audit committee characteristics to assess the impact on earnings management. However, there are many other corporate governance aspects that may have an impact on the level earnings management. Future researches could incorporate other corporate governance characteristics in order to examine their relationship to earnings management. Secondly, this study has used the popular cross-sectional Modified Jones model to estimate the discretionary accruals. Alternative measures are available, which future researchers could apply to estimate the discretionary accruals. Finally, this research has only used three sectors to identify the relationship between variables. Future researchers can expand the number of sectors

References

Bekiris, F & Doukakis, L 2011, 'Corporate governance and accruals earnings management', *Managerial and Decision Economics*, vol. 32, pp. 1-50.

Chalevas, C & Tzovas, C 2010, 'The effect of the mandatory adoption of corporate governance mechanisms on earnings manipulation, management effectiveness and firm financing', *Managerial Finance*, vol. 36, no. 3, pp. 257-277.

Chen, K, Elder, R & Hsieh,Y 2007, 'Corporate governance and earnings management: the implications of corporate governance best practice princples for taiwanese listed conpanies', *Journal of Contemporary Accounting & Economics*, vol. 3, no. 2, pp. 73-105.

Colombo Stock Exchange, viewed 25 January 2017, https://www.cse.lk/home/CSESectors

Cadbury, A. 1992, *Report of the committee on the financial aspects of corporate governance, Cadbury Report*, Gee Publishing London, London.

Dharmadasa, P, Gamage, P & Herath, SK 2014, 'Corporate governance, board characteristics and firm performance:evidence from Sri Lanka', *Journal of South Asian Development*, vol. 21, no. 1, pp. 7-31.

Dechow, PM, Sloan, RG and Sweeney, AP 1995, ‘Detecting earnings management’, *The Accounting Review*, vol. 70, no. 2, pp. 193-225.

Epps, WR & Ismail, TH 2009, ‘Board of directors’ governance challenges and earnings management’, *Journal of Accounting & Organizational Change*, vol. 5, no. 3, pp.390 – 416.

Ebaid, IE 2013 , ‘Corporate governance and investors' perceptions of earnings quality: Egyptian perspective’, *Corporate Governance: The International Journal of Business in Society*, vol. 13, no. 3, pp.261 – 273.

Edirisinghe, A 2015, ‘Corporate governance of banks: a critical analysis of Sri Lankan law and practice’, Proceedings of 8th International Research Conference, November 2015, General Sir John Kotelawala Defence University, Ratmalana, pp. 64- 71.

Ji , XD, Ahmed, K & Lu, W 2015, ‘The impact of corporate governance and ownership structure reforms on earnings quality in China’, *International Journal of Accounting & Information Management*, vol. 23, no. 2, pp. 169 – 198.

Klein, A 2002, ‘Audit committee, board of director characteristics, and earnings management’, *Journal of Accounting and Economics*, vol. 33, pp. 375–400.

Liu, Q & Lu, Z 2007, ‘Corporate goverenance and earnings management in the Chinese listed companies : a tunneling perspective’, *Journal of Corporate Finance*, no. 13, Auguest, pp.1-26, (online proQuest).

Leventis , S & Dimitropoulos, P 2012, ‘The role of corporate governance in earnings management: experience from US banks’, *Journal of Applied Accounting Research*, vol. 13, no. 2, pp.161-177.

Mohamad, MHS, Rashid, HMA & Shawtari, FAM 2012, ‘Corporate governance and earnings management in Malaysian government linked companies: the impact of GLCs’ transformation policy’, *Asian Review of Accounting*, vol. 20, no. 3, pp.241 – 258.

Manawaduge, ASPG 2012, ‘Corporate governance practices and their impacts on corporate performance in an emergine market :the case of Sri Lanka’, *University of Wollongong Thesis Collections*, March, pp.1-358.

Riwayati, H, Markonah & Siladjaja, M 2016, ‘Implementation of corporate governance influence to earnings management’, *Perbanas Institute*, vol. 219, pp. 632-638.

Ramachandran, J, Ngete, ZA, Subramainian, R & Sambasivan, M 2015, ‘Does corporate governance influence earnings management?: evidence from Singapore’, *The Journal of Developing Areas*, vol. 49, no. 3, pp. 263-274.

Senaratne, S 2011, ‘Corporate governance reforms in Sri Lanka’, *Sri Lanka Journal of Advanced Social Studies*, vol.1, no.1, pp.1-25.

Senaratne, S & Gunaratne, PSM 2009, 'Corporate governanace of Sri Lanakan listed companies: significunt features and issues', *University of Colombo Review*, vol.2, no.1, pp. 73-93.

Xie, B, Davidson, W & DaDalt, P 2003, 'Earnings management and corporate governance: the role of the board and the audit committee', *Journal of Corporate Finance*, vol. 9, pp. 295- 316.

Yang, CY , Tan, BL & Ding, X 2012, 'Corporate governance and income smoothing in China', *Journal of Financial Reporting and Accounting*, vol. 10, no. 2, pp. 120 – 139.

SUSTAINABILITY MANAGEMENT AND ACCOUNTING PRACTICES IN A TEA PLANTATION COMPANY IN SRI LANKA

Sunil J. Dahanayake
Department of Accounting, United Arab Emirates University

Samanthi Senaratne
Department of Accounting, University of Sri Jayewardenepura

Abstract

This study examines the construction of auditability for the sustainability reports produced by an auditee organization in Sri Lanka. In this respect, the study addresses the research question of how the sustainability management and accounting systems are enacted through the institutional strategies of an auditee organization. This issue is examined using a tea plantation company in Sri Lanka as the case study, which represents an industry of economic, social and environmental importance for the country. The study used a qualitative and interpretive research methods such as historical document analysis, interviews, and observations to collect data on sustainability management and accounting systems of the organization. Three sub-processes of data analysis, viz. data reduction, data display, and conclusion drawing and verification (Huberman & Miles 1994) were used in the study as they help to handle the vast amount of published and unpublished data and records of auditors and auditees. The research question was examined through the theoretical frameworks of Actor-Network-Theory (ANT) and Framing and Overflowing (Callon 1986, 1998, 1999, Latour 1987, 2005). The concepts of Framing, Overflowing and ANT focus on analyzing the human and non-human actors' involvement in technologies such as accounting and auditing. The study found that in the selected tea plantation company, sustainability mechanisms are embedded in both in-field and off-field activities of the value chain of the company. Sustainable agricultural practices, environmental management, human resource and community development, and food safety are major concerns of the company involving both human and non-human actors in their sustainability accounting, reporting and assurance process.

Key words: Auditee Organizations, Construction of Auditability, Sustainability Accounting

1. Introduction

Recent literature has highlighted the importance of examining the practices of auditing and assurance services through field research (Dillard 2011, Gendron et al. 2007, O'Dwyer 2011, Malsch & Salterio 2015). However, most of the focus has been on front stage elements, such as audit reports and annual reports. Relatively little attention has been paid to backstage elements such as the audit and assurance methodologies and institutional processes that underpin the performance of auditability. Power (1996, 1997, 2003b), Khalifa et al. (2007) and Robson et al. (2007) argue that it is necessary to understand both the audit context and the audit and assurance methodologies that underpin audit and assurance practice in order to understand how auditability is constructed. Hence, this research project examines how regimes of auditability associated with sustainability assurance services are created and enacted and focuses on one aspect of the sustainability assurance process, namely, auditee sustainability reports, sustainability accounting and assurance methodologies and audit environment.

Recent times have seen an upsurge in companies focusing on their social responsibility and producing sustainability reports to reflect their social responsibility (Cooper & Owen 2007). Among variants of social responsibility reporting, sustainability reporting (SR) reflects the performance of an entity in terms of economic, environmental and social activities in line with the concept of sustainable development, which is defined as the development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs {World Commission on Environment and Development (WECD) - Brundtland Report 1987}. Thus, the Global Reporting Initiative (GRI), which presents a commonly accepted reporting framework for SR, describes that a sustainability report reflects how economic, environmental and social impacts are caused by the everyday activities of an organization (GRI 2017). GRI states that a sustainability report also presents an organization's values and governance model, and demonstrates the link between its strategy and commitment to a sustainable global economy. Hence, SR can be considered a contemporary accounting technology that drives organizational change towards more sustainable outcomes (Eccles and Krzus, 2010). Alongside, assurance of SR has also gained momentum. O'Dwyer (2011) has examined how assurance practitioners have attempted to construct sustainability assurance practice and how their efforts to construct sustainability assurance rendered SR auditable. O'Dwyer (2011) highlights that the public accounting firms have extended core expertise in financial audit into sustainability assurance and thereby to new contexts and subject matters. Further, Gendron et al. (2007), Radcliffe (1999), and Skaerbaek (2009) note that the development of assurance services such as sustainability assurance services involve a lot of social, political, economic and environmental actors. The actions of these actors and other stakeholders in the sustainability assurance services cannot be programmed like financial auditing. Hence, it is worthwhile examining what possibilities have emerged for providing assurance services on sustainability accounting and reporting. This study extends the call for research into the non-financial audit areas to understand how those processes have been developed and established within the social, political and economic environment (Power 1996, 1999, Gendron 2007, Skaerbaek 2009, O'Dwyer 2011).

The research question addressed in this study is how sustainability reports are developed and implemented through the institutional strategies of an auditee organization. This research question is explored in the context of a selected tea plantation company in Sri Lanka in view of its economic relevance and its social and environmental impacts on the country. The construction of auditability is theorised by applying the concepts of framing and overflowing and the Actor-Network-Theory (Goffman 1959, 1974, Callon 1986, 1998, 1999, Latour 1987, 2005). This study is informed by a qualitative research methodology, particularly applicable to critical and interpretive approaches.

The rest of the paper is structured as follows: section two presents a literature review, section three the conceptualization and research methodology Section four an analysis of the findings of the study and the final section the conclusions of the study.

2. Literature review

2.1 Concept of Sustainability Reporting (SR)

The notion of SR is directly related to the concept of sustainable development, which is defined as development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs (WECD 1987). This definition covers three main areas: economic development; environmental development; and social development. The Brundtland Report deals with four primary dimensions of sustainable development: safeguarding long-term ecological sustainability, satisfying basic human needs, and promoting intragenerational and intergenerational equity (Holden et al. 2014). Daly (2007), who calls these dimensions as "fundamental objective values, not subjective individual preferences", and views them as non- negotiable.

Long-term ecological sustainability refers to the conditions required for the ecosystem to sustain itself over the long-term. The Brundtland Report emphasizes that "sustainable development must not endanger the natural systems that support life on Earth: the atmosphere, the waters, the soils, and the living beings" (WECD 1987, p.44). On the other hand, the basic human needs dimension refers to employment, food, energy, housing, water supply, sanitation, and health care for the inhabitants of the world. Thus, satisfying basic human needs and assuring long-term ecological sustainability are preconditions for sustainable development (WECD 1987).

The Brundtland definition of sustainable development highlights the importance of 'inter-generational equity' and 'intra-generational equity'. 'Inter-generational equity' has a long-term focus and recognizes that the present generation's consumption patterns should not negatively impact on the future generation's quality of life. This move towards sustainability implies that organizations should look beyond the short-term in their decision making. On the other hand, 'intra-generational equity' means that the needs of all of the present inhabitants of the world need to be met, which requires strategies to alleviate poverty and starvation that currently beset the people of various countries. Thus, a sustainable organization must achieve an optimum balance between financial security, minimizing negative impacts on environment and acting in conformity with social expectations. Hence, taken together, 'inter-generational equity' and 'intra-generational equity' are termed as 'eco-justice' and Brundtland definition of sustainable development considers 'eco-efficiency', which emphasizes the efficient use of resources to minimize the impact on the environment.

This definition of sustainable development is relevant not only for governments but also for organizations and companies. Since corporate entities control most of the earth's resources, they are required to consider how their activities would affect the environment and society. Hence, the UN Global Compact (UNGC) on Sustainability, the world's largest corporate sustainability initiative, emphasizes that businesses should align their strategies and operations with the ten universally accepted principles of human rights, labour, the environment and anti-corruption (Refer Table 1) and the 17 UN's Sustainable Development Goals (SDGs) (Refer Table 2), which aim to end poverty and hunger by 2030. GRI SR Guidelines provides the mechanism for companies to show their compliance with SDGs.

Table 1: UNGC Principles

Dimension	Principle
Human Rights	1. Businesses should support and respect the protection of internationally proclaimed human rights. 2. Make sure that they are not complicit in human rights abuses.
Labour	3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining. 4. The elimination of all forms of forced and compulsory labour. 5. The effective abolition of child labour. 6. The elimination of discrimination in respect of employment and occupation.
Environment	7. Businesses should support a precautionary approach to environmental challenges. 8. Undertake initiatives to promote greater environmental responsibility. 9. Encourage the development and diffusion of environmentally friendly technologies.
Anti-corruption	10. Businesses should work against corruption in all its forms, including extortion and bribery.

Source: Author constructed

Table 2: UN Sustainable Development Goals (SDGs)

Goal 1	**End poverty**
Goal 2	Zero hunger
Goal 3	Good health and well being
Goal 4	Quality education
Goal 5	Gender equality
Goal 6	Clean water and sanitation
Goal 7	Affordable and clean energy
Goal 8	Decent work and economic growth
Goal 9	Industry, innovation and infrastructure
Goal 10	Reduced inequality
Goal 11	Sustainable cities and communities
Goal 12	Responsible consumption and production
Goal 13	Climate action
Goal 14	Life below water
Goal 15	Life on land
Goal 16	Peace, justice and strong institutions
Goal 17	Partnerships to achieve the gaols

Source: Author constructed

2.2 Current status of SR

SR has been increasingly adopted by companies worldwide given the demand of stakeholders for greater transparency in both environmental and social issues (Cooper & Owen 2007, Deegan 2017). However, the extent of its usage differs among countries as well as industries as shown in the following studies.

As corporate social responsibility reporting (CSR), which is commonly known today as SR, is a voluntary exercise for corporate entities and many contextual and company specific factors impact on it in different country settings. Ali et al. (2017), who review the factors influencing CSR disclosure in both developed and developing countries, find that firm characteristics such as company size, industry sector, profitability, and corporate governance mechanisms predominantly appear to drive the CSR reporting agenda. This study also finds that political, social, and cultural factors influence the CSR disclosure agenda. Another important revelation of the study is the variation in the determinants of CSR disclosure between developed and developing countries in terms of the importance attached to different stakeholder groups. However, variations have been observed within the matters disclosed under SR within the same country in some studies. In this respect, Maubane et al. (2014) find that though all the selected market sectors reported on the environment, society and governance (ESG) categories as per the requirements of the Johannesburg Stock Exchange (JSE) SRI Index, the mining and materials sector reported more on the environment and the society categories than the other sectors. These findings suggest that there are reporting patterns emerging across and within the selected market sectors of companies listed on the JSE.

On the other hand, some studies on SR in different industries show how industry variations have impacted on them. Lodia and Hess (2017) focus on sustainability practices and reporting of mining companies in a developing country context based on a review of the literature on previous research studies done in this industry. Based on this review, the study shows that though mining companies are not fully accountable for their sustainability impacts, some positive developments have been observed such as partnership with NGOs and improving practices in specific contexts. This study shows a need for effective sustainability management and credible reporting by mining companies in their transition to sustainability. On the other hand, the study of Kozlowski et al. (2014), which analyzes the sustainability indicators disclosed by apparel brands in their publicly available reporting, finds 87 corporate sustainability indicators reported by these companies but with a lack of consistency among them. The study finds that the majority of these indicators dealt with performance in supply-chain sustainability while the least frequently reported indicators have addressed business innovation and consumer engagement. This is considered an obvious outcome when considering the prominence given to supply-chain issues in the industry. However, because the sustainability impacts of the supply chain are not entirely within the direct control of the apparel brand, the study suggests that future disclosures on sustainability indicators should increase the emphasis on collaborative efforts between the brand and its suppliers. These studies reveal the unique characteristics of industries that impact on the sustainability initiatives as well as on the focus of SR.

SR has gained momentum over time in both profit and non-profit environments. Battaglia et al. (2015) show how the measurement and communication of sustainability aspects in an Italian Corporative Society led to a dialogue with its shareholders and stakeholders without ignoring competitive factors. This study analyses how the experience of a 5-year action research project (from 2006 to mid-2011) carried out within this corporative society was used to implement different tools for sustainability accounting and to embrace a more open dialogue with stakeholders, in particular with employees and members. In this process of change, the tools implemented for sustainability accounting have played a key role in supporting the cooperative to reinterpret its own values and stimulate a new and participative management approach.

The results indicate a virtuous circle between the management and measurement of cooperative principles and the management and measurement of sustainability issues.

In spite of this widespread use of SR in different countries and in different industries, still SR still needs improvement in some parts of the world and in some industries. Uyar (2017), investigating SR in an emerging market-Turkey-, finds that there is a long road to be travelled towards consistent and complete SR. Further, Ceulemans et al. (2014) show that SR initiatives of higher education institutions need considerable development. In this respect, Alonso-Almeida et al. (2014) show that SR is less prevalent among universities though they play a key role in the development of society, and their involvement in sustainable development is crucial in changing current practices in society towards sustainable development. However, the level of disclosure is not directly linked to the extent of SR practised in different sectors. Alcaraz-Quiles et al. (2015) find that public entities are interested in sustainability even though they do not publish specific reports. This heterogeneity implies that, in practice, sustainability information disclosure is driven more by the interest and individual concern of managers and policy makers in their respective areas than by the institutional backing of the governing bodies of these institutions.

2.3 Factors impacting on SR

As the concept of sustainability has been developed in response to stakeholder demands, a key for engaging stakeholders is SR. Hence, it is important to examine how stakeholders are engaged in SR in diverse contexts. Herremans et al. (2015) find that the resource dependencies on different stakeholders lead to the development of different stakeholder relationships and thus appropriate resources within the company to execute engagement strategies that are informing, responding, or involving. Further, Ali et al. (2017) find that in developed countries, the concerns of stakeholders such as regulators, shareholders, creditors, investors, environmentalists and the media are considered very important in disclosing CSR information. On the other hand, CSR reporting is heavily influenced in developing countries by the external forces/powerful stakeholders such as international buyers, foreign investors, international media and international regulatory bodies. Furthermore, there is relatively little pressure from the public with regard to CSR disclosure in developing countries compared to developed countries.

While these studies have focused on external drivers of SR, other studies have considered internal drivers of SR. Thijssens et al. (2016) recognize the internal factors associated with SR by exploring in detail how companies manage their SR processes. This study, based on Dutch companies that have excelled in SR, finds that management of SR takes place in companies in two ways: the level of formalization of SR and the level of integration of SR into day-to-day sustainability management. Despite top ranking for SR in these companies, the constellations of structures, systems and processes with which SR is managed varies across them. Interestingly, in half of the sample companies, SR is not part of their day-to-day activities, but are rather decoupled. The results support prior literature by providing insights into the internal factors underlying SR, and how they interrelate.

2.4 Corporate SR tools

The popularity of SR is evidenced by the development of a range of tools in the last two decades such as Global Reporting Initiative (GRI), AA1000 and Carbon Disclosure Project (CDP) inter alia. These tools collectively referred to as corporate SR tools serve to assess the progress of corporate entities towards achieving sustainability goals. Siew (2015) in an overview of the criteria and methodology divides corporate SR tools into three categories: frameworks (principles and initiatives), standards, and ratings and indices. as shown in Table 3 below. While frameworks refer to principles, initiatives or guidelines provided to corporations to assist them in their disclosure efforts, standards provide guidelines on best-in-class practices, some more specific than others. Ratings and indices attempt to measure the ESG performance of companies.

Table 3: Corporate SR tools

Category	Examples
Frameworks	Global Reporting Initiative (GRI) SIGMA project DPSIR framework The Global Compact Carbon Disclosure Project (CDP) World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol (GHG Protocol) Broad principle-based frameworks
Standards	AA1000 SA8000 ISO 14001 ISO 9001 AS/NZS 4801 EMAS OHSAS 18001
Ratings and Indices	KLD EIRIS SAM Asian Sustainability Rating (ASR) Dow Jones Sustainability Index (DJSI) MSCI ESG indices FTSE4Good index Bloomberg ESG disclosure scores Trucost

Author constructed based on Siew (2015)

The most common corporate SR tool is the GRI Guidelines on Sustainability Reporting (Hedberg & von Malmborg, 2003). It is an integrated disclosure framework that enables companies and their stakeholders to assess performance along economic, environmental and social lines. GRI was founded in 1997 by the Coalition for Environmentally Responsible Economies (CERES) with the intention of creating a globally applicable SR framework (GRI, 2011). Since then, several generations of GRI Guidelines have been issued as G1 to G4 and they were converted into GRI Standards in 2016, which companies are expected to follow from 2018. GRI Standards consist of three universal standards: GRI 101 – Foundation; GRI 102 - General Disclosures and GRI 103 - Management Approach and three topic specific standards: GRI 200 - Economic; GRI 300 - Environmental and GRI 400 - Social.

The extant literature on SR shows that GRI Guidelines have been used to evaluate firms' sustainability reports. Aktaş et al. (2013) find that Turkish companies fulfill requirements relating to 'Profile Disclosures' and 'Disclosures on Management Approach' of GRI. However, the same intensity is not observed in relation to 'Performance Indicators' prescribed in GRI. In the Sri Lankan context, Liyanagedara and Senaratne (2012), who examined the level of compliance with GRI guidelines in the sustainability disclosures of publicly listed companies, conclude that the level of compliance with GRI guidelines is low and that disclosures vary significantly amongst the companies. Similarly, a longitudinal study across five years (2005-2010) carried out by Wijesinghe (2012) identifies trends in SR in Sri Lanka. It shows an increasingly positive trend towards SR, similar to the level of disclosures provided by companies in the developed countries. More recently Dissanayake et al. (2016) indicate that larger companies in Sri Lanka, like their counterparts in other countries, undertake and report on sustainability activities. This study examines the nature and extent of SR, and specifically considers the reporting of key performance indicators (KPIs).

2.5 Sustainability assurance

There has also been a wider call to understand how practices of audit and auditability are constructed and enacted (Power 1996, 1999, 2003, Robson et al. 2007, Khalifa et al. 2007, O'Dwyer et al. 2011). While there has been extensive work undertaken to better understand financial audits and VFM audit publications and reports, only limited attention has been given to understanding the backstage elements associated with the development and enactment of other assurance services such as sustainability assurance practices. There is a need to pay more attention to the 'back of house'[6] (Goffman 1959) practices and processes embodied in audit methodologies in order to more fully explore and understand the development of audit and assurance practices (Power 1996, p. 311). The most obvious and significant element, as highlighted by Power (1996, 2003), is the development and enactment of audit methodologies in the development of other assurance practices.

It can be argued that audit methodologies, which can influence the growth of the audit function, are intrinsically associated with the practice of audit (Abbott 1988, Power 1996, 1997, 2003b, Knechel 2002, Robson et al. 2007). O'Dwyer et al. (2011) support this argument by showing how the development of audit methodologies such as environmental audit practices have been associated with enhancing the legitimacy of new audit practices. Therefore, there is the potential to extend prior research on sustainability assurance services to fully understand the interaction between the practices of audit, the audit environment and audit methodologies, and thereby enhance understanding of the creation of auditability. As Power (1996, 2003), Robson et al. (2007) and O'Dwyer et al. (2011) emphasise, the current audit literature has paid relatively little attention to the link between the output of the audit, audit reports and backstage practices of audit.

The power of audit methodologies is that they provide a guide for audit practices. Accordingly, examining the sustainability assurance report production processes and methodologies 'can provide valuable knowledge of the reliability and credibility of those reports to their providers' (O'Dwyer et al. 2011, p. 33). The question that needs to be explored is whether the audit methodologies drive the audit environment, or

[6] The terms 'back of house' and 'backstage' are synonymous. Similarly, the terms 'front of house' and 'front stage' are synonymous. These terms are taken from Goffman's (1959) theory of social dramaturgy.

whether the audit environment drives the methodologies. There is also the possibility that the audit methodologies and environment interact simultaneously to shape the audit methodologies and environment in a continuous process of developing sustainability assurance practice. This study examines the construction of sustainability management and accounting reports and auditee organisation strategies to create the credibility of sustainability reports.

2.6 Research gap and questions

The literature review indicates the need to move beyond examining the extent of SR and how the assurance on SR is carried out in a company. Hence, it is still not known how sustainability reports are constructed by the companies based on sustainability initiatives embedded in their operations. In the study, the term sustainability report refers to a GRI[7] compliant Sustainability Report published by a company indicating strategies, mechanisms and indicators of corporate sustainability initiatives. GRI requires a corporate sustainability report to disclose economic, environmental and social caused by a company from its everyday activities along with its strategy, values and governance model. In this context, this study addresses the issue of how sustainability reports are constructed in an audit organization through its institutional strategies.

3. Research design

This study adopts qualitative research methodology, particularly constructivist and interpretive approaches. These research methods are selected for compatibility with the research objectives and theoretical framework of overflowing and framing (Goffman 1974, Callon 1998), supplemented by the concepts of actors, scripts and inscriptions (Callon 1986, Goffman 1959, 1974, Latour 1986, 2005, Robson 1992). It is suggested that sustainability assurance is similar to a ritual process by which masses of data and information are purified in order to compile the sustainability assurance reports (Pentland 1993, Radcliffe 1999). Accordingly, qualitative research methods allow the researcher to analyse and interpret this ritual of the sustainability assurance process dramatised by the auditors before wider actors and stakeholders. Document analysis, interviews, personal communication and examination of sustainability-related documents are used for data collection. One of the researchers also uses his previous audit experience as a research method (Robson et al. 2007) to examine the audit programmes, methodology manuals and files in relation to sustainability assurance and audits. These multiple data collection methods are used for data triangulation to enrich the veracity of the research findings (Radcliffe 1999).

The study adopts the case study approach as it focuses on sustainability strategies and measures adopted by a tea plantation company in Sri Lanka, and how they have been reported and assurance services obtained in this respect. Firstly, we interviewed the Chief Executive Officer (who also serves as the Chief Financial Officer) of the company to obtain an overall view of the sustainability strategies, and measures adopted by the company and the associated certification processes. This was followed by visits to two main tea estates of the company situated in the Talawakelle Region, namely, Bearwell and Mattakele Plantations.[8] During the visits to these estates, we were able to observe the operations and sustainability measures of each estate in the field, factory,

---

[7] GRI is the most commonly used Framework in the preparation of corporate sustainability reports as elaborated previously under Corporate SR Tools.

[8] We were informed that these two plantations produce the best quality orthodox tea or black tea to the Colombo Tea Auction and the TP Ltd managed to obtain the highest prices for their black tea.

stores and related divisions. We were accompanied by the Manager, Sustainability and Quality Systems Development of the company, with the assistant managers of the respective estates. They provided a detailed explanation of the operations of the tea estates and sustainability mechanisms adopted by the company in compliance with the Rainforest Alliance Certification, Ethical Tea Partnership Agreement and International Standard Organisation Standards on Food Security. During these visits, we also examined the documents maintained at estate level in relation to sustainability measures. This encompasses policy documents, compliance records and audit reports prepared in relation to certification principles and standards referred above. These interviews and observations were followed by an interview with the General Manager, Plantations (who is in charge of all estate level operations including sustainability mechanisms adopted). The schedule of interviews and estate visits is given in Table 4.

Table 4: Schedule of interviews and visits to estate

	Interviewee	**Date**	**Duration**
1.	CEO (also the CFO of the company)	24/03/2017	1 hour
2.	Manager, Sustainability and Quality Systems Development	03/04/2017	2 hours
3.	Assistant Manager, Estate 1	03/04/2017	1 hour
4.	Manager, Sustainability and Quality	04/04/2017	1 hour
5.	Assistant Manager, Estate 2	04/04/2017	45 minutes
6.	General Manager, Plantations	13/09/2017	45 minutes
7.	Visit to Estate 1-Bearwell Plantation	03/04/2017	Half a day
8.	Visit to Estate 2-Mattakele Plantation	04/04/2017	Half a day

Source: Author constructed

In these interviews, the researchers allowed the participants to express their comments freely to enable data to emerge on the development of sustainability measures in the company (Dent 1991). Firstly, these interviews were recorded and transcribed without the names of the participants. Then the data collected through observations of processes and measures adopted in estates and the interviews carried out with key company officials were triangulated with the information reported in the annual reports of the company in relation to sustainability (O'Dwyer et al. 2011). The collected data was analyzed using three sub-processes: data reduction, data display and conclusion drawing/verification methods (O'Dwyer 2004, Huberman & Miles 1994). Huberman and Miles's (1994) model is useful because it allows to manage the vast amount of published and unpublished data and records maintained by the company in relation to sustainability reporting and assurance practices. In the next section, findings of the study are presented and analysed by taking together the data gathered through documentary analysis, interviews and observations as to the sustainability policies and measures of the company.

4 Case analysis and discussion

As the findings of a study of this nature should be understood on the basis of the characteristics of the sector in which the audittee organization is operating, this section initially provides an overview of the tea plantation sector in Sri Lanka. Thereafter, the sustainability policy, measures and outcomes of selected auditee organization are analyzed and discussed.

4.1 Background of the case

Sri Lanka's tea plantation industry was started in 1867 by James Taylor, a British planter, in Loolkandura Estate in Kandy, Sri Lanka. Sri Lanka. Then Ceylon, was a

British colony from 1796 AD to 1948 AD. Sri Lanka (Ceylon) was mostly covered by natural virgin forests before the British government leased out the lands to British planters to commence commercial scale plantations. They first introduced the coffee plantations in Ceylon but the coffee plantations were destroyed by a viral disease. As a consequence, the coffee plantations were converted into tea plantations and later Sri Lanka became one of the major tea exporting countries in the world.

The tea industry in Sri Lanka makes a significant contribution to the overall economic and social development of the country. It contributes to nearly 30% of foreign exchange earned by the country and approximately one million of the country's population live in the tea estates, which occupy a land area of 230,000 hectares, of which 190,000 hectares are cultivated. It is the single largest agricultural export industry in Sri Lanka, in terms of both volume and net foreign earnings.

However, it is often affected adversely by the changes in weather conditions from extreme rainfall to drought conditions. Hence, in the tea industry, climate change significantly affects crop production and tea quality, which, in turn, significantly impact on the commercial viability of tea plantation companies in the short-run and the sustainability of their operations in the long-term. Further, this industry is highly labor-intensive with a strong presence of trade unions. The employees of tea plantation companies reside in the estates with their extended families as a community. In this context, these companies have to focus on the well-being not only of plantation workers but also the entire resident community in the tea estates. Further, there are many local and global socio-political and economic factors that impact on these industries. Owing to a myriad of challenges faced by RPCs (Refer Table 5), there is a need to uphold the best practices in agriculture and field development for future viability. Hence, the companies operating in the tea plantations need to focus on three dimensions of performance - economic, environmental and social. Thus, concern for sustainability has become a key strategic imperative in Sri Lanka's tea industry.

Table 5: Challenges facing the tea industry

Sustainability Dimension	Challenge
Economic	Global economic and geo political uncertainty Domestic macroeconomic imbalance Global competition and substitutes Monocrop operations
Environmental	Climate change Land productivity Governmental policy on weedicides and fertilizer
Social	Trade Union activity Changing demographics Labour productivity

Source: Author constructed based on the interviews with the company officials: CEO, General Manager, Plantations and Manager, Sustainability and Quality Systems Development

In Sri Lanka, there are 23 Regional Plantation Companies (RPCs) owned by private companies. Most of the tea estates in Sri Lanka are managed by these companies and they have given significant importance to sustainable agriculture practices. Nevertheless, some RPCs are significant in terms of how they have been embraced in their plantations.

The study has selected one such RPC to address how its institutional strategies on sustainability impact on the preparation of sustainability reports. The selected RPC is a subsidiary of one of largest business conglomerates listed on the Colombo Stock Exchange (CSE). It has 16 estates spread out on 6,490.55 hectares of land, of which 14 are situated at high elevations in Talawakelle and Nanu Oya and the other two are in low elevations in Deniyaya and Galle. It has maintained market leadership for over 12 years by recording the highest prices for its tea among the RPCs at the Colombo Tea Auction. The resident communities in estates number over 41,000 people comprising 10,351 families as at March 31, 2017. The next section discusses the sustainability policy of the company and the resulting mechanisms and how they are operationalized in tea plantations. In this RPC, sustainable agricultural practices have been set up through renowned certification processes that the company is currently following – Rainforest Alliance (RA) - Sustainable Agriculture, ISO 22000 Food Safety Management System, Ethical Tea Partnership and UTZ Sustainable Tea as well as the guidelines set up by the Tea Research Institute of Sri Lanka.

4.2 Sustainability policy of the company

In SR, an organization's commitment to sustainability should stem from its mission, goals and strategies. This company's commitment to sustainability is well articulated in its mission as stated below:

> *Manage the plantations to enhance Quality of life of all employees, Produce and market quality teas that delight our customers, Drive sustainable growth, Enhance shareholder value.*

The company has identified its key stakeholders and how the company would respond to their interest in the mission statement with a focus on the three dimensions of sustainability: economic, environmental and social. In the interview with the CEO of the company it was highlighted that as a company it is committed to improving its performance in terms of the three P's – Profit, Plant and People and the corporate strategies have been devised in line with this philosophy. Accordingly, the CEO stressed the fact that sustainability is integrated into the business model of the company, which is portrayed as a 'tea tree' highlighting how the company creates value to meet the expectations of stakeholders. It shows how value is created in terms of economic, social and environmental impacts to ensure sustainability in the long-term. As a plantation company, it has a high interaction with Nature and people. Hence, the company has recognized the importance of meeting the aspirations of stakeholders other than shareholders, particularly customers, employees, resident communities and the environment in line with UN SDGs referred in Section 2 of the Paper. This aspect is dealt in detail under stakeholder engagement.

Accordingly, the main strategic imperatives of the company highlighted at the interviews held with the CEO and General Manager Plantations can be linked with the three dimension of sustainability – economic, environmental and social as shown in Table 6. We link the strategic imperatives with the sustainability dimension with which they are most associated. However, these imperatives cannot be confined purely to one dimension. Rather they are interrelated and connected with all three dimensions of sustainability.

Table 6: Strategic imperatives relating to sustainability dimensions

Sustainability Dimension	Strategic Imperatives
Economic	Value addition New revenue streams Cost controls and management
Environmental	Land productivity Climate change and environmental change
Social	Labour productivity Workforce development Community development

Source: Author constructed based on the data collected from interviews held with CEO and General Manager, Plantations and disclosures in corporate annual reports

Under these strategic imperatives, the company has identified both short-term and long-term strategies as indicated in Table 7 showing its commitment to long-term sustainability of its operations. The governance and risk management practices of the company have also been developed in alignment with the strategic imperatives of the company, which have been developed with the central focus on sustainability as indicated in the interviews held with CEO and General Manager Plantations as indicated below.

> *"The achievement of sustainability indicators is considered in the performance evaluation of estates and it is one of the tasks that falls within my purview". (General Manager, Plantations)*

> *"We see an improvement in the quality of tea we produce and the auction prices for our tea due to sustainability measures adopted in relation to RA and other standards. Therefore, in assessing company performance, sustainability considerations are given due importance." (CEO of the Company)*

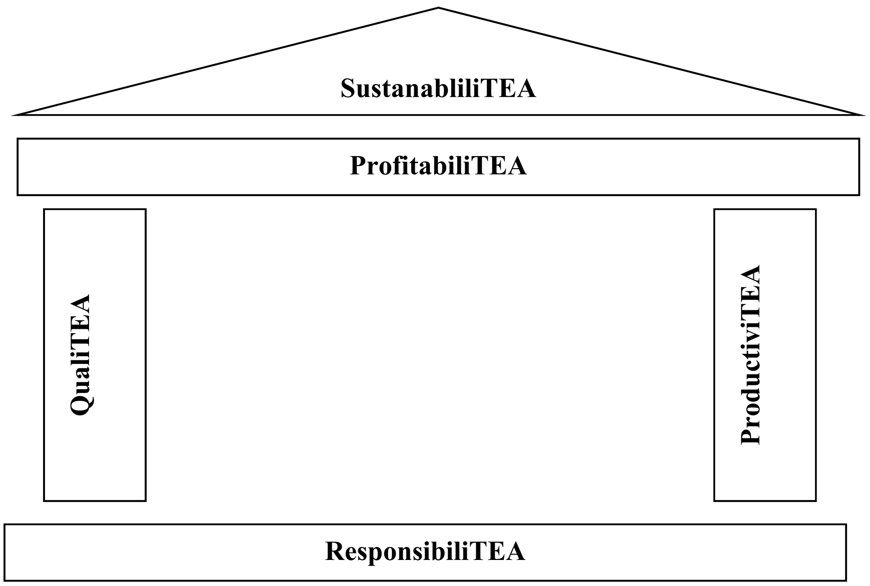
Table 7: Short and long–term strategies under strategic imperatives

Strategic Imperatives	Short-term Strategy	Long-term Strategy
Quality tea	Produce quality tea with sustainable, ethical and food safety business practices in conformity with standards of international certification bodies.	Invest in sustainable field practices like replanting, automated solutions and improvements to factory processes.
Value addition	Focus on value added teas and marking new products.	Invest in research and development to increase value-added tea and draw up long-term marketing plans.
New revenue streams	Study the feasibilities and secure new market opportunities for crop diversification.	Progressively venture into non-crop operations and hospitality and leisure business themed on tea tourism.

Cost controls and management	Control production cost through productivity based wage model, adoption of energy efficient technologies and maintain a lean overhead cost structure.	Control production cost through productivity based wage model, adoption of energy efficient technologies and maintain a lean overhead cost structure.
Land productivity	Continue with timely soil management practices including weeding and fertilizer applications to prevent soil degradation.	Continue with replanting and rationalize the land use by planting fuel wood in uneconomical land.
Climate change and environmental change	Resort to environmental friendly business practices, focus on reducing greenhouse gas emissions and protect biodiversity and water sources.	Take forward the tree planting programme and work towards carbon neutrality.
Labour productivity	Mechanize harvesting, intensify management control at estate level. Closely monitor productivity and incentives on performance	Maintain a continuous dialog with workforce and educate them on the need to improve productivity and to embrace productivity based wage model and revenue sharing business model
Workforce development	Create an inclusive workplace and invest on training and development to ensure workforce wellbeing	Build an empowered workforce enhancing their quality of life and change mindset to be a stakeholder rather than a worker
Community development	Consolidate 'Home for Every Plantation Worker' project	Maintain a consistent dialog and engagement to build long-term and reciprocal ties with resident and neighbouring community
Governance and risk management	Ensure effective risk management, internal controls and uphold current practices in governance	Ensure effective risk management, internal controls and uphold current practices in governance

Source: Author constructed based on the interview data and disclosures in corporate annual reports

This shows that the company has identified sustainability as the main pillar under which other dimensions of the business operations -profitability, productivity, quality and responsibility- have been built on as diagrammatically shown below.



Source: Corporate Annual Report 2016/2017

4.3 Embedding sustainability into operations

The sustainability focus is maintained at each stage of the value chain of this company, which comprises Tea Nursery, Field Operation, Collection, Factory, Packing Centre and Trading as explained in detail at the interview held with Manager, Sustainability and Quality Systems Development of the company. The key sustainability initiatives at each stage are indicated in Table 8.

Table 8: Key sustainability initiatives

Stage of Value Chain	Activities Carried Out	Sustainability Initiatives
Tea Nursery	Establishing improved tea cultivars	Research and development
Field Operation	Planting and maintaining of tea fields and harvesting of green leafs	Soil management
Collection	Collecting harvested tea leaves from own estates and bought leaf from smallholders	Quality checks
Factory	Processing of orthodox black, green and specialty teas	Quality and safety management Energy management
Packing Centre	Packing made teas, product labelling and transporting	Quality checks as per global food safety standards and certifications (these are described below) Timely and safely delivery
Trading	Trading made teas at the Colombo Tea Auction and direct selling	Customer engagements PR initiatives with buyers

Source: Author constructed based on the interview data, observations at field and factory, and disclosures in corporate annual reports

The process of linking the sustainability dimension of the value chain of the company has taken place in conformance with international certification bodies - Rainforest Alliance (RA) –Sustainable Agriculture Standards, ISO 22000 Food Safety Management System, Ethical Tea Partnership and UTZ Sustainable Tea, which provide the best practices to be followed by a tea manufacturing company as described in Table 9. In this respect, Manager, Sustainability and Quality Systems Development said that:

> *"We have developed sustainable practices in both in-field and non-field operations with the associated management systems in line with the guidelines prescribed by the certification bodies particularly the RA Certification and the food security standards".*

Table 9: The coverage of certification and standards

Certification and Accreditation	No. of Estates Certified	Scope of Certification
Rainforest Alliance (RA) Sustainable Farm Certification	15 out of 16	Ecosystem conservation Wildlife protection Climate change Fair labour practices Human Rights Food and farming Communities
Ethical Tea Partnership (ETP)	15 out of 16	Raising social and environmental and standards of tea estates and processing factories Wellbeing of tea workers and communities Climate and environment Tea smallholders
ISO 22000 Food Safety Management Systems	12 out of 16	Food safety
UTZ Sustainable Tea Certification	02 out of 16	Farm practices, farm management Social and living conditions Environment

Source: Corporate Annual Report 2016/2017 and RA and ISO Standards documents presented at the interviews held at Estates. Further, we observed the certifications and standards indicated as sign boards at Factories and Field Levels of two estates that we visited.

Certification audits and internal audits are carried on a regular basis to ensure that estates adhere to ethical and sustainable management and agricultural practices in line with RA and other standards. These audits provide assurance on compliance of the company with certification standards in its operations. The General Manager, Plantations said that

> *"the outcomes of these audits are presented to the respective estate management to deliberate on and to take corrective action and also for necessary improvements."*

The RA sustainable agriculture standard audit is initiated by the RA certification body annually to ensure that all requirements specified in Sustainable Agriculture Network (SAN) Standard are met. Similarly, the Sri Lanka Standards Institute (SLSI) and DNV have carried out third party audits to ensure that estates have complied with ISO 22000:2005 Food Safety Management System. The UTZ audit has also been carried out by SLSI. In addition to the above verifications, internal audits are conducted by the Manager, Sustainability and Quality Systems Development.

It was also revealed at the interview held with the Manager, Sustainability and Quality Systems Development that the company also selects and retains its suppliers after carefully evaluating their business credentials in terms of their practices and values based on social and environmental factors. Accordingly, the company obtains its fertilizer from two renowned suppliers who are certified under ISO 14001:2004 Environmental Systems and ISO 9001:2008 QMS Certification. Packing material is also obtained from suppliers who have both these ISO certifications.

Apart from these sustainability mechanisms associated with in-field operations of the company, the other three main areas it has focused on are human resource development, engaging with local communities and environmental management as discussed in the following paragraphs based on the information gathered through the interviews held with the Manager, Sustainability and Quality Systems Development of the company and the Assistant Managers of two estates visited, and the observations we made at the two estates that were covered as field studies.

Company's 'Human Resource and Social Policy' identifies that engaging a workforce and boosting their work morale and productivity are crucial to drive growth and its long-term viability. The labour management practices and work ethics have been developed in keeping with this policy and the requirements of RA Sustainable Farm Certification, Ethical Tea Partnership, and ISO 22000 Food Safety Management Systems. Accordingly, the company focuses on labour practices, occupational health and safety, training and development, productivity and performance management, and labour relations. The outcomes of these practices are considered in terms of zero anemia for a healthy life; 100% attendance at work for increased earnings; create a better future for a prosperous life; clean tidy homes and working places; and a healthy lifestyle and nutritious food for a better quality life.

The company gives equal importance to maintaining healthy relations with the local community as estate workers live with their extended families. Hence, the focus is on improving the living standards of the local community to ensure a healthy and balanced workforce for higher productivity. In this respect, the company conducts the social responsibility project, 'A home for every plantation worker program', implemented in all 16 estates of the company. The Manager, Sustainability and Quality Systems Development said that this programme focuses on the:

> *"improvement of the living environment of estate communities, promotion of their healthy living and physical and mental well-being as well as educating youth, giving them vocational training and employment opportunities."*

The key strategic imperatives of environmental (natural capital) management of the company have been identified as material management, solid waste management, GHG emission management, water conservation and protection of water resources, soil conversation and agro chemicals and fertilizer management, and biodiversity conservation and protection in line with the requirements of RA Sustainable Farm Certification and Ethical Tea Partnership.

The Estates Managers emphasized that in material management and solid waste management, the company follows the 3R concept – reduce, reuse and recycle. In material management, the company keeps the material footprint under control and uses fuel wood made of recycled agriculture waste material as an energy source in factory operations. In integrated waste management programmes, all bio-degradable waste is utilized to produce compost which, in turn, is used in tea fields and home garden plots of the community.

The company has also taken measures to control their dependence on fossil fuels and reduce green-house-gas emissions and reduce corporate carbon footprint by operating all tea driers with renewable energy, firewood and briquettes, and investing in energy-efficient machinery and equipment. An integrated water resources management approach has also been adopted through rainwater harvesting, chemical free buffer zones and vegetation barriers, monitoring and reductions in agrochemicals usage, waste water purification systems, protecting water resources, awareness programmes on water conservation, and annual water quality testing.

Soil conservation and management in the tea estates is based on the '4R Nutrient Stewardship' initiative advocated by International Plant Nutrition Institute, which looks into economic, social and environmental dimensions of nutrient management. As a means of adapting to climatic change, the company focuses on adopting drought, pest and disease-tolerant cultivars, ensuring soil moisture and conservation, resorting to compost and organic manure, planting shady trees and irrigation during dry months.

All sixteen of its estates located in the hill country and low country wet-zones are endowed with diverse ecosystems and habitats such as lakes, ponds, streams, wetlands with swamps and marshes, waterfalls, riparian habitats, eco-forests and Eucalyptus forests, which provide sanctuary for the precious biodiversity within the estates. Hence, the Manager, Sustainability and Quality Systems Development reiterated that

> *"the Environmental Policy of the company is strongly committed to biodiversity and water sources through a well-managed conversation programme"*.

4.4 Stakeholder engagement

In SR, the identification of the stakeholder interests and responding to them is given paramount importance. Hence, SR is a key aspect of a company, which is committed to sustainability. Accordingly, this company identifies and prioritizes stakeholders on a two-tier basis- the level of influence the stakeholders have on the organization and the level of interest they have on the sustainability of its operations. Hence, the stakeholders of the company are mapped under four groups as indicated in Table 10 given below.

Table 10: Stakeholder mapping and extent of engagement

Stakeholder Mapping	Stakeholders	Level of Engagement
High Influence-High Interest	Parent company Shareholders Employee/Trade Unions Resident Communities Buyers, Customers, Brokers	Closely engage and manage

High Influence-Low Interest	Suppliers and Service Providers	Keep satisfied and meet their needs
Low Influence -High Interest	Government Industry Regulatory bodies Financial institutions Planters Association /Societies/PHDT Certification Bodies Media	Keep Informed
Low Influence -Low Interest	Neighbouring Communities Non-governmental Organizations	Monitor and address needs when required

Source: Author constructed based on disclosures in annual reports and data gathered through the interview held with the CEO of the company

Based on this analysis, the company provides priority to key stakeholders identified as 'high influence-high interest'. Accordingly, the company identifies their key concerns stated below in Table 11 for closer engagement and management.

Table 11: Key issues and concerns of high-influence and high-interest stakeholders

Stakeholder	Key Issues and Concerns
Group-parent company/ Shareholders	Profit and growth Sound returns Climate change and crop production Sustainability aspects Responsible corporate management
Employee/Trade Unions	Remuneration Profit and growth Responsible corporate management Estate infrastructure and environment Occupational health and safety Quality of work life Career stability and advancement Climate change and crop production
Resident communities	Housing and estate infrastructure Water and sanitation facilities Health and nutrition Capacity building and education Employment opportunities
Buyers, Customers, Brokers	Product quality and food safety Compliance with local and international standards and regulations Green and ethical products Conforming to the by-laws of Ceylon Tea Traders Association Price Climate change and crop production

Source: Author constructed based on disclosures in annual reports and data gathered through the interview held with the CEO of the company

4.5 Materiality assessment and boundaries

In determining the materiality, firstly a long list of sustainability aspects of company operations is identified and depicted as 'sustainability context' in line with GRI G4 Guidelines on SR. These aspects are then prioritized by the management team based on their relevance to both internal and external stakeholders based on a qualitative analysis of the following four key parameters: strategic, operational and financial; social and industry; environment and statutory and regulatory framework. The prioritized list of material items is placed in a materiality matrix highlighting their level of significance to the organization as well as to the external stakeholders. A list of 12 highly significant items from both internal and external stakeholder perspectives has been identified in line with the indicators of GRI G4 Guidelines. They are economic performance; energy; environment – compliance; environment – overall investment; biodiversity; emissions; effluents and waste; freedom of association and collective bargaining; child labour; forced or compulsory labour; society – compliance; and customer health and safety.

4.6 Key sustainability indicators

Sustainable agriculture and manufacturing practices have supported the estates in upholding the profitability of the estates despite depressive crop production patterns caused by adverse weather conditions that have prevailed during the year 2016/2017. The CEO of the company attributed the success to compliance with RA Agriculture and ISO Food Security Standards and noted that:

> *"during the current year, that 13 out of 16 of our estates have been able to improve the profitability levels beyond the previous year while most other RPCs recorded losses due to bad weather conditions and world market pressures"*.

The Key Performance Indicators (KPIs) of the company based on economic dimensions for the year 2016/2017 indicated in Table 12 too depicts this fact. The company has also made a significant investment in improving the facilities at factories as well as in estate infrastructure development, which include road development and provision of housing, water, sanitation and recreation facilities as indicated in Table 12 in line with certification standard requirements. The sustainability initiatives of the company in terms of certification and accreditation have led to developing intellectual capital as a unique value driver as evident by KPI Nos. 9 to 12.

Table 12: KPIs of the company

No.	KPI	2016/2017	2015/2016
1	Gross Profit Margin	63%	
2	Net Profit Margin	7.4%	3.3%
3	Return on Equity (ROE)	11.9%	6.75%
4	Return on Assets (ROA)	6.4%	
5	Interest Cover	5.18 times	
6	Debt Equity Ratio	15.95%	30.2%
7	Capital Expenditure	Rs. 39 million	Rs. 35.75 million

8	Estate Infrastructure	Rs. 43.8 million	Rs. 54.8 million
9	Overall Gross Sales Average (GSA) Ranking	1	1
10	Top Price Ranking	199	156
11	Certification Coverage (% of total operations)	RA -87.5% ISO 22000 - 95% UTZ – 13%	RA -87.5% ISO 22000 - 95% UTZ – 6.5%
12	Corporate Awards for Business Excellence, Sustainability and Reporting	34	
13	Customer Satisfaction Index	73%	70%
14	Overall Rank among RPCs	1	1
15	Rank - High grown	1	1
16	Rank- Low grown	1	1
17	Customer complains	7	22
18	Investment in community infrastructure development (Rs. Million)	26.3	54.8
19	Beneficiaries community capacity development (Number)	12,476	15,387
20	Investment in community capacity development	2.1	7.06
21	Youth on vocational training (Rs. Million)	3,557	12,688
22	Youth on vocational training (Number)	0.68	1.02
23	Beneficiaries on health and nutrition programmes (Number)	293,159	211,285
24	Investment on health and nutrition programmes (Rs. Million)	9.7	9.22

Source: Corporate Annual Report 2016/2017

Owing to the company's commitment to product quality and food safety standards in compliance with the requirements of certification bodies, the company has been able to improve its relationship with buyers, brokers and customers as indicated in KPI Nos. 13-17. These measures have also contributed to the company recording the highest tea prices for both high grown elevations and low grown elevations at the Colombo Tea Auction. The impact of 'Human Resource and Social Policy' and measures undertaken based on it are depicted in the improvement in human capital-related KPIs Nos. 18 to 24 in Table 12.

5. Analysis and conclusions

This paper extended the theoretical notion of audit society (Power 1997) and examined the construction of auditability from the perspective of the auditee organization. Power (1997) argued that accounting and auditing are not an isolated objective function but are developed and maintained to satisfy the needs of the economic, political and social environment. He further argued that there are many audit type activities that are developing or taking place to maintain required societal functions such as quality audits, Value for Money (VFM) audits and environmental audits. The audit function is not always an objective-oriented procedure- driven activity similar to financial audits. There are many other audit activities taking place that involve subjective processes and procedures. One such activity is the sustainability accounting and assurance services. As such, there is a need to understand that new forms of auditing and accounting activities carried out by the economic entities and assurance services providers in society. Therefore, this paper attempted to understand the sustainability accounting and audit strategies adopted by an auditee organization to provide comfort and assurance to the outside stakeholders of the economic entity (Pentland 1992).

Audit and assurance services involve three different parties: the auditor, auditee and outside stakeholders or actors of the economic entity. In this respect, this paper examined how an auditee organization has developed strategies and procedures to meet the outside stakeholders' needs in sustainability management practices, accounting and assurance services. We examined a tea plantation company as a case study as it involves many different actors in the sustainability management and accounting practices in three vital areas, namely, the environment, economy and society. We adopted the Actor-Network-Theory (ANT) to analyze the research question and findings as this case study involved many actors (inside and outside the organization) working in harmony to achieve their objectives and interests.

In this context, in this tea plantation company where these interventions were examined, we found that the strategies and mechanisms associated with both in-field and non-field activities encompassing sustainable agriculture practices, food safety, environmental management, and human and community development had led to the establishment of sustainability accounting, reporting and assurances practices in this company. A closer evaluation of these sustainability strategies and mechanisms indicated that both human and non-human actors should work in tandem to produce sustainability reports in an organization as interpreted by ANT. On the other hand, these reports are front stage activities of the company resulting from many back stage processes associated with in-field and non-field activities that this company is currently engaged in as shown in the Concepts of Framing and Overflowing. There are many actors in the case study organization: investors, customers (tea drinkers), employees and their families, surrounding community members, wild flora and fauna, who live in and around the tea plantations, water consumers who live down stream of the tea plantations. As such, the case study organization, the Tea Plantation Company, needed to develop a strategy and establish practices on sustainability and produce periodic sustainability management and accounting reports to satisfy all these human and non-human actors to achieve a sustainable growth of the organization.

The case study organization had not engaged a formal external sustainability assurance provider to certify their SR reports. However, they had complied with many other requirements imposed by the various accreditation agencies such as Rainforest Alliance and Ethical Tea Partnership related to tea production. This confirms the argument that the audit and assurance services can be performed by various organizations and persons who possess the expertise in the relevant areas (in this case sustainability and quality standards relevant to plantation companies), not merely by professional accountants (Perego & Kolk 2012). The audit and assurance can also take place as subjective program evaluation methodologies and they may not always take place as objective-oriented audit methodologies (Power 1997, 1999). Hence, how these accreditation agencies perform audit and assurance services would be an area for consideration in future research.

References

Aktaş, R, Kayalidere, K & Karğin, M 2013, 'Corporate sustainability reporting and analysis of sustainability reports in Turkey', *International Journal of Economics and Finance*, vol. 5, no. 3. pp. 113-125.

Alcaraz-Quiles, FJ, Navarro-Galera, A & Ortiz-Rodrı´guez, D 2015, 'Factors determining online sustainability reporting by local governments', *International Review of Administrative Sciences*, vol. 81, no. 1, pp. 79-109.

Ali,W, Frynas, JG & Mahmood, Z 2017, 'Determinants of corporate social responsibility (CSR) disclosure in developed and developing countries: a literature review', *Corporate Social Responsibility and Environmental Management*, vol. 24, no. 4, pp. 273-294, DOI: 10.1002/csr.

Alonso-Almeida, M, Marimon, F, Casani, F, & Rodriguez-Pomeda, J 2014, 'Diffusion of sustainability reporting in universities: current situation and future perspectives', vol. 106, pp. 144-154, *Journal of Cleaner Production*, pp. 1-11.

Battaglia, M, Bianchi L, Frey, M & Passetti, E 2015, 'Sustainability reporting and corporate identity: action research evidence in an Italian retailing cooperative', *Business Ethics: A European Review*, vol. 1, no. 1, pp. 52-72.

Bebbington, J & Larrinaga, C 2014, 'Accounting and sustainable development: an exploration, Accounting, Organizations and Society, vol. 39, no. 6, pp. 395-413.

Callon, M 1986, 'Some elements of sociology of translation: domestication of the scallops and fishermen of St. Brieuc Bay', in Law, J. (Ed.), *Power, Action and Belief: A New Sociology of Knowledge?* Routledge, London, UK, pp. 196–233.

Callon, M 1998, 'An essay on framing and overflowing: economic externalities revisited by sociology', in Callon, M. (Ed.), *The Laws of the Markets*, Blackwell, Oxford, pp. 245–269.

Callon, M 1999, 'Actor-network theory-the market test', in Law, J. and Hassard, J. (Ed.), *Actor-Network-Theory and After, Blackwell*, Oxford, pp. 181–195.

Ceulemans, K, Molderez, I & Van Liedekerk, L 2014, 'Sustainability reporting in higher education: a comprehensive review of the recent literature and paths for further research', *Journal of Cleaner Production*, vol.3, no.1, pp.1-17.

Cooper, S M & Owen, D L 2007, 'Corporate social reporting and stakeholder accountability: The missing link', *Accounting, Organizations and Society*, vol. 32, no. 7/8, pp. 649-667.

Daly, H 2007, *Ecological economics and sustainable development, selected essays of Herman Daly*, Elgar, Cheltenham, UK/Northampton, US.

Deegan, C 2017, 'Twenty five years of social and environmental accounting within Critical Perspectives of Accounting: hits, misses and ways forward', *Critical Perspectives of Accounting*, vol. 43, pp. 65-87.

Dillard, J, 2011, 'Double loop learning; or just another service to sell: a comment on the case of sustainability assurance: constructing a new assurance service', *Contemporary Accounting Research*, vol. 28, no. 4, pp.1267-1277.

Dissanayake, D, Tilt, C & Xydias-Lobo, M, 2016, 'Sustainability reporting by publicly listed companies in Sri Lanka', *Journal of Cleaner Production*, pp.1-14, http://dx.doi.org/10.1016/j.jclepro.2016.01.098.

Eccles, R G & Krzus, M P 2010, *One Report: integrated reporting for a sustainable strategy*, Wiley, Hoboken, NJ.

Gendron, Y, Cooper, D J & Townley, B 2001, 'In the name of accountability: state auditing, independence and new public management', *Accounting, Auditing and Accountability Journal*, vol. 14, no. 3, pp. 278–310.

Gendron, Y, Cooper, D J & Townley, B 2007, 'The construction of auditing expertise in measuring government performance', *Accounting, Organizations and Society*, vol. 32, pp. 101–129.

Holden, E, Linnerud, K & Banister, D 2014, 'Sustainable development: our common future', *Global Environmental Change*, vol. 26, pp. 130–139.

Hopwood, A 1983, 'On trying to study accounting in the context in which it operates', *Accounting, Organizations and Society*, vol. 8, no. 2/3, pp. 287–305.

Hopwood, A 1998, 'Exploring the modern audit firm: an introduction', *Accounting, Organizations and Society*, vol. 23, no. 5/6, pp. 515–516.

Hopwood, A 2000, 'Understanding financial accounting practice', *Accounting, Organizations and Society*, vol. 25, pp. 763–766.

Hopwood, A 2007, 'Whither accounting research?', *The Accounting Review*, vol. 82, no. 5, pp. 1365-1374.

Huberman, AM & Miles, MB 1994, 'Data management and analysis methods', in Denzin, NK & Lincoln, YS (Ed.), *Handbook of qualitative research*, Sage, Thousand Oaks, California.

Kamal, Y & Deegan, C 2013, 'Corporate social and environment-related governance disclosure practices in the textile and garment industry: evidence from a developing country', *Australian Accounting Review*, no. 65, vol. 23, no. 2, pp. 117-134.

Khalifa, R, Sharma, N, Humphrey, C & Robson, K 2007, 'Discourse and audit change: transformations in methodology in the professional audit field', *Accounting, Auditing and Accountability Journal*, vol. 20, no. 6, pp. 825–854.

Knechel, WR 2007, 'The business risk audit: origins, obstacles and opportunities', *Accounting, Organizations and Society*, vol. 32, pp. 383–408.

Kozlowski, A, Searcy, C & Bardecki, M 2014, "Corporate sustainability reporting in the apparel industry: an analysis of indicators disclosed", *International Journal of Productivity and Performance Management*, vol. 64, no. 3, pp. 377–397.

Latour, B 1987, *Science in action*, Harvard University Press, Cambridge, MA.

Latour, B 2005, *Reassembling the social: an introduction to Actor-Network-Theory*, Oxford University Press, New York, NY.

Lodhia, S & Hess, N, 2014, 'Sustainability accounting and reporting in the mining industry: current literature and directions for future research', *Journal of Cleaner Production*, pp. 1-8.

Malsch, B & Salterio, S E 2016, ‘Doing good field research: assessing the quality of audit field research’, *Auditing: A Journal of Practice and Theory*, vol. 35, no. 1, pp. 1-22.

Maubane, P, Prinsloo, A & Rooyen, N V 2014, ‘Sustainability reporting patterns of companies listed on the Johannesburg Securities Exchange’, *Public Relations Review*, vol. 40, pp. 153–160.

O’Dwyer, B, Owen, D & Unerman, J 2011, ‘Seeking legitimacy for new assurance forms: the case of assurance on sustainability reporting’, *Accounting, Organizations and Society*, vol. 36, pp. 31–52.

O’Dwyer, B 2004, ‘Qualitative data analysis: illuminating a process for transforming a “messy” but “Attractive” “Nuisance”’, in C., Humphrey & Lee B., (eds), *The real life guide to accounting research: a behind the scenes view of using qualitative research methods*, CIMA Publishing, London.

O’Dwyer, B 2011, ‘The Case of Sustainability Assurance: Constructing a New Assurance Service’, *Contemporary Accounting Research*, vol. 28, no.4, pp. 1230–1266.

Pentland, B T 1993, ‘Getting comfortable with the numbers: auditing and the micro-production of macro-order’, *Accounting, Organizations and Society*, vol.8, no.7/8, pp.605–620.

Perego, P & Kolk, A 2012, ‘Multinationals’ accountability on sustainability: the evolution of third-party assurance of sustainability reports’, *Journal of Business Ethics*, vol. 110, pp. 173-190.

Power, M 1996, ‘Making things auditable’, *Accounting, Organizations and Society*, Vol.21 No. 2/3, pp. 289-315.

Power, M 1997, *The audit society: rituals of verification*, Oxford University Press, Oxford.

Power, M 2003, ‘Auditing and the production of legitimacy’, *Accounting, Organizations and Society*, vol.28, pp. 379-394.

Power, M 2007, ‘Introduction, Business risk auditing: debating the history of its present’, *Accounting, Organizations and Society*, vol. 32, pp. 379–382.

Radcliffe, V S 1998, ‘Efficiency audit: an assembly of rationalities and programmes’, *Accounting, Organizations and Society*, vol. 23, no. 4, pp. 377–410.

Radcliffe, V S 1999, ‘Knowing efficiency: the enactment of efficiency in efficiency auditing’, *Accounting, Organizations and Society*, vol. 17, no. 7, pp. 685–708.

Robson, K 1992, ‘Accounting numbers as ‘inscription’: action at a distance and the development of accounting’, *Accounting, Organizations and Society*, vol. 32, pp. 409–438.

Robson, K, Humphrey, C, Khalifa, R & Jones, J 2007, ‘Transforming audit technologies: business risk audit methodologies and the audit field’, *Accounting, Organizations and Society*, vol. 32, pp. 409–438.

Liyanagedara, K & Senaratne, S 2009, ‘Corporate sustainability reporting in Sri Lanka’, Conference Proceedings, The Sixth International Conference on Business

Management, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura, 2009.

Siew, R Y J 2015, ‘A review of corporate sustainability reporting tools (SRTs)’, *Journal of Environmental Management*, vol. 164, pp. 180-195.

Skaerbaek, P 2009, ‘Public sector auditor identities in making efficiency auditable: the National Audit Office of Denmark as independent auditor and modernizer’, *Accounting, Organizations and Society*, vol. 34, pp. 971–987.

Talawakele Tea Estates PLC, 2016, *Annual Report 2015/16*.

Talawakele Tea Estates PLC, 2017, *Annual Report 2016/17*.

Thijssens, T, Bollen, L & Hassink, H 2016, ‘Managing sustainability reporting: many ways to publish exemplary reports’, *Journal of Cleaner Production*, pp. 1-16, http://dx.doi.org/10.1016/j.jclepro.2016.01.098.

Wijesinghe, KN, 2012, Current context of disclosure of corporate social responsibility in Sri Lanka, Unpublished MBA Thesis.

World Commission on Environment and Development (WCED) 1987, *Our common future* (The Brundtland Report), Oxford University Press.

FORENSIC ACCOUNTING EDUCATION IN SRI LANKA: PRACTICE AND PERCEPTION

L. Priyangika

R.M.S. Bandara
Department of Accounting, University of Kelaniya

Abstract

Accounting professionals of the future must be able to respond to changes in accounting practices. The increased public awareness and concern about fraud, and forensic accounting training and fraud investigation have encouraged the accounting profession to pay more attention to functional accounting education. Sri Lankan accounting education need to be aligned with the market demand and needs of the public for teaching students the best practices and methods of forensic accounting. This study aims to examine the current coverage and future direction of forensic accounting education in Sri Lanka. A survey was conducted with a sample of accounting academics and practitioners who were questioned on the need for forensic accounting and level of proficiency which will increase the skills of the accounting professionals to detect fraud. The results of the survey indicate a growing demand for forensic accounting in Sri Lanka and the need for accounting professionals to enhance their skills and obtain proper certification to deliver as per the need of the market. The study concludes that the demand for forensic accounting education and practice will continue to increase and that forensic accounting should be integrated into the accounting curricula either as a separate course or as modules. This paper will increase the awareness of the institutes that award accountancy degrees and professional qualifications about the importance of including forensic accounting skills into their programmes.

Key words: Academicians, Education, Forensic accounting, Fraud, Practitioners, Sri Lanka

1. Introduction

Many practices in modern business have been taken as fair dealings. Laws have been passed (Sarbanes- Oxley Act[9], Companies Act No. 7 of 2007), agencies have been established to monitor and enforce them (SLAASMB[10], COPE[11]), and ethics and morals are taught in schools and included in the academic and professional curricula (Code of Conduct and Ethics of various professional disciplines). Despite of all these actions, corporate fraud is a recurring and troubling phenomenon. The majority of corporate frauds are executed by the top management who are responsible with the quality of the company's financial reporting (Golden et. al. 2006). In 1998, the Enron Scandal 2001, WorldCom Scandal 2002, Freddie Mac Scandal 2003, Lehman Brothers

[9] *The Sarbanes-Oxley Act of 2002 (SOX) is an act passed by U.S. Congress in 2002 to protect investors from the possibility of fraudulent accounting activities by corporations.*
[10] *Sri Lanka Accounting and Auditing Standards Monitoring Board*
[11] *Committee on Public Enterprises appointed by Parliament of Sri Lanka*

Scandal 2008, Bernie Madoff Scandal 2008, and the Satyam Scandal 2009 involved managers at the top level and in some cases involved accountants and auditors.

With the evolution of businesses from barter to e-commerce, the propensity for fraud and irregularities in corporate entities increased causing huge losses and misleading investors (Carnes & Gierlasinski, 2001). This has resulted in public anger over the occurrence of massive frauds in companies with the common question being "Where were the auditors?". Even though the accounting and auditing professions are inseparably linked with fraud deterrence, fraud detection and fraud investigation, both the professions have their own role to play in meeting the expectation of their acting as detectives.

In light of bridging this gap between the public perception and auditing practice, the role of Forensic Accounting has emerged as a key requirement in the field of finance and accounting.

1.1 Role of auditor and forensic accountant

The traditional auditor's role as a financial statement examiner is distinct from that of forensic accountant, which is deterring, detecting and investigating a fraud. The International Standards on Auditing (ISA) 200 (International Federation of Accountants – IFAC 2016) defines the auditor's role as 'to express an opinion on whether the financial statements are prepared in all material respects in accordance with an applicable reporting framework and on whether the financial statements are presented fairly, in all material respects, or give a true and fair view'. The auditing process requires the auditor to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatements whether due to fraud or error (ISA 200 (IFAC 2016)). However, such assurance is obtained from tests and evidence drawn on a sample basis which leaves a tendency for misstatements and undetected frauds. On the other hand, a forensic accountant's concern is not with reaching a general opinion on financial statements as a whole, but at a much more granular level with the factual information derived from both documentary evidence and testimonial evidence. (Tiwari & Debnath 2017). Such concern will further extend to finding out who, what, when, where, how and why of a suspected or known impropriety. Sampling and materiality concepts are generally not used in determining the scope of forensic accounting procedures; instead all relevant evidence is sought and examined (Golden et. al. 2006). With these distinct characteristics of the two professions, it appears that forensic accounting can play a bigger role in the investigation of fraud which is required of the discipline in order to safeguard investor interest. However, forensic accounting is a recently new facet of accounting and auditing, which is still emerging in the Sri Lankan accounting profession.

The growing need for forensic accounting in Sri Lanka has necessitated the adoption of forensic accounting into accounting education. The curriculum of forensic accounting education must be comprehensive enough to promote creativity (Rezaee & Burton 1997). A broad range of personal attributes and knowledge including written and oral communication, interviewing techniques, specialized computer skills and investigative skills are crucial for a forensic accountant to perform. In Sri Lanka, professional bodies like CA Sri Lanka, ACCA, CIMA and universities offer accounting education and produce professional accountants while audit firms and some companies in the industry provide the required training. The need for forensic accounting education is further evidenced in the increasing demand from the public because:

- General public is more concerned about the increase in fraudulent financial activities as reported in the Treadway Commission Report and other studies (e.g., KPMG survey 1994)
- Current studies emphasis the need for competent, educated and trained forensic accountants (e.g., Rezaee et al. 1996, Thornhill 1994)
- The related literature suggests a need for the examination of the content, coverage and delivery of forensic accounting education (Rezaee et al. 1996)

As per the Treadway Commission's (1987) recommendations, accounting programmes should pay more attention to fraud investigation education. Further it suggested that the current curriculum may be poor in this important area. The variety of knowledge required of forensic accountants in carrying out litigation services, giving expert testimony and conducting fraud investigations is extensive and therefore, should have a more prominent position in the accounting curriculum (Rezaee & Burton 1997). Many groups in the general public expect accountants to assume a more active role in providing reasonable assurance regarding responsible corporate governance, reliable financial reporting, and detecting and preventing fraudulent financial activities. Hence, the purpose of this study is to develop an insight into forensic accounting education, highlighting the skill sets that forensic accounting practitioners need to possess to succeed in the practice of forensic accounting. Accordingly, the objective of this study is to compare and contrast the views of academicians and professionals in practice on the present stand and the future direction of forensic accounting education in Sri Lanka.

2. Literature review

Future accounting graduates must be able to respond to changes in accounting practices. Due to the increased awareness of and concern about fraud, attention to forensic accounting training, and fraud investigation, may be one component of a more functional accounting education. They will need 'knowledge acquisition' through traditional university/business school education and 'knowledge application' through on-the-job-training and continued professional development programmes (Rezaee & Burton 1997). The Treadway Commission (1987) recommended that accounting education should create the foundation and a common body of knowledge upon which lifelong learning can be built and problem-solving techniques can be developed. Further, accounting education should include fraud investigation.

Accounting discipline has many specializations, and auditing and forensic accounting are two of the most common. Although forensic accounting and auditing seem similar there are major differences between them. Forensic accountants search specifically for fraudulent activity within organizations; auditors verify that companies comply with regulations and organizational policies. Some have argued that the 'future demand' for auditing services will depend on the auditors' capability to 'detect and deter fraud' (Carpenter 2007), thus implying an incremental addition to the current auditor's skills set.

2.1 The interrelationship among between auditing, forensic accounting and fraud investigation

Traditional auditing practices address 'fraud' to the extent of the auditing and accounting standards they are bound by. However, auditors are not responsible for planning and performing auditing procedures to detect fraud (ISA 200 (IFAC 2016)). Allegations of fraud are often resolved through court action, showing the overlap between fraud examination and forensic accounting. However, each discipline has actions unrelated to each other: fraud professionals often assist in fraud prevention and deterrence efforts that do not directly interface with the legal system while forensic accountants work with damage claims, valuations and legal issues that do not involve allegations of fraud (Kranacher et. al. 2008). The interrelationship among auditing, fraud examination, and forensic accounting is changing due to political, legal, social and cultural events (Kranacher et. al. 2008). The level of overlap between forensic accounting and fraud examination may be vary as per the situation. Because external auditors operate in an environment impacted by accounting and auditing standards they are expected to have adequate knowledge and skills to detect material frauds in the financial statements. In addition, auditing, fraud examination, and forensic accounting professionals often have skill sets that apply to multiple areas and they are able to leverage those skills and abilities from one area to another (Kranacher et. al. 2008).

2.2 Required knowledge, skills and abilities for forensic accounting and fraud investigation

According to Kranacher et. al. (2008) the knowledge and skills required to have to concentrate on issues associated with financial crime, fraud, and forensic accounting includes firstly, basic accounting concepts which are essential in identifying fraud and financial statement manipulation and to assess for any overstatement or understatement; secondly, basic auditing concepts including professional skepticism in evaluating statements or representations made; thirdly, business law concepts that demonstrate how fraud and fraudulent financial reporting violate the law and finally general business communication skills, business ethics and basic computer skills.

Currently in Sri Lanka, some of the state universities like University of Sri Jayewardenepura (USJ), University of Colombo (UOM) and University of Kelaniya (UOK) offer accountancy degree programmes. CA Sri Lanka (CA), the pioneer in producing professional financial accountants and auditors, have included the above subject areas in their curricula. Further, USJ has included forensic accounting as a separate subject in their accounting degree programme while UOK offered the Auditing and Forensic degree for the first time in Sri Lanka. CA Sri Lanka offers a certificate course in forensic accounting in addition to the forensic accounting course unit included in the Degree of applied accounting. However, the growing need for forensic accounting experts has necessitated the adoption of a formal approach to forensic accounting education (Seda & Kramer 2014). The curriculum for forensic accounting education must be comprehensive (West Virginia University 2007, Shanikat & Khan 2013, Lang et al. 2014, Clements & Knudstrup 2016). Forensic accounting education enhances students' creative ability (Lee et al. 2015). A broad range of personal attributes and a knowledge base including written and oral communication, interviewing techniques, specialized computer skills and investigative skills are crucial for forensic accountants (Akkeren et. al. 2013). A case or problem-based approach can be one of the effective modes of forensic accounting education (Coller et al. 2004, Brezina et al. 2012). To bridge the gap between the demand for and supply of efficient forensic accountants, enhanced research approaches are crucial (Carnes & Gierlasinski 2001, Bierstaker et al. 2006). According to Kranacher et. al. (2008) the specific and advanced leaning is required for forensic accountants include, criminology which is sociological study of crime, fraud and forensic accounting and forensic and litigation advisory services.

As per Rezaee et al. (1996) forensic accounting education has been limited primarily to continuing professional education sessions for practicing accountants. At present only a few universities and colleges teach forensic accounting as a subject. As per the above mentioned requisites in the profession of forensic accounting there are critical issues in developing a forensic accounting curriculum as to the contents of forensic accounting education and the importance of forensic accounting in current accounting curricula. This study addressed these issues by gathering opinions from academicians and practitioners. The prevalence of fraudulent financial activities and the lack of standards to define auditors' responsibilities regarding fraud detection led to the creation of the Association of Certified Fraud Examiners (ACFE; formerly National Association of Certified Fraud Examiners) in 1988. ACFE sponsors and awards the CFE designation for those who wish to be recognized as specialists in fraud investigation and, accordingly, has over 15,000 national and international members. Hence this study further looks into the need of a certification for forensic accountants either local or foreign.

3. Methodology

This work was carried out as a pilot study using a mail survey administered to accounting practitioners and academicians in Sri Lanka. The survey mail was sent to 50 practitioners and academicians accompanied by a covering letter stating the objectives, assuring confidentiality of the responses, agreeing to share the findings, and giving the approximate time needed to complete the questionnaire. According to Micheal and Isaac (1995) samples sizes between 10 and 30 is adequate for a pilot study hence justifying the adequacy of the sample of the current study. During the data collection several reminders were sent to increase the response rate. Responses were received from 35 participants comprising 22 practitioners and 13 academicians. Practitioners included partners from 10 reputed audit and consultancy firms and 12 from industry who are in senior management positions. A slightly revised questionnaire was sent to the academicians of the universities who offer accountancy as a degree programme. Eight from local universities and five from foreign universities responded.

The three-section questionnaire was prepared based on questions used in similar studies conducted in Australia (Akkeren et.al. 2013), USA (Rezaee & Burton 1997) and India (Tiwari & Debnath 2017). The questions were changed to suit the Sri Lankan context, pre-tested and revised. Section 1 of the questionnaire sought participants' perceptions of the current and future need for forensic accounting practice and education in Sri Lanka. Section 2 dealt with the knowledge and skills needed by forensic accountants. Section 3 asked questions on certification in forensic accounting for practice and the need for a code of conduct and ethics in this area. In addition, four open ended questions were also asked to gather qualitative information on the same topics as in the quantitative section of the questionnaire. Then, a descriptive analysis was conducted on the data gathered which is presented in the next section.

4. Results

The results of the study are presented under the following headings: need for forensic accounting education, knowledge and skills needed for forensic accountants and certification and code of ethics for forensic accountants.

4.1 Need for forensic accounting education

Emerging social, economic and legal conditions have contributed to an increased demand for forensic accounting by legislators, law enforcement agencies, the financial community, the accounting profession and the general public. Thornhill (1994) stated that white-collar bank fraud accounts for losses 50 times greater than those due to crimes of violence against banks. Table 1 below presents the responses from practitioners and academicians on the need for forensic accounting education in Sri Lanka.

Table 1: Need for forensic accounting education

Question	Practitioners		Academicians	
	Yes	No	Yes	No
Do you feel that demand for forensic accounting practice has increased?	100%	0%	100%	0%
Do you feel the incident of corporate fraud, dishonesty etc. have increased over the last five years?	96%	4%	100%	0%
Do you think that the current auditing practices meet the requirement of the clients in detecting fraud and irregularities?	4%	96%	9%	91%

All practitioners and academicians who responded to this survey agreed that the demand for forensic accounting has increased. Over 90% of both practitioners and academicians accepted that corporate fraud, dishonesty, etc. have increased over the last five years and again more than 90% of both participant groups were of the view that the current auditing practices do not meet the needs of clients in detecting frauds and irregularities. Almost all the respondents of both the groups indicated that the demand for forensic accounting had increased as well as increased corporate frauds and malpractices. These responses also indicate that experienced practitioners and academicians of the accountancy field may have a built in bias towards forensic accounting in finding a solution for the increased corporate frauds.

4.2 Possible reasons for increase in corporate frauds

This was an open-ended question given to both groups of respondents to seek their views on the reasons for the increase in corporate fraud. Responses varied according to personal beliefs and judgments. Table 2 below summarizes the most mentioned reasons; deterioration of public governance and ethics was the most significant reason whereas undue influence was the least important reason.

Table 2: Reasons for increase in corporate frauds

Reason for Frauds	Practitioners	Academicians
Need for money due to life style desires	38%	27%
Position power	13%	18%
Internal control weaknesses	38%	45%
Undue influence	4%	9%
Keep the good times rolling	13%	0%
Ineffective regulatory measures	4%	18%

Deterioration of public governance and ethics	25%	64%

4.3 Common types of corporate frauds and irregularities

Another open-ended question sought the respondents' view on the most common type of corporate fraud and irregularities. The most cited corporate frauds are given in Table 3 below:

Table 3: Common types of corporate frauds

	Practitioners	Academicians
Manipulation of accounting records	79%	73%
Misrepresentation	46%	55%
Embezzlement	21%	55%

The above findings will help future researchers to make a more in depth study of this subject.

4.4 Knowledge and skills needed by forensic accountants

The second set of questionnaire was aimed to get the views of the respondents and the desired knowledge and skills needed by the forensic accountants in order to carry out their duties. Even though the public perception is that the auditor is responsible for detecting fraud, whether the traditional auditor possesses the required skills and knowledge to carry out fraud investigation is a question. The accounting profession has been urging accounting educators to change the accounting curricula in response to changes in accounting practices, the new competitive global business environment and vulnerable financial and business reporting processes. Responses to the second set of questionnaire are given in Table 4 below.

Table 4: Knowledge and skills needed for forensic accountants

Question	Practitioners		Academicians	
	Yes	No	Yes	No
Do you think that the current practicing accountants have the required skills and knowledge to carry out a forensic accounting investigation?	13%	83%	9%	91%
Do you think that the current accounting and auditing curricula provided by Universities and Professional Bodies sufficiently cover the subjects related to forensic accounting?	4%	92%	0%	91%
Do you use any software to forensically examine data?	17%	79%	N/A	N/A
Does your academic programme teach students any software to forensically examine data?	N/A	N/A	36%	55%

The majority of the respondents, both practitioners and academicians, are of the opinion that the current practicing accountants do not have the required skills and knowledge to carry out a forensic accounting investigation. They are further of the view that the current accounting and auditing curricula provided by universities and professional bodies do not sufficiently cover the subjects related to forensic accounting. However, a considerable contribution was noted of the universities and/or business schools offering accountancy students software for forensic examination of data. But the corresponding response from knowledgeable practitioners was that forensic accountants in practice do not use such knowledge because they do not use such software.

Two more open-ended questions were asked to obtain the views of the both respondent categories. These questions were about the required skills and the subjects that accountancy curricula should have to facilitate such skills and knowledge. Tables 5 and 6 below summarize the most mentioned views.

Table 5: Most important skills needed for forensic accounting work

Skills required	Practitioners	Academicians
Analytical skills	33%	45%
Attention to detail	17%	9%
Skepticism	42%	27%
Business domain knowledge	25%	0%
IT skills	21%	36%
Investigative skills	25%	27%
Critical thinking	8%	9%
More IT related /Cyber security knowledge	13%	18%

Table 6: Other subject areas to be included in accountancy curricular

Other subjects needed	Practitioners	Academicians
Legal procedures	29%	18%
Evaluation Techniques	25%	36%
Social Behavioural studies	25%	18%
Training	8%	9%
Digital forensics / Cyber security	21%	18%

The above responses show that the present accounting curricula are not sufficiently responsive to society's demand for forensic accounting education and practice. Thus the following measures need to be taken:

- Accounting curricula should include courses or materials on forensic accounting; and
- Universities and professional bodies should advise students on career opportunities in forensic accounting and encourage the pursuit of forensic accounting expertise.

Accounting academics are responsible for educating future accountants. It is important for this group to agree that forensic accounting skills will add value to the future of auditing practice. Auditors are in the front line of this changing paradigm and consensus among auditors would be necessary for an incremental addition to the current skill set and to progress forward. Forensic accountants are significant in this process because their knowledge, guidance, and future participation in the audit process are essential to bring about the necessary change.

4.5 Certification and code of ethics required by forensic accountants

Professional certification is common in almost every industry with good reason: it helps advance the profession. Certification helps employers evaluate potential new hires, analyze job performance, evaluate employees, select contractors, market services, and motivate employees to enhance their skills and knowledge. Certification gives recognition to competency, shows commitment to the profession, and helps with job advancement. There has been an explosive growth in professional certification for forensic accountants in Sri Lanka. The third set of questionnaires of this study aimed to get information on current certification of forensic accountants and the way forward. The need for a code of conduct and ethics too was looked at.

Table 7: Need for certification of forensic accountants / code of ethics

Question	Practitioners		Academicians	
	Yes	No	Yes	No
Are you certified by any of the international forensic accounting associations?	12%	88%	0%	100%
Do you think that accountants or any other professionals who undertake forensic work need to be formally certified by a professional organization such as CA Sri Lanka?	96%	4%	91%	9%
Do you think an international certification will be useful over a local certification in practicing forensic accounting?	83%	17%	100%	0%
Do your firm/company have an ethical code of conduct to direct accountants to investigate fraud?	92%	8%	N/A	N/A
Does your academic program include any ethical code of conduct to direct accountants to investigate fraud?	N/A	N/A	64%	18%

According to the responses received, most of the practitioners as well as academicians are not certified by forensic accounting associations. However, both respondent categories are of the view that professionals (including accountants) need to be formally certified by a professional organization such as CA Sri Lanka. Further, they are of the view that an international certification will be more useful than a local certification for practicing forensic accounting. The majority of organizations have an ethical code of conduct to direct accountants to detect fraud while most of the educational programmes too have included an ethical code of conduct in their curricula.

5. Summary and conclusion

This study investigated the need for forensic accounting education in Sri Lanka. In assessing such a need, the services provided, the skills and expertise required to successfully perform those services, and the qualifications, skills and personal attributes of forensic accountants wishing to enter the profession were considered in an increasing corporate fraud environment. The findings revealed that forensic accounting is a broad title that covers a variety of fields of expertise, including accounting, business law and IT. This is in line with the existing literature that recognizes that the role of a forensic accountant is interdisciplinary and complex, and involves far more than fraud investigation and requires a broad range of work-based skills and personal attributes

(Kahan 2006, Durkin & Ueltzen 2009, Davis et al. 2010, Di Gabriele 2010, Gottschalk 2011).

Current initiatives in accounting education recommend that accounting programmes should transmit the basic knowledge for future accountants on which life-long learning and knowledge application can be built. Forensic accounting is an emerging area, especially given today's litigious business environment, incidence of fraudulent business practices and increased emphasis by the accounting profession on fraud detection. The results of the study indicate that academicians and practitioners desire enhanced forensic accounting education. The respondents expect the demand for and interest in forensic accounting education and practice to continue mainly due to increasing corporate frauds in the country.

Further, it was observed that the skills and expertise required to provide forensic accounting services were multiple and varied, and can be grouped into two distinct categories, namely work-based skills and personal attributes. Although these two categories are inextricably linked, making this distinction is relevant for the development of relevant accountancy curricula. Within the first category of work-based skills, respondents considered analytical skills, skepticism, IT skills and investigative skills to be the most important skills. This is not surprising when considering the role of a forensic accountant, which relies heavily on the accountant's ability to not only communicate with clients, judges, potential witnesses and others during an investigation, but also record their findings in a formal report and/or court brief.

In response to the second set of question, participants further identified the key personal attributes needed to perform forensic accounting work successfully. It can be seen that the most desired personal attributes required to successfully undertake forensic accounting work include business domain knowledge, attention to detail. interpersonal skills and an analytical aptitude. Other personal skills included being inquisitive, intelligent, engaging and resilient. Common sense and a measured and calm disposition, along with being methodical, flexible, collegial, and having integrity, were further identified as important personal attributes for performing the job effectively.

All the respondents to the survey have a positive thought on separate certification for forensic accountants to give confidence and recognition at work, to use a mechanism for continuous professional development and learning, and a secure job market free from competition.

Despite many limitations and constraints, this study has provided important elementary groundwork for understanding and supporting the future development of the forensic accounting profession in Sri Lanka. It has identified the increasing demand and complex cross-disciplinary nature of the services provided under forensic accounting services, the required set of knowledge and skills for forensic accountants, and the importance of having separate certification and practice of an ethical code of conduct. It is hoped that this survey will benefit the accountancy profession in Sri Lanka and open further areas for research in order to enhance and uplift the accounting profession.

References

Akkeren, JV, Buckby, S & Kim, M 2013, 'A metamorphosis of the traditional accountant: an insight into forensic accounting services in Australia', *Pacific Accounting Review*, vol. 25, no. 2, pp. 188-216.

Bierstaker, JL, Brody, RG & Pacini, C 2006, 'Accountants' perceptions regarding fraud detection and prevention methods', *Managerial Auditing Journal*, vol. 21 no. 5, pp. 520-535.

Brezina, M, Casey, RJ & Grenier, JH 2012, 'The SMU football recruiting scandal: a primer on compliance auditing and forensic investigations', *Journal of Accounting Education*, vol. 30, pp. 233-247.

Carnes, KC & Gierlasinski, NJ 2001, 'Forensic accounting skills: will supply finally catch up to demand?' *Accounting Research Journal,* vol. 16, no 6, pp. 378 - 382. http://dx.doi.org/10.1108/02686900110395514

Carpenter, TD 2007, 'Audit team brainstorming, fraud risk identification, and fraud risk assessment: implication of SAS No. 99', *Accounting Review*, vol. 82 no. 5, pp. 1119-40.

Coller, M, Harrison, GW & Spiller, EA Jr. 2004, 'Mooresville Honda Company: a case in forensic accounting', *Journal of Accounting Education*, vol. 22, pp. 69-94.

Crumbley, DL 2001, 'Forensic accounting: older than you think', *Journal of Forensic Accounting,* vol. 11 no. 2, pp. 181-202.

DiGabriele, JA & Huber, WD 2014, 'Topics and methods in forensic accounting research', *Accounting Research Journal*, vol.28, no. 1, pp. 98 – 14. http://dx.doi.org/10.1108/ARJ-08-2014-0071

Golden, TW, Slalak, SL, Clayton, MM 2006. *A guide to forensic accounting investigation.* John Wiley & Sons Inc. Hoboken, New Jersey.

Hopwood, W, Young, GR. & Leiner, J 2008, *Forensic Accounting*, McGraw-Hill-Irwin, New York, NY.

International Federation of Accountants (IFAC) 2016, Handbook of *international quality control, auditing, review, other assurance, and related services pronouncements, 2016-2017 (vol. 1), IFAC.*

James, A, DiGabriele, JA 2009. 'Implications of regulatory prescriptions and audit standards on the evolution of forensic accounting in the audit process', *Accounting Research Journal,* vol. 10, no. 2, pp. 109- 121. http://dx.doi.org/10.1108/09675420910984673

Jeanette, V, Akkeren SB, MacKenzie, K 2013, 'A metamorphosis of the traditional accountant: an insight into forensic accounting services in Australia', *Pacific Accounting Review*, vol. 2, no. 2, pp. 188–216.

Kahan, S 2006, ‘Sherlock Holmes enters accounting: dramatic increase in fraud brings more
CPA sleuths into the industry’, *Accounting Today*, vol. 20, no. 8, pp. 32-33.

Kranacher, MJ, Morris, BW, Pearson, TA, and Riley, RA. Jr. 2008, ‘A model curriculum for education in fraud and forensic accounting’, *Issues in Accounting Education.* vol. 23, no. 4, pp. 505–519.

Lee, CC, Cefaratti, M & Green, ER 2015, ‘The incremental benefits of a forensic accounting course to creativity’, Journal of Forensic & Investigative Accounting, vol. 8, no. 1, pp. 157-167.

Louwers, TJ & Madison, J 2015. ‘The past, present, and future (?) of crime related forensic accounting methodology’, *Accounting Research Journal,* vol. 28, no 1, pp. 4–9.
http://dx.doi.org/10.1108/ARJ-04-2015-0047

Messier, WF Jr, Glover, SM, Prawitt, DF 2006, *Auditing & assurance services.* McGraw-Hill Irwin, New York.

Michael, WB. & Isaac, S 1995. *Handbook in research and evaluation*. Educational and Industrial Testing Services. San Diego, CA.

Rezaee, ZE & Burton, J 1997, ‘Forensic accounting education: insights from academicians and certified fraud examiner practitioners’, *Accounting Research Journal*, vol. 12, no. 9, pp. 479 – 489.
http://dx.doi.org/10.1108/02686909710185206

Seda, M and Kramer, BKP 2014, ‘An examination of the availability and composition of forensic accounting education in the United States and other countries’, *Journal of Forensic & Investigative Accounting*, vol. 6, no. 1, pp. 1-46.

Shanikat, M and Khan, A 2013, ‘Culture-specific forensic accounting conceptual framework: a skills set theoretical analysis’, *International Journal of Business and Management,* vol. 8 no. 15, pp.112-123.

Tiwari, RKR & Debnath, J 2017, ‘Forensic accounting: a blend of knowledge’, *Journal of Financial Regulation and Compliance*, vol. 25, no. 1, pp. 73 – 85.
http://dx.doi.org/10.1108/JFRC-05-2016-0043

Wilks, JT and Zimbleman, MF 2004, ‘Using game theory and strategic reasoning concepts to prevent and detect fraud’, *Accounting Horizons*, vol. 18, no. 3, pp. 173-84.

AN EMPIRICAL STUDY OF THE RELEVANT SKILLS, KNOWLEDGE AND EDUCATION IN FORENSIC ACCOUNTING, AND THE CURRENT STATUS OF RELATED SERVICES IN THE SRI LANKAN CONTEXT

S.D. Gunathilake
Department of Accounting, University of Sri Jayewardenepura

Roshan Ajward
Department of Accounting, University of Sri Jayewardenepura

Abstract

This study examines the relevant skills and knowledge required for forensic accounting services; assesses different dimensions (course content, methods of delivery and methods of assessment) of forensic accounting education; and examines the range, extent (in terms of revenue generation) and future demand for forensic accounting services provided in Sri Lanka. A self-administered structured questionnaire was used to obtain the opinions of professional accountants in the public practice for the first and third objectives of the study, where 82 usable responses were received. Further, a content analysis was performed using 37 forensic accounting syllabuses in achieving the second objective. In terms of findings, the fraud risk assessment, deductive analysis and diagnostic skills were the highest ranked skills, whereas, the least ranked skill was marketing; and, the highest ranked knowledge area was accounting, whereas the least ranked knowledge area was professional responsibilities. The selected forensic accounting syllabuses have used topics such as introduction to forensic accounting, fraud examination, fundamentals of fraud, corporate governance and ethics, and audit and assurance more frequently. Textbooks and articles, lectures, tutorials and e-learning techniques were observed as key methods of delivery; and examinations, individual reports and essays, and dissertations were observed as the most popular methods of assessment. Services such as litigation support, valuation of damages and fraud examination, risk management in forensic accounting and technology services were ranked as the top five (in terms of revenue generated), coupled with increasing future demand for litigation support and expert witnessing, and, stable future demand for fraud examination. The findings of this study are expected to contribute to the existing literature and fill the gap, especially in relation to a developing country like Sri Lanka.

Key words: Forensic accounting, Forensic accounting education, Forensic accounting services, Knowledge, Skills

1. Introduction

Fraud has existed over many generations, but in the past two decades, the world has witnessed many prominent financial scandals such as Enron, WorldCom and Satyam. Many of these scandals became milestones with historical importance in the journey to combating fraud (Pearson & Singleton 2008). Moreover, the 2016 Global Fraud Survey steered by the Association of Certified Fraud Examiners (ACFE) illustrates that the organizations established worldwide lose approximately about 05% of their annual revenue due to fraud. Moreover, Bhasin (2015) reported that the opportunities for forensic accountants are growing at a rapid pace all around the globe. However, according to Bhasin (2016), a similar situation is observed in most of the Asian countries, as well as in all developed, developing and emerging nations. It is most unfortunate that forensic accounting is, by and large, an unexplored area (Bhasin 2016). In this backdrop, Sri Lanka has secured the 95th position out of 176 countries in the 2016 - Corruption Perception Index (Transparency International Sri Lanka 2017), which may indicate the growing need for forensic accounting services in Sri Lanka. As suggested by Thilakarathna (2010), Sri Lanka should establish and develop forensic and investigative accounting services as soon as possible in a bid to reduce unexpected corporate failures. Lasantha Wickramasinghe, the President of CA Sri Lanka indicates, (Lanka Business Online 5 May 2017)

> […] that amidst increasing fraud and corruption, the institute has taken steps to ensure that public expectations are met with the launch of this specialised course. […] Wickremasinghe also encouraged more chartered accountants to follow the certificate course, as it will educate them in an important and relevant area, which will not only enhance their professional standing, but will also bring them greater professional success, as they will be in continuous demand across both the public and private sectors, locally and overseas.

The researchers observe, however, a dearth of studies in the important area of forensic accounting. Accordingly, there are three main research objectives dealt with in this research; examine the relevant skills and knowledge required to provide forensic accounting services; assess the status of forensic accounting education, in terms of course content, methods of delivery and methods of assessment; and to examine the range, extent (in terms of revenue generation) and future demand for forensic accounting services in Sri Lanka.

In terms of the significance of this study, as far as the researchers observe, this study is a pioneering research that has been carried out in Sri Lanka. Accordingly, this study attempts to contribute to the existing literature on forensic accounting and fill the gap, especially in the context of a developing country like Sri Lanka. Furthermore, this study focuses on both the supply and demand sides of forensic accounting services and education, and attempts to provide information that may be useful for universities and professional bodies planning to offer a course in forensic accounting in light of recent changes in the business environment and the accounting profession.

The remainder of this research paper is structured as follows. The next section extracts the literature to date on the subject. Section 3 explains the research methodology while Section 4 focuses on the analysis and discussion. Finally, Section 5 concludes the study by pointing out its limitations and directions for further research.

2. Literature review

This section reviews local and international extant literature on the concept of forensic accounting, related models and studies on skills and knowledge, different dimensions of forensic accounting education and forensic accounting services. Finally, the literature review identifies the gap in the subject area of the research.

2.1 Forensic accounting

"Forensic" means "suitable for use in a court of law," and it is to that standard and potential outcome that forensic accountants generally have to work (Crumbley et al. 2004). Accordingly, Thornhill (1995) stated that forensic accounting is a relatively new concept and hence there has been no formal definition accepted as the standard.

However, he defined forensic accounting as an accounting analysis to assist in legal matters, which will form the basis for discussion, debate and ultimately dispute resolution (Thornhill 1995). Similarly, Özkul and Pamukçu (2012) define forensic accounting as a specialty area of the accountancy profession which describes engagements that result from actual or anticipated disputes or litigation. From an auditor's perspective, forensic accounting deals with the application of auditing methods, techniques or procedures to resolve legal issues that require the integration of investigative, accounting, and auditing skills (Arokiasamy & Cristal-Lee 2009, Özkul & Pamukçu 2012, Dhar & Sarkar 2010, Manning 2002). Such forensic evidence must meet standards required by courts of law and be presented in a manner that will be accepted by a court of jurisprudence (Peterson 2015). From the perspective of a fraud examiner, forensic accounting is the application of investigative and analytical skills to resolve financial issues in a manner that meets the standards required by courts of law (Hopwood et al. 2008). On the other hand, Crumbley (2006) has defined forensic accounting as the application of specialized knowledge and specific skills to stumble up on the evidence of economic transactions. On a comprehensive basis, AICPA (2004) defines forensic accounting as the application of accounting principles, theories and discipline to facts or hypothesis at issue in a legal dispute and includes every branch of accounting knowledge.

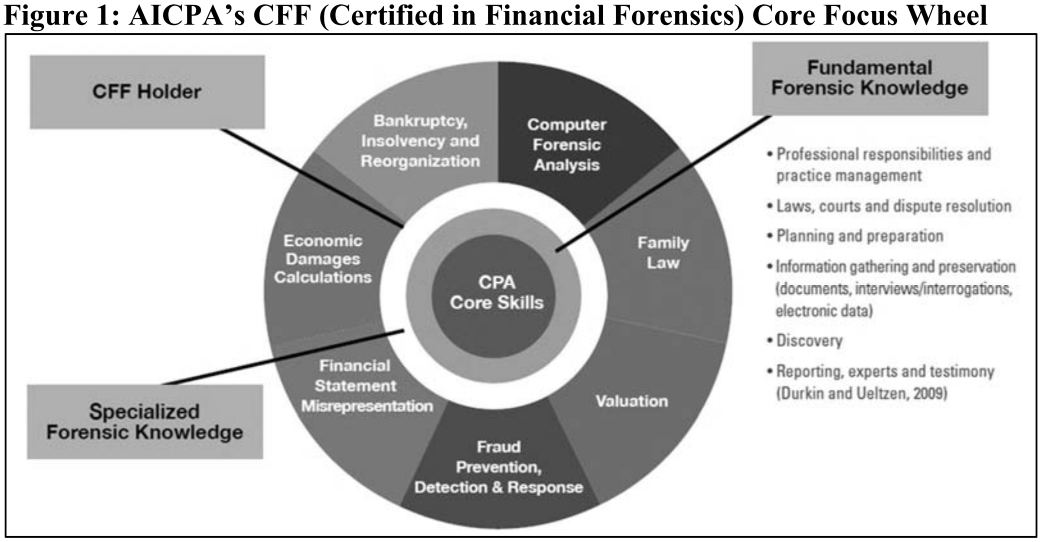
This study is backed by theoretical explanations and models of forensic accounting skills and knowledge required as discussed below.

2.2 Skills and knowledge required to perform forensic accounting services

Model on skills

Figure 1 identifies the various specializations and other analytical, investigative and communication skills required by a forensic accountant (Davis et al. 2010). This is an example of the forensic accounting services offered in the USA, coupled with an outline of the knowledge base and formal certification required for the Certified Financial Forensic (CFF) credentials in the US forensic accounting industry.

Figure 1: AICPA's CFF (Certified in Financial Forensics) Core Focus Wheel



Source: 'Characteristics and Skills of the Forensic Accountant' (Davis et al. 2010, p.3)

Empirical studies
The study by Akkeren et al. (2013), has explored the relevance of this model to Australian forensic accounting practice, where skills such as, oral and written communication, critical thinking, interpersonal and technical accounting skills are considered as most important. The survey conducted by Davis et al. (2010), was aimed at improving the efficiency of forensic accounting, through the identification of the knowledge and skills necessary for this profession, where all the three groups of respondents (attorneys, academics and public accountants) have ranked simplifying the presentation of information, auditing and written communication skills as high (Davis et al. 2010). The study by Digabriele (2008) in the USA has considered the results of the studies; Harris and Brown (2000), Grippo and Ibex (2003), Messmer (2004) and Ramaswamy (2005) and the skills rated as most important were critical thinking, deductive analysis and written communication, whereas the skills rated as least important were specific legal, composure and unstructured problem solving. A similar study was conducted by Okoye and Jugu (2010) in the Nigerian context, and the skills rated as most important were critical thinking, deductive analysis and written communication. In contrast to the US study by Digabriele (2008), composure has identified as a most important skill. The skills rated as least important were analytical proficiency, unstructured problem solving and investigative flexibility (Okoye & Jugu 2010). The skill competency items rated as the most important were effective written communication, auditing skills and oral communication in the study by Bhasin (2013), whereas research skills, telling the story, and investigative ability take second place in terms of importance. The items rated as least important were: understanding the goal of a case, solving unstructured problems, and synthesizing the results of discovery and analysis respectively (Bhasin 2013). Arežina et al. (2014) conducted a study based on a literature review where the purpose was to sublimate the experiences and opinions of various authors in order to determine which skills and traits are relevant to the profession of forensic accountant. Based on such a literature review this study has identified the same skills tested in the studies by Davis et al. (2010) and Bhasin (2013).

Empirical studies on knowledge areas
Using the same model depicted in Figure 1, AICPA suggests that fundamental forensic knowledge includes: professional responsibilities and practice management, laws, courts and, dispute resolution, planning and preparation, information gathering and preservation (documents, interviews/interrogations, and electronic data), discovery and reporting, experts and testimony (Davis et al. 2010). Tiwari and Debnath (2017) presented a paper based on a literature review which reported the knowledge required for forensic accountant as auditing, accounting, statistics, information technology, legal, human-behaviour knowledge.

2.3 Forensic accounting education in terms of course content, methods of delivery and methods of assessment

The education of a forensic accountant (FA) should cover the knowledge, skills, and abilities needed to effectively discharge the expected duties (Brooks & Labelle 2006). For the past 25 years, university accounting disciplines around the world have been revising their forensic accounting education and their curriculum to include courses in fraud/forensic accounting. Yet an initial review of these courses indicates divergent approaches to their development (Smith & Crumbley 2009). Rezaee et al. (2004) considered forensic accounting education as being relevant and useful for accounting students, and suggested that forensic accounting topics be integrated into the accounting curriculum. According to MacPhail (1999), business schools have not done an adequate job of preparing students to respond ethically to the complex issues that arise in the work environment. Albrecht and Sack (2000) concluded that accounting education had just not kept up with changes in the business environment.

According to Wickramasinghe and Anthony (2017), many universities and several professional organizations are currently offering forensic accounting-related courses and promoting fraud examination and forensic accounting education among the society. Although forensic accounting is viewed as one of the most rewarding and secure career choices, there is still a gap between forensic accounting practice and education (Rezaee et al. 2004). A similar gap is identified in Sri Lanka and forensic accounting is viewed as one of the most secure career tracks. However, there are no accounting programmes offering forensic accounting courses (Wickramasinghe & Anthony 2017). It is further argued that there is no bifurcated programme for forensic accounting from accounting and auditing curricula of both academic and professional education (Wickramasinghe & Anthony 2017).

Course content (importance of forensic accounting topics)

Rezaee and Burton (1997), Rezaee et al. (2004), Brooks and Lebelle (2006) and Akyel (2012) have identified the relative importance of 50 topics in forensic accounting, which are depicted in Appendix 1. The ten top-ranked topics are fundamentals of fraud, financial statement fraud, types of fraud (e.g., employees, management), cooking the books and problems in accounting, elements of fraud: pressure, opportunity and rationalization, anti-fraud controls, internal control evaluation, theory and methodology of fraud examination, principles of ethics and corporate code of conduct and fraud detection and deterrence programmes (Rezaee & Burton 1997). Factor analysis was used by Rezaee and Burton (1997) to reduce the above forensic accounting topics into four modular topics as (1) Investigation and law, (2) Fraud and fraud auditing, (3) Financial reporting process and (4) Ethics. However, the study conducted by Wickramasinghe and Anthony (2017) in the Sri Lankan context was based on content analysis of a sample of 14 foreign universities and three foreign professional institutions that are currently offering forensic accounting-related courses and have their syllabuses available online. The study identified the most important areas as follows:

1. Introduction
2. Computing economic damages
3. Indirect methods of reconstructing income
4. Employee fraud: the misappropriation of assets
5. Proper evidence management litigation support in special situations
6. Money laundering and transnational financial flows
7. Business valuation
8. Litigation services provided by accountants
9. Detecting fraud in financial reporting
10. Investigation of electronic data digital forensic analysis reporting
11. Commercial damages
12. Case studies

Methods of delivery

Rezaee et al. (2004) opined that the most commonly used learning mechanisms in teaching a forensic accounting course are cases, textbooks, research projects, guest speakers, and videos, out of which cases and textbooks, research projects and guest speakers are the most important learning mechanisms while field trips to professional organizations and correctional facilities are the least popular way of teaching a forensic accounting course. Rezaee and Burton (1997) have identified the same learning mechanisms tested in the above study. They suggested that, in order to present forensic accounting principles and practices to their students, the accounting faculty may wish to group interrelated topics under different curricular modules. Rezaee et al. (2004) and Zango (2012) have reported that the majority of forensic accounting courses are integrated through accounting and auditing courses whereas conducting separate forensic accounting courses are less popular. An introduction to and definition of forensic accounting services are given below.

2.4 Forensic accounting services

Akkeren et al. (2013) state that there is a varied range of definitions with regard to the range of forensic services offered within the accounting profession. Three common areas of forensic accounting practices in Anglo-Saxon countries are litigation support, expert witnessing, and fraud examination (Rezaee et al. 2004, Akyel 2012, Rezaee et al. 2016). However according to Bhasin 2007 and Okoye and Gbengi 2013, forensic accounting consists of two major components: *litigation services* that recognize the role of an accountant as an expert consultant and *investigative services* that use a forensic accountant's skills and may require possible courtroom testimony. However, according to Covaleski (2003), there are three of the top six accounting niche services falling within the forensic accounting area: business valuation, litigation support and forensic/fraud. From a different viewpoint, Manning (2005) noted that the services of forensic accounting are utilized in areas such as accounting, antitrust, damages, analysis, valuation, and general consulting. Forensic accountants have also been used in divorces, bankruptcy, insurance claims, personal injury claims, fraudulent claims, construction, royalty audits, and tracking terrorism by investigating financial records (Manning 2005). Moreover, it is evident that most of the previous studies have preferred litigation support, expert witnessing and investigative accounting as mainstream forensic accounting services which are described next. Okoye and Akamobi (2009) opines that *litigation support* includes both business litigation and dispute advice, where, Akkeren et al. (2013) identified services such as dispute resolution and litigation advice as 'reactive' services offered by accounting firms. According to Akkeren et al. (2013), forensic professionals can often resolve litigation problems before any *expert trial testimony* is required. However, such professionals sometimes need to testify as an expert witness if the dispute escalates to a court hearing and the judge and jury do not have specialized knowledge to reach a conclusion without their testimony (Okoye & Akamobi 2009). Most firms require a thorough *in-depth investigation* in certain auditing risk areas (AICPA 2004) and a primary purpose of forensic investigation is the identification, explanation and communication of the information behind economic and reporting events.

It is important to examine prior studies conducted on the subject matter in order to identify the range of forensic accounting services and its extent (in terms of revenue generation), which is one of the main objectives of this study. The study by Okoye and Akenbor (2009) has identified litigation support and investigative accounting as two broad areas of practice in forensic accounting. The mainstream forensic accounting services identified above have been tested in the context of the US by Rezaee et al. (2004) and of China by Rezaee et al. (2014), where both findings reported that the future demand for and interest in all three areas of forensic accounting will increase. A comparison of both these results indicates that Chinese respondents felt that the demand for litigation support practice of forensic accounting is much higher than that in the United States. The study by Bhasin (2017) in the Indian context has identified that the demand for forensic accountants will increase well into the foreseeable future, and many respondents in the study were unsure if the supply of forensic accountants would be enough to meet the demand in the future. From an Australian perspective, the study conducted by Akkeren et al. (2013) reported the findings from 32 interviews with Australian practicing forensic professionals who suggested that forensic accounting services are broad and complex and this study has identified that all firms are providing fraud investigation and expert witness services and a large percentage have identified other forensic accounting services, as shown below, in addition to the three mainstream forensic accounting services depicted above.

1. Valuation/Damages
2. Criminal Matters
3. Technology services
4. Business Advisory
5. Risk Management
6. Contract Assessment
7. Corporate Misconduct
8. Business Intelligence
9. Business Analytics
10. Personal Injury
11. Regulatory Investigations

From a regulative perspective, the Accounting Professional and Ethical Standards Board (APESB) of Australia, working with Forensic Accounting Special Interest Group (FASIG) of Australia and other interested parties, issued Accounting Professional & Ethical Standard (APES) 215 - Forensic Accounting Services. APES 215 sets the standards for Members in the provision of quality and ethical Forensic Accounting Services in the Australian context (APESB 2015).

2.5 Literature gap

There is dearth of studies which examined the relevant skills and knowledge required for forensic accounting services; assessed the status of forensic accounting education, in terms of course content, methods of delivery and methods of assessment; and examined the range, extent (in terms of revenue generation) and future demand of the forensic accounting services provided in Sri Lankan context. Thus, this study expects to contribute to the extant literature on forensic accounting and fill the gap, especially in relation to a developing country like Sri Lanka. The next section elaborates on the methodology adopted in the current study.

3. Methodology

This section discusses the research approach, population and sample, instrumentation and analytical strategies adopted in the study.

3.1 Research paradigm and approach

This research is based on a positivist paradigm where new knowledge could be discovered through objective measures. The first and third research objectives of the study were to assess the relevant skills and knowledge required to provide the forensic accounting services; and to assess the range, extent (in terms of revenue generation) and future demand for forensic accounting services provided in the Sri Lankan context. To achieve these objectives, a quantitative research methodology (Burns & Grove 1993) was primarily used. The information was collected through self-administered structured questionnaires distributed personally to the participants by the researchers. Since the majority of the literature on similar research areas deals with the quantitative approach (DiGabriele 2010, Rezaee & Burton 1997, Rezaee et al. 2004, Rezaee et al. 2016), this research has also adopted a similar approach. In this regard, the researcher followed a deductive approach in order to achieve the expected research objectives. Epistemological assumptions of an interpretive approach were used by reviewing empirical evidence through a literature review.

The second research objective of the study was to examine the status of forensic accounting education, in terms of course content, methods of delivery and methods of assessment, where a quantitative content analysis (Berelson 1952) was used as the method of study in relation to the second objective. Content analysis can be both quantitative and qualitative. The quantitative content analysis deals with coverage or number of times an item appears in a piece of recorded information. A similar study by Wickramasinghe and Anthony (2017) in the Sri Lankan context was based on content analysis on a sample of syllabuses of forensic accounting courses.

3.2 Population and study sample

In terms of the first and third objectives of the study, the target population for this study defined to include Professional Accountants in Public Practice in Sri Lanka. According to the Institute of Chartered Accountants of Sri Lanka (n.d.), Public Practice Organizations are Firms of Practicing Chartered Accountants and the Auditor General's Department and Non-public Practice Organizations are all other approved training organisations, other than those classified as Public Practice. A professional accountant in public practice is deemed to be recognized as a Chartered Accountant working in Public Practice Organizations (supervisory level and above). Accordingly, the Chartered Accountants of Sri Lanka engaged in Public Practice Organizations are included in the population of this study because:

1. The Institute of Chartered Accountants of Sri Lanka (CASL) is the regulated professional organization in Sri Lanka, which was founded in 1959 by Act of Parliament No. 23 of 1959, and considered as the authoritative body over the accounting standard setting process of Sri Lanka.
2. The researchers expect that these groups will be able to provide knowledgeable information that will be relevant to achieving the study objectives.

Therefore, the population of the study was 4,952 Chartered Accountants of Sri Lanka (Institute of Chartered Accountants of Sri Lanka 2017). A total of 82 Professional Accountants in Public Practice in Sri Lanka responded to the questionnaire. The demographics of the sample are presented in Section 4 of this report.

In terms of the second objective of the study, the target population for achieving the second research objective of this study included the syllabi of foreign universities and foreign professional institutions that are currently offering forensic accounting courses and have their syllabi available online. A random sample of 37 syllabi in forensic accounting related courses was selected. It included 20 foreign universities and two foreign institutions (Appendix 2).

3.3 Sources of data

The main source of data collection for achieving the first and third objectives was a self-administered structured questionnaire distributed among a selected population. Accordingly, the research was carried out using primary sources of data to achieve the first and third research objectives. The main source of data collection considered for achieving the second objective of this study was the World Wide Web and mainly focused on secondary data sources.

3.4 Questionnaire and development

A self-administered structured questionnaire designed by the researchers was used as the data collection instrument for this study, with the objective of eliciting as much related information as possible from the respondents. The question development process included several steps:

1. The comprehensive literature review performed previously facilitated the formulation of the initial questionnaire;
2. The completed questionnaire was then sent to the selected Professional Accountants who are already in Forensic Accounting Practice in Sri Lanka and a senior academic for the purpose of getting expert opinions and comments. Their suggestions and comments were considered and the questionnaire was accordingly amended.
3. A Pilot Study followed suit. Twenty (20) Professional Accountants who were part of the study population were given the questionnaire to fill.
4. This finalized questionnaire was converted to an online version and responses were secured via www.esurve.org.

Accordingly, the validity and the reliability of the questionnaire were ensured. The questionnaire, 05 pages long, was divided into four (04) sections. It included Likert scale measurements, multiple-choice questions and one open-ended question. It was designed in such a way that only straightforward, concise, brief and short answers were required. Upon trial, it was clear that the questionnaire could be answered within 10 - 15 minutes. The four (04) sections are as follows:

Section 01 was labelled as 'Demographics' and listed variables consisting of professional qualification possessed by the respondent, age, gender, highest academic qualification, professional qualifications, present practicing organization category (i.e. Big three audit firms or other audit firms), current designation, experience both in accounting and forensic accounting profession and awareness of forensic accounting services provided by the respondents' respective audit firms. **Section 02** was labelled 'Forensic Accounting Services' and listed two main questions focused on the third objective of the study (i.e. to examine the range, extent [in terms of revenue generation] and future demand for the forensic accounting services provided in Sri Lankan context). The respondent was required to select the services provided by their organization, rank the top five services based on the revenue generated by the firm and state their opinion on the future demand of the same. **Section 03** was labelled 'Skills and Knowledge to perform Forensic Accounting Services' and consisted of two (02) questions focused on the first objective of the study (i.e. to examine the skills and knowledge required to provide the previously identified range of services). Skills and knowledge aspects were separately dealt with. Both questions were structured in the modified Likert fashion, on a 5 – point scale, ranging from '*Least Important*' to '*Most Important'* and separately to mark '*Not Applicable*' skills and knowledge areas. Subjects were then instructed to respond about their perception on the level of importance with the skills and knowledge areas given. **Section 04** was labelled 'Opinion' asking the Professional Accountants of their personal opinion on Forensic Accounting practice in Sri Lanka.

3.5 Data Analysis strategies

Descriptive and inferential statistics were mainly used in analysing. Frequency tables were drawn and are presented in Section 4. The open-ended questions were analysed through quantitative content analysis by the researchers with the aim of quantifying emerging characteristics and concepts.

In terms of analytical strategies, first, descriptive statistics regarding the variables were presented to obtain an overall idea of the sample professional accountants in public practice. Then, in terms of achieving the first objective of the current study, i.e., assessing the relevant skills and knowledge required to provide forensic accounting services, the mean rank method was used to identify the top highest and bottom lowest means for the answers provided. Further, a one sample *t*-test was performed to assess whether the mean value is statistically significantly different from the neutral value '3'. In achieving the second objective, i.e., examining the status of forensic accounting education, in terms of course content, methods of delivery and method of assessment, a content analysis followed by descriptive statistics and a frequency analysis was performed to identify the three themes. Moreover, in achieving the final objective, i.e., assessing the range, extent (in terms of revenue generation) and future demand for the forensic accounting services provided in Sri Lanka a frequency analysis was performed to assess the range of services provided and ranking will be performed to assess the extent (in terms of revenue generation) of the same. Using the above methodology, the analysis was performed, and the resulting descriptive statistics and other results are shown in the following section.

4. Findings and discussion

This section describes the analysis of the demographic variables describing the sample representation and the analysis of the findings related to the three research objectives indicated in Section 1. These analyses were performed using the methodology outlined in Section 3 above.

4.1 Descriptive statistics

This section describes the statistics that emerged from the analysis performed using the data collected from the respondents to the questionnaire. The table below summarizes the demographic variables of the respondents:

Table 1: Demographic variables

Demographics	Categories	N	%
Age	20 – 25	7	8.2
	26 – 30	17	20.7
	31 – 40	29	35.4
	41 – 50	19	23.2
	Over 51	10	12.2
	Total	**82**	**100**
Gender	Male	60	73.2
	Female	22	26.8
	Total	**82**	**100**

Highest academic qualification	GCE O/L		1	1.2
	GCE A/L		10	12.2
	Certificate/Diploma		6	7.3
	Basic Degree		45	54.9
	Postgraduate Diploma		6	7.3
	MBA/M.Sc.		14	17.1
	Ph.D.		0	0.0
	Total		**82**	**100**
Professional qualifications	Associate Member	ICASL	67	81.7
		ACCA	1	33.3
		CIMA	13	81.3
	Fellow Member	ICASL	15	18.3
		ACCA	2	66.7
		CIMA	3	18.8
	Total	**ICASL**	**82**	**100.0**
		ACCA	**3**	**3.7**
		CIMA	**16**	**19.5**
Firm currently employed	Big three audit firms		32	39.0
	Other audit firms		50	61.0
	Total		**82**	**100**
Current Designation	Partner		22	26.8
	Director		11	13.4
	Manager		32	39.0
	Supervisor		17	20.7
	Total		**82**	**100**
Years of experience in the Accounting Profession	1 – 5 years		26	31.7
	6 – 10 years		16	19.5
	11 – 15 years		12	14.6
	More than 16 years		28	34.1
	Total		**82**	**100**
Years of experience in the Forensic Accounting Profession	No Experience		56	68.3
	Less than 1 year		12	14.6
	1 – 5 years		10	12.2
	6 – 10 years		2	2.4
	11 – 15 years		0	0.0
	More than 16 years		2	2.4
	Total		**82**	**100**
Awareness of Forensic Accounting Services provided by their respective firms	Yes		53	64.6
	No		29	35.4
	Total		**82**	**100**

Source: Author constructed

It is noted that 8.2% of the respondents were aged from 20 to 25 and another 20.7% of the respondents from 26 to 30, followed by the 31 – 40 age group representing 35.4% of the respondents. 23.2% of the respondents were aged from 41 – 50 and the remaining 12.2% were from the over 51 age category. Further, 73.2% of the respondents were males and 26.8% females. Considering the educational background of the respondents, 54.9% of the respondents had a basic academic degree as their highest academic qualification and the next highest academic qualification was a MBA/M.Sc., represented by 17.1% of the sample. Moving on to the professional qualifications, 100% of the respondents were qualified in Chartered Accountancy, out of which 81.7% were Associate members and 18.3% were Fellow members. However, as an additional professional qualification 19.5% of the respondents were qualified in CIMA (UK). 39% of the respondents represented the Big three audit firms (KPMG, EY or PWC) and 61% were currently employed in other audit firms. Further, it was observed that 26.8% of the respondents were Audit Partners, 13.4% Audit Directors, 39% Audit Managers and 20.7% were Audit Supervisors. 31.7% of the respondents had 1 – 5 years of experience in the Accounting profession, followed by 19.5% who had 6 to 10 years of experience, 14.6% 11 to 15 years of experience while 34.1% had over 16 years of experience in the Accounting profession. 68.3% of the respondents had no experience in Forensic Accounting, followed by 14.6% who had less than one year of experience, 12.2% 1 to 5 years of experience while 2.4% had 6 to 10 years of experience and 2.4% had more than 16 years of experience in Forensic Accounting. The above information shows that the sample is heterogeneous and has a diverse representation.

4.2 Mean ranking and one sample *t*-test - skills and knowledge required to provide forensic accounting services

In assessing the first objective of the study, i.e. assessing the relevant skills and knowledge required to provide the forensic accounting services, the tables below of descriptive statistics show 28 skills and 15 knowledge areas that were included in the questionnaire in two separate questions which the respondents had marked as either 'not applicable' or if applicable, the 'most important skills and knowledge areas' and the 'least important skills and knowledge areas'. The mean values derived were interpreted based on the Likert scale used for the questionnaire, i.e. *1 – Least Important* and*5 – Most Important*.

Table 2: Mean ranking - skills

Skills	Indicated as 'Not Applicable'	*N*	Mean[a]	SD
Panel A - Most important				
1. Fraud Risk Assessment		82	4.5366**	.91887
2. Deductive analysis		82	4.5122**	.91953
3. Diagnostic		82	4.3049**	.88456
4. Composure		82	4.3049**	.78077
5. Unstructured problem solving		82	4.2683**	.77058
6. Sociological skills	1	81	4.2346**	.79485
7. Psychological skills	1	81	4.2222**	.89443
8. Conceptual Thinking		82	4.2073**	.85689
9. Investigative	1	81	4.1852**	.93690
10. Financial/Numeracy		82	4.1829**	.86250
11. Auditing		82	4.1707**	.88617
12. Technical Accounting		82	4.1707**	.90000
13. Time management		82	4.0854**	.94544
14. Think like the wrongdoer		82	3.9512**	1.57842
15. Simplify the information	5	77	3.9221**	1.20051
16. Critical Thinking	3	79	3.8987**	1.36433
17. Communication		82	3.8659**	1.05130
18. Team working		82	3.8415**	1.04786
19. Solve structured problems	1	81	3.5802**	1.16043

20. Commercial/business advisory		82	3.5244**	.70668
21. Legal		82	3.5000**	1.15737
22. Understand the goals of a case	1	81	3.3580**	1.12148
23. Research Skills	1	81	3.2222	1.20416
24. Information Technology		82	3.1707	1.28433
25. Identify key issues		82	3.1341	1.27427
Panel B - Least important				
26. Analytical proficiency		81	2.8148	1.31445
27. Interviewing		82	2.6220*	1.44564
28. Marketing	22	60	2.1500**	1.32544

[a]Based on the one sample *t*-test performed, the significance of the difference between the test value of 3 and the mean values are also indicated, where $^{**}p<.01$ and $^{*}p<.05$.
Source: Author constructed

The primary skill highlighted by the respondents was fraud risk assessment which the respondents perceived was required to perform forensic accounting services in Sri Lankan context (mean value of 4.5366). The second most highlighted skill was deductive analysis (mean value of 4.5122), which is the ability to take aim at financial contradictions that do not fit into the normal pattern of an assignment. Based on the responses received, the top ten skills perceived by the respondents were fraud risk assessment, deductive analysis, diagnostic, composure, unstructured problem solving, sociological skills, psychological skills, conceptual thinking, investigative, and financial/numeracy, which are also statistically significantly different with a test value of 3 and their respective mean values. It should be further highlighted that respondents placed a lower level of importance of less than 3 to skills such as *'marketing', 'interviewing' and 'analytical proficiency'*, out of which only marketing and interviewing skills were statistically significantly different with a test value of 3 and their respective mean values.

Table 3: Mean ranking – knowledge areas

Knowledge areas	Indicated as 'Not Applicable'	*N*	Mean[a]	SD
Panel A - Most important				
1. Accounting		82	4.4756**	.78921
2. Audit		82	4.4634**	.91887
3. Taxation		82	4.3293**	.88965
4. Business valuation		82	4.1220**	.99864
5. Fraud schemes		82	4.1098**	.96872
6. Reporting experts and testimony	3	79	4.0380**	.97984
7. Economic loss quantification		82	4.0366**	1.07088
8. Systems		82	4.0000**	.95581
9. Investigative techniques		82	3.9390**	.99812
10. Governance and ethics		82	3.7439**	1.22536
11. Information gathering		82	3.3415*	1.26900
12. Planning and preparation	9	73	3.1233	1.30112
13. Laws, courts and dispute resolution		82	3.1220	1.27066
14. Discovery	5	77	3.0000	1.45999
Panel B - Least important				
15. Professional responsibilities	6	76	2.6842	1.38766

[a]Based on the one sample *t*-test performed, the significance of the difference between the test value of 3 and the mean values are also indicated, where $^{**}p<.01$ and $^{*}p<.05$.
Source: Author constructed

The key knowledge area highlighted by the respondents was the knowledge of accounting which the respondents perceived was required to perform forensic accounting services in Sri Lankan context (mean value of 4.4756). Based on the responses received, the top ten knowledge areas perceived by the respondents were accounting, audit, taxation, business valuation, fraud schemes, reporting experts and testimony, economic loss quantification, systems, investigative techniques, and governance and ethics, which are also statistically significantly different with a test value of 3 and their respective mean values. It should be further highlighted that respondents placed a lower level of importance of less than 3 to knowledge of *'professional* responsibilities', which is not statistically significantly different with a test value of 3 and their respective mean values.

4.3 Quantitative content analysis – Status of forensic accounting education, in terms of course content, methods of delivery and methods of assessment

In assessing the second objective of the study, i.e. examining the status of forensic accounting education in terms of content, methods of delivery and method of assessment, the tables below of descriptive statistics illustrate the relative importance of the selected topics of forensic accounting within the collected 37 forensic accounting syllabuses of 20 foreign universities and two foreign institutes.

Table 4: Forensic accounting education – course content

Selected topics in Forensic Accounting	*N*	%	Selected topics in Forensic Accounting	*N*	%
1. Introduction to Forensic Accounting	37	100.0	14. Economics	18	48.6
2. Fraud Examination	32	86.5	15. Business Valuation, Bankruptcy and Insolvency	17	45.9
3. Fundamentals of Fraud	32	86.5	16. Real Life Case Studies	16	43.2
4. Corporate Governance and Ethics	32	86.5	17. Electronic and Cyber Crimes	14	37.8
5. Audit and Assurance	30	81.1	18. Taxation	12	32.4
6. Fraud Risk Assessment	29	78.4	19. Effective Report Writing	12	32.4
7. Investigative Procedures	28	75.7	20. Management Accounting	10	27.0
8. Financial Accounting	27	73.0	21. Interviewing Financially Sophisticated Witnesses	8	21.6
9. Legal System	27	73.0			
10. Financial Reporting Process and Analysis	27	73.0			
11. Research in Forensic Accounting	26	70.3	22. Contemporary Issues	4	10.8
			23. Business Intelligence	3	8.1
12. Business Analytics and Modelling	21	56.8	24. Forensic Accounting in Public Sector	2	5.4
13. Financial Reporting Standards and Principles	19	51.4	25. Intellectual Property	1	2.7
			26. Special Topics in Forensic Accounting	1	2.7

Source: Author constructed

It was observed that the top ten topics related to forensic accounting incorporated in selected forensic accounting syllabuses were introduction to forensic accounting (100%), fraud examination (86.5%), fundamentals of fraud (86.5%), corporate governance and ethics (86.5%), audit and assurance (81.1%), fraud risk assessment (78.4%), investigative procedures (75.7%), financial accounting (73%), legal system (73%), and financial reporting process and analysis (73%). However, '*special topics in forensic accounting'* (2.7%), '*intellectual property'* (2.7%), '*forensic accounting in public sector*' (5.4%), '*business intelligence*' (8.1%) and '*contemporary issues*' (10.8%) are the least frequently incorporated in forensic accounting syllabuses.

Table 5: Forensic accounting education – methods of delivery

Methods of Delivery	*N*	%
1. Textbooks and Articles	37	100.0
2. Lectures	36	97.3
3. Tutorials	27	73.0
4. e-Learning Techniques	25	67.6
5. Pre-Recorded Videos	17	45.9
6. Case Studies in Teaching	15	40.5
7. Discussion Groups	15	40.5
8. Workshops	11	29.7
9. Group Work Tasks in Teaching	10	27.0
10. Projects in Teaching	9	24.3
11. Seminars	7	18.9
12. Q & A Sessions in Teaching	3	8.1

Source: Author constructed

Results presented in Table 5 represent descriptive statistics of the learning mechanisms used in teaching a forensic accounting course using a quantitative content analysis of selected 37 forensic accounting syllabuses. The key methods of delivery are textbooks and articles (100%), lectures (97.3%), tutorials (73%), e-learning techniques (67.6%), pre-recorded videos (45.9%), case studies in teaching (40.5%) and discussion groups (40.5%). It is further observed that 54.1% of the selected syllabuses are conducted online, which is categorized as distance learning courses and no face-to-face interaction is not available, and the remaining 45.9% of the selected syllabuses are conducted on campus, where face-to-face interaction is available (not tabulated).

Table 6: Forensic accounting education – methods of assessment

Methods of Assessment	*N*	%
1. Examinations	37	100.0
2. Individual Reports and Essays	27	73.0
3. Dissertations	25	67.6
4. Group Consultancy Projects	15	40.5
5. Individual and Group Presentations	12	32.4

Source: Author constructed

Based on the quantitative content analysis of the selected syllabuses on method of assessment, it is highlighted that examinations (100%) are the major assessment method in selected courses and the next most significant methods of assessment are individual reports and essays (74%) and dissertations (67.6%).

4.4 Frequency analysis - forensic accounting services provided in Sri Lankan context

In assessing the third objective of the study, i.e. assessing the range and extent (in terms of revenue generation) of the forensic accounting services provided in Sri Lanka, the tables of descriptive statistics illustrate 14 forensic accounting services that were included in the questionnaire which the respondents have marked as 'offered by your firm' and if offered, to rank the top five forensic accounting services based on the revenue generated.

Based on the responses received for the questionnaire, 64.6% of respondents were aware of the forensic accounting services offered by their firms and 35.4% of respondents were not aware of the same (Table 1). Out of the respondents who are aware of the forensic accounting services, litigation support was the most frequently offered (54.7%) forensic accounting service (in public practice organizations), which is consulting expert service on business litigation and dispute advisory.

Table 7: Range of forensic accounting services

Forensic Accounting Services	*N*	%
1. Litigation Support	29	54.7
2. Risk Management in Forensic Accounting	25	47.2
3. Business Advisory in Forensic Accounting	24	45.3
4. Fraud examination (Lay Witness and Investigative Services)	22	41.5
5. Valuation of Damages	22	41.5
6. Regulatory Investigations in Forensic Accounting	20	37.7
7. Technology services in Forensic Accounting	18	34.0
8. Expert Witnessing	13	24.5
9. Business Analytics in Forensic Accounting	13	24.5
10. Contract Assessment	11	20.8
11. Corporate Misconduct Investigations	10	18.9
12. Personal Injury Assessment	9	17.0
13. Business Intelligence	6	11.3
14. Criminal Matters Investigations	3	5.7

Source: Author constructed

Based on the responses received for the questionnaire, the top five forensic accounting services are litigation support, risk management in forensic accounting, business advisory in forensic accounting, fraud examination (lay witness and investigative services) and valuation of damages. However, '*criminal matters investigations', 'business intelligence', 'personal injury assessment', 'corporate misconduct investigations'* and *'contract assessment'* are perceived as the least popular forensic accounting services.

Table 8: Extent of forensic accounting services in terms of revenue generation

	N	%	Ranking				
			1	**2**	**3**	**4**	**5**
1. Litigation Support	29	54.7	**20**	7	5		
2. Risk Management in Forensic Accounting	25	47.2	8	9	2	**6**	1
3. Business Advisory in Forensic Accounting	24	45.3	6	2	3	1	4
4. Fraud examination	22	41.5	4	3	**8**	7	
5. Valuation of Damages	22	41.5	8	**11**	2	5	1
6. Regulatory Investigations in Forensic Accounting	20	37.7	2	1		3	7
7. Technology services in Forensic Accounting	18	34.0		3	2	2	**8**
8. Expert Witnessing	13	24.5	3	4	6	2	
9. Business Analytics in Forensic Accounting	13	24.5		2	1		1
10. Contract Assessment	11	20.8		2	1	1	
11. Corporate Misconduct Investigations	10	18.9	2				
12. Personal Injury Assessment	9	17.0				3	
13. Business Intelligence	6	11.3			2	1	1
14. Criminal Matters Investigations	3	5.7			7		

Source: Author constructed

In assessing the extent of the forensic accounting services provided in Sri Lankan context (in terms of revenue generation), majority of respondents have ranked litigation support (37.7%) as the no. 1 ranking forensic accounting service, followed by valuation of damages (20.8%) at no. 2, fraud examination (15.1%) at no. 3, risk management in forensic accounting (11.3%) at no. 4 and finally technology services in forensic accounting (15.1%) at no.5.

Table 9: Future demand for forensic accounting Services

		N	%
Litigation Support	Unsure?	2	3.8
	Decrease?	1	1.9
	Remain the same?	22	41.5
	Increase?	28	52.8
Expert Witnessing	Unsure?	2	3.8
	Decrease?	2	3.8
	Remain the same?	23	43.4
	Increase?	26	49.1
Fraud examination (Lay Witness and Investigative Services)	Unsure?	1	1.9
	Decrease?	1	1.9
	Remain the same?	29	54.7
	Increase?	22	41.5

Source: Author constructed

Furthermore, based on the responses received for the questionnaire, majority of the respondents perceived an increasing demand for forensic accounting services such as, litigation support (52.8%) and expert witnessing (59.1%), whereas, 54.7% of the respondents highlighted that future demand for fraud examination will remain at the same level.

4.5 Discussion

This section discusses the key findings from the analysis performed and highlights the consistency or inconsistency of the findings with extant literature on this subject. Subsequent to the demographic analyses performed, the study identified the most and least important *skills and knowledge areasrequired to provide the forensic accounting services*. The findings depicted in Table 2, are consistent with the previous studies of Digabriele (2008) in the USA and Okoye and Jugu (2010) in Nigeria who highlighted, deductive analysis as one of the most important skill to perform forensic accounting services, and analytical proficiency and legal skills as least important skills required to perform the same services. In contrast to the US study by Digabriele (2008), Okoye and Jugu (2010) highlighted composure as one of the more important skills which is consistent with the current study. However, the results of the previous studies of Bhasin (2013), Davis et al. (2009) and Arežina et al. (2014) are not consistent with the current study, in highlighting the most and least important skills. Moving on to the other factor, i.e. knowledge areas, respondents perceived that the knowledge of accounting and auditing are key to perform forensic accounting services, whereas knowledge on professional responsibilities have placed as least important. This finding is also consistent with the findings of Tiwari and Debnath (2017) who reported that knowledge required for forensic accountant as auditing, accounting, statistics, information technology, legal, human-behaviour knowledge.

Subsequent to the first objective, the study identified *status of forensic accounting education, in terms of content, methods of delivery and methods of assessment*. Findings depicted in Table 5 based on quantitative content analysis, indicates that majority of the selected forensic accounting syllabuses have more frequently included; introduction to forensic accounting, fraud examination, fundamentals of fraud, corporate governance and ethics, audit and assurance, fraud risk assessment, investigative procedures, financial accounting, legal system, financial reporting process and analysis, research in forensic accounting, business analytics and modelling and financial reporting standards and principles in their syllabuses. This finding is consistent with the previous studies of Rezaee and Burton (1997), Brooks and Lebelle (2006) and Akyel (2012), who have reported 50 topics in forensic accounting based on perception of academicians and practitioners. The same forensic accounting topics have been reduced to four modular topics as (1) Investigation and law, (2) Fraud and fraud auditing, (3) Financial reporting process and (4) Ethics. However, the study conducted by Wickramasinghe and Anthony (2017) in Sri Lankan context, has concluded by identifying 12 most important areas, out of which, indirect methods of reconstructing income, proper evidence management litigation support in special situations, employee fraud: the misappropriation of assets, and money laundering and transnational financial flows have not been covered in the findings of the current study. Moving on to the other factor, i.e. status of forensic accounting education, in terms of methods of delivery, findings indicate that the key methods of delivery are textbooks and articles, lectures, tutorials and e-learning techniques. This finding is consistent with the previous study of Rezaee et al. (2004) who found that, most commonly used learning mechanisms in teaching a forensic accounting course are cases, textbooks, research projects, guest speakers, and videos. It is further observed that, majority of the selected courses are conducted online, and the remainder on campus. This finding was not highlighted in previous studies done on this regard. Based on the content analysis of the selected syllabuses, it is highlighted that examination, individual reports and essays and dissertation are the most frequently used methods of assessment. As far as the researchers observes, these findings were not available in previous research studies performed on this subject. Further, it is observed that 31 out of 37 are separate forensic accounting courses and 6 are integrated into accounting and auditing courses. This finding is consistent with the previous study of Rezaee and Burton (1997), who reported that CFE practitioners required a separate forensic accounting course. However, the studies of Rezaee et al. (2004) and Zango (2012) are not consistent with the current study.

Subsequent to the second objective, the study identified *range and extent (in terms of revenue generation) of the forensic accounting services provided in Sri Lankan context*. The findings depicted in Table 7, are consistent with the previous studies of Okoye and Akenbor (2009) in Nigeria, Bhasin (2017) in India and Akkeren et al. (2013) in Australia, who highlighted, litigation support, investigative accounting, valuation and damages assessment and advisory services as frequently offered forensic accounting services in their respective regions. Considering the extent (in terms of revenue generation) of the forensic accounting services provided in Sri Lankan context, of respondents have ranked litigation support, valuation of damages, fraud examination, risk management in forensic accounting and technology services in forensic accounting as top five forensic accounting services provided in their firms in terms of revenue generated. This finding was not highlighted in previous studies done on this regard. Further, the respondents perceived that the future demand for litigation support and expert witnessing will increase, however, future demand for fraud examination will remain the same in Sri Lankan context. This finding is partially consistent with the findings of Rezaee et al. (2004) in the USA, Rezaee et al. (2014) in China and Bhasin (2017) in India who reported that all three mainstream forensic accounting service will increase in future. Comparison of these results with those of Rezaee et al. (2004) and Rezaee et al. (2014) indicates that Sri Lankan respondents felt that the demand for fraud examination practice of forensic accounting will remain at the same level than that in the United States and in China.

5. Conclusion

Fraud has existed over many generations. In the past two decades, many prominent financial scandals such as Enron, WorldCom and Satyam have been witnessed. And, opportunities for forensic accountants are growing rapidly all around the globe with special emphasis in most of the Asian countries, as well as all developed, developing and emerging nations. There are three main research objectives dealt with in this research: to examine the relevant skills and knowledge areas required for forensic accounting services; to assess the status of forensic accounting education, in terms of course content, methods of delivery and methods of assessment; and to examine the range, extent (in terms of revenue generation) and future demand of the forensic accounting services provided in Sri Lankan context. In order to achieve the first and third objectives of this study, a self-administered structured questionnaire was developed with the help of a comprehensive literature review. It was refined according to expert opinion, and 82 usable questionnaires were secured. In order to achieve the second objective, a quantitative content analysis was used to identify the three themes in relation to the study sample of 37 syllabuses of forensic accounting-related courses available online.

In terms of findings, mean ranking and one same *t*-test analyses were performed with the data received in order to examine the *most important* and *least important* skills and knowledge required to provide forensic accounting services. The five ten skills perceived by the respondents are *fraud risk assessment, deductive analysis, diagnostic, composure* and *unstructured problem solving*, which are also statistically significantly different with a test value of 3 and their respective mean values, and skills such as *marketing, interviewing and analytical proficiency* perceived as least important. Similar findings have been reported in previous studies done by Digabriele (2008) in the USA and Okoye and Jugu (2010) in Nigeria. Further, the top five knowledge areas were *accounting, audit, taxation, business valuation* and *fraud schemes* whereas, the least mean ranked knowledge area was *professional responsibilities*. This finding is also consistent with the findings of Tiwari and Debnath (2017), who reported that knowledge required for forensic accountant was auditing and accounting.

In achieving the second objective of the study, a quantitative content analysis was performed, and the findings indicate that the majority of the selected forensic accounting syllabuses had incorporated topics such as *introduction to forensic accounting, fraud examination, fundamentals of fraud, corporate governance and ethics, audit and assurance, and fraud risk assessment*. This finding is consistent with the previous studies of Rezaee and Burton (1997), Brooks and Lebelle (2006) and Akyel (2012). However, this study is only partially consistent with the study conducted by Wickramasinghe and Anthony (2017) in the Sri Lankan context. Further, the key methods of delivery in forensic accounting courses are *textbooks and articles, lectures, tutorials and e-learning techniques*, which are consistent with the study of Rezaee et al. (2004). It was further observed that the majority of the selected courses were conducted *online*, and the remainder *on campus*. This finding was not highlighted in previous studies done on this regard. Finally, in relation to the second objective, it was highlighted that *examinations, individual reports and essays and dissertations were the most frequently used methods of assessment.* Findings about this were not available in previous research studies.

As the final objective, the study identified the range and extent (in terms of revenue generation) of the forensic accounting services provided in Sri Lanka. The most frequently offered forensic accounting service is *litigation support*, *risk management in forensic accounting, business advisory in forensic accounting*, and *fraud examination* while the least frequent service is *criminal matters investigations, business intelligence, personal injury assessment, corporate misconduct investigation* and *contract assessment*. These findings are consistent with the previous studies of Okoye and Akenbor (2009) in Nigeria, Bhasin (2017) in India and Akkeren et al. (2013) in Australia. Considering the extent of the forensic accounting services provided in Sri Lanka, respondents have ranked *litigation support, valuation of damages, fraud examination, risk management in forensic accounting and technology services in forensic accounting* as the top five forensic accounting services provided in their firms in terms of revenue generated. This is not observed in previous research studies. The findings indicate that the future demand for *litigation support* and *expert witnessing* will increase. However, future demand for *fraud examination* will remain the same. This finding is partially consistent with the findings of Rezaee et al. (2004) in the USA, Rezaee et al. (2014) in China and Bhasin (2017) in India.

In terms of significance, this study focuses on both the supply and demand sides of forensic accounting service and education, and attempts to provide information that may be useful for universities and professional bodies planning to offer a course in forensic accounting in light of the most recent changes in the business environment and the accounting profession in Sri Lanka. The findings of this study should be interpreted subject to certain caveats. Accordingly, it should be highlighted that only professional accountants in public practice were considered in this study. However, the spread of the Big three and other practicing firms ensured that a sufficiently broad range of views were captured. Perhaps, a future study can consider the perceptions of non-accounting professionals such as attorneys, and identify the differences in their perceptions

References

Accounting Professional & Ethical Standards Board (APESB) 2015, *APES 215 - Forensic accounting services*, APESB, Australia.

Akkeren, JV, Buckby, S & MacKenzie, K 2013, 'A metamorphosis of the traditional accountant: an insight into forensic accounting services in Australia', *Pacific Accounting Review*, vol. 25, no. 2, pp. 188- 216.

Akyel, N 2012, 'Forensic accounting training: a proposal for Turkey', *Social and Behavioral Sciences,* vol. 55, pp. 77-86.

American Institute of Certified Public Accountants (AICPA) 2004, *Forensic and litigation services committee and fraud task force: Discussion memorandum. forensic services, audits, and corporate governance: bridging the gap*, AICPA, New York.

Arežina, N, Knežević, G, Simeunović, N & Vukićević S 2014, 'Forensic accountant: innate trait or acquired skill?' *FINIZ 2014 - The Role of Financial Reporting in Corporate Governance*, Singidunum University, Serbia.

Arokiasamy, L & Cristal-Lee, S 2009, 'Forensic accounting: public acceptance towards occurrence of fraud detection', *International Journal of Business and Management,* vol. 1, pp. 145-160.

Association of Certified Fraud Examiners (ACFE) 2016, *Report to the nations on occupational fraud and abuse*, viewed 23 October 2017, https://s3-us-west-2.amazonaws.com/acfepublic/2016-report-to-the-nations.pdf

Berelson, BR 1952, *Content analysis in communication research*, Free Press, New York.

Bhasin, ML 2007, 'Forensic accounting: a new paradigm for niche consulting', *The Chartered Accountant*, vol. 1, pp. 1000-1010.

Bhasin, ML 2013, 'Survey of skills required by the forensic accountants: evidence from a developing country', *International Journal of Contemporary Business Studies*, vol. 4, no. 2, pp. 54-86.

Bhasin, ML 2015, 'Forensic accounting: perspectives and prospects', *The Pakistan Accountant Journal*, vol. 1, pp. 44-48.

Bhasin, ML 2016, 'Contribution of forensic accounting to corporate governance: an exploratory study of an Asian country', *International Business Management*, vol. 10, pp. 479-492.

Brooks, LJ & Labelle, R 2006, 'CAP forum on forensic accounting in the post-Enron world: education for investigative and forensic accounting', *Canadian Accounting Perspectives*, vol. 5, pp. 287-306.

Burns, N & Grove, SK 2005, *The practice of nursing research: conduct, critique, and utilization*, 5th edn, Elsevier Saunders, St. Louis.

Covaleski, JM 2003, 'Many top growth areas resolve around synergy of CPA/attorney relationship', *Accounting Today*, 18 March.

Crumbley, DL 2006, 'Forensic accountants appearing in the literature', *Journal of Forensic Accounting*, vol.13, no. 25, pp. 223-245.

Davis, C, Farrell, R & Ogilby, S 2010, *Characteristics and skills of forensic accountants*, AICPA, New York.

Dhar, P & Sarkar, A 2010, 'Forensic accounting: an accountant's vision', *Vidyasagar University Journal of Commerce*, vol. 15, no. 3, pp. 93-104.

DiGabriele, JA 2008, 'An empirical investigation of the relevant skills of forensic accountants', *Journal of Education for Business*, vol. 1, pp. 331-338.

Grippo, FI & Ibex, IW 2003, 'Introduction to forensic accounting', *The National Public Accountant*, vol. 4, pp.4-8.

Harris, CK & Brown, AM 2000, 'The qualities of a forensic accountant', *Pennsylvania CPA Journal*, vol. 71, pp. 2–3.

Hopwood, WS, Leiner, J, & Young, GR 2008, *Forensic accounting*, New York.

Lanka Business Online 2017, 'CA Sri Lanka members recognized as forensic accounting specialists', 5 May, viewed 12 October 2017, http://www.lankabusinessonline.com/ca-sri-lanka-members-recognized-as-forensic-accounting-specialists/

Manning 2002, *Financial investigation and forensic accounting,* CRC Press, USA.

McPhail, K 1999, 'The threat of ethical accountants: an application of Foucault's concept of ethics to accounting education and some thoughts on ethically educating for the other', *Critical Perspectives on Accounting*, vol. 10, no. 6, pp. 833-866.

Messmer, M 2004, 'Exploring options in forensic accounting', *National Public Accountant*, vol. 5, pp. 9–20.

Okoye, E & Akenbor, O 2009, 'Forensic accounting in developing economies: problems and prospects', *The University Advanced Research Journal,* vol. 1, pp. 1-2.

Okoye, EI & Akamobi, NL 2009, 'The role of forensic accounting in fraud investigation and litigation support', *The Nigerian Academic Forum*, vol. 10, no. 7, pp. 39-44.

Okoye, EI & Jugu, YGR 2010, 'An empirical investigation of the relevant skills of forensic accountants in Nigeria', *Journal of Knowledge Management*, vol. 1, no. 2, pp. 34-47.

Özkul, FU & Pamukçu, A 2012, 'Fraud detection and forensic accounting', *Emerging Fraud*, vol. 1, pp. 19-41.

Pearson, TA & Singleton, TW 2008, 'Fraud and forensic accounting in the digital environment', *Issues in Accounting Education,* vol. 23, no. 4, pp. 545-559.

Ramaswamy, V 2005, 'Corporate governance and the forensic accountant', *CPA Journal*, vol. 75, pp. 68–70.

Rezaee, Z & Burton, JE 1997, 'Forensic accounting education: insights from academicians and certified fraud examiner practitioners', *Managerial Auditing Journal*, vol. 12, no. 9, pp. 470-489.

Rezaee, Z, Crumbley, L & Elmore, R 2004, 'Forensic accounting education: a survey of academics and practitioners', *Advances in Accounting Education Teaching and Curriculum Innovations*, vol. 6, pp. 193-232.

Rezaee, Z, Lo, D, Ha, M & Suen, A 2016, 'Forensic accounting education and practice: insights from China', *Journal of Forensic & Investigative Accounting*, vol. 8, no. 1, pp. 106-119.

Smith, GS & Crumbley, L 2009, 'Defining a forensic audit', *Journal of Digital Forensics, Security and Law*, vol. 4, no. 1, pp. 61-79.

Thilakerathne, PMC 2010, 'Necessity and importance of developing forensic accounting services in Sri Lanka to mitigate corporate failures', *Research Symposium 2010*, University of Kelaniya, Sri Lanka.

Thornhill WT 1995, *Forensic accounting: how to investigate financial fraud*, Irwin Professional Publishing, New York.

Tiwari, RK & Jasojit Debnath, J 2017, 'Forensic accounting: a blend of knowledge', *Journal of Financial Regulation and Compliance*, vol. 25, no. 1, pp. 73 - 85.

Transparency International Sri Lanka 2017, 'Sri Lanka Ranked 95th out of 176 countries in the 2016 Corruption Perception Index', 25 January, viewed 2 November 2017 http://www.tisrilanka.org/sri-lanka-ranked-95th-out-of-176-countries-in-the-2016-corruption-perception-index

Wickramasinghe, LLS & Anthony, CSW 2017, 'Forensic and investigative accounting education in accounting curriculum in Sri Lanka', *ICARE Magazine - International Conference for Accounting Researchers and Educators*, pp. 37 -41.

Peterson, KO 2015, 'Forensic accounting and fraud: a review of literature and policy implications', International Journal of Accounting and Economic Studies, vol. 3, no. 1, pp. 63-68.

Zango, AG 2012, 'The relevance of forensic accounting education in financial reporting', Umaru Musa Yar'adua University, Working Paper Series.

Appendix 1

50 topics in forensic accounting tested in the studies conducted by Rezaee and Burton (1997), Rezaee et al. (2014), Brooks and Lebelle (2006) and Akyel (2012)

1. Fundamentals of fraud	2. Legal elements of fraud
3. Theory and methodology of fraud examination	4. Trial and cross-examination
5. Valuation expert in divorce	6. Rules of evidence
7. Careers in forensic accounting	8. Expert testimony and expert witness techniques
9. Professional organizations sponsoring forensic accounting	10. Principles of ethics and corporate code of conduct
11. Anti-fraud criteria	12. Fraud detection and deterrence programs
13. Anti-fraud education	14. Internal control evaluation
15. Anti-fraud controls	16. Conducting internal investigations
17. Anti-fraud training	18. Resolution of allegations of misconduct
19. Anti-fraud auditing standards	20. Financial reporting process and analysis
21. Shareholder litigation	22. Environmental and business red flags
23. Professional standards pertaining to forensic accounting	24. Statistical sampling
25. Types of fraud (e.g., employees, management)	26. Corporate governance
27. Financial statement fraud	28. Bribery and corruption investigation
29. Modelling and discounting future damages	30. Business valuations and cost estimates
31. Financial reporting standards and principles	32. Compliance with applicable laws and regulations
33. Interview skills and legal aspects of interviews	34. Cyber and computer fraud
35. Security and privacy	36. Criminology and white-collar and economic crimes
37. Analytical procedures	38. Earnings management
39. Conflicts of interest investigating techniques	40. Elements of fraud: pressure, opportunity, and rationalization
41. Techniques in locating hidden assets	42. Intellectual property fraud
43. Crime control techniques	44. Manipulation of related party transactions
45. Litigation consulting techniques	46. Occupational fraud
47. Effective report writing	48. Cooking the books and problems in accounting
49. Knowledge of the legal system	50. Ethical misconduct

Appendix 2 - List of Universities and Institutions which are offering forensic accounting courses, and selected for the study sample

University/Institution	Country	No. of forensic accounting related courses offered
Brentwood Open Learning College	United Kingdom	02
West Virginia University	The United States of America	01
Northumbria University	United Kingdom	02
University of Portsmouth	United Kingdom	02
University of South Wales together with ACCA	United Kingdom	02
Asia Pacific University of Technology and Innovation (APU)	Malaysia	02
Sheffield Hallam University	United Kingdom	02
Queensland University of Technology (QUT)	Australia	01
Universiti Teknologi Mara (UiTM)	Malaysia	02
Golden Gate University	The United States of America	03
De Montfort University	United Kingdom	01
New England College	United Kingdom	01
Embry-Riddle Aeronautical University	The United States of America	01
University of Toronto	Canada	01
Vancouver Island University	Canada	01
Southern New Hampshire University	The United States of America	02
University of Wollongong	Australia	02
RMIT University	Australia	03
Swinburne University of Technology	Australia	01
Monash University	Australia	01
The Institute of Chartered Accountants of India	India	01
Sherlock Institute of Forensic Science (SIFS) India	India	01
Webster University	The United States of America	01

Source: Author Constructed