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Editors' Note

It is with much pleasure we forward the publication of the first issue of the Sri Lanka Journal of management Studies (SLJMS). More importantly this launch is aligned with the inauguration ceremony of Faculty of Management Studies at the Open University of Sri Lanka. We would like to dedicate the first issue of this precious journal for late professor Sudatta Ranasinghe, Professor of Management Studies, Open University of Sri Lanka, with utmost respect. The contribution made by late Professor Sudaththa Ranasinghe for the upliftment of the Department of Management Studies, Faculty of Humanities and Social Sciences in particular and the Open University of Sri Lanka in general is noteworthy and immeasurable

I take this opportunity to thank authors, editors, and reviewers, all those that have volunteered to contribute to the success of this Journal. This issue has articles from different domains in Management such as Marketing, Financial Management, Human resources, and Microfinance. We invite all researchers, specialists, and professionals in various disciplines in Management Studies to make a worthy contribution to the upcoming issue of this journal in December 2019. If you have any questions, suggestions, or concerns, please address them to nabey@ou.ac.lk. I look forward to your valuable contributions in our journey together in the future with a view to realizing full potential of SLJMS.

Profound Regards,

Professor Nalin Abeysekera
Editor in Chief

DETERMINANTS OF RISK DISCLOSURE IN COMMERCIAL BANKS OF SRI LANKA

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Abstract

The purpose of the study is to investigate the determinants of risk disclosures in commercial banks in Sri Lanka. The theoretical framework is developed based on agency theory and the creation of a risk disclosure index (RDI) based on International Financial Reporting Standard (IFRS) 7, Basel II: market discipline and prior literature. Data was collected from annual reports of 10 commercial banks and interim financial statement from Colombo Stock Exchange over the period of 2007-2016 total of 92 annual reports were considered for analysis. The findings reveal that implementation of IFRS 7 and Basel II: market discipline standards raised the extent of risk disclosure in market, credit, liquidity and operational risks associated with commercial bank of Sri Lanka. The effect can be attributed to regulatory requirement executed by central bank of Sri Lanka. The study also found that determinants of disclosure vary across types of risk, bank size, the number of risk committees and board size. The existence of an integrated risk management committee has a significant impact on all types of risk disclosures. Further, findings show that there is no significant impact of leverage on risk disclosure of commercial bank in Sri Lanka. These findings will help regulatory agencies in Sri Lanka and elsewhere in monitoring banking institutions by identifying the impact of standards. Both existing and potential clients of banks can use these findings in strategically choosing their preferred bank of interest.

Keywords: Annual Report, Risk Disclosure, Agency Theory, Risk Management

Introduction

In this age of globalization with the rapidly changing business environment, firms are automatically placed into a more vulnerable position to risks. As this affects to all operations and decision making process of business firms, banks as well as stakeholders, disclosure of risk become more important part. The global financial crisis in year 2007/2008 also created significant concerns about risk disclosures by financial institutions. Introduction of IFRS 7 by International Accounting Standards Board adds to the quality of risk disclosure practices to be exercised by all preparers of financial statements. It is expected to provide existing and potential investors the opportunity to better evaluate risk exposures of entities holding material financial assets and liabilities. Basel II simultaneously introduced a regulatory framework for risk disclosure and shifted the regulatory focus from top-down to bottom-up governance, prompting increased reliance on self-evaluation and market discipline.

The financial sector has faced a lot of difficulties in the past few decades in Sri Lanka. The major cause of serious banking problems continues to be directly related to credit standards for borrowers and counterparties, poor portfolio risk management, or lack of attention to changes in economic or other circumstances that can lead to deterioration in the credit standing of a bank's counterparties. In unstable economic environments, interest rates charged by banks are fast over-taken by inflation and borrowers find it difficult to repay loans as real income falls, insider loans increase and over concentration in certain portfolios increases giving rise to credit risk.

When the financial and banking sector become more competitive, new risk management banking techniques emerged to manage the different types of risk. The risk that mostly applicable to banks are credit risk, operational risk, liquidity risk, market risk and equity risk. The Global financial crisis (2007-2008) also created a requirement of risk mitigation. Risk disclosure is the latest concern on risk mitigation. Financial markets are well informed, and entry is efficient. However, potential attempts for more transparency by additional disclosure requirements introduce a commitment device that provides incumbents with incentives to distort risk management (Hoang & Ruckes, 2017). Improvements in risk disclosure play an important role in protecting stakeholders' interests and accordingly, they are an important part of the corporate governance reforms (Solomon et al., 2000). At the same time, in order to generate trust and gain social legitimacy, firms have responded to the increasing stakeholders' pressures by voluntarily disclosing a greater amount of risk-related information (Abraham & Cox, 2007). Management should disclose information that enables users of its financial statements to evaluate the nature and extent of risks arising from financial instruments to which the entity is exposed at the end of the reporting period [IFRS 7 para 31]. The disclosures require focus on the risks that arise from financial instruments and how they have been managed. Therefore, present study aims to investigate the extent of risk disclosure and find the factors determining the risk disclosures in annual reports of commercial banking sector in Sri Lanka.

Research Objectives

The main objective of the study is to examine the risk disclosure in commercial banking sector in Sri Lanka. The study aims to find out how far to which extent they have disclosed their risks in annual report according to the regulatory frame work.

The specific aims of the study are:

- To identify the level of risk disclosure in commercial banks in Sri Lanka.
- To investigate the determinants of risk disclosure in commercial banks in Sri Lanka.
- To identify the most significant determinant /determinants influence on risk disclosure in commercial banks in Sri Lanka.

Literature Review

Risk disclosures may be part of an organizational strategy in order to manage public expectations and to justify corporate risk management (Power, 2007; Gabillon & Gabillon, 2012). According to the most recent study carried out by the Institute of Chartered Accountants in England and Wales (ICAEW, 2011), it is important that companies disclose information related to their experience of risk as well as the lessons that they have learnt over time. In the absence of specific regulations, managers decide both the type and the amount of risk information to be disclosed (Beretta & Bozzolan, 2004). Therefore, it is

necessary to analyze the reasons why companies decide to voluntarily disclose corporate risk information.

The studies of corporate risk reporting were performed in relation to several aspects in several countries. Dobler (2008) has performed a study about incentive for risk reporting by extensive comparison of disclosure standards in several countries, especially the developed ones such as USA, UK and Germany. After making comparison with the standards used in different part of the world an explanation on risk reporting incentive based on existing framework such as Agency theory, Proprietary theory, and Signalling theory was given. In addition, the study of Ball, Robin, and Wu (2002) further examined the incentive for risk reporting in the case of Asian countries.

Apart from the study on reporting standards, numbers of researches in this field were carried out to learn about several determinants of corporate risk disclosures. For instance, Linsley and Shrivs (2006) have studied about factors that affect level of company's risk reporting based on the sample of 79 UK listed companies. They hypothesized company's size and level of risk as two determinants of the risk disclosures and a positive association between them were observed. This result is in accordance with another study of Beretta and Bozzolan (2004), which was done based on data of Italian firms. It is also in accordance with many similar studies that were performed in social disclosures field, namely Beattie et al. (2004), Firth (1979), Hossain et al. (1995), and Hackston and Milne (1996). Nevertheless, there has been a contradictory result from the study of Campbell et al. (2003) on UK companies. The existing literature on risk disclosure focusses on specific disclosure items (e.g. operational risk or market risk or liquidity risk) or on a specific section (e.g. management report) in the annual report (Dobler et al., 2011). Previous literature has examined risk disclosures and performance, value, and stock price decisions (Aebi et al., 2012; Amran et al., 2009; Beasley et al., 2005; Hoitash et al., 2009). These studies noted the inadequacy of, and the qualitative and backward looking nature of risk disclosure. Kajüter (2006) and Linsley and Lawrence (2007) highlighted the vagueness and inadequacy of disclosures for determining risk profile and the unstandardized presentation of risk disclosures in annual reports (Oliveira et al., 2011).

Ahmed and Courtis (1999) used leverage to measure level of company's risk and identified that there is no significant relationship between this index and level of risk reporting. A similar result was discovered by Hossain et al. (1995), Adamu (2013), Oliveira et al., (2006), Meek et al. (1995), Raffournier (1995) and Hossain et al. (1995). In contrary to this finding, Malone et al., (1993) and Deumes and Knechel (2008) found a positive relationship between the extent of disclosure and financial leverage. Ntim et al. (2011) investigated the association between corporate governance and risk disclosure in South Africa. Barakat and Hussainey (2013) examined direct and joint effects of bank governance, regulation, supervision and risk reporting for European banks, proxied by operational risk disclosure. Setiyono and Tarazi (2014) investigated the impact of the correspondence of disclosure and proprietorship structure on bank risk. The point of the study conducted by Lipunga (2014) was to assess the level of risk disclosure level in yearly reports expressed by the Malawian commercial banks; the study additionally researched the impact of profitability on level of risk disclosed. Barakat and Hussainey in 2013 explored impact of the bank governance, regulation, and supervision on the quality of risk

reporting in the banking industry. The analyst utilized these components as intermediaries for ORD in test of European banks.

Ashfaq et al (2016) found the determinants of quantity as well as quality of the risk disclosures in annual reports of banking sector of Pakistan. Nahar et al (2015) investigated the extent of risk disclosure and the factors determining the same for all listed banks in Bangladesh. The implementation of IFRS 7 and Basel II: market discipline standards for banks in Bangladesh were further investigated in their study.

Theoretical Perspective and Hypotheses

Number of Risk Committees (RC)

Agency theory assists in explaining managers' motivation to make corporate disclosures when regulations are absent. The principal-agent relationship should efficiently use information in the organisation to minimise information asymmetry and risk bearing costs (Eisenhardt, 1989). Monitoring of risk governance instruments can reduce uncertainty and increase flow of information (Aebi et al., 2012). In the absence of monitoring mechanisms, such as RC, managers are more likely to be opportunistic by manipulating or making misleading disclosures (Latham and Jacobs, 2000). Dedicated and prudent RC can efficiently monitor risk exposure, policies and procedures affecting loans, non-performing loans, market and operational areas. The monitoring mechanism of RC underlies the risk governance characteristics of banks. By measuring, monitoring and maintaining an acceptable level of risks, RC assist banks to improve their sustainable risk management processes, strengthen their monitoring mechanisms, and achieve their strategic risk management policy. Banks RC can manage risk strongly ensuring better corporate governance. (Mongiardino & Plath 2010; Aebi et al., 2012). This is consistent with the notion that RC review and update risks on Asymmetric basis. Information asymmetry can also be reduced by monitoring managerial attitude (Jensen & Meckling, 1976). Having a risk committee indicates better risk management and better corporate governance (Aebi et al., 2012; Lajili, 2009) compared with not having one. Therefore, following hypotheses are generated for exploring the relationship between the number of RC and the extent of risk disclosure.

H1: There is a positive association between the number of RC and the extent of risk (market, credit, liquidity, operational and equities) disclosure.

Level of Debt in Capital Structure

In an active capital market, disclosure reduces information asymmetry and hence lessens the monitoring burden between principals and agents. If managers choose not to disclose relevant information in annual reports, the information gap results in less transparency (Marshall & Weetman, 2002) and also it results in a possible conflict of interest concerning principal and agent.

For example, adverse selection may arise because of misrepresentation of the agent's abilities. Therefore, companies disclose risk-related information to explain the causes of high-level risks to creditors and thus provide justification and explanation for inside information concerning the business (Linsley & Shrivs, 2006). Agency cost is

greater in highly leveraged company because a large percentage of debt allows higher potential wealth transfers from debt holders to shareholders (Jensen & Meckling, 1976). Thus, agency theory predicts that corporate disclosures are expected to increase with leverage. Therefore, the following hypothesis is formulated between two variables.

- H2. There is a positive association between leverage and the extent of risk (market, credit, liquidity, operational and equities) disclosure.

Bank size

The literature suggests that size is an important factor in examining accounting disclosures and its measurement can benefit all of the theories. However, when comparing banks, it is important to recall that the volume of total assets substantially affects a bank's riskiness. Laeven et al., (2014) found strong evidence that individual and systemic risk increases with bank size. This is consistent with the presence of agency conflicts in large organisations as well as with the hypothesis that regulators are reluctant to unwind banks that are too big to fail, leading them to take on excessive risks. (Linsley & Shrive, 2006) have documented a positive relationship between firm size and disclosure. Accordingly, the third hypothesis is formulated as follows,

- H3. There is a positive association between bank size and the extent of risk (market, credit, liquidity, operational and equities) disclosure.

Existence of Risk Management Unit (RMU)

Jensen and Meckling (1976) hypothesised that if principals and agents seek to maximise their own self-interest, agents become opportunistic and maximise their own welfare by serving their own best interest. As a result, they do not pursue the maximisation of principals' wealth. However, using a monitoring system through financial disclosure may assist to reduce the agency problem (Miller & Noulas, 1996). Without appropriate skills and abilities, the agent makes wrong decisions regarding the organisation's policies and disclosure decisions. Therefore, professional legitimacy could be achieved by establishing a RMU to manage the overall risk management strategy, lessen agency problems and at the same time increase risk disclosure. That is, stronger risk communication is expected in annual reports of these organisations compared to those that do not have a RMU. The RMU has the unique responsibility of risk management and monitoring processes and practices that inform risk information provided to that section of the bank responsible for compiling disclosures in the annual report. Therefore, the following hypothesis is developed between presence of RMU and extent of risk disclosure.

- H4. The presence of a RMU is positively associated with the extent of risk (market, credit, liquidity, operational and equities) disclosure.

Board Size

According to agency theory, greater boards are bad and corrupt, while smaller boards are good and effective in terms of enhancing performance and disclosure (Jensen & Meckling, 1976). Free rider problems between executives, expanded decision making time, raised costs. Poor communication and monitoring could all have an adverse effect on disclosure levels and good practice. Jensen, (1993), Guest (2008) and Coles et al. (2008) documented a negative relationship between board size and disclosure and performance. However, stakeholder theory describes that larger boards provide greater access to the management to the external environment, (Ntim et al., 2013). Moreover, resource dependence theory indicates that boards having large number of member improve the base of the knowledge on which business opinion may be required. This in turn increases managements' aptitude to engage in improved business decisions (Ntim et al., 2013). Moreover, Chen and Jaggi (2000) argued that a large number of directors on the board could lessen the information asymmetry issue and instigate more disclosure. However, more directors could course less efficiency in relation to monitoring management. Also, Healy and Palepu (2001) confirmed that the number of directors on the board could affect its control and monitoring operations, though disclosure is regarded as a monitoring item that could be increased. Khurram et al., (2016) found that banking institutions operating in Pakistan may improve their own RDQ and quantity by appointing independent outside board directors. Hence, there is a contrary evidence on the relationship between risk disclosure and size of the board. Based on the stakeholder theory and dependence theory, this study generated following hypothesis between board size and extent of risk disclosure.

H5: There is a positive relationship between risk disclosure and board size.

Methodology

The goal of this study is to add to the literature on risk disclosures, in part the empirical scarcity in risk disclosure studies in developing countries, particularly across periods prior and after the global financial crisis and also in relation to different types of risk, using a sample of all listed commercial banks in Sri Lanka, a developing country. The population of the study comprises 25 commercial banks including 13 licensed commercial banks and 12 foreign banks in Sri Lanoka. Data was collected from annual reports of 10 commercial banks and Interim financial statement from Colombo Stock Exchange over the period of 2007-2016 covering of 92 annual reports for analysis.

In this study a Risk disclosure index is developed based on International Financial Reporting Standard (IFRS) 07, Basel II –market discipline and prior literature. Therefore, with the Risk disclosure index the extent of risk disclosure can be quantified, and also the determinants of it can be identified. The Risk disclosure index developed by considering five major risks in banking industry (credit risk, operational risk, liquidity risk, market risk, equity risk) and also five factors that can determine the risk disclosure. They are number of Risk committees, Level of debt in capital structure, Size of the bank, Existence of Risk management unit and Size of the Board.

The index was developed in two phases. In the first phase, an extensive review of prior studies provided the common items across the studies and it also help to identify the

items for an initial benchmark risk disclosure index for each component. These items were then categorised under regulatory requirements (IFRS 7[2], Basel II: market discipline).

In the second phase, additional items from the regulatory framework requirements were included within the benchmark risk disclosure index. In total, 91 items constitute the risk disclosure index for this paper and according to the characteristics of disclosed risks, they are grouped into market, credit, liquidity, operational and equities risks. For each risk item score of “1” indicates that the particular risk is disclosed in the banks’ annual reports and “0” not disclosing in their annual reports. The following multiple regression models were constructed based on various risk disclosure components (market, credit, liquidity, operational and equities) to explore the determinants of these risk disclosure components.

$$RDI = a + b_1(\text{number of RC}) + b_2(\text{leverage}) + b_3(\text{bank size}) + b_4(\text{presence of a RMU}) + b_5(\text{board size}) + e$$

$$MRDI = a + b_1 RC_{it} + b_2 DE_{it} + b_3 LnTA_{it} + b_4 RMU_{it} + b_5 BS_{it} + e$$

$$CRDI = a + b_1 RC_{it} + b_2 DE_{it} + b_3 LnTA_{it} + b_4 RMU_{it} + b_5 BS_{it} + e$$

$$LRDI = a + b_1 RC_{it} + b_2 DE_{it} + b_3 LnTA_{it} + b_4 RMU_{it} + b_5 BS_{it} + e$$

$$ORDI = a + b_1 RC_{it} + b_2 DE_{it} + b_3 LnTA_{it} + b_4 RMU_{it} + b_5 BS_{it} + e$$

$$ERDI = a + b_1 RC_{it} + b_2 DE_{it} + b_3 LnTA_{it} + b_4 RMU_{it} + b_5 BS_{it} + e \quad \text{Where,}$$

RDI = Risk Disclosure Index for bank i in year t, which are risk (market (MRDI), credit (CRDI), liquidity (LRDI), operational (ORDI) and equities (ERDI));

RC_{it} = Number of Risk Committees for bank i in year t;

DE_{it} = Debt to Equity ratio for bank i in year t;

LnTA_{it} = Natural Logarithm of Total Assets for bank i in year t;

RMU_{it} = Presence of a Risk Management Units for bank i in year t.

LnBS_{it} = Natural Logarithm of Board Size for bank i in year t;

Findings and Discussions

According to the number of risk indicators disclosed in annual reports, each type of risk was categorized under different groups. Market risk and Credit Risks are divided into three groups according to the number of risk disclosure which are Low, Medium and High levels.

Table 1: Credit Risk Group

No of Risk Disclosures	Risk Level	Frequency	Percent
1-7	Low	29	31.5%
8-13	Medium	22	23.9%
14-19	High	41	44.6%
Total		92	100.0%

Credit risk disclosure was categorized in to three groups according to the total no of credit risk indicators disclosed by commercial banks in their annual reports as shown in table1. 44.6 % of samples show high credit risk disclosure which is 41 number of repots. 23.9 % medium credit risk disclosure and 31.5% reports display low credit risk disclosure.

Table 2: Market Risk Group

No of Risk Disclosures	Risk Level	Frequency	Percent
3-9	Low	19	20.7
10-15	Medium	34	37.0
16-21	High	39	42.4
	Total	92	100.0

Level of Market risk disclosed was grouped as shown in table2. Under this credit risk category 42.4 % of annual reports showed high level of market risk disclosure on their annual reports as well as 37 % medium level and 20.7 % low market risk levels presented in their annual reports.

Analytical results of liquidity risk disclosure by number of risk disclosure indicators were shown in table 3. Maximum no of liquidity risk disclosure indicators is 9 out of 9 total liquidity risk indicators which was shown in 17.4% out of total samples (16 no of samples). 33.7 % presented only 2 indicators about liquidity risk which is the highest rank of the total samples.5.4 % of annual reports have not exposed operational risks in their annual reports.

Table 3: Liquidity Risk Group

No of Risk Disclosures	Frequency	Percentage
0	5	5.4
1	3	3.3
2	31	33.7
3	19	20.7
4	7	7.6
5	2	2.2
7	3	3.3
8	6	6.5
9	16	17.4
Total	92	100.0

Analysis of operational risks disclosure results given in table 4 indicate that 31.5 % of the total samples disclosed only one operational risk indicator and 19.6 % of the total

samples indicates only 2 indicators. Maximum number of 8 indicators disclosed by only 13% of the total sample.

Table 4: Operational Risk Group

No of Risk Disclosures Indicators	Frequency	Percentage
0	2	2.2
1	29	31.5
2	18	19.6
3	15	16.3
4	3	3.3
7	13	14.1
8	12	13.0
Total	92	100.0

Comparison of Risks Disclosure Prior to and After Regulatory Standards.

The analysis presents the implied impact after the international standards were implemented by Central bank of Sri Lanka. Basal II and IFRS regulatory standard were enforced by CBSL in year 2010 after global financial crisis. In order to compare impact of regulatory requirement the data base was divided into two separate sets: (Before 2010 and after 2010). This analysis will show the way to examine how banks have implemented this regulations.

Table 5: Level of Credit risk disclosure before and after regulatory requirements

No of Disclosure Indicators	Level of Risk Disclosure	Frequency			As a Percentage		
		Before	After	Total	Before	After	Total
1-7	Low	17	0	17	18.5%	0.0%	18.5%
8-13	Medium	11	9	20	12.0%	9.7%	21.7%
13-19	High	4	51	55	4.3%	55.4%	59.8%
Total		32	62	92	34.8%	62.5%	100.0%

After regulatory requirements were enforced by Central bank of Sri Lanka 34.8% of samples have disclosed credit risk information before and only 4.3 % of reports disclosed high level of credit risks (4 annual reports). Majority of banks have disclosed low level of credit risks with 55% of total risk disclosure before regulation executed as shown in table 5. After statutory legation were implemented by CBSL regulations, 62.5% has disclosed credit risk information (62 reports) and 81.8 % has disclosed high level of credit risk information. There was no low level of credit risk disclosed by any bank after implementing statutory regulations by CBSL Further details are presented by table6.

Table 6: Detailed evaluation of credit risk disclosure before and after regulation implemented.

Level of Risk Disclosure		Before Regulations	After Regulations	Total
Low	Frequency	17	0	17
	% within Credit Risk Group	100.0%	0.0%	100.0%
	% Total CRI Before Regulation	40.5%	0.0%	18.5%
	% of Total	18.5%	0.0%	18.5%
Medium	Frequency	15	5	20
	% within Credit Risk Group	75.0%	25.0%	100.0%
	% Total CRI Before Regulation	35.7%	10.0%	21.7%
	% of Total	16.3%	5.4%	21.7%
High	Frequency	10	45	55
	% within Credit Risk Group	18.2%	81.8%	100.0%
	% Total CRI Before Regulation	23.8%	90.0%	59.8%
	% of Total	10.9%	48.9%	59.8%
Total	Frequency	42	50	92
	% within Credit Risk Group	45.7%	54.3%	100.0%
	% Total CRI Before Regulation	100.0%	100.0%	100.0%
	% of Total	45.7%	54.3%	100.0%

Table 7 and 8 represents that evaluation of market risk disclosures before the regulations were executed of risk disclosure by central bank (before 2010) and after implemented the risk disclosure requirements (after 2010).

Table 7: Level of credit risk disclosure before and after regulatory requirements

No of Disclosure Indicators	Level of Risk Disclosure	Before		After		Total	
		Freq.	%	Freq.	%	Freq.	%
3-9	Low	17	18.5%	2	2.2%	19	20.7%
10-15	Medium	14	15.2%	20	21.7%	34	36.9%
16-21	High	1	1.1%	38	41.3%	39	42.4%
	Total	32	34.8%	60	65.2%	92	100.0%

34.8% of the sample disclosed market risk information before executing the regulatory requirements by CBSL. Out of this majority of reports (17 reports) were disclosed low level of market risk which represents 43.8% as shown in table 7. After the execution of regulations by CBSL revealed that 65.2 % banks have disclosed market risk information on their annual reports and majority of them are high level market risk disclosures (41.3%) and it is greater 97.4% compared to 2.6%. Only 2 bank reports have disclosed low level of market risk after regulatory requirements were introduced.

Table 8: Evaluation of Market Risk Disclosure before and after regulation implemented.

Level of Risk Disclosure		Before Regulations	After Regulations	Total
Low	Frequency	17	2	19
	% within Market Risk Group	89.5%	10.5%	100.0%
	% total MRI Before/ After Regulation	53.1%	3.3%	20.7%
	% of Total	18.5%	2.2%	20.7%
Medium	Frequency	14	20	34
	% within Market Risk Group	41.2%	58.8%	100.0%
	% total MRI Before/ After Regulation	43.8%	33.3%	37.0%
	% of Total	15.2%	21.7%	37.0%
High	Frequency	1	38	39
	% within Market Risk Group	2.6%	97.4%	100.0%
	% total MRI Before/ After Regulation	3.1%	63.3%	42.4%
	% of Total	1.1%	41.3%	42.4%
Total	Frequency	32	60	92
	% within Market Risk Group	34.8%	65.2%	100.0%
	% total MRI Before/ After Regulation	100.0%	100.0%	100.0%
	% of Total	34.8%	68.2%	100.0%

Table 9 represents evaluation of liquidity risk before and after statutory regulation executed by central bank of Sri Lanka.

Table 9: Evaluation of Liquidity Risk Disclosure Before and after regulation implemented

No of Disclosure Indicators	Before		After		Total	
	Freq.	%	Freq.	%	Freq.	%
0	5	15.63%	0	0.00%	5	5.43%
1	2	6.25%	1	1.67%	3	3.26%
2	18	56.25%	13	21.67%	31	33.70%
3	7	21.88%	12	20.00%	19	20.65%
4	0	0.00%	7	11.67%	7	7.61%
5	0	0.00%	2	3.33%	2	2.17%
7	0	0.00%	3	5.00%	3	3.26%
8	0	0.00%	6	10.00%	6	6.52%
9	0	0.00%	16	26.67%	16	17.39%
Total	32	100.00%	60	100.00%	92	100.00%

32 reports have disclosed liquidity risk before the introduction of regulations and after it has risen up to 60 numbers. Majority reported only 2 liquidity risk disclosures before and after regulations were implemented. Prior to introduction of regulations 15.63% had not disclosed liquidity risk information at all, but after the introduction of regulation no report which did not disclose any liquidity risk information has been found.

Table 10: Evaluation of operational risk after and before statutory regulation implements.

No of Disclosure Indicators	Before		After		Total	
	Freq.	%	Freq.	%	Freq.	%
0	2	2.17%	0	0.00%	2	2.17%
1	15	16.30%	0	0.00%	15	16.30%
2	5	5.43%	7	7.61%	12	13.04%
3	1	1.09%	12	13.04%	13	14.13%
4	2	2.17%	9	9.78%	11	11.96%
5	6	6.52%	4	4.35%	10	10.87%
6	1	1.09%	20	21.74%	21	22.83%
7	0	0.00%	8	8.70%	8	8.70%
Total	32	34.78%	60	65.22%	92	100.00%

As shown in the table 10 most of the banks have disclosed very little about operational risks before regulations were introduced. Only 34.78 percent of banks have disclosed information related to operational risks and majority of reports presents only one

indicator. (46.87%). After executing CBSL regulations the several banks have displayed more information on operational risk in their annual reports. Many banks have displayed over 5 indicators.

Multivariate Analysis

Multiple regression analyses were conducted to examine the relationship between credit risk, market risk, liquidity risk and operational risks with various potential predictors. Table 11 summarizes the results of the regression analysis. Moreover, the summary below indicates that the model is significant, with an F value as indicated in the table, confirming the fitness of the model used for the purpose of this study.

Table 11: Summary statistics of regression analysis

Variables	Credit Risk Index	Market Risk Index	Liquidity Risk Index	Operational Risk Index
(Constant)	-33.119***	-20.054**	-15.815*	-9.531**
LnTA	5.794***	4.908***	1.857	2.279***
DE	0.003	0.003	-0.001	-0.003
BS	0.711**	0.315	0.648**	0.068
IRMU	8.149***	5.325**	3.605*	2.554**
RC	0.069	-0.023	0.002	-0.233
R Square	0.514	0.378	0.175	0.330**
Adjusted R Square	0.478	0.332	0.113	0.281
F -Value	14.184	8.147	2.843	6.614
Sample size	92	92	92	92

Where ; LRDI, liquidity risk disclosure index ;LnTA, log value for total assets; DE, debt equity ratio; BS, board size; IRMU, integrated risk management Committee ; *,**,*** Denote the level of significance at* $p < .05$ ** $p < .01$ *** $p < .001$.

The regression results show that coefficient estimates for total assets (LTA) are significantly positive for all regressions (p -value $<.001$) except liquidity risks, suggesting that asset size is positively associated with bank disclosure of credit, market and operational categories of risk exposure. This indicates that larger the size of the banks the greater is the risk disclosure. Existing studies have found that larger rather than smaller banks characterize themselves by disclosing more risk information, which results in reduced monitoring costs and information asymmetry (Abraham & Cox, 2007; Aebi et al., 2012; Oliveira et al., 2011). Further these findings are related with the previous studies by Beretta and Bozzolan (2004), Linsley et al. (2006) and Lopes and Rodrigues (2007). According to legitimacy theory larger companies; disclose more risk-related information to manage stakeholders' perceptions about corporate reputation. A higher extent of disclosure assists larger firms to be more visible to relevant shareholders (Mashayekhi & Bazaz, 2008).Therefore the results are supported to H3.

The regression results also show that a significant positive relationship with the existence of RMU and the extent of risk disclosure of all type of credit, market, liquidity and operational risks. (credit, market at p -value $<.001$, liquidity and operational at p -

value < .05). This suggests that the level of risk disclosure is high in banks where integrated risk management unit has been established. Further this implied as: banks with greater risk exposure being more likely to set up a RMU. The RMU has the unique responsibility of risk management and monitoring processes and practices that inform risk information provided to that section of the bank responsible for compiling disclosures in the annual report. These findings are consistent with the theoretical prediction of agency theory perspective and legitimacy theory that discussed in development of hypothesis and theoretical perspective. Therefore, the H4 is supported by the results for regression analysis.

Regression results are statistically significant (p -value < 0.01) in board size (BS) and positively associated with liquidity risk and credit risk disclosure. This implies that banks that have larger board size will tend to disclose more information about credit and liquidity. This is support to the findings of Shamsun et al (2008). They found that BS is significantly and positively associated with liquidity and credit risk. However, there is no significant association between board size with market and operational risk. Cheng and Courtenay (2006) established that there was no significant association between the two variables, while Jia et al. (2009) Guest (2009) and Coles et al. (2008) documented a negative relationship between board size and disclosure level in the banking industry. Farag et al (2014), Nitm et al. (2013), Elshandidy et al. (2013), Allegrini and Greco (2013) and Elshandidy and Neri (2015), emphasised on a positive relationship between the number of directors on the board and risk disclosure. Therefore, the empirical findings on this issue have been mixed.

However, there is no significant relationship found in number of risk committee (RC) and capital structure (DE) with all types of risk disclosures. Previous studies reveal mixed results in relation to the association between corporate risk disclosure and DE (proxy of capital structure). Most prior literature has not found any significant relationship between risk disclosure and leverage (Abraham & Cox, 2005; Amran *et al.*, 2009; Linsley & Shrivs, 2006; Mohoboot, 2005). Lopes and Rodrigues (2007) concluded that there was an insignificant relationship. Further, Adamu (2013) documented that there is no significant relationship between company leverage and corporate risk disclosures. A possible explanation seems likely to be that monitoring information can be furnished by means other than in the annual report (Leuz *et al.*, 2004). Thus, the second hypothesis H2 is rejected.

Conclusions and Implication to the Practice

Overall, the analysis suggests that commercial banks in Sri Lanka has significantly improved their risk disclosure over time, these improvements are associated with disclosure of specific risks, consistent with agency theory. Results revealed that the international disclosure standards are associated with an increment in the extent of risk disclosures in all categories. This effect is more prevalent after 2010, highlighting the impact of statutory regulation operationalization by central bank of Sri Lanka. Further the results also confirmed that the adoption of high quality international regulatory standards (Basel II/IFRS) enhanced quality and quantity of risk information provided by commercial banks in SL. According to the results the highest level of risk disclosures were recorded in the credit and market risk information category, whereas the lowest is in operational risk

and liquidity information. Analysis of the results reveals that the asset size of banks is significantly associated with credit, market and liquidity categories of risk disclosures. The existence of a RMU is highly significant determinant of all categories of risk disclosures. To end with, there is no significant relationship between DE and corporate risk disclosures in commercial banks in Sri Lanka.

These findings will help regulatory agencies in Sri Lanka and elsewhere in monitoring banking institutions by identifying the impact of particular standards. Both existing and potential clients of banks can use these findings strategically choosing their preferred bank of interest. More particularly, the significance of bank characteristics will help clients identify the potential risks of the banks they are interested in doing business with.

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TOWARDS OPEN DISTANCE LEARNING FOR FUTURE: PRACTICES AND CHALLENGES IN SRI LANKA

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Abstract

The greatest challenge in the 21st century for higher education is the recognition of relevance, which is the need to adapt to the immediate needs of the society by produce an employable or employability graduate. ODL has the potential to provide higher education while the personnel remain in employment to continue servicing the market. It is a form of education that combines the world of work with learning with mutual benefit. The Open University of Sri Lanka is now moving towards the 5th generation ODL technology supported by a combination of online-and blended teaching and learning techniques. Today it caters to a student population of about 40,000 learners who offer courses through the Faculties of Education, Engineering, Natural Sciences, Health Sciences, Humanities and Social Sciences and Management Studies. Together they offer about 67 study programs. The ODL as a mode of learning has the prime objective of facilitating learners who were mostly unreached education or employed, who were denied tertiary, adult or lifelong education due to the various barriers that prevented them from continuing education. While for these groups of students technology is an effective strategy to overcome such barriers, the use of sophisticated technology which imposes additional barriers to pursuing education, should be considered with care.

Keyword: Open Distance Learning, Innovative Education, Employability and Entrepreneur Education

Higher Education and Open Distance Learning in Sri Lanka

Due to the emergence of online providers and campus institutions offering online programmes, open and distance learning (ODL) is no longer the preserve of open universities. The field is much wider than it was 30 years ago, and technology is increasingly contributing to the death of “distance.” says Asha Kanwar (COL, 2017). Today challenge for higher education is the recognition of relevance. Through the universities, need to prepare individuals to contribute to the social and economic development of the country which can be fruitfully achieved if the graduates are provided with the relevant skills and the knowledge. It is in this context that higher education needs to be defined as a public service that which contributes to cultural, economic and social development within the context of pluralism and cultural diversity.

It is accepted that higher education, in any given society, whether developed or developing, has to play a role in the production and transmission of knowledge. Knowledge is universal and has become the heritage of the mankind. To convert universities into knowledgeable institutions, the institutions in the sphere of higher education need to be encouraged to perform an active, creative and innovative role to help change society.

Democratic Socialist Republic of Sri Lanka is an island nation in South Asia with a population of 21.2m (2016). The current per capita income of Sri Lanka is USD 3760 and over the last 5 year period the economic growth had been around 5%. The Sri Lankan system of university education began in 1921 with the establishment of the University College, which in 1942, was elevated to the status of a fully-fledged University, which, at its inception, accommodated only 904 students. The University of Ceylon was elitist and exclusively residential in character. It became outmoded when the impact of the Free Education Scheme came to be felt in the country.

The impact of the Free Education Scheme came to be felt in the sixties and seventies, and the University system. Sri Lanka established provincial Universities to expand the opportunities for higher education. These universities are new, and their infrastructure not yet developed, even though the new system broke away from the mould of the conventional university. They introduced new courses which have been organized on the basis of the concept of employability. Present policy strategy is to produce an employable competent graduate, who can find employment in whatever field he or she undertakes to study.

Higher Education in Sri Lanka is a subject at national government. There are 15 national Universities including the Open University of Sri Lanka, 3 Campuses and 17 affiliated Institutes offering Diploma, Degree and Post Graduate degrees. These Higher Educational Institutes are governed by an Act of Parliament (Universities Act No. 16 of 1978). University Grants Commission (UGC) under the Ministry of Higher Education is the apex body of the Universities in Sri Lanka. While the Universities are empowered to maintain quality of their higher education programs through the Senates by the Universities Act of Sri Lanka, the University Grants Commission too has evolved a system of external Quality Assurance Reviews at Institute and Subject Levels for Universities, Campuses and affiliated Institutes.

Open distance learning has become a policy option for a growing number of countries. ODL has the potential to provide higher education while the personnel remain in employment to continue servicing the market. It is a form of education that combines the world of work with learning with mutual benefit. In other words it is possible to receive early benefits as the learner progresses with her/his studies. Besides the economic advantage, distance education may have a more immediate social impact. It is a means to satisfy missed opportunities and improve one's training for the job. In other words, it may give the learner a feeling of satisfaction and personal fulfillment. In modern society, higher education has become a critical rite of passage. It marks maturity and gives capacity to engage the world out of school. Higher education is an important element in the formation of character, in providing skills and "to nurture a reflective quality", the capacity to think and formulate thoughts independently, to analyse and evaluate situations critically even before one becomes a producer and creator of knowledge.

Open and Distance Learning in Sri Lanka

Sri Lanka's burst into Open and Distance Learning commenced about more than 40 years ago with the establishment of the Sri Lanka Institute of Distance Education in the late seventies for the grant of diplomas. However the establishment of the Open University of Sri Lanka in 1980 with the absorption of the Sri Lanka Institute of Distance Education. Sri Lanka was also the first country in the South Asian Region and seventh in the world to establish an Open University. 'University for All', the Open University provides a ladder of opportunity to 40000 students representing varied social classes, age groups, ethnic groups, religions and languages.

The vision of the Open University of Sri Lanka (OUSL) is "To be the premier Open and Distance Learning institution in Asia through excellence, efficiency and equity in lifelong learning." OUSL enables students to enroll at Foundation Level and then obtain higher credentials even up to the PhD level.

University education become more & more severely competitive and the government resorted to standardization mechanisms in an attempt to facilitate the admission of students from rural and underprivileged areas. While the number of students admitted to conventional university free education was less than 6% of the relevant student cohort. However the important difference between theory and practice as far as the concept of Distance Education and Open Learning was concerned in Sri Lanka was the fact that Sri Lanka had a huge number of school leavers who had not had the practical opportunity to read for a Sri Lankan University Degree in any field, even if they had the money unless they went abroad. The demand for higher education provision continues to grow annually and supply cannot meet demand. In 2015 only 17.14 percent out of the 60.46 percent students satisfying minimum entry were selected for Universities in Sri Lanka.

There are approximately more than 10,000 Sri Lankans going abroad on annual basis. Demand for international education and qualifications continue to grow. An increasing number of foreign and private institutions in Sri Lanka as a significant market, as they seek to diversify. They are also establishing more courses run jointly with Sri Lankan institutions in-country, and / or promoting distance or open learning methods.

There is also demand for postgraduate studies in the research fields. Graduate output from Sri Lankan universities for the year 2005 were 12,545 (first degree) and 4,589 (postgraduate) and these were increased for the year 2015 as 29,545 first degree and 7,513 postgraduate. Out of these, a considerable percentage of graduates preferring research programmes have also increased. In addition, some of other Universities have introduced new undergraduate courses in online system. However, there are no postgraduate courses in these fields and, as a result there is further demand for research programmes abroad. MBAs have become very popular with professionals, but they generally demand for distance learning / affiliated courses, due to the high cost and employed people.

One of the main issues confronting the higher education sector in Sri Lanka is the limited access to higher education. This issue is presently addressed by capacity building of the Open University of Sri Lanka and popularization of Distance Education. Issues concerning quality, need for regulatory framework and mutual recognition of higher educational qualifications, which are common in the region are shared by Sri Lanka as

well, with the growing presence of Cross Border Higher Educational Institutes. Strategies to address these issues are under consideration. Maintaining and upgrading the quality of university education keeping up its past reputation, positioning the Universities among the best universities in the world are challenges to be faced by Sri Lanka in the next few years.

Contribution of Open University of Sri Lanka (OUSL)

Sri Lanka too faces problems in producing globally competitive knowledge workers necessary for the economic take-off. When the knowledge economy expands, the need for higher-order skills deepens. Sri Lanka is not yet ready to produce skilled workers in the scale that is required. Sri Lanka university system recruits less than 17 percent of those who have acquired the minimum qualifications necessary for admissions. This may be around 5 percent of the relevant age cohort. The graduate output is not only abysmally low but, they are also not employable. This mismatch too is ironical.

Meanwhile, of those who fail to get admission to local universities, many join the labour force while the more fortunate among them go abroad for higher education. Yet another group looking for distance education programmes. Many of those who go abroad for higher studies wish to remain in those countries, while some who come back possess qualifications that do not fit the needs of the industry. Thus the challenges before us can be summarized in terms of expanding educational opportunities to those who are keen to follow study programmes (expanding access), making sure that those who are deprived of access due to socio-economic considerations are accommodated (ensuring equity), ensuring that the quality and relevance of training are assured through concrete measures (guaranteeing excellence) and achieving all three of them at a cost that is affordable to the country (improving efficiency). These concepts in brief are cogently captured in the concept of “the iron triangle” in higher education.

The concept of “iron triangle” is based on the presumption that university education can flourish only in an ambience of vibrant community of residential students. The model dislodges the myth that ‘iron triangle’ is necessarily valid. The recent developments of information and communication technology have made those assumptions still more questionable. There is an abundance of evidence to prove that the iron triangle can be broken using Open Distance Learning (ODL). The British Open University (OUUK) which maintains competitive ranking with the universities in UK is one such example. Sri Lanka replicated the same model by establishing the Open University of Sri Lanka (OUSL) in 1980.

The secret of success of ODL is fivefold. First, it combines educational technology to minimize the distance between learners and teachers. Second, it inculcates in students the science and art of self-learning. Third, it helps the working population to complete accredited undergraduate and postgraduate degree programmes while working. This gives them invaluable exposure to the ‘world of work’ making the educational package offered a cost saver to them and their employers. Fourth, as self-learners ODL students are trained to seek and acquire new knowledge. Fifth, the emphasis on quality enhancement of study programmes makes ODL students more competitive in the eyes of governments and donor agencies.

In 2020 the Open University of Sri Lanka (OUSL) marks its 40th Anniversary, having pioneered the mission of Open and Distance Learning (ODL) in 1980. One could say that it was started as an experiment in line with global trends. Today it has refocused its attention on 'excellence'. The OUSL has broken barriers to teaching Engineering Technology, Health Sciences, Management Studies, Education, Social Sciences and Natural Sciences through the distance mode of education. It has successfully taken the message of ODL to the periphery.

Helped by a network of regional centres that are equipped with class-rooms, state of the art IT laboratories, seminar halls and libraries Open University of Sri Lanka as a national institution dedicated to tertiary education is now committed to increasing its outreach so that learners from wherever they come from can successfully engage themselves in diverse educational pursuits. The 40th Anniversary celebrations are used to take these messages further into the countryside.

Three important characteristics are peculiar to the OUSL. Firstly, the institution is committed to the UNESCO enshrined concept of 'university education for all', providing life-long education for those who have the necessary aptitude and commitment. When knowledge doubles so fast, learners must update their knowledge continuously. The OUSL provides a ladder of opportunities from foundation courses to postgraduate degrees through diplomas and undergraduate degrees to achieve this goal. The attributes mentioned above ensure the 'equity' goal of higher education which forms an important pillar of our vision.

The second pillar of OUSL vision is excellence. The OUSL is dedicated to quality enhancement continuously from the point of view of "fitness for use". The OUSL underscores the importance of quality enhancement of her curricula, syllabi, assessment methods, learning support, institutional planning and employability of her graduates. It uses the QAA toolkit of the UGC, ODL-QAA Tool-kit of the Commonwealth of Learning (COL) and the COL-RIM evaluation criteria to improve quality of academic products and services.

The third pillar of OUSL vision is to increase efficiency in the sphere of resource utilization. This includes, the physical infrastructure including land, buildings and equipment scattered throughout the country and the human resources of the total workforce of about 850 persons directly on roll and another 1000 who work as consultants and tutors. The capabilities of these resources have to be marshaled to the optimum.

Use of Technology by OUSL (DE TO OER)

Today's higher education administrators, who must balance the fiscal pressures of running a large organization influenced by external forces such as rankings and increased competition for students and faculty and internal stresses produced by boards and accrediting agencies who are demanding more transparency, accountability, and tangible evidence of success, are best served by seeking continued innovation in curricular programs, delivery mechanisms, support services, and operations.

Innovation processes in education must be seen in its complex social conditioning. This implies: correspondence education system complex vital social needs; internal

consistency of its parts, and evaluation of the Company, each of the structural elements; education focus on the progressive development of society; that young people need in education, its social orientation.

In terms of socio-economic crisis changed the place of higher education in the system of values in life Sri Lankan student's focus on specialty and forms of education, installing the future professional activities. Education is becoming a pragmatic utilitarian value. Priority among universities now young people is given to economic, management, legal, and humanitarian. At that dominates the desire to get an education as possible, good timing to take the most favorable place in the material sense.

Innovation processes should be carried out today in all educational institutions. New types of educational institutions, management systems, new technologies and techniques - a manifestation of the huge potential of innovation processes. Competent and thoughtful their implementation contributes to the deepening in it for positive change. Innovation for 'Learner-Centered' Education. With the emergence of smart phones, eBook readers, 'Podcasts' and 'Vodcasts,' Internet and low-cost computers, as well as solar electricity, cell phone access, and other technologies, comes the opportunity to provide education to assist individuals and communities in places under-served by traditional educational institutes. Technology and other innovations enable educational design and delivery to be adapted to the needs and environment of students enrolled in Open and Distance learning (ODL) and traditional educational programs. Thus, technology can also help programs shift to a 'learner-centered' approach to education. In an environment in which the postal system is slow or unreliable, traditional ODL can face challenges in program delivery. Today Internet and email has enabled changes in the design and delivery of ODL in many parts of the world.

Today, educators have the challenge of monitoring changes in technologies, determining if they apply to learners living in 'the real world,' and seeking ways to use technologies to complement and support instructional methodologies and practices. The opportunities are immense, but there are also technological limitations in many parts of developing countries. Barriers to technological innovations for supporting education include inadequate telecommunications bandwidth, lack of trained support staff, and the cost and the availability of simple telephones, cell phones, computers, and electricity.

OER-integrated teaching and learning

The term Open Educational Resources was first introduced at a conference hosted by UNESCO in 2000 and was promoted in the context of providing free access to educational resources on a global scale. Open Educational Resources (OER) are 'teaching, learning and research materials in any medium digital or otherwise, that reside in the public domain or have been released under an open license that permits no cost access, use, adaptation and redistribution by others with no or limited restrictions' (UNESCO, 2012). OER may include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge. OER can be used freely and openly in the teaching-learning process and the enhanced openness through OER empowers teachers and learners to become more creative

and innovative in their educational practices (Cape Town Open Education Declaration, 2008).

OER have many positive impacts in the teaching and learning process. Using the tools offered by new ICT, integration of OER will not only increase capacity for teaching training system but also offer opportunities to enhance articulation between theory and practice and to support teachers more effectively to become reflective practitioners (Thakrar, Zinn & Wolfendon, 2009). In an analysis of reflections of teachers participated in a case study in Sri Lanka, the results indicated that integration of OER in their teaching and learning process has provided opportunities to overcome their obstacles, to become enthusiastic participants and involve actively in teaching and learning processes (Kugamoorthy & Rajini, 2016). In addition, OER have many benefits including free and open availability and accessibility over the Internet and as few restrictions as possible on the use of the resources. There should be no technical barriers, no price barriers and as few legal permission barriers as possible for the end-user. Unlike other traditional educational materials which are protected under conventional copyright terms, OER have an open license which allows the end user to use, modify and share them at no cost. Open licenses permit the users to retain, reuse, remix, revise and redistribute the OER materials (Wiley, 2014).

ICT and OER-integrated teaching and learning: Supporting social change among teachers Therefore, teachers can use OER in a productive way to create their own materials and use them to provide innovative teaching and learning experiences. These innovative experiences may bring about changes in the behaviour of students and to promote their social relationships. OER could support lifelong learning and personalized learning and will move the power over learning from the institutions to individual learners. Quality of learning experiences can be improved through facilitating learner centered, self-directed, peer to peer and social learning by the integration of ICT and OER. Therefore, integration of ICT and OER will not only facilitate the teaching-learning process but also build a learning community with enormous social skills in the conflict affected countries.

Drive for e-learning education in Sri Lanka

Information literacy amongst academic staff responsible for the development and implementation of e-learning is crucial. Lack of staff awareness about information skills, lack of understanding about constructivist-based pedagogy and lack of training opportunity for academics are also barriers for the use of e-learning. Moreover, this study found that learning theories, pedagogy, and even e-learning are not yet incorporated into the curriculum in Sri Lanka (Namali Suraweera, Chern L. Liew and Jocelyn Cranefield 2012).

In other contexts, e-learning has been used as a solution for problems similar to those faced by Sri Lankan education for example, increasing equity of access to education. The e-learning is capable of widening access to education of improving social and educational equity of reducing cost, improving quality of learning, providing flexible learning and maintaining interactive learning. It seems e-learning has the potential to address the issues of tertiary education in Sri Lanka. There is still a lack of research that indicates what factors affect the use of e-learning in information management education in the Sri Lankan context.

OUSL has developed more detailed criteria to monitor the quality of its e-learning services because, to OUSL, e-learning is not a supplementary mode of education but a main form of ODL especially at graduate level. OUSL opened a totally online lifelong education. To meet the need to oversee QA processes and pursue continuous quality improvement of these new e-learning programmes and online services, the Center for Educational Technology and Media (CETme) was created. This centre develops all the e-learning courses utilizing digital materials produced by the Centre for Educational Technology and Media Development and supports faculty in delivering e-learning courses. It also carries out e-learning course evaluations and monitoring activities based on specific QA measures.

E-learning is increasingly being looked to by many ODL institutions as an economical way of expanding their services, widening opportunities for students around the world, and making effective use of the emerging technologies. In fact, quite a few ODL institutions have integrated e-learning components in their ODL services. However, most of the institutions investigated in the study have not developed a separate QA system for e-learning. It appears that quality assurance schemes for e-learning content and practice are still at the early stages of development. The emerging good practice of OUSL's QA for e-learning indicates that it is necessary to give a role to internal and external experts, students and the public in voicing their opinions about quality of e-learning.

The overall attitude towards adoption of e-learning is not discouraging though it is not very favorable among some of the learners and the teachers. Besides developing knowledge and skills in e-learning it might be necessary to adopt social marketing to popularize e-learning to address attitudinal gaps. The lack of favorable attitude towards e-learning among some of the teachers may be due to lack of confidence in the application of online learning approaches as well as lack of rewards for achieving better results through e-learning. If the university adopts e-learning to a higher extent than at present, there might be greater scope for making e-learning more popular among a larger population of learners so that opportunity for higher education can be further extended to peripheral areas. Sivalogathan, V. and L.P.S.Gamini (2017)

Extending Learner Support Services

In order to improve chances on the labour market, the skills base of students must be extended. When considering the improvement of subject specific and personal skills in relation to the three cycles of Bachelor, Master and Doctorate, the dialogue and involvement of employers should be promoted, in order to effectively devise and innovate curricula. However, caution must be exercised with the adaptation of curricula to prevent universities from becoming proprietary knowledge providers to firms and/or or taking on the role of existing professional training centres.

The innovation driven economy requires students to (i) generate, judge and validate knowledge, (ii) satisfy the need of human capital on the labour market, and (iii) push value creation by new endeavours and/or ventures, (EC, 2004). The universities must indeed strongly promote that students are equipped with knowledge, skills and attitudes that all individuals need as a foundation for lifelong learning.

In as far as universities of the past have operated with non or semi-permeable borders to societal stakeholders. Universities must be inventive when it comes to satisfying labour market demands and the needs of the innovation driven economy. To adapt to a world altered by technology, changing demographics and globalisation, in which the higher- education landscape includes new providers and new paradigms, innovation and flexibility from institutions are needed.

Inclusion and Social Mobility:

Adopting ODL as a policy option is ostensibly to increase access to higher education especially by non-traditional learners. These may be those who may not have adequately met the admission standards set by residential universities, or they may be mature entrants or others who wish to enhance their qualifications. Most may be studying while working but some may be unemployed or women at home. The learners may be doing so out of interest or for recreational purposes; others may need to improve their qualifications either as part of work requirements or for professional purposes.

Herein, higher education aims to provide for more equitable access in terms of costs, entry qualifications and flexible learning opportunities. Education can enact a strategy of more inclusion (CEPS, 2009; Go8, 2009). An inclusive higher education strategy enables disadvantaged groups to enhance their educational attainment throughout first and second cycle study programmes, and improve their social and professional mobility. The aim is to fully take part in and benefit from a successful economy and obtain a set of competences which act as foundation for further learning as part of lifelong learning.

In order to promote access, the university is required to undertake a marketing campaign by media setting out available courses, qualification requirements and the support available to interested candidates through an affordable fee scheme. Next the institution must seek means of making the registration processes, and assessment for admission easy so as to assist an interested candidate make what may turn out to be the most crucial decisions of his/her life. In any case, ODL institutions benefit from mass enrolments as they can achieve thereby economies of scale and become financially viable.

Continuous and Professional Education:

Higher education connects with the labour market by delivering students with the so required high level skills and competences, while simultaneously driving the dialogue on curriculum development with external stakeholders (Mincer, 1962). The lifelong learning mission of the university under discussion, the organisation provides for continuing education and professional training and develops joint programmes in collaboration with dedicated professional education and training institutions employability prospects.

University academics should be no less qualified than academics in residential universities. Indeed, as educators, academics in distance education institutions need a qualitatively extra dimension. They must have a passion for and commitment to distance education as a mode of learning delivery, empathy with their learners and skills to participate in a learning mode that demands just as much in terms of creativity and

professional expertise from the academic as it does from the student. Besides, academics in distance learning institutions must engage in research in their own discipline but should be constantly researching effective educational delivery models for their learners. This process obviously goes to the extent of assessing the impact or reception of the graduates of the institution in the workplace, perceptions by industry as well as the progress of the university's alumni. External quality assurance and assessment is essential for the success of a distance education institution. The EQA model should be simple and strictly adhered to across the institution; generate confidence and a sense of achievement. It must also seek to achieve international best practices.

Innovation and ODL Delivery:

Higher education connects with entrepreneurship and innovation by delivering students that are not only educated in subject matter but also have essential skills and competences to adopt or drive successful developments. Such universities excel in programmes aimed at the coaching of innovation and feed the lessons which they have learned back into the curriculum (WEF, 2009). Simultaneously, opportunities for new economic activity and entrepreneurship provide for new research domains and teaching horizons.

Obviously everyone who attends a university is desirous of success and the completion of studies within a reasonable time. In distance education this is necessitated by several pressing factors. There are different levels of success. One must believe that university studies have value even if a student does not succeed in the examinations. The fact that one underwent studies will forever have an impact in the learner's development and intellectual ability. But that is not good enough. The institution should aspire to crown its achievement by awarding the degree nothing is complete until that event.

Learners should be carefully counseled about study load especially at the beginnings of distance learning courses. An assessment of their time and resources must be undertaken and on the basis of hours available to be devoted to study, advice can be given on an appropriate study load. Once a learner has been registered and properly counseled, the institution should then take responsibility for monitoring progress, application, undertake regular assessments and the student should then complete the course programme within a reasonable time.

Institutional Support:

Multilingual Open Educational Resources for Independent Learning: a new generation of OER with a strong focus on development and delivery of quality-assured materials for off-campus target groups. Open technologies to make learning and higher education more accessible (Boticario et al., 2006). To serve the call for employability skills and competences, along with the increasingly individualized needs of the 21st century, Open and Distance Teaching Universities (ODTUs) experiment with radically new and flexible placement practices. As regards the cooperation with public and private organisations, professional bodies, chambers of commerce, and social partners. Moreover, the typical organisational and administrative characteristics of ODTUs prevent the implementation of traditional placements.

It is an 'open' virtual platform, a social and technological infrastructure which delivers professional entrepreneurship services and takes full advantage of Web technologies. It caters for relational symbiosis and scale advantages by providing virtual office space to tenants, communication facilities, collaborative support tools, virtual business and financial coaching support, IT infrastructure and web development services, access to e-content, access to incubator tenants, access to external stakeholders, and other types of social and entrepreneurial support.

Universities in Sri Lanka, both conventional universities and OUSL, tap from a mix of different public and private financial sources, which is reflected in the different institutional profiles, their missions, strategies and business models. One of the main challenges of today's universities is managing an increasingly diversified portfolio of activities with increasingly limited access to state funded financial resources. Only universities that will be able to identify their costs 'in full' will be able to determine whether they can operate on a financially sustainable basis and prove what is needed on a reliable and verifiable basis.

Entrepreneurship and Employability:

Throughout the economic systems, general school-level education and training is noted to increase with economic development, however post-school quality of entrepreneurship education and training is seen as inadequate in almost all innovation driven countries. The innovation driven economy strongly depends on entrepreneurs (Drucker, 2001). Entrepreneurship is one of the important drivers of economic growth, productivity, innovation and employment. Bosma et al. (2009) identify agricultural, manufacturing and innovation driven economies. In agricultural or factor driven economies the notion of entrepreneurship is one of necessity: it is exercised to generate and maintain an individual income, herewith avoiding the risk of unemployment. In manufacturing economies or efficiency driven economies the notion of entrepreneurship is one of opportunity: it is exercised by the recognition of a good opportunity, which implies more income and a way of obtaining more independence. In service economies or innovation driven economies, the notion of entrepreneurship is one of possibility. Although modern societies are in need of innovation to sustain their economy, the individual and financial necessity of actually becoming entrepreneurial seems diminished.

In Sri Lanka concerning future labour market imbalances and expected shortages in skills and competences. Globalisation, greying populations, urbanisation and the evolution of social structures, together with the growing importance of information and communication technologies, biotechnologies, nanotechnologies and green technologies, have accelerated the pace of change in the labour market and associated requirements for skills and competences. Labour markets and the skills people need are evolving ever faster and future jobs are likely to require higher levels of education and a different mix of skills, competences and qualifications (EC, 2009).

Indeed society paces onwards and requires more and more complex skills; workers accordingly should be able to participate in lifelong learning and be able to adapt to a variety of new tasks over their working lives. Next to domain-specific knowledge and expertise, workers more and more require the acquisition of transversal skills and

competences such as analytical skills, self-management and entrepreneurial skills, which are transversal and transferable in the changing environment. Public authorities, education and training providers, students, social partners, as well as regional and local actors must join hands in contributing to the design of more efficient education and training policies. (Sivalogathan, and Abeysekera, 2017).

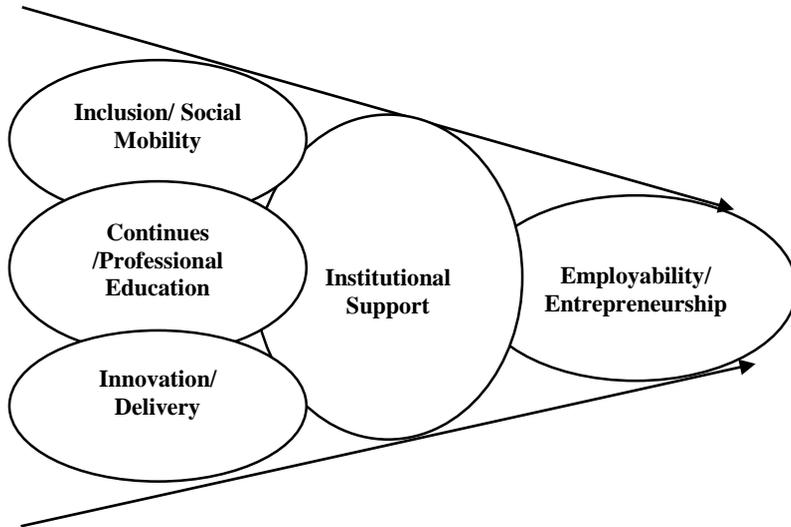


Figure 1: Strategic Model for ODL Innovation Practices

Programme Delivery and Learner Support System

Keeping in line with the Open University of Sri Lanka's ODL based education, the OUSL using multiple resources and techniques to achieve the degree programme outcomes and intended learning outcomes of the course modules. A blended learning environment with extensive use of ICT tools used in a student centric learning environment. The course curriculum is structured to achieve the expected knowledge, skills, attitude and mindset with strong support from the teaching/learning strategies.

The Open University of Sri Lanka has taken considerable strides in development of blended and online learning over the last 37 years and would build up its teaching learning environment making use of the available resources and expertise while adding on other technology based tools available. The OUSL uses its in house developed "myousl" student management system as the student management and administration tools. The open source virtual learning environment (VLE) Moodle which is used by the Department and other faculties of the university. Use of an open source environment would allow the faculty to integrate other tools which will be useful for education especially OER, web and mobile based platforms and services. This environment would also facilitate creative learning and teaching approaches, such as 'flipped classrooms' and related approaches which enables the delivery of lecture content, assessment and feedback online, and shift toward more interactive learning in the face-to-face environment. OUSL would also use

new digital resources, online learning activities and content that are available through MOOCs (Massive Open Online Courses) from world renowned universities.

During the teaching/learning process faculty would focus on developing our own digital content as well as exploiting the availability of web based open educational resources (OER). OUSL also focus much more on leveraging technology in the service of providing flexible access, active and collaborative learning tasks, varied and creative assessment tasks including those that engage students in creating sharable digital content, and adaptive and personalized support that meets diverse student needs. The traditional lecturing would be modernized with the use of prerecorded content, online assessments, interactive classroom techniques, interaction using social media, and the use of e-portfolios. This will enable us to maximize the value of face-to-face interaction in blended learning approaches. We will ensure that all learning events and tasks in all courses, including lectures, engage students in active learning.

In addition to the assessments used in the course modules to achieve the active learning, a special module is used for action based knowledge, skills and attitude enhancement in last year with a common module Research Project and CSR (Corporate Citizen Responsibility) project to achieve the specialization specific objectives with social responsibility. In addition an independent study also will enable students to enhance the critical thinking abilities further through application of the skills and knowledge gathered every year. The OUSL committed to achieving excellence in all its learning, teaching, and assessment activities and to developing a student centered culture that encourages innovation, promotes student integration and continual reflection.

Programme delivery & Learner Support system

Printed Materials: The central element in this teaching system is a series of printed texts that every student receives. These fulfil several purposes, the print materials are equivalent to face-to-face lectures and motivate questions and activities are interspersed throughout the text. The intention of these questions is to help the students in thinking independently while developing analytical skills.

MYOUSL Account: MYOUSL is an integrated learner support system which is hosted in Open University Management Information System (OMIS). This facilitates students to get access to their personal details, financial position, and examination results. Further this can be utilized for apply final examination, share course materials and create discussion groups. In addition to that myousl consist communication facilities such as SMS facilities and facility to send announcements.

NODES: It is a cloud based system which aims at educating under graduates, graduates and professionals. Using moodle cloud system able to provide lectures through video conferencing simultaneously with 20 different centres (It will be expanded further in future),online examination, data repository which can be utilized by industry practitioners and student related courses By launching National Online Distance Education (NODEs) access centres in every regional and study centres of the Open University of Sri Lanka, we can reach peripherals of the country.

Online library: Our main website comprises of this online library facility, where staff and students can search for book, past year question papers and research journals, using their login ID and password from any premises.

Audio, Video materials: Audio – visual devices enliven studies by enabling the student to watch video films and relevant material and provide an opportunity to listen to audio cassette presentations by Open University staff and other experts in the specific fields. Audio visuals are thus an important teaching aid for the self-learner.

Communication Channels: In addition to MYOUSL portal, NODES services and online library facilities, SMS service and Online Notice board are available under main website. This is purely for the purpose of message delivery regarding any academic activity.

Day Schools: While printed course materials and audio visuals form the main components of the study packs in the distance education system of the OUSL, day schools are conducted from time to time at Regional and Study Centres. These day schools are primarily for discussions, clarification of problems, and are often conducted by academic staff of the OUSL as well as visiting academics from other universities, academic institutions and the like.

E-Learning: Keeping in line with outcome based education in context on Open and Distance environment at Open University of Sri Lanka, using Moodle and other multiple resources and techniques as Learning Management System (LMS). Moodle was built with elements and tools that embody pedagogical understanding and the organization and design of Moodle's interface supports learners and learning tasks with all the standard features of a LMS that supports a content-driven learning model. This can be considered as one of the competitive advantage for the OUSL and core-competency as well. The OUSL has accommodate new technology and e- learning activities that are available through many recognized online forums and MOOCs (Massive Open Online Courses) from world renowned institutions.

Challenges in Implementation of ODL Technology

The models of distance learning can be considered as a family of co-existing 'generations' each still having valuable contributions to make to the study life of global distance learning. It is imperative to ensure that technology-driven distance education proposed by the later generations of ODL does not alienate the already disadvantaged students from pursuing higher education. In Sri Lanka, the strengths of teacher training programmes in the distance mode to train teachers who lacked professional qualifications, mainly used print materials while the OUSL used supplemented these with audios. The introduction of newer technologies occurred in the OUSL with the establishment of a state-of-the-art Media House donated by JICA for in-house production of multi-media learning materials.

In 2003, the Distance Education Modernization Project, (DEMP) supported by the Asian Development Bank and the Government of Sri Lanka embarked on an ambitious project on Online Learning at post-secondary education level. The overall goal of the

DEMP was to increase socio-economic growth by developing a modern, high quality human resource base through online education, to raise quality and enhance capacity with the aim of setting up and managing a distance education network that provides assistance to develop curriculum content, training, mentoring, peer group support and interaction and maintenance of hardware and software. The project provided expertise, capacity building, technology transfer, equipment and software and recurrent costs (Gunawardena, 2008). Online learning developed the model of Flexible Learning as not only was the Internet being used for delivery of the programmes, for transmission of assignments and provision of feedback but it was also envisaged that social learning would take place, through chats, virtual canteens, discussion forums etc. Thus in two Online Learning programmes in Sri Lanka, Gunawardena and Karunanayake (2008) found that Cooperative Learning was the norm in communications.

Teachers and students in the post war contexts or so called conflict affected fragile environments experience extra ordinary challenges even for the basic education delivery. These challenges keep them away from the use of technology-enhanced education. These aspects negatively affect students' cognitive, physical and psycho-social well-being, which in turn negatively affect their learning. Teachers are directly affected by conflicts and crisis. Their own education and professional development may have been disrupted and resulting in low levels of content knowledge and teaching skills (USAID, 2013). Kelegama (2010), in a report on post conflict reconstruction in Sri Lanka, mentions that, education of most of the students in conflict affected areas was disrupted due to displacement, loss of family members, psychological impact, loss of school materials and the destruction of school buildings. Further, he suggests that providing educational infrastructure including teaching and learning aids is an essential action that should be considered regarding the conflict affected groups. His ideas reveal that provision of teaching learning materials is also an important action to promote educational gains of post conflict regions.

Higher Education, in the context of current developments in Sri Lanka, is of paramount importance for economic and social development. The main challenge before Sri Lanka as in the case of many other developing countries in the region is how to increase access to higher education while at the same time increasing relevance and quality of educational programs and to improve skills of the undergraduates so that they are gainfully employed. Today, in the global context, challenge before all countries, especially South Asia, is how to expand higher education, as this sector, due to a variety of problems including that of fiscal constraints, face numerous problems which demand new policy initiatives. Higher education system of Sri Lanka therefore needs to be reformed to make a noteworthy contribution to both development and change in the country. New policy initiatives and a reform strategy is being planned and adopted with a view to reforming the system on the basis of both local and global considerations.

Best Practices

Best Practices and Awards

The OUSL secured the Gold and Silver awards at the 32nd Annual Conference of the Asian Association of Open Universities, (AAOU 2018) in Hanoi Vietnam. Mr. W. A. R. Senevirathne (Dept. of Management Studies, OUSL) and Ms. H.C Dassanyake (Dept.

of Management, University of Sri Jayawardanapura) won the Gold award for the best paper titled *Can E-Sevicescapes Improve Student Management*. Evidence for the Open University of Sri Lanka. The Silver award was won by a joint paper presented by A.M.P.B. Abeyasinghe (Dispatch Division), B.G Jayathilleke (CETME), B.C.L Attapattu (Civil Engineering), L.P.S Gamini (Department of Management Studies). The event was attended by a large delegation of paper presenters from the OUSL.

The Faculty of Education of OUSL launched a website “Digital Education Leaders in Action” June 2019. This is in relation to the research project conducted on the implementation of the Commonwealth Digital Education Leadership Training in Action (C-DELTA) Programme in Sri Lankan schools, supported by the Commonwealth of Learning (COL), Canada. The key aim of this research project was to develop capacity among school teachers and promote the adoption of digital education environments in schools. It was envisaged that the participant teachers of this research project would develop their competencies in adopting and promoting C-DELTA in their schools by improving their digital education leadership skills, thus becoming effective professionals who can cater to the digital education environments in their institutions. The website captures the teachers’ reflections on their journeys, reported in the form of “stories”. A research dissemination seminar was also held afterwards, with the participation of practitioners from educational institutions. This research project was implemented by a five-member team, under the leadership of Prof. Shironica P. Karunanayaka, Dean, Faculty of Education.

OEPGateway@OUSL is your window into Open Educational Practices at OUSL. It features novel initiatives by OUSL staff in collaboration with partners around the world. These initiatives include research projects and resources on various types of open educational practices including open access to education, open learning, OER integration and open scholarship. The aim is to support capacity building, research, and promotion of scholarship in relation to open educational practices.

The OUSL won the Gold and Silver medals in the Best Practices Awards category at the 31st Annual Conference of the Asian Association of Open Universities (AAOU 2017) in Indonesia. The Gold medal was won for the research paper titled, “Development of a Hybrid Learning System to Enhance ODL: Printed Course Material Amelioration via Smart phones by W.R.de Mel and Mr. M.R. Mohamed Haroon of the Department of Mechanical Engineering, Faculty of Engineering Technology, OUSL. This paper develops a Hybrid Learning System (HLS) in the field of ODL. The Silver medal was won by the paper titled, “Development and Testing of a Mobile Application through Design-based Research,” a joint paper presented by the members of the Centre for Educational Technology and Media (CETMe) and the Faculty of Health Sciences, OUSL.

During the years 2005 to 2008, OUSL was to achieve recognition of its excellence in two particular fields. The faculty of Education won an international award of excellence for a study programme and a national center of excellence was established at OUSL in the field of English. In 2008, this innovative programme won OUSL’s first international accolade when it was awarded the Commonwealth of Learning Award for Excellence in Distance Education at the Six Pan-Commonwealth Forum in London. The Faculty of Education of the Open University of Sri Lanka has taken a huge step forward in proactively

integrating ICT and OER in its educational programmes for the professional development of teacher educators in the country. This is initiative of the Faculty of Education marked an important beginning and step in the right direction. It help to transform OUSL and to usher it into a new era of a learner and learning centered education and where it is competitive with international standards.

Teachers' professional as well as social behaviours have been positively changed by the OER-integrated teaching-learning practices. Initially they were reluctant to come forward, not confident to express their ideas, not ready to work with others in teams, less interactive and shy. But ICT and OER integration has significantly changed their social behaviours. They joined together in teams and conducted workshops, published books, created OER in their mother tongue and shared them with the others. Teachers became socially active through the integration of ICT and OER in their teaching-learning process (Sasikala Kugamoorthy and M. Rajini, 2017).

An undergraduate student in Mechanical Engineering at the OUSL, became the winner of South Asian SOFE (Speak Out For Engineers) Competition 2017, organized by the Institution of Mechanical Engineers (IMEchE) UK. The competition provides young engineers with an excellent opportunity to demonstrate and develop their verbal and visual presentation skills and competence in public speaking.

The Open University of Sri Lanka has filed four Patents at the National Intellectual Property Office (NIPO) in August 2017. Though the staff and students of the university have filed Patents in the past, this is the first time the OUSL has become an applicant to file Patents. A team of senior academics from the OUSL and other senior scientists have filed a patent application for "A process of producing a cross-linked cellulose and acrylic acid grafted super absorbent copolymer using a domestic microwave oven for agricultural applications."

The OUSL organize a "3D Printing Camp" for the first time in Sri Lanka with a team of Soft Robotics Research Group of the OUSL. This camp focused on school children under the guidance of the Ministry of Education in line with the "Global 3D Printing Day". Which was considered as the foundation of Sri Lanka's futuristic trends in 3D Printing. "3D printing" originally referred to a process that deposits a binder material onto a powder bed with inkjet printer heads layer by layer. More recently, the term is being used in popular vernacular to encompass a wider variety of additive manufacturing techniques. In fact, it is a novel technology that is yet to be embraced by the emerging fields of Soft Robotics Technology in Sri Lanka.

Students and staff of the Department of Management Studies of the OUSL have carryout CSR activities keeping in mind that 'Life is all about Learning' every year. The most important facet in life should be learning with emotional intelligence. This is mostly about learning by understanding, by helping others, because you have been given a chance, a rare chance to be a human. Corporate Social Responsibility (CSR) is the economic, social, ethical and discretionary commitment of a business for the wellbeing of stakeholders, society and the environment. CEMBA/CEMPA, the programme that opens the door for professionals around the country to gain necessary skills, knowledge and also competencies also open the door for the same to serve the community they live in.

Developing a policy handbook at national level

To realize their visions and fulfill the mandates, all the ODL institutions have developed policies, management guidelines and organizational bodies which oversee or carry out the policies. Major policy development areas include academic affairs, personnel, admission, assessment, finance and resource allocation, quality assurance, and services. The OUSL has developed a rather comprehensive handbook or manual listing policies and guidelines in all major policy areas.

ODL policies at different levels determine the kinds of ODL practices. The ODL policies at institutional, national and international levels provide the directions and guidelines for the everyday operations and managements of any ODL activities and initiatives. To meet the needs of a rapidly changing environment for ODL, existing policies must be appropriately revised and new policies need to be developed. In doing so, an ODL institution must take a comprehensive, systemic approach rather than a piecemeal approach.

The University Grants Commission (UGC) disburses funds, formulate student-admission criteria and sets administrative guidelines and norms for Sri Lanka University. In 2001, a QA project was initiated by the Committee of Vice-Chancellors and Directors and UGC with World Bank assistance to develop and implement a comprehensive QA system for Sri Lanka higher education including ODL. As results of this collaborative work, the Academic Procedures Handbook was completed in 2003 and updated in 2015 as a complementary to the QA Handbook. Countries which have relatively small numbers of higher education institutions can adopt this model of policy development of Sri Lanka. As seen in the case of OUSL, the policy manual which was developed at the national level has been used as guidelines for assuring the quality of ODL services. This national-level policy will result in a significant improvement in the quality of education in general and ODL in specific.

Learner's Support Services and Teaching

Learner's support system lies in the heart of any ODL activities. It is important for an ODL institution to offer opportunities for its students to connect with the institution and thus to develop valuable learning experience. Typical forms of student services in recent ODL include: face-to-face and/or online tutoring and counseling, telephone or email services, digital libraries, and mentoring. With the development of ICT, ODL institutions are able to offer individualized and interactive student services faster and easier than ever. Some examples include 24 hour telephone or email help desks, e-counseling, e-tutoring, and tutoring sessions via video-conferencing.

OUSL provides one-stop comprehensive student services through the nine regional and 21 study centres throughout Sri Lanka. The role of the central regional education services centre is to be a one-stop centre in providing support services to OUSL learners in collaboration with regional and study centres. These centres provide students with academic support and other services via face-to-face tutorials, coordination, and telephone sessions with tutors. Online services such as online interactions, updated digital library in Sri Lanka, and email-based supports are also provided.

Since the quality of student support services is heavily depending on the academics/tutors' performance, OUSL operates a rather unique system whereby senior academics/lead tutors that are effective and active are selected to support other visiting academics/tutors. Currently more than 100 senior academics/Lead Tutors are working at the all regional and study centres. The senior academic/Lead Tutors' distinctive role is to support other visiting academics/tutors in both the face-to-face and online pedagogy. Here they are required to monitor the tutors during the face-to-face interactions as well as their online discussions. An online feedback form will allow the Lead Tutors to key-in the results and tutors can view the feedback. The results are also captured and stored in the Tutor Teaching Database for Deans to view for decision making processes. It is the duty of any ODL institutions to reduce or eliminate existing or potential barriers to ODL activities of students. In this regard, providing high-quality, just-in-time services for ODL students is essential. The concept of one-stop services shows ODL students ways to reach academic goals faster and more effectively. OUSL's case provides other ODL institutions with an opportunity to review their various student services from the perspective of one-stop services.

Conclusions and Recommendations

The systems and procedures that the OUSL employs permits student to rearrange their academic activities to suit what they want, where they want and when they want. These are questions that impose traditional barriers to higher education. We do not insist on entry level qualifications other than being adults and possession of basic literacy. The foundation and certificate courses impart the preparatory knowledge necessary to undertake higher level programmes at Diploma and at Undergraduate Degree levels. For the past three decades, the OUSL experimented and tested ODL methodologies to identify what is best for Sri Lankan learners. OUSL passed this consolidation stage and are currently moving towards the phase of rapid expansion to cater to the higher educational needs of the country. The staff and the leadership of the OUSL are ready to undertake this venerated responsibility to help build a new Sri Lanka.

The OUSL has already established a firm foundation for online education and the institution is currently moving albeit slowly towards achieving the goal of transforming the delivery of a larger share of the courses into online mode within the next five years. There are several gaps in knowledge and skills as well as attitudes among the learners and the teachers that have to be addressed to make online education effective and efficient (Sivalogathan, V. and L.P.S.Gamini, 2017). The University must follow the international benchmarks in e-learning noted above and take pro-active decisions to address the gaps vis-à-vis the international benchmarks. In this endeavor the University must aim at optimizing its strengths and the unique advantage of being the nation's leading ODL institution. In conclusion one might note that there is a need for greater alignment of institutional strategies and ICT based learning supported by effective leadership to ensure benefits of e-learning to all the stakeholders.

Some of the inherent advantages of the ODL system include its commitment to enhancing flexibility in terms of recruitment of students, scheduling of study time, place of study, admission requirements, credit transfer, and use of web-based learning with the help of on-line tutors. The Open University of Sri Lanka is now moving towards the next

generation ODL technology supported by a combination of online-and blended teaching and learning techniques. Today it caters to a student population of about 40,000 learners who offer courses through the Faculties of Education, Engineering, Natural Sciences, Health Sciences and Humanities and Social Sciences and Management Studies. Together they offer about 67 study programmes. The ODL as a mode of learning has the prime objective of facilitating learners who were mostly disadvantaged due to gender, age, lack of formal education, residence in remote locations or employed, who were denied tertiary, adult or lifelong education due to the various barriers that prevented them from continuing education.

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CUSTOMER ACCEPTANCE AND SERVICE CONTINUATION INTENTION OF THE TOUCH TRAVEL PASS TERMINALS IN SRI LANKA

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Abstract

The Touch travel pass system is introduced to the Sri Lankan market with the intention of automating the traditional bus ticketing mechanism. After five years of the product introduction, it is revealed that there are less acceptance and service continuation intention amongst the terminal users. Hence, the purpose of this study is to investigate the determinants of customer acceptance and service continuation intention of touch travel pass terminals in Sri Lanka. This study employs a quantitative methodology and survey strategy. Primary data was gathered from a sample of 150 bus owners and 150 bus conductors using a structured questionnaire utilizing a systematic random sampling technique. The theoretical framework and hypotheses were developed based on previous literature. The independent sample t-tests, one-way ANOVA, and multiple regression models were used through SPSS software in testing the hypotheses. Perceived usefulness, social influence, and trust show a significant positive impact on customer acceptance. Trust shows a higher impact on customer acceptance than the other determinants. Further, the findings disclose that demographic factors such as gender, age, marital status, and education do not show any significant impact on customer acceptance and service continuation. Moreover, it is implied that the perceived usefulness, perceived ease of use and government influence have a significant impact on service continuation intention. Government influence shows a higher impact on service continuation intention than the other determinants.

The management should focus more on perceived trust, social influence and perceived usefulness in enhancing customer acceptance. Further, the marketers should focus more on perceived usefulness, ease of use, and government influence in enhancing the service continuation. Moreover, the government should also focus on developing a mandatory requirement for the use of travel pass for the enhancement of both customer acceptance and the service continuation. Further, the government should develop the necessary infrastructure facilities to smoothen the process. This study is the first to investigate the factors affecting customer acceptance and service continuation of touch travel pass terminals in the Sri Lankan context.

Key Words – Customer acceptance, service continuation, touch travel pass, Sri Lanka.

Introduction

The touch travel pass mechanism has been identified as a fast and secure payment method for the transportation industry. The bus owners in the Western Province of Sri Lanka can utilize the special Point of Sale (POS) machines to perform transactions, which enabled Near Field Communication (NFC) and General Packet Radio Service (GPRS) technology. GPRS refers to a packet-oriented mobile data service and based on the wireless cellular communication systems. This technology extends a global system for mobile (GSM) voice networks with support for data structures. Near Field Communication enables to perform transactions and data exchange between two parties (endpoints) with wireless communications. As per the bus owner's perspective, this technology gives the opportunity to get the relevant data about transactions, monitor the collections, since the collections are automatically deposits to their bank account.

This growing technology has been developed and implemented in the private bus sector in the Western Province in Sri Lanka in 2013. As per the three in-depth interviews conducted with the management of the touch travel card project in assessing more insights, the interviewees highlighted that the initial objective of implementing the touch project was to acquire and retain 4,000 bus owners within the second half of 2016. But customer acceptance was less than 40% of the expected level and the evaluation of the difference between the desired outcome and an actual outcome has created a strategic planning gap. To address this research gap, it is essential to recognize the determinants of customer acceptance of touch travel pass terminals in Western Province, Sri Lanka. Moreover, the expected usage of the existing POS terminal was 90% from the acquired base. All three interviewees highlighted that the actual active usage was 50% of the acquired base which is below the expected level and this has created the second research gap of this study. Therefore, it is important to identify key factors affecting service continuation of touch travel pass terminals with special reference to the Western Province in Sri Lanka.

The research questions of this study have been identified as 1) what are the determinants of customer acceptance? 2) what are the determinants of service continuation intention? The main objective of this study is to investigate the determinants of customer acceptance and service continuation intention of touch travel pass terminals in Sri Lanka. This study contributes to the marketing literature by being the first study to investigate customer acceptance and service continuation intention of touch travel pass terminals in the Sri Lankan context.

Literature Review

The literature review is focused on a critical assessment of determinants of customer acceptance and service continuation intention with special reference to the technological products.

Customer Acceptance

There are numerous factors that are being considered for the success of Information Technology Implementation. User acceptance and continuous use of such technology play a vital role in any of the organizations. Meuter et al (2000) emphasized that consumer acceptance as a critical factor for the cashless transactions which required a

change in consumers' behavioural patterns. According to Psychology, it is a confirmatory attitude of changing behaviour based on the factors including context, reference object, and the situation. Here, customers are considered as the acceptance object whereas product and services are considered as the reference objects. Moreover, the context or situation refers to the purchasing situation where there is a mutual understanding. However, between buyer and seller with regard to a specific product, Schmidt et al. (2015) pointed out that the situation does not particularly focus on the point of sale but the product and services offered by a company.

There are multiple theories that explain customer acceptance. For instance, Davis (1989) introduced the Technology Acceptance Model (TAM) based on an earlier theory developed in order to explain the phenomenon; Theory of reasoned action (Ajzen and Fishbein, 1980). Davis (1989) posits that the TAM model as a key explanation for why consumers accept or reject new technological products or services. The model is specifically designed to test the factors affecting consumer adoption of technological products or services in an organizational context and assessing behavioural gaps (Samarasinghe and Ahsan, 2014; Samarasinghe and Samarasinghe, 2013). Davis (1989) identified the key factors of this model as perceived ease of use and perceived usefulness. However, Lu et al. (2003) emphasized that recent research studies used this model in order to explain the setting of private individuals. Accordingly, Lu et al. (2003) argued that the technology acceptance model is widely used outside of the organizational contexts in addition to the inside context of the organization. The model argued that usage intention or consumer adoption is based on the perceived ease of use and the perceived usefulness of such a product.

The origination of the technology acceptance model was on the information systems. The researcher of this study intends to apply the same model with special reference to the cashless transactions, attitudes, and behaviour in the transportation industry. There are multiple factors added to the model by the various researchers in the recent past. For instance, Gefen and Keil (1998) proposed that the technology acceptance model is widely important when employing social factors in the phenomenon. Accordingly, Gefen and Keil (1998) added Trust as an antecedent of consumer acceptance. Further, Bradley and Stewart (2002) and Page and Luding (2003) argued that perception of the risk and trust-related issues as key factors influencing the adoption of internet banking. The researcher of this study intends to apply a modified version of the technology acceptance model which focuses on ease of use and perceived usefulness in determining consumer acceptance. Even though bus owners do not use the bust ticketing terminals, we intend to proceed with the perceived ease of use in terms of the bus conductors' perspective.

Moreover, numerous researchers used trust as a significant factor influencing the consumer acceptance with special reference to the technological products (Polatoglu and Ekin, 2001; Kardaras and Papathanassiou, 2001; Dewasiri and Tharanganee, 2014). Hence, the researcher of this study decided to incorporate this variable into the technology acceptance model. Other researches focus on the effect of external pressure and Government support on customer acceptance (Iacovou et al 1995). While, several studies integrated between technology acceptance, Social influences, and perceived cost to investigate its impact on customer acceptance (Venkatesh et al,2012.; Sulaiman, 2000; Alam, et al., 2007). Considering the above literature researcher include five main

determinants namely perceived usefulness, Price value, perceived trust, government support and social influence which could affect customer acceptance.

The perceived usefulness

Doll et al. (1998) identified perceived usefulness as “the extent to which a person finds that using the technology will enhance his or her job performance”. The perceived usefulness of mobile ticketing terminal could be identified as its ability to offer a means-end relationship that will enhance the ticketing performance. Barczak et al. (1997) argued that the means-end relationship as the reason for using a technological product. Venkatesh and Davis (2000) argued that perceived usefulness is formulated in coordination with new technology and its consumer acceptance.

Price Value

The cost is considered as the cost of its development and maintenance in determining the price as emphasized by Karanasios and Burgess (2006). It includes investment in both time and money. The past evidence shows that the product or services cost has an inverse relationship with the acceptance decision. For instance, Premkumar et al. (1994) investigated the same phenomenon and revealed that cost as a key factor affecting consumer acceptance in the Electronic Data Interchange context (EDI). Zeithaml (1988) epitomized that product cost and product quality are considered together to determine the perceived value of the product and services. As Dodds et al. (1991) emphasized, the researcher of this study intends to determine the price value as the tradeoff among perceived benefit and product cost for a better operationalization of the variable. The overall price of purchase costs, operating costs, and disposal costs are too high for the customer and prevent the customer from accepting a product or service. (Schmidt et al 2015) Therefore, if travel pass device purchase, transactions costs are too high and it will lead to creating barriers for customers, hence customers may search for other options. Here, it is assumed that the price value could be positive when the benefits of using new technology are higher than the product cost. Hence, it is expected that the price value and consumer intention or acceptance are positively related. Accordingly, price value is added as a determinant explaining consumer acceptance of using touch travel pass terminals.

Social influence

The impact of social influences on consumer acceptance was investigated in few social-related theories. For instance, the theory of reasoned action argues that consumers' behavioural intentions are affected by both subjective norms and attitude. The research studies in the diffusion of innovation are also revealed that consumer adoption for new technologies is affected by social norms than the IT characteristics and decision styles of the individuals. Cooper and Zmud (1990) and Laudon (1985) supported the argument stating that social influences as key factors influencing the diffusion of innovation. Here, it is possible to argue that the decision to purchase POS machines is affected by social elements such as peer / superior influences and other people's opinions. This argument is supported by the recent studies conducted in the new technology adoption in both organizational contexts and consumer perspectives (Hsu and Lu, 2004; Lu et al., 2003; Venkatesh et al., 2012). Karunanayake and Samarasinghe (2018) investigated the social influence on purchase intention in the Sri Lankan context.

Venkatesh et al. (2012, p. 159) defined the social influence as “the extent to which consumers perceive important others (e.g. close friends and family) believe they should use a particular technology”. Deutsch and Gerard (1955) identified this effect as an internalization mechanism that focuses on the interpretation of human behaviour from others' point of view as evidenced by the behavioural reality (Schepers and Wetzels, 2007). Hence, it is reasonable to argue that behavioural intention to use POS device or touch travel card based on the influence made by the social networks such as his or her own friends, peers, superiors, and other social groups. Schepers and Wetzels (2007) argued that the social influence in the current context is mainly from social media that includes the internet. The aforementioned internet networks and web of relationships could have a direct influence on consumers' opinions, buying decisions, and finally the behaviour of the people.

Perceived trust

The perceived trust towards a transaction of a technological product or service plays a vital role in consumer acceptance. The trust could be identified as the consumer's confidence over the security of personal information and the money will not be used by a third party without their consent. Abrazhevich (2004) argued that consumers do have a belief towards the vendors that their personal information will not be used even at a stage where there is no perfect system own by the vendor. Accordingly, it is believed that the customers' degree of confidence in their money or personal information is safe and all the stakeholders involved in the business will act as per the consumers' interest. Hence, in terms of using the online payment system, the consumers believe that the transaction is conducted in a proper mechanism where money and transaction information is not stolen and misused. Similarly, if the vendor uses an imperfect payment system, the customers believe that all the stakeholders such as banks, vendors, POS supplying partners will not use their personal information in a harmful way. Conversely, the other stakeholders accepting the payment are also to be trusted that their receipt of the payment is secured and on time while facilitating digital commerce. The bus ticketing terminal is also carrying an online payment in a similar mechanism.

Lim et al. (2007) emphasized that the higher level of trust and confidence towards the Electronic Payment System (EPS) as a key factor for a successful e-commerce implementation and adoption in any country. The success story of Japan revealed that trustworthiness towards the digital systems as a major reason for its acceptance in the country. Abrazhevich (2004) supported the argument revealing that customers will not tend to use any technological system until they perceive that it is trustworthy. This finding was backed by the survey conducted by Abrazhevich (2004), who found that customers will not use systems that they perceive to be less trustworthy. In a similar background, Kniberg (2002) argued that the adoption and acceptance of EPS are positively related to consumer trust. Accordingly, if the perceived trust goes up, there will be an increment in the consumer acceptance which will help to retain and sustain the consumer relationships.

Government support

The government plays a vital role in the implementation of any technological product or service through legislation and infrastructure development to suit the technology. Tan and Teo (2000) supported this argument stating that any government could

influence the acceptance of new technologies based on the support they tend to provide for a successful implementation. Here, Tan and Teo (2000) suggest that the government could play a supporting role in terms of leadership and intervention with special reference to innovation diffusion. Thus, there is a possibility to measure government support as per the level of support provided by the government. In a similar ground, it is possible to argue that there is a positive relationship between government support and the acceptance of such technology. Here, it is expected to have a similar positive relationship between the government support and the touch travel pass acceptance by the consumers. Iacovou et al. (1995) identified government influence as external pressure or support when implementing a technology acceptance model.

As Hernandez et al. (2006) emphasized, external factors such as government support are also playing a vital role in determining the consumer acceptance of new technology. Therefore, the government of Sri Lanka is currently playing a noteworthy role in determining the rules and regulations in the bus industry as well as providing subsidiaries to the bus owners.

Service Continuation Intention

Service continuation is also playing a vital role in the acceptance of new technology introduction since that is supporting to continue such service which will help the customer acceptance in the long-run. Liao et al. (2009) introduced the technology continuation theory (TCT) stating that consumers' intention of continuation towards new technology is vital in consumer acceptance. Liao et al. (2009) developed the theory of technology continuation based on three theories of technology, information systems, and consumer acceptance; Technology acceptance model (Davis, 1989), Expectation Confirmation Model (Bhattacharjee, 2001), and Cognitive Model (Oliver, 1980).

Perceived ease of use and perceived usefulness have been explicitly investigated in explaining the technology continuation intention. It is argued that a consumer's continuous usage of service is judgmental. Agarwal and Prasad (1999) argued that there is a substantial effect from usefulness on the service/product continuation. For instance, from the business to the consumer market, people tend to use touch POS terminals through wireless networks like GPRS/GSM/WiFi. The stakeholders believe that these online activities will enhance the ultimate performance of the product offerings to both consumers and the service providers. Moreover, perceived behavioural control, social influence, and government influence were considered as the key factors affecting service continuation intention (ex: Bandura et al., 1977; Bandura et al., 1980; Venkatesh et al., 2012; De Valck et al., 2009; Tan and Teo, 2000).

Perceived usefulness and Service Continuation

Perceived usefulness plays a vital role in service continuation intention as proposed in the service continuation theory, suggested by Bhattacharjee (2001). It is expected to have a positive influence from perceived usefulness on service continuation intention as suggested in the original argument. Accordingly, if a consumer believes in the information systems, it will enhance the job performance and finally, the degree of positivity of perceived usefulness towards continuance will increase. There are numerous studies conducted in analyzing the impact of perceived usefulness on service continuation

intention and most of them have found a positive relationship between two variables; Al-Maghrabi et al. (2011) and Ho and Kuo (2010). It is expected to set the expectations at an achievable extent in the first phase. If a company sets up the initial expectations at a higher level, there will be discontinuation when the consumer's expectations are not fulfilled. Thus, the level of new expectations could motivate or demoralize consumers in continuous usage. Moreover, the continuation of service indicates some level of satisfaction. Hence, the service user is at a voluntary level and expectation levels are reached, a significant positive relationship is expected amongst the perceived usefulness and the touch travel pass service continuation.

Perceived ease of use and Service Continuation

Davis (1989) defined the Perceived Ease of Use as “the degree to which a person believes that using technology will be free from effort”. It is argued that if the new system is easier to use, the end consumers are keen on using it to learn new features and continuation is carried forward. Chiu & Wang (2008) explained that perceived ease of use is completely related to the service continuation in the Web using and learning context. Adams et al. (1992), Subramanian (1994), Hendrickson et al. (1993), Igbaria et al. (1995), Gefen and Straub (1997), Agarwal and Prasad (1999), and Gefen and Keil (1998) epitomized that there is a universal consensus between perceived ease of use and service continuation. Gefen and Straub (2000, 2003) also provided evidence for such a relationship in the context of touch travel pass terminals.

Perceived behavioural control and Service Continuation

Ajzen (1991, p.183) argued that "perceived behavioural control added to the research model because the availability of human resources for a person must (at least to some extent) dictate the intention to perform a behaviour". Bandura (1977) proposed that "perceived behavioural control is concerned with the perceived ability to perform a behaviour (or sequence of behaviours) and is therefore very similar to the idea of self-efficacy by Perceived behavioural control which reflects the internal and external constraints on behaviour". There are several systematic literature studies conducted by Bandura et al. (1980) explaining the role of perceived behavioural control on the service continuation (Bandura et al., 1977; Bandura et al., 1980). These studies have proposed that consumers' behaviour is highly affected by their confidence in the ability to control it. According to the theory of planned behaviour and theory of service continuation, the perceived behavioural control could be employed to assume incessant social achievement together with the behavioural intention. Here, bus conductors involve in the process of smart card acceptance and continuous use of the travel pass terminals in the travel pass process. Hence the behavioural control has significant impact on the service continuation.

Social Influence and Service Continuation

Social influence (SI) is also playing a vital role in explaining the service continuation of a technological product. SI is defined as the importance of the opinions of others including family, friends, relatives, peers, and colleagues on the consumers' decision towards service continuation as emphasized by Venkatesh et al. (2012). Further, De Valck et al. (2009) emphasized on the consumers' social network impact on the service continuation behavior. For instance, social influence shows a significant positive impact

from the formation of attitudes with special reference to the technology used as epitomized by Sapio et al. (2010), Venkatesh et al. (2012), and Laroche et al. (1996). Muk and Chung (2014) revealed that social influences like referents affect the consumer intention towards brand pages in the web. Similarly, in the case of teenagers, it is vital to substantiate their selections with colleagues as proposed by Muk and Chung (2014). Therefore, Social Influence could be considered as a significant factor influencing consumer's intention to the continuation and on the other hand bus, passengers have significant influencing power to appeal regarding travel pass usage and continuation.

Government Influence and Service Continuation

The researcher of this study discussed the importance of government support on consumer acceptance in the early literature. Tan and Teo (2000) revealed that government support could help in the formation of new technologies and their continuation. Nasri and Charfeddine (2012) divulged the importance of studying how individuals and firms perceive the government influences on service continuation. Shih and Fang (2004) epitomized that "Government Influence often includes technical aspects due to the large amounts of money required". Here, it is possible to argue that the internet and other infrastructure development and its continuation have also played a vital role in the service continuation as emphasized by Nasri and Charfeddine in 2012. Therefore, Touch travel pass technology often requires support for service continuation from the government of Sri Lanka.

Conceptual Model

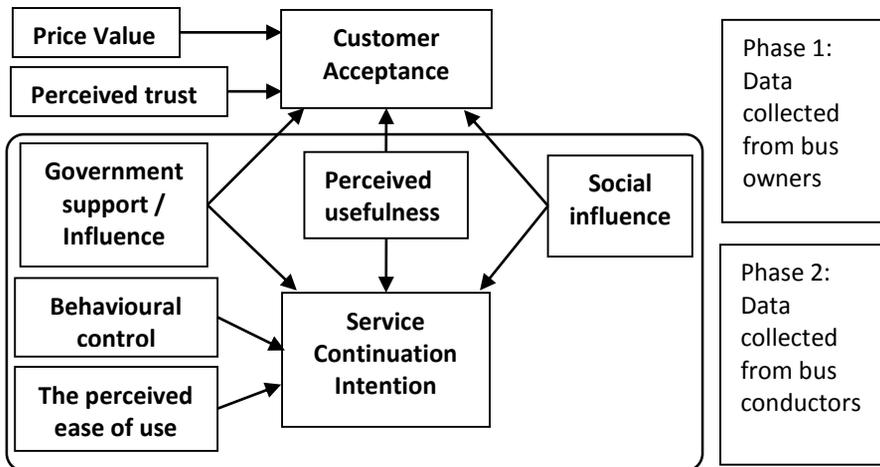


Figure 1: Conceptual Framework

Source: Author has developed the same based on previous literature

The conceptual model is developed based on previous literature on customer acceptance and service continuation intention. Here, the determinants of customer acceptance and service continuation intention of touch travel pass terminals are investigated. Hence, the customer acceptance and service continuation intention are the dependent variables of the study. Independent variables were identified as price value,

perceived trust, government support, perceived usefulness, social influence, behavioral control, and perceived ease of use. Figure 1 represents the conceptual framework of the current study.

Research hypotheses

The research hypotheses were developed based on the rigorous literature review to achieve research objectives of the current study. Given below are the main hypotheses (12) developed to test the conceptual model developed in the current study.

- H1: There is a significant relationship between perceived usefulness and customer acceptance.
- H2: There is a significant relationship between price value and customer acceptance.
- H3: There is a significant relationship between social influence and customer acceptance.
- H4: There is a significant relationship between government support and customer acceptance.
- H5: There is a significant relationship between perceived trust and customer acceptance.
- H6: There is a significant relationship between perceived behavioral control and service continuation.
- H7: There is a significant relationship between perceived ease of use and service continuation.
- H8: There is a significant relationship between perceived usefulness and service continuation.
- H9: There is a significant relationship between government support and service continuation.
- H10: There is a significant relationship between perceived usefulness and service continuation.
- H11: There is a significant relationship between demographic factors and customer acceptance.
- H12: There is a significant relationship between demographic factors and service continuation.

Research Methodology

Dewasiri et al. (2018) argued that it is appropriate to use the quantitative methodology if the research questions are started in 'what' form. Hence, this study uses quantitative methodology in order to suit the research questions of the study. Moreover, this study intended to gather information from variant respondents. Hence, this study can be considered under the data triangulation approach since it uses a person variation in data (Dewasiri et al., 2017; Dewasiri et al., 2018; Baker et al., 2019; Thurmond, 2001). Here, the acceptance decision and the service continuation decision are respectively made by the bus owner and conductor. Hence, the researcher has selected 150 bus owners as the sample through the systematic random sampling technique to measure customer acceptance. Service continuation is also measured by selecting 150 bus conductors as the sample through the same sampling technique. The population is counted as 4126 bus owners and conductors. The sample frame is the registered database of western province road passenger transport authority and it is gathered from the WPRPTA database. The data was

collected by the researcher during the period from January 2019 to March 2019. The researcher used direct communication methods such as face to face interactions and telephone conversation techniques in order to obtain the responses from the sample through a structured questionnaire. The questionnaire included instruments designed for measuring key concepts such as service continuation, customer acceptance, perceived usefulness, price value, social influence, government support/influence, perceived trust, and perceived ease of use, perceived behavioural control, and demographic characteristics. The operationalization of the key concepts is indicated in Appendix 1.

The data analysis was conducted using SPSS software employing analytical techniques such as independent sample t-tests, one-way ANOVA tests, and multiple regression analyses.

Validation of Measurement Properties

The concepts and constructs measured in this study were operationalized based on the rigorous literature survey conducted by the researcher. Hence, constructs and concepts used in the survey consist of high content validity. There are several measures to ensure the construct validity, but the researcher of this study proceeded with the confirmatory factor analysis considering the easiness of its interpretation. Here, the factor analysis tends to confirm how the indicators are operationally defined and its' suitability in terms of validity.

Table 1: Validity and Reliability of the Constructs

Dimension	Indicators	Validity	Reliability (Conbranch's Alpha)
Perceived Usefulness (OPU)	OPU1	.892	.963
	OPU2	.967	
	OPU3	.965	
	OPU4	.969	
Price Value (OPV)	OPV1	.956	.899
	OPV2	.956	
Social Influence	OSI1	.941	.871
	OSI2	.941	
Customer Acceptance	OCA1	.907	.782
	OCA2	.907	
Perceived Ease Of Use (CPE)	PEU1	.696	.706
	PEU2	.792	
	PEU3	.690	
Government Support	OGS1	.798	.796
	OGS2	.824	
	OGS3	.934	
Service Continuation (SC)	SC1	.959	.913
	SC2	.959	

Accordingly, the indicators were selected for each dimension if the component values are greater than 0.7 benchmarks as emphasized by Sekaran (2007). Moreover, the researcher used inter-item consistency reliability in assessing the reliability of the constructs. Here, the researcher used Cronbach's alpha in measuring the same (Cronbach, 1946). Convergent validity is demonstrated by each factor ensuring loadings in excess of 0.5 (Moyano-Fuentes et al, 2012). Table 1 reflects the validity and reliability of the constructs investigated in the current study.

It is imperative to note that, some variables (e.g. perceived behavioural control and perceived trust,) were tested using one indicator as suggested in the literature (Tan and Teo 2000). Moreover, those variables were tested and confirmed in the same empirical studies which resultant a good internal validity. According to Table 1, it is evident that all the items contribute above the accepted minimum level of factor loadings of 0.5 as emphasized by Moyano-Fuentes et al (2012) ensuring the convergent validity. Moreover, the reliability is ensured achieving a higher Cronbach's alpha (>0.7) values for each dimension.

Data Analysis and Discussion

The data analysis is conducted in four stages. First, the relationship between bus owner's demographic factors and customer acceptance is investigated. Then, the determinants of customer acceptance are investigated. Third, the relationship between bus conductor's demographic factors and service continuation intention is investigated. Finally, the determinants of service continuation intention are investigated.

Relation between Demographic factors and Customer Acceptance

Table 2 represents the results of the appropriate tests conducted in determining the relationship between the bus owner's demographic factors and customer acceptance. This table shows the results of the independent sample t-tests (IS t-t) and one-way ANOVA tests in assessing the said relationship.

Table 2. Tests for the relationship between Demographic factors and Customer Acceptance

Demographic Factor	Appropriate Test for the Relationship with Customer Acceptance and Its p-value	Significance
Gender	IS t-t, p-value: 0.115	Insignificant
Age	ANOVA, p-value: 0.178	Insignificant
Marital Status	IS t-t, p-value: 0.266	Insignificant
Education	ANOVA, p-value: 0.351	Insignificant
Ownership (Owner is working in the bus: Yes/No)	IS t-t, p-value: 0.817	Insignificant

The results of the independent sample t-tests and one-way ANOVA tests reveal that there is no significant relationship between the demographic factors and the customer acceptance of touch travel pass terminal.

Determinants of Customer Acceptance of the Touch Travel Pass Terminal

The multiple regression analysis (Equation 1) is conducted in determining the factors affecting the customer acceptance of the touch travel pass terminal.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon \quad (1)$$

Where

Y =	Customer acceptance(OCA)	X1=	Perceived usefulness(OPU)
X2=	Social influence (OSI)	X3=	Price value (OPV)
X4=	Perceived trust (OPT)	X5=	Government support(OGS)
€ =	Error		

The results of the regression analysis reveal that the significant value is lesser than 0.05 in the ANOVA table, implying that the regression model results in significantly better prediction of customer acceptance. Hence, it can be concluded that, $\beta_j \neq 0$ for at least one j ($j = 1, 2, 3, 4, 5$). According to the results stated in the model summary, the adjusted R squared is 0.617. Therefore it could be concluded that 61.7% of the model fitness can be explained by the fitted regression model. The Durbin Watson value is (2.150) closer to 2, it is possible to state that the error terms are uncorrelated. Table 3 represents the coefficient results of the regression model in determining customer acceptance.

Table 3: Coefficient Results of the regression model in determining customer acceptance

Variable	Standardized Coefficients	Sig. (p-value)
Perceived usefulness	.093	.001*
Social influence	.723	.001*
Price value	-.021	.935
Perceived trust	1.261	.000*
Government support	.179	.468

The results indicated in the coefficient table stated that p-values of the perceived usefulness ($p=0.001$), social influence ($p=0.001$) and perceived trust ($p=0.000$) are less than 0.05. Hence the results reveal that perceived usefulness, social influence, and perceived trust show a significant impact on the customer acceptance of the touch travel pass terminal. Further, the coefficient results indicate that perceived trust (1.26) has the highest positive impact on customer acceptance. Thus, the results support Abrazhevich's (2004), Lim et al.'s (2007), and Kniberg's (2002) findings who proposed that the perceived trust shows a higher impact on customer acceptance. Moreover, social influence (0.723) shows the second-highest impact as stated by Hsu and Lu (2004), Lu et al. (2003), and Venkatesh et al. (2012). The perceived usefulness (0.093) shows the least significant impact on the customer acceptance of the touch travel pass terminal. These results support the research findings of Davis (1989).

Relationship between Demographic factors and Service Continuation Intention of the Touch Travel Pass Terminal

Table 4 represents the results of the appropriate tests conducted in investigating the relationship between the bus conductor's demographic factors and the service continuation intention. This table shows the results of the independent sample t-tests (IS t-t) and one-way ANOVA tests in assessing the said relation.

Table 4. Tests for the Relationship between Demographic factors of Bus Conductors and Service Continuation Intention

Demographic Factor	Appropriate Test for the Relationship with Customer Acceptance and Its p-value	Significance
Age	ANOVA, p-value: 0.270	Insignificant
Marital Status	IS t-t, p-value: 0.289	Insignificant
Education	ANOVA, p-value: 0.875	Insignificant
Touch Terminal Experience	ANOVA, p-value: 0.295	Insignificant

The influence of gender on service continuation intention could not be measured since all the conductors are recorded as male respondents. The results of the independent sample t-tests and one-way ANOVA tests reveal that there is no significant relationship between the demographic factors and the service continuation of touch travel pass terminal.

Determinants of Service Continuation Intention of the Touch Travel Pass Terminal

The multiple regression analysis is conducted in determining the factors affecting the service continuation of the touch travel pass terminal. The results of the regression analysis reveal that the significant value is lesser than 0.05 in the Anova table, implying that the regression model results in significantly better prediction of service continuation intention of the touch travel pass terminal. The findings further revealed that the adjusted R Square is 0.547 in the model summary. Therefore, it could be concluded that 54.7% of the model fitness can be explained by the fitted regression model. Durbin Watson's value is (2.2297) closer to 2, it is possible to state that the error terms are uncorrelated.

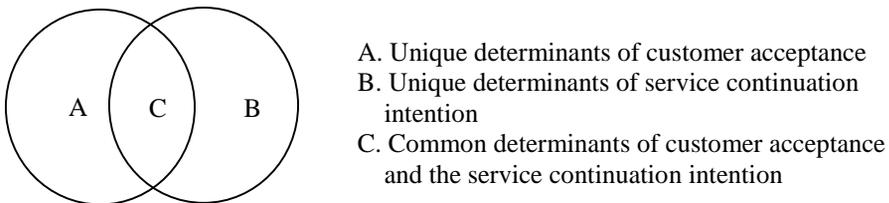
Table 5 – Coefficient Results of the regression model in determining the service continuation intention

Variable	Standardized Coefficients	Sig. (p-value)
Perceived usefulness	.177	.006*
Perceived ease of use	.235	.000*
Behavioural control	-.062	.288
Social influence	.115	.252
Government support	.456	.000*

*Significant at 0.01 level

The results indicated in the coefficient table stated that p-values of the perceived usefulness ($p=0.006$), perceived ease of use ($p=0.000$) and government support ($p=0.000$) are less than 0.05. Hence it implies that perceived usefulness, perceived ease of use, and government support have a significant positive impact on the service continuation intention. Further, the coefficient results indicate that government support (0.456) has the highest positive impact on the service continuation intention. Thus, the findings support the Tan and Teo's (2000), Nasri and Charfeddine's (2012) and Shih and Fang's (2004) results who emphasized on the government influence. Moreover, perceived ease of use (0.235) shows the second-highest impact while perceived usefulness (0.177) shows the least significant impact on the service continuation intention of the touch travel pass terminal. Based on the overall findings, it is not possible to reject H1, H3, H5, H7, H8, and H9 of the current study. Figure 2 represents both common and unique determinants of customer acceptance and the service continuation intention. The results indicate that the perceived usefulness has implications for both customer acceptance and the service continuation intention.

Figure 2. Comprehensive picture of the determinants of customer acceptance and the service continuation intention.



Where:

A = Perceived trust and social influence

B = Perceived ease of use and government support

C = Perceived usefulness

Conclusion

According to the findings of the regression performed, it is possible to conclude that the perceived trust has the highest substantive positive impact on customer acceptance. It could be further concluded that the social influence perceived usefulness has a substantive positive impact on the customer acceptance of the touch travel pass terminal. The second objective of the study is to investigate the determinants of service continuation of touch travel pass terminals in the Sri Lankan context. According to the findings of the regression performed it is possible to conclude that the government influence has the highest substantive positive impact on service continuation intention. Moreover, the perceived ease of use and perceived usefulness can be considered as the other significant determinants of service continuation intention. Further, it is possible to conclude that there is no significant relationship between the demographic factors and customer acceptance or service continuation intention. Finally, it could be concluded that perceived usefulness as the common determinant of customer acceptance and service continuation intention. This

study is limited to the customer acceptance and service continuation intention of the touch travel pass terminals. Hence, future researchers can focus on the determinants of customer acceptance and service continuation intention of the touch travel passes (end consumer acceptance) to have a broader understanding of the phenomenon.

Implications of the study

This study has implications for both managers and regulators. The management should focus more on the factors affecting the customer acceptance of the touch travel pass terminal in order to increase customer acceptance. In particular, they should focus more on perceived trust, social influence, and perceived usefulness. The success of the travel pass project is not only based on customer acceptance but the service continuation. In particular, management should focus more on the factors affecting the service continuation of the touch travel pass terminals such as government influence, perceived ease of use, and perceived usefulness in developing their strategies. The management should especially focus on perceived usefulness since it has implications for both customer acceptance and the service continuation intention. Moreover, the government should also focus on developing a mandatory requirement for the use of travel pass in making this project a success. Further, the government should develop the necessary infrastructure facilities to smoothen the process of the touch travel pass project.

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Appendix 1: Operationalization of the Variables

This table shows the dimensions and respective survey indicators used to measure the key variables.

Dimension	Indicator	Code
Perceived Usefulness	The touch travel pass terminal is important in getting the correct daily income on real time basis	OPU1
	The touch travel pass terminals minimize complaints on non-issuance of tickets and balance inquiry.	OPU2
	Touch travel pass terminal helps in reducing money cheating practices.	OPU3
	The touch travel pass terminal provides relevant and accurate information such as transactions and its history on real time.	OPU4

Price Value Adopted from Venkatesh, Thong, Xin(2012)	Touch travel pass terminal is reasonably priced	OPV1
	Touch travel pass terminal provides a value for the money in terms of benefits against the fixed (terminal) and variable costs (reload and repair and maintains).	OPV2
Social Influence Adopted from Lu et al. (2005)	Other bus owners think I must use Touch travel pass terminal.	OSI1
	Touch travel pass terminal provides me a status sign among my associates.	OSI2
Government Support Tan and Teo(2000)	I am satisfied about government support regarding legislation and infrastructure development in implementing touch travel pass terminal	OGS1
	The government endorses and promotes Touch payment system in Sri Lanka	OGS2
	The Sri Lankan government actively involves in developing infrastructure facilities to empower Touch payment system	OGS3
	The existing legal background provides solid foundation to expand Touch travel pass terminal in Sri Lanka.	OGS4
Perceived ease of use Adopted from Gefen D, (2003)	The use of touch travel pass terminal is clear and understandable	PEU1
	The touch travel pass terminal is very easy to use.	PEU2
	It is easy to become skilful with the touch travel pass terminal	PEU3
Perceived trust adopted from Abrazhevich, Dennis (2004)	I will stop using the touch travel pass terminal, if I understand that it's not trustworthy.	OPT1
Customer Acceptance Mansour and Aref (2015)	I intend to accept Touch travel pass terminal in future	OCA1
	I think accepting the Touch travel pass terminal is important to all bus owners to get maximum outcome from the bus operation	
Perceived Behavioural Control adopted from Herbjørn, Pedersen Helge(2005)	I have required resources and means to use "Touch travel pass terminal	PBC1
Service Continuation adopted from Byoungsoo(2010)	In the future I'm planning to use Touch travel pass terminal for issuing tickets.	SC1
	I will surely continue with Touch payment service on regular basis.	SC2

BUSINESS DEVELOPMENT SERVICES (BDS) OFFERED BY MICROFINANCE INSTITUTIONS (MFIS) IN SRI LANKA: CASE STUDY AS A RESEARCH STRATEGY

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Abstract

Research methodology refers to an overall approach to a problem, which can be put into practice in a research process; from the theoretical underpinning, to the collection and analysis of the data. Research methodology consists of components such as research philosophy, process, strategy, choice and techniques. Strategy provides overall direction including the process to conduct a research. Case studies, experiments, action research and ethnography are strategies that can be used in a research. A case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real life context, especially when the boundaries between the phenomenon and its context are not clearly evident. Choosing the correct research strategy is very important for a doctoral study. Thus, Case study method was used for a doctoral study to explore the business development services (BDS) offered by the Sri Lankan Microfinance Institutions through the lenses of coproduction concept. Case study method addresses the research objectives and questions at hand and improves the reliability of the research process. Further case study method contributes to understand the complex relationships in BDS and addresses the call for improved methodological pluralism in BDS research.

Keywords: Case Study Method, Research Methodology, Business Development Services, Microfinance, Research Strategy

Introduction

Research methodology provides the overall process that researcher has to follow when carrying out a research that includes philosophical stance, research process (i.e. qualitative or quantitative) and research strategy (i.e. survey, experiments, case study method, action research, ethnography). Research strategy can be defined as the overall direction of research, including the process by which the research is conducted (Remenyiet al., 2003). The selection of the research strategy depends on many factors such as philosophical stance, the nature of research questions, the extent of knowledge available and amount of time and resources available. Case study method was used to undertake the doctoral study on business development services (BDS) offered by the microfinance institutions in Sri Lanka. Theory of co-production was used as the theoretical underpinning for the study.

This paper presents a rationale for selecting case study over other strategies. The paper is composed of three main sections, justifying case study method adopted for this research. The first section explains the positioning of this research within the overall philosophical continuum. Secondly, the suitability of a particular approach used and the

case study method are presented. Thirdly, the techniques used in the data collection and data analysis are discussed. Finally the conclusions are drawn.

Research Philosophy

The research philosophy characterizes the researcher's particular beliefs about the world, which will be reflected in the nature of the data collection, analysis and overall phenomena to be perceived and interpreted (Denzin and Lincoln, 1998). Hence, the researcher needs to recognize and understand the personal philosophical position (paradigm) that will determine the entire course of the research study undertaken.

Positivism and social constructivism are the two contrasting views that can be taken to carry out research (Collis and Hussey, 2003; Remenyiet al., 2003; Easterby-Smith et al., 2003). The main idea behind positivism is that the social world exists externally and its properties should be measured through objective methods rather than inferred subjectively through sensation, reflection or intuition (Easterby-Smith et al., 2003). In contrast, the social constructivist philosophical stance believes that reality is not objective (subjective consciousness) or external, but is socially constructed and given meaning by people (Easterby-Smith et al., 2003). The main differences between positivism and social constructivism are given in Table 1.

Table 1: Differences between positivism and social constructivism

Element	Positivism	Social constructivism
The observer	Must be independent	Is part of what is being observed
Human interest	Should be irrelevant	Are the main drivers of the science
Explanations	Must demonstrate causality	Aim to increase general understanding of the situation
Research progress through Concepts	Hypotheses and deduction Needs to be operationalized so that they can be measured	Gathering rich data from which ideas are induced Should incorporate stakeholder perspectives
Units of analysis	Should be reduced to the simplest terms	May include the complexity of 'whole situation
Generalization through	Statistical probability	Theoretical abstraction
Sampling requires	Large numbers selected randomly	Small numbers of cases chosen for specific reasons

Source: Easterby-Smith et al. (2002)

By considering the characteristics between the two contrasting views, the social constructivist approach is deemed to be more appropriate for this study. As set out in the aim, objectives and questions, the study aims to explore the business development services provided by microfinance institutions in Sri Lanka. The research requires the researcher to be part of the environment and that reality is created with and through the relationships or interactions (e.g. between counsellor, trainer, and owner manager) in the environment. Moreover, it is believed that there is multiple realities and no pre-existing one reality. Hence, this invalidates the method to embrace a strong positivistic approach.

According to Saunders (2007), research philosophy can be thought of in three major ways: 1. ontological; 2. epistemological; and 3. axiological. These ontological, epistemological and axiological assumptions refer to the nature of reality, the acceptable knowledge in the field of study and the values, respectively. These three assumptions will allow the researcher to position the research within the philosophical continuum.

Ontological Assumptions

Ontology refers to the assumptions that we make about the nature of reality (Easterby-Smith et al., 2008). It is characterized by two aspects: objectivism and subjectivism (Saunders et al., 2007; Johnson and Duberley, 2000). Objectivism asserts that the social entities which exist in reality are external to the social actors, whereas in subjectivism the perceptions and consequent actions of social actors create the social entities. Since this study deals with the perceptions and actions of stakeholders in business development services, it fits into subjectivism.

Epistemological Assumptions

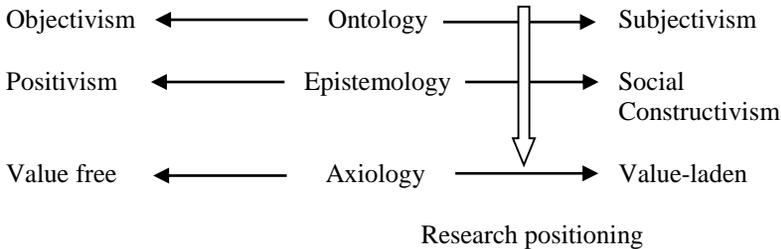
Epistemology relates to relationships between reality and the researcher (Healy and Perry, 2000). Burrell and Morgan (1979) recognize it as how one might understand the world and communicate knowledge to fellow human beings. The researcher who takes up the positivistic approach believes in a pre-existing reality and works with an observable and measurable reality. On the other hand, the researcher who takes up the social constructivist viewpoint does not believe in pre-existing reality and thus believes that reality is socially constructed, whereby differing viewpoints may emerge. The aim of the social constructivist researcher is to understand how people invent structures and explain what is going on around people. In this study, the researcher takes up the social constructivist stance, as the intention is not to measure things, but to understand business development services in Sri Lanka by gathering rich data.

Axiological Assumptions

Axiology studies judge values. It relates to personal values in relation to a research topic (Collis and Hussey, 2003). In the positivist approach, researchers believe that the research process is value free and that objects being studied are unaffected by their activities. In contrast, in the social constructivist approach researchers believe that the research process is value-laden and that research activities are affected by researchers' values and help to determine the facts and interpretations of the study. This research is closer to the value-laden approach; the researcher is highly involved in the research process and adds his values in all the steps of the research process.

Research Positioning

According to the previous discussion, a diagrammatic representation of how this study is positioned in the philosophical continuum is given in Figure 1.



Research Logic

Research logic has three components: induction, deduction and abduction (Eriksson and Kovalainen, 2008; Collis and Hussey, 2009). In the deductive approach, the researcher might begin with a specific theory of interest and then narrow it down to a few hypotheses. These hypotheses will be tested with sets of data to either prove or to disprove the original theory. The inductive approach works in the opposite way to the deductive approach, moving from more specific observations to broader generalizations and theories (Saunders et al., 2007, Creswell, 2007; Gill and Johnson, 2002). Thus theory emerges through induction and theories are tested through deduction. According to Eriksson and Kovalainen (2008), the term abduction is used to combine both induction and deduction and some studies use adduction logic (theory building and theory testing). Since this study focuses on theory building in the area of business development services (the concept of co-production is used only to guide the study), induction logic is considered.

Research Process

The research process consists of four steps, namely descriptive, analytical, predictive and exploratory (Collis and Hussey, 2009). Descriptive research describes a particular problem or issue, whereas analytical or explanatory research goes beyond this and analyses how and why phenomena are happening. Predictive research predicts (forecasts) the likelihood of something happening, while exploratory research is conducted when there is little or no information about the issue or problem. Therefore the idea of using exploratory research is to establish patterns, ideas or hypotheses, rather than to test or confirm hypotheses. This study on business development services provided by microfinance institutions in Sri Lanka is a novel study; the researcher attempts to explore the phenomena and hence this falls into exploratory research.

Research Approaches: Quantitative and Qualitative

Collis and Hussey (2003) identify two research paradigms: quantitative and qualitative. The quantitative, also known as the positivist approach, believes that the researcher is independent of what is being researched, whereas in the qualitative, also known as the interpretive approach, the researcher interacts with what is being researched.

Table 2 distinguishes between the two paradigms from the dimensions of ontology, epistemology, axiology and the rhetorical.

Table 2: Distinction between quantitative and qualitative research

Assumption	Questions	Quantitative	Qualitative
Ontological	What is the nature of the reality	Reality is objective and singular, apart from researcher	Reality is subjective and multiple as seen by participants in a study. Researcher interacts with that being researched
Epistemological	What is the relationship between researcher and the researched?	Researcher is independent from that being researched	Researcher interacts with that being researched
Axiology	What is the role of values?	Value-free and unbiased	Value –laden and biased
Rhetorical	What is the language of research?	Formal Based on set definitions Impersonal voice. Use of accepted quantitative words	Informal Evolving decisions Personal voice. Use of accepted qualitative words

Source: Collis and Hussey (2003).

Based on Collis and Hussey (2003), it is clear that this research is qualitative (e.g. the researcher interacts with that being researched; reality is subjective). According to Creswell (2009), qualitative research takes an inductive approach in the data analysis and builds general themes from the particular and the researcher interprets the meaning of the data. Since this study is an inductive research and it possesses the characteristics identified by Creswell, it is a qualitative research.

Research Strategy (Why Case Studies are Used?)

Research strategy can be defined as the overall direction of research, including the process by which the research is conducted (Remenyiet al., 2003). According to Yin (2009), the choice of research strategy is influenced by three conditions. These are the types of research questions posed; the extent of control an investigator has over actual behavioural events; and the degree of focus on contemporary events. Research strategy also depends on the philosophical stance, the extent of existing knowledge, and the amount of time and other resources available (Saunders et al., 2007). In business and management research, common research strategies are experiments, action research, ethnography, survey and case studies (Saunders et al., 2009; Remenyiet al., 2003; Easterby-Smith et al., 2003). The following section justifies the choice of case study as the best strategy for this study.

The overall philosophical stance of the study, as explained before, is social constructivism. The experiment and survey position is closer to the positivist end of the philosophical continuum. Experiments are widely used in natural sciences, in which hypotheses are tested in a controlled environment (laboratory). In an experiment the researcher can control the environment. Although surveys are not conducted in a strictly controlled environment, their results can be influenced by a pre-determined analysis plan which expects patterns. In contrast, this research was not conducted in a controlled environment and a pre-determined analysis plan was not used. As the study also considers stakeholders' views and perceptions on the subject, more in-depth analysis is needed, hence experiments and survey methods are not suitable.

In action research, the researcher acts as part of the problem environment and tries to change the status quo of the situation by changing the attitudes or the behaviour of the participants. Moreover, it is conducted in a partially-controlled environment, hence making it unsuitable for this study. Ethnography is holistic in which the researcher becomes a participant observer of the problem environment. Ethnography study is carried out for a prolonged period, with interaction with the social groups in order to understand the phenomenon better. Since this study was not conducted for a long period and the researcher did not act as a participant observer, ethnography was not suitable.

Due to the constraints stated, the case study method was the most appropriate method for this study. According to Yin (2009), a case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real life context, especially when the boundaries between the phenomenon and its context are not clearly evident. Further, this study answers the “what” type of exploratory questions (i.e. what are the co-production outcomes?); and does not control the behavioural events (i.e. the researcher does not control the behaviour of trainers, counsellors and owner managers); and focuses on a contemporary event (i.e. business development services in Sri Lanka). Hence, according to Yin (2009), case study qualifies as the most appropriate strategy. Accordingly, the following section explains the case study design.

The Case Study Design

Some authors view case study as a methodology, others as a method (Creswell, 2003; Yin, 2009). In this research, the case study is used as a methodology or type of design. Moreover, case studies are generalisable to theoretical propositions and not populations or universes. They do not represent a sample and hence the objective of carrying them out is to expand and generalize theories (analytical generalisation) and not to enumerate frequencies (statistical generalisation) (Yin, 2003).

Choosing a Grounding Theory for Case Study

Case study uses a theory or conceptual categories that guide the study and data analysis. This approach is different to that of other qualitative designs such as grounded theory and ethnography, which do not use a theory to guide the study (Gioia and Chittipeddi, 1991; Strauss and Corbin, 1990; Glaser and Strauss, 1967). Yin (2008) recommends that the case study method needs a theoretical perspective at the beginning of the investigation as it affects the research questions, analysis and interpretation of findings.

Thus this study uses the concept of co-production as the grounding theory for guidance. According to Parks et al. (1981), co-production involves joint efforts between two parties who jointly determine the output of their collaboration.

Case Study Protocol

Case study protocol is a procedure with steps that enhance the reliability of case study research and it is intended to guide researchers in carrying out the data collection from cases (Yin, 2003).

- A case study protocol should have the following sections:
- An overview of the case study project (project objectives and auspices, case study issues and relevant reading about the topic being investigated).
- Field procedures (presentation of credentials, access to case study “sites”, language pertaining to the protection of human subjects, sources of data and procedural reminders).
- Case study questions (the specific questions that the case study investigator must keep in mind in collecting the data).
- A guide for the case study report (outline, format of the data, use and presentation of other documentation and bibliographical information).

A quick glance at the case study protocol indicates why it is so important. First, it keeps the researcher targeted on the topic being researched. It also helps him identify the anticipated problems that may be encountered in the areas of data collection and case study reporting. In this study, the case study protocol was followed.

Selecting a Multiple Case Study Approach

Case study can be single case design or a multiple case one. According to Yin (2003), the multiple case design composed of two or more cases is less vulnerable and gives stronger analytical conclusions than a single case design. Multiple case design also provides a strong base for theory building (Yin, 2009; Eisenhardt and Graebner, 2007). Since the researcher intends to have strong analytical conclusions and a strong base for theory building, the multiple case study approach has been chosen for the study (i.e. six MFIs will be selected).

Determining Case Boundary and Unit of Analysis

It is important to identify the case boundary and the unit of analysis in order to conduct the study. The concept of business networks can be used in this respect.

Based on the nature of the study, which involves dyadic relationships between the MFI (counsellors, trainers) and the owner manager/microenterprise necessary for co-production in business development services (BDS), the dyad network perspective is best suited to determine the case boundary. Thus, the unit of analysis for the study is the dyadic relationship between the MFI (counsellors, trainers) and the owner manager/microenterprise.

Selection of Cases and Respondents

According to Eisenhardt and Graebner (2007), for research focusing on developing a theory rather than testing one, theoretical, rather than random, sampling is found to be ideal. Since the proposed study is about developing a theory (the model in this study), theoretical sampling is used to select cases. Thus six (6) MFIs, counsellors, trainers, managers and owner managers were selected for the study. When selecting the MFIs, MFI category (i.e. government, bank, non-bank, NGO, cooperative) and lending methods (i.e. individual, group) were considered.

Research Techniques: Data Collection and Analysis

Research techniques can be discussed in relation to two major phases: 1. Data collection and 2. Data analysis.

Data Collection

According to Yin (2009), the data for a case study should come from six sources: documents, archival records, interviews, direct observation, participant observation and physical artefacts. The logic behind using multiple sources of evidence is that it enhances data triangulation. Moreover, the benefit of having multiple sources of evidence in the case study approach can be maximized by maintaining a case study database, on which all the evidence (data) is stored in a systematic way (Yin, 2009). Thus the database gives the critical reader an opportunity to go back to the raw data as and when required, resulting in higher reliability in the case study approach (Yin, 2009).

Data collection in the study took place in two stages. In the first stage, data from the chosen MFIs was collected by conducting in-depth interviews with key officers. The data collected from the first stage was used to refine the conceptual framework and research questions. In the second stage, data was collected from both the MFI officers and owner managers of the microenterprises.

Since the study is exploratory in nature and aims to yield insights into the co-production concept in the microfinance context in Sri Lanka, in-depth interviews using a semi-structured questionnaire was the appropriate method for data collection. Thus, in-depth interviews were used as the main data collection tool. According to Martin et al. (2009), the goal of the in-depth interview method is to yield insights into less researched concepts that can guide theory development and/or future research and hence can be empirically verified in subsequent research. Moreover, Patton (2001) states that the semi-structured questionnaire (interview) allows researcher to gather data in more detail and enable a conversational situational interview. Semi-structured interviews also allow the researcher to collect a wide variety of information while covering the topic of interest (Valk, 2007).

For the study, primary and secondary data were collected. According to Patton (2001), the collection of primary data is often costly and time consuming. This data is tailored to a specific interest purpose and is originated by a researcher, whereas secondary data is often quick and less expensive and is already collected for purposes other than that of the researcher. The primary data was collected through in-depth interviews and

observations. The secondary data for this study was gathered through company records, websites (i.e. archival records), product brochures, and government institutions/reports. For example, the websites of six cases were visited in order to collect information pertaining to the organizational structures (i.e. linkages) of cases (MFIs) which have a bearing on co-production. Moreover, some MFIs provided their annual reports, from which BDS performance figures (e.g. Portfolio at Risk (PAR) figures, and number of employments generated) were obtained. These performance figures are useful to examine BDS co-production outcomes. According to Yin (2003, 2009), data from different sources enhances data triangulation.

Five different semi-structured questionnaires were used to collect data from the MFI officials (i.e. microfinance manager, BDS manager, counsellor, and trainer) and owner managers. 1-2 hours was spent with each respondent to collect the data. The questions included were based on the research aim, questions and objectives. Before the final face-to-face interviews took place, the researcher visited potential MFIs and interviewed key personnel, read company reports and visited websites in order to gain insights. A similar process was also followed by other studies (e.g. Johnsen and Ford, 2006).

A brief of the research study was sent to the chosen MFI officers and owner managers, and appointments were made prior to the interview dates. Officers were visited at their respective MFI offices and owner managers at their business premises for the interviews. This method was appropriate, as the researcher was able to make additional observations as well as collect verbal information. It was therefore possible to establish whether there was a discrepancy between what the respondents said and what really happened. The in-depth interviews were audio-taped, transcribed verbatim and then analyzed.

Research Ethics

All researchers should consider ethical issues when conducting a study. According to Denscombe (2004), a researcher needs to consider the following three ethical principles when carrying out a study:

1. Participants' interest should be protected.
2. Researchers should avoid deception and misinterpretation.
3. Participants should provide their informed consent.

Following Principle 1, the researcher sent a letter to all the participants before the data collection, informing them about the objective of the study, their role in the data collection and ensuring how their interests would be protected. When setting up the interviews the researcher made sure they were held at a convenient location and at times convenient to the participants. Thus all the interviews were held at participants' offices and business premises. The participants were informed that the data collected would only be used for the study and that their identities would not be disclosed.

Principle 2 expects the researcher to be open and honest in the interviewing process and its aftermath. For example, before the data collection began every participant was briefed about the objective of the study and their role in it. Transcriptions were also

sent to the participants to verify accuracy. Moreover, the participants were allowed to ask questions and to obtain a copy of the results. The researcher updated the progress of the study to participants so that they felt respected and were willing to provide feedback.

Principle 3 is general agreement from participants that they are participating in the study willingly. The researcher obtained this informed consent from all of them. The participants were assured of their right to anonymity. Thus code numbers were used in the study to represent participants. They were also informed that they were participating in the study voluntarily and could withdraw at any time. Further they could refuse to answer any uncomfortable questions.

In addition, as a postgraduate research student of Bournemouth University, the researcher had to pass an examination on research ethics and needed to obtain ethical clearance for the study from the university.

Transcription and Translation

The majority of the interviews were conducted in the Sinhala language, except for a few which were conducted in English. All the interviews were audio-recorded and the Sinhalese dialogues were translated into English. This was a time consuming exercise, but nevertheless the researcher transcribed all the interview data in order to remain closer to it. After the data had been transcribed, the transcriptions had been translated into English appropriately. Once the data had been transcribed into text the analysis was made. The following sections outline the data analysis procedures.

Data Analysis

Thematic analysis was used to analyze the data. When analyzing data techniques and strategies such as pattern matching and cross case synthesis were used. Yin (2009) proposes four general strategies and five techniques to analyze case studies. These general strategies and techniques are not mutually exclusive and hence researchers can use any number of them in any combination.

Four General Strategies

1) Relying on theoretical propositions

The most preferred strategy to use in analysis is based on the theoretical propositions that led the case study. The original objectives of the case are based on such propositions, which in turn reflect a set of research questions, the literature review, and new hypotheses or propositions. This study employs this strategy in the analysis by using the research objectives, questions and a conceptual framework (which reflects the propositions).

2) Developing a case description

This strategy is used when data has been collected without having initial research questions or propositions. Since this study had research questions and collected data accordingly, this strategy was not used.

3) Using both qualitative and quantitative data

Certain case studies may have a substantial amount of quantitative data, although the qualitative data remains central to the study. Researchers need to use a strong analytical tool to analyze this. This study did not use this strategy, as it primarily collected qualitative data. However, it did use quasi-statistics to explain certain concepts.

4) Examining rival explanations

This strategy attempts to define and test rival explanations. For example, it is possible to have rival propositions, and rival contrasting perspectives of participants and stakeholders. This study does not have rival propositions; however, rival perspectives could emerge, hence this strategy was used. For example, the literature shows that the level of formal education of owner managers can help them to absorb training better, but the findings of the MFI-6 case study show that formal education does not matter and that even with a low level of formal education owner managers can be trained.

Five Techniques

Yin (2009) proposes five techniques to analyze data: pattern matching, explanation building, time series analysis, logic models and cross case synthesis.

1) Pattern matching

Pattern matching is the most desirable technique to analyze a case study. According to Trochim (1989), it compares an empirically-based pattern with a predicted one (or with several alternative predictions). If the patterns coincide, the results can help a case study to strengthen its internal validity. In pattern matching, Yin (2009) distinguishes between theoretical replication and literal replication. Theoretical replication is when cases are designed to cover different theoretical conditions (i.e. selection of cases to predict contrasting results), whereas literal replication is when cases are designed to corroborate each other (i.e. selection of similar cases).

This study used pattern matching as a technique to analyze the cases studies and hence involved theoretical replication and literal replication. An example of theoretical replication was that cases were selected based on the lending strategy of the MFI, and on the basis of this lending strategy the degree of co-production changed. MFI-1 uses group lending and showed higher co-production compared to MFI-3, which uses individual lending. An example of literal replication was that MFIs which uses group lending (e.g. MFI-1 and MFI-2) showed somewhat similar co-production results.

2) Explanation building

The explanation building technique is used mainly in descriptive case studies. However, this technique is used in exploratory case studies as a part of the hypothesis-generating process (Glaser and Staruss, 1967), but its goal is not to conclude a study but to develop ideas for further study. This being an exploratory study, the explanation building technique was used. For example, new ideas emerged that can be researched in the future in light of the co-production theory. A spouse's support in the owner manager's business and office bearer training are such new ideas which emerged from the study.

3) *Time-series analysis*

The third analytical technique is to conduct time-series analysis. This technique is directly analogous to the time-series analysis conducted in experiments and quasi-experiments. This technique was not used in this case, as the study does not deal with time-series data.

4) *Logic models*

The logic model technique deliberately stipulates a complex chain of events over an extended period of time. This is used in case study analysis when case events are staged in repeated cause-and effect- cause and effect patterns. This technique was not used here, as the study is not involved with a complex chain of events.

5) *Cross-case synthesis*

This technique is unique in multiple case studies (i.e. more than one case); as previously explained, techniques can be used for either single or multiple case studies. Cross-case analysis is easier compared to a single case and the findings are robust. In cross-case analysis, word tables are created to display the data from the individual cases according to a uniform framework. Cross-case synthesis was used in the analysis and a word table was created according to the framework identified. When the number of cases is high in cross-case synthesis, quantitative techniques can also be used.

This study used cross-case analysis as there were six cases. In qualitative analysis, the key elements in the data are called 'themes'. Some themes might develop before the analysis and others during the study (Patton, 2002; Coffey and Atkinson, 1996; Sandelowski, 1993). Themes can be common to all the cases or may vary across groups of cases depending on the data and method (Ayres et al., 2003). In this study, the themes identified were common across the cases and hence cross-case analysis was conducted based on these common themes. Cross-case comparisons are useful for external validation of individual case study findings (Creswell, 2007). Table 3 summarizes the strategies and techniques used in the analysis.

Table 3: Strategies and techniques used in the case study analysis

Strategies used	Techniques used
Reliance on theoretical propositions	Pattern matching
Examination of rival explanations	Explanation building
	Cross-case synthesis

Data Analysis Using Nvivo 10

The NVivo 10 qualitative research software was developed by QSR International Australia. It helps researchers to manage, shape and make sense of unstructured data. NVivo 10 has a step-by-step approach. The steps adopted in this research are explained below.

First, six cases (six MFIs) were set up in NVivo. Second, the interview transcripts which form the data sources were imported to NVivo from the individual case studies. Coding data followed which then allowed the researcher to classify the interview data into meaningful themes. There are two types of coding in NVivo: 1. Auto coding, and 2. Manual

coding. Auto coding is recommended for research using structured questionnaires in order to obtain answers to the questions in a consistent way. In contrast, manual coding is used when there is relatively a small data set and the study requires close analysis. In manual coding, the researcher identifies the themes based on the sources and then creates nodes in NVivo. The researcher then drags and drops relevant references (i.e. quotations) to manually created nodes. In this study, manual coding was used because the researcher does not use a structured questionnaire which generates answers in a consistent way and there was also a manageable data set. Further concepts/themes emerged when data was being analyzed, which were different to the themes identified by the software based on common words/similarities on the interview transcripts. Thus manual coding was preferred to auto coding.

A coding structure can be established by arranging the emerging themes in ‘tree nodes’, with each node based on a hierarchical structure for each study. Finally, interdependent ideas were captured, relationships were identified and models created to visualize ideas and relationships. The analyzed data in NVivo was utilized in the thesis at the writing up stage. The case study method recommends maintaining a case study database in order to increase the reliability of the study (Yin, 2009). Thus storing the research data in a meaningful way in NVivo can improve the reliability of this study.

Validity and Reliability

Validity and reliability are important to test the logical statements of a research design. Hence four tests, namely construct validity, internal validity, external validity and reliability, are used in this connection (Yin, 2009).

Table 4: Types of validity used in the study

Type of Validity	Description	Techniques employed	Stage of the report
Construct validity	Identifying correct operational measures for the concepts being studied. In this study, the researcher uses multiple sources of evidence.	Data triangulation. Establishment of a chain of evidence. Key informants review the case study report.	Data collection. Data collection. Data composition.
Internal validity	Quest to establish a causal relationship. Inferences based on documentary evidence and interviews.	Patten matching. Explanation building.	Data analysis. Data analysis. Data analysis.
External validity	Defining the domain to which the study’s findings can be generalized.	Multiple case study –application of replication logic.	Research design.

Reliability	Demonstrating that the operations of a study, such as data collection procedures, can be repeated with the same results.	Case study protocol. Consistent interview guidelines. Case study database.	Data collection. Data collection. Data collection.
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Source: prepared by author, using Yin (2009).

Table 4 outlines how types of validity and reliability were used in the study. Further, the applicability of maintaining a chain of evidence, triangulation and replication logic used in this study is also discussed in detail below the table.

Maintaining a Chain of Evidence

Maintaining a chain of evidence methodically improves the reliability of the study (Yin, 2009). The researcher maintained a case study database in which all the information (e.g. interview data, observations, references) was stored in Nvivo. The case study report cites the relevant sections of the case study database by referencing them to specific documents, interviews or observations. The following steps were followed in maintaining the chain of evidence (figure 5).

By following the steps stated below it is easier to cross-refer the methodological procedures to the resulting evidence.

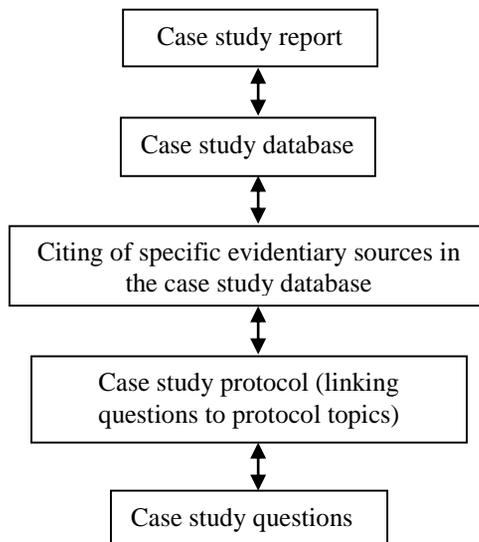


Figure 5: Chain of evidence. Source: Yin (2009).

Replication Logic

Six case studies of diverse natures were selected to allow replication logic. Replication leads to generalisability of the findings to similar contexts. Identical semi-

structured questionnaires were used to collect data across six diverse cases, and similar and dissimilar findings emerged (i.e. literal and theoretical replication).

Triangulation

Triangulation refers to the combination of multiple theories, methods, observers and empirical materials to produce a more accurate, comprehensive and objective representation of the object of the study (Silverman, 2006; Collis and Hussey, 2009). According to Denzin (2006), there are four types of triangulation: 1. data; 2. investigator; 3. method; and 4. theory.

1) Data triangulation

There are three categories in data triangulation: time, space and person (Denzin, 2006). Time triangulation occurs when data is collected at different points in time. In this study, the researcher first collected data in early 2015 and then in the last quarter of 2015. Furthermore, data had been collected through the literature survey since 2014, until the point of writing the thesis. Thus this study fulfils the time triangulation requirement.

Space triangulation occurs when the researcher collects data from different sites. In this study, data was collected from different locations in Sri Lanka. Thus this study meets the space triangulation requirement.

Person triangulation occurs when data is collected from different persons. For this study the researcher collected data from people in the six case studies and from an external trainer and a BDS consultant. Thus this study conforms to person triangulation.

2) Investigator triangulation

This occurs when data is collected by more than one investigator with different expertise, but which involves complementary work for the same study. In this study, data was collected by the researcher himself. Therefore investigator triangulation did not occur.

3) Method triangulation

Method triangulation can occur at the level of design or data collection. At design level it is called between-method triangulation and at data collection level as within-method triangulation. In this study, at the design level in-depth interviews were held to collect data, but at the data collection level data was collected through in-depth interviews and observations.

4) Theory triangulation

Theory triangulation occurs when more than one theoretical position is used to interpret data. In this study, the concept of co-production was used as the grounding theory to interpret the data. Additionally, an IMP framework, linkage models, counselling and training theories were used for interpretation.

Conclusion

Rationale of selecting the case study method as a strategy for a doctoral study aimed at exploring the Business Development Services offered by the Microfinance Institutions in Sri Lanka are presented and discussed in the preceding discussion. It was

revealed that the proper understanding of the philosophical stance and the research strategy are important to carry out a successful research.

Case study was chosen as the preferred research strategy for this doctoral study on business development services due to a number of reasons. These reasons are philosophical stance (i.e. social constructivism), type of research questions (i.e. How, why, what), the study's non-controlling behavior of the participants and its study of a contemporary event. It is important to consider the originality and research design in a doctoral study. It is believed that these results were achieved by carrying out this doctoral study by using the case study method. Thus case study strategy would contribute towards addressing the call for methodological pluralism in business development services research in microfinance sector and enhancing the understanding of the complex relationships relating to the sector and the phenomenon being investigated.

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IMPACT OF FIRM-SPECIFIC NEWS RELEASES ON SHARE PRICES IN BANK, FINANCE AND INSURANCE SECTORS OF COLOMBO STOCK EXCHANGE

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Abstract

This paper examines the impact of firm-specific news releases on share price changes in bank, finance, and insurance sectors of the Sri Lankan stock market: Colombo Stock Exchange (CSE). The data is gathered from the CSE data base and annual reports for the daily share prices, All Share Price Index (ASPI), and news releases for the period from January 2017 to December 2018.

Two types of analysis were performed to identify the impact of firm-specific news releases on share prices, namely an individual company level analysis and industry level analysis. The findings of both the analysis indicate that relationship between firm specific information releases and changes in share prices is statistically insignificant except for dividend announcements. Further, research in this area is needed to substantiate the findings of this study using subcategories of the firm specific news releases.

Key Words: firm-specific news, share price, dividend announcements

Introduction

Firm specific news releases and macroeconomic information play an important role in stock markets. This information is important in the selection of portfolios of equity securities and other investments at both individual and institutional levels. Further, the role of firm specific information is indispensable in establishing equilibrium pricing in the capital market at the aggregate market level.

Numerous studies (Atiase, 1988; Berry & Howe, 1994; and Dye, 1985) investigated the market impact of individual firm-related news releases. Most of the market impacts were examined based on stock price movements. One main reason for that was the return and new relationships provide insight to the structure of financial markets. The movements in share prices reflect the changes in investors' expectations about future performance of the firm generated by news releases. Investors will change their expectations about the market whenever new information arrives to the market. This will cause the investor to forecast either positively or negatively based on the impact of information received. But sometimes the investors do not react either positively or

negatively to information. Therefore, it can be seen that share prices do not always reveal information. Hence, studying of relative importance and the impact of information items on share prices is crucial. However, prior studies in this respect, in emerging markets are very limited and this research focuses on price reaction to firm specific information items.

Information is an important resource to various parties involved in the capital markets. Among them corporate management is highly concerned about issues regarding information since the discretionary power over timing and amount of information releases and sometimes whether the information such as forecasted earnings, dividend payout should be released is vested with the management. Apparently in setting integrated corporate disclosure policies, a proper understanding of how the capital market will react to the news releases is essential.

In addition, it is important to assist the parties that are involved in purchase of information and supervisory bodies such as the Securities Exchange Commission that are concerned with the capital markets and issue of information because they make decisions that affect the content and timing of information released to the capital markets. There are only few researches found on emerging markets, like Colombo Stock Exchange. Most researches incorporate new releases which are based on developed markets. However, Sri Lanka is an emerging stock market which is partly liberalized. In view of these, research that aims at examining impact of firm-specific news releases on market prices in CSE is important.

Information reflection of market prices is a major requirement to build efficient market. Therefore, it is important to invent new strategies to improve the efficiency of the CSE. Further, impact of firm-specific news releases on stock prices has not been identified in the Sri Lankan context although researches are available on testing the impact of isolate specific news events such as right issues, dividend effect etc., on stock prices. This study attempts to fill this existing gap. Accordingly the research questions of this study are identified as (1) what is the impact of firm-specific news on the stock prices and (2) what information events are key determinants of firm's price changes. Hence, the objective of this study was to examine the impact of firm specific news releases on share prices of companies listed under Bank, Finance and Insurance Sector in Sri Lankan stock market.

Literature Review

Overall information announcements

There are numerous empirical studies (Atiase, 1988; Berry & Howe, 1994) which discussed the association between information flow and market activity in developed markets. All those studies explained the link between information set and movements in stock prices which is a central issue in financial economics. However, considerable number of researches (Mitchell and Mulherin, 1994; Thompson et al. 1987) suggests that the association between information flow and movements in stock prices is not particularly strong.

But some researchers argued that there is a strong relationship between information flow and movements in stock prices (Ryan and Taffler, 2004; Aharony and Swary, etc. 1980).

First part of this section discusses the literature which examines the impact of overall information events and share price changes whilst the latter part of the section reports the empirical studies which were considered to have an impact of single information event on changes in market activity especially relating to stock prices.

Mitchell and Mulherin (1994) examined the relationship between a number of news announcements reported and aggregated measure of stock market activity including trading volume and market return. They supported the argument that relationship between information flow and movements in market activity is not particularly strong. They observed that although there is direct relationship between Dow Jones announcements and stock market activity, the relationship is weak whereas the measure of market and firm-specific return are not significantly related to the non information sources of trading activity. Daily numbers of headlines reported by Dow Jones were used as primary measure of public information including firm-specific and macroeconomic information.

Berry and Howe (1994) found that there is insignificant relationship between public information flow and price volatility although there is positive, moderate relationship between public information and trading volume which was similar to results provided by Mitchell and Mulherin (1994). They developed a measure of public information flow to financial market and used it to document the pattern of public information. News releases by Reuter's News service was used as primary data source and regression analysis was used to examine the relationship between public information flow and market activity over a period from May 1990 to April 1991.

Thompson et al. (1987) recognized the frequency of firm specific news coverage across firms based on firm size, industry grouping and sources of corporate news. They also examined the relationship between firm stock price movements and broadly defined news categories even though their key focus was not to measure this relationship. Price responses were measured using twelve broadly defined news categories. Therefore, this did not identify differences among news categories which had price impact and news that were not price sensitive. Impact on prices from news was measured by calculating average return relating to each news category pre-specified. They found that, on average, news categories appeared to inform very little news to the market.

Market information environment is complex and consists of information provided by firm in concern and many other parties. However, information provision to the market may be sometimes unsatisfactory due to many reasons. Dye (1985) addressed this issue in information and reported three reasons for management's failure to disclose nonproprietary information. They are, investor's knowledge of management information is incomplete, nonproprietary information may not be disclosed if it is part of manager's vast array of private information, and management reticent as best resolution to agency problem. Also this paper provides that there are distinctions between the amount of information disclosed and even the credible announcement of private information is possible.

Ryan and Taffler (2004) examined the relationship between capital market information flows and company share price changes and trading volume activity and relative importance of different firm specific information events and trading volume activity. They studied the frequency with which different news categories drive price

changes using Mann-Whitney Rank Sum Test to measure price or volume impact of news events that occur with greatest frequency using sample period from 1994 to 1995. They found that reported news events drive significant proportion of companies' economically significant price changes and trading volume activity and firm's formal accounting releases dominated all other news events where a considerable proportion of information content of those accounting releases is not anticipated by the market as a whole. As per their conclusion "in excess of 70% of all firms' preliminary and interim results trigger economically significant price changes (trading volume Movements) demonstrating the clear information content of these formal accounting releases to the market on this basis" (Ryan and Taffler, 2004, p. 73). Further, in their analysis, they showed significant positive price movements occur with greatest frequency followed in order by direct share dealing, bids, preliminary results, share deals, interim results, financing and management related news.

Literature based on particular information announcement

Atiase (1985) looked at in detail the relationship between pre-disclosure of earning announcements and security price behavior and suggested that for entire sample the security price revaluation of reported period is greater than the share price revaluation over pre-disclosure period subject to limitation that were due to sample size and assumptions underlying the model specifications. The regression results provided evidence that stock price movements specifically relate to pre-disclosure of earning announcements.

Brennan and Hughes (1991) focused on stock split announcements. A manager with private "good news" provides incentives to analysts to produce research report on firm with low share prices in order to reveal information to the investors. Therefore, they found that number of analysts making forecasts is negatively related to the stock prices. The main limitation in this study was the assumptions that the only way investors get to know about the firm is through their personal broker and they only invest in securities of firms that they know about, which made it difficult to infer the results to be pragmatic state of affairs. When investigating for firm specific news releases which influence stock prices, Aharony and Swary (1980) came up with one of the most important news items, which is, dividend announcements. If dividend conveys useful information, in an efficient market this will be reflected in stock price changes immediately following a public announcement. They found that market reaction to dividend announcement studies strongly support that changes in quarterly cash dividend provides useful information beyond the earning numbers provided by corresponding quarter. Naive dividend expectation model and market model were used and examined that on average stock market adjusted in efficient manner to new quarterly information.

Collett (2004) reported that negative trading statements exceed positive trading statements by 50%, and market reaction, measured by abnormal returns, is considerably greater for the negative statements which were in line with previous US studies. There is significant market reaction to announcements for all size-controlled portfolios, with considerably greater reaction for small companies relative to medium sized companies and for medium sized companies relative to large companies. His results suggest that trading statement announcements by UK firms contain genuine surprises for the stock market; that

the market reacts quickly to the news; and that for small companies there is some over-reaction to bad news.

Dedman (2004) further explores the relationship between agency problems, corporate governance and legal measures to limit agency problems, and the likelihood and accuracy of disclosure of price sensitive information in the UK which is an extension of Collett's (2004) study.

Fox and Opong (1999) examined the impact of entry and exit of board of directors on share price. The results suggested the changes in composition of management boards affect share price of corresponding firm and also indicate securities market discount the information about the board. Small but significant abnormal returns arrived using event study method occurred on the day of announcement. They found that the informational effect of new appointment to the board perceived differently from the resignations from the management board by the market.

Although the number of empirical studies based on emerging markets in less developed countries is relatively limited, stressing few of them is important since this study was carried out using data from Colombo Stock Exchange. Chen et al. (2005) examined the overall announcement effects in terms of abnormal trading volume and abnormal returns, and then further examined the relations between the timing of announcements and their market reactions based on stock market in China. Using 3,802 Chinese firms' earnings announcements, they employed regression analysis to provide evidence that earlier announcements possess more information content, as measured by trading volume and returns, than the later announcements. Hence information asymmetry exists between earlier and later earnings announcements. Further, the regression results also show that earlier announcements receive greater price reactions.

Selecting one of firm-specific variables Adelegan and Adelegan (2001) investigated the relationship between stock returns and dividend announcements in the Nigerian context. They found that earnings and dividend announcements are normal parallel events in Nigeria as they are always announced together as against the developed stock market where such announcements are made separately and share prices do react to dividend announcements.

Dissa Bandara (2001) investigated the market response to dividend announcements using data from the emerging market of Sri Lanka. Although the results of the study supported the information content of dividend hypothesis in Sri Lankan stock market, the level of responsiveness is relatively low and is different from previous studies based on developed stock markets. Using 37 quoted companies in Colombo Stock Exchange, the study employed event study method for a period of six years from January 1993 to December 1998. He found that market reaction to the dividend announcements in terms of positive reaction to the dividend increase and negative reaction to the dividend decrease. Dewasiri and Weerakoon (2016), Baker et al. (2019), and Dewasiri et al. (2019) suggested that dividend carries certain information in the Sri Lankan market but they referred to the information only on future prospects in accordance with the signaling theory.

The past studies based on developed markets which studied the impact of information announcements on stock prices/stock return considering overall information events provide different arguments on strength of the relationship between information announcements and stock prices. However, they accepted that there is some relationship between them even though disagreed based on strength of the relationship on each other's arguments. From the above discussed past studies, Ryan and Taffler (2004) identified economically significant price changes triggered by most of firm specific news releases who specifically addressed the firm specific news releases. Based on their findings, this study hypothesized that price changes are driven by firm-specific news releases of publicly quoted companies under Bank, Finance and Insurance Sector in Colombo Stock Exchange.

Methodology and Data

This study employs the quantitative methodology since the research questions employed in this study are consistent with the quantitative methodology as emphasized by Dewasiri et al. (2018). The sample of this study is selected from Bank, Finance and Insurance Sectors of CSE in order to investigate the impact of firm specific news releases on the share prices. The Bank, Finance, and Insurance companies perform the highest number of share transactions out of 20 industrial sectors in the CSE. Sample of 26 quoted public companies from Bank, Finance and Insurance Sector for the two year period from 1 January 2017 to 31 December 2018 was selected. The firms which do not exist during the entire period of the study or had merged or demerged are excluded from the sample.

Data

The data set was obtained from CSE, Sri Lanka. The daily share prices for companies selected used to measure the returns at the individual company level. The daily share prices of 26 quoted public companies from Bank, Finance and Insurance Sectors for the period of 1st January 2017 to 31st December 2018 are gathered from the data library of the CSE. Shares of the companies in the sample selected had not been traded on each and every trading day when considering the sample period from 1st January 2017 to 31st December 2018 as examined in the study. This is called as thin trading problem¹. Therefore, if there is any missing daily share price of a company, it is adjusted considering the most recent closing and opening prices.

All Share Price Index (ASPI) for Bank, Finance and Insurance Sector measures the price changes of all the stocks in that sector which are employed to measure the market return. Sector ASPI is also obtained from CSE. Both returns have been utilized in the study to investigate the relationship between information and stock returns.

Further, the firm specific news releases are obtained from Stock Market and the Daily and Weekly reports which are the official publications of CSE. There is no adjustment made to controlling the simultaneous releases of firm specific information events due to the fact that the different categories of information releases on the same date had not been identified in the data set used in this study. This enables to avoid the drawback of controlling which is eliminating a substantial number of data points.

Measurements of Variables and Model Specification

The first step of the data collection is to allocate all abnormal returns to one number of comprehensive categories of firm specific news releases in order to measure the impact of these news releases on share prices. All the firm-specific news releases are classified in to thirteen categories as stated in the appendix 1. These categories are selected considering news categories employed in previous studies and availability of news items during the sample period. The expected return generating model is as follows:

$$ER_{i,t} = \beta_i R_{m,t}$$

Where,

$R_{m,t}$ = market return for the day t,

β_i = coefficient of the relationship between $R_{i,t}$ and $R_{m,t}$

This is the well-known market model with no intercept term which was used in previous studies and identified the intercept term unlikely to add to the results (Ryan and Taffler, 2004). Market returns are calculated using following formula:

$$R_{m,t} = \ln (ASPI_t / ASPI_{t-1})$$

Where,

\ln = natural logarithm

$ASPI_t$ = All Share Price Index (ASPI) for Bank, Finance and Insurance Sector on day t,

$ASPI_{t-1}$ = All Share Price Index (ASPI) for Bank, Finance and Insurance Sector on day t-1,

This model is also consistent with the model used by Dewasiri and Weerakoon (2014, 2015) to measure the market return. Actual returns for firm i calculated as follows:

$$R_{i,t} = \ln (P_t + D_t) - \ln (P_{t-1})$$

Where,

P_t = price of shares of firm i on day t.

D_t = dividend for shares of firm i on day t

P_{t-1} = price of shares of firm i on day t-1

This return generating model is also consistent with the model used by Ryan and Taffler (2004) to calculate dividend adjusted returns. Dummy variables are assigned for firm specific news releases in measuring relationship between changes in share prices and firm specific news releases.

Model Specification

A multiple regression model is used to measure the impact of firm-specific news releases on the share prices as indicated below.

$$SP_{i,t} = \beta_0 + \beta_1 AGM_{i,t} + \beta_2 FIN_{i,t} + \beta_3 ANR_{i,t} + \beta_4 AC_{i,t} + \beta_5 DSD_{i,t} + \beta_6 L_{i,t} + \beta_7 M_{i,t} + \beta_8 P_{i,t} + \beta_9 LI_{i,t} + \beta_{10} NC_{i,t} + \beta_{11} EA_{i,t} + \beta_{12} DA_{i,t} + \beta_{13} CBOD_{i,t} + u_{i,t}$$

Where $SP_{i,t}$ is the share price proxied by market return or actual return (dependent variable); AGM is AGM announcements; FIN is Finance; ANR is analysts' recommendations; AC is asset changes; DSD is directors share dealings; L is labor; M is management; P is product; LI is legal issues; NC is non-classifiable; EA is earnings

announcement; *DA* is dividend announcement and *CBOD* is changes in board of directors; and *u* is the error term.

Data Presentation and Analysis

Multiple regression analysis is carried out for each individual firm in order to identify impact of news releases on company share prices. As per Table 1, dividend announcements show significant impact on the stock price changes for 21 companies. Further, there is only two out of remaining twelve firm specific news categories relating to three companies which have significant impact on abnormal returns measured based on stock price changes. All the other news categories have insignificant impact according to t-statistic obtained through multiple regression analysis.

Firm specific news categories indicating significant impact

When considering the dividend announcements category, Table 1 indicates that 88.4% of the companies reflect news relating to dividends and out of which 91% of the companies show significant impact on abnormal returns. All the coefficients of dividend announcements relating to twenty one companies are showing statistically significant impact on the abnormal returns. As per the Table 1, 92.3% companies indicate news relating to earning announcements and 8% out of that have significant impact according to the t-statistic. Moreover, 42% of the companies released news relating to the changes in board of directors in which 9% of the companies express significant impact on abnormal returns.

Firm specific news categories indicating insignificant impact

77% of the news categories show an insignificant relationship with the share price changes. Moreover, from the total sample, 92.3%, 26.9%, 7.7%, 11.5%, 11.5%, 11.5%, 7.7%, 3.8%, 11.5%, 19.2% companies indicate news relating to AGM, financing, analysts' recommendations, asset changes, directors share dealings, labor, management, product, legal issues and non-classifiable categories respectively while indicating insignificant impact.

Table 1: Regression results of the analysis performed in individual company level

Company Code	t-statistic												
	AGM	Financing	Dividend Announcements	Earnings Announcements	Analysts	Asset changes	Changes in BOD	Directors share dealings	Labor related	Management related	Product related	Legal issues	Non classifiable
AACI	-	-	0.56	0.30	-	-	-	-	-	-	-	-	-
ACAP	0.02	-	2.51*	0.20	-	-	-	-	-	-	-	0.58	-
ALLI	0.75	-	2.68*	0.44	-	-	-	-	-	-	-	-	-
ARPI	0.30	-	2.16*	2.28*	-	-	-	-	-	-	-	-	-
CFIN	0.03	-	2.33*	0.84	-	-	0.15	-	-	-	-	-	-0.47
CFVF	-	-	-	-	-	-	-	-	-	-	-0.05	-	1.73
CINS	1.80	0.54	2.06*	0.74	-	-	-0.57	-	-	-	-	0.73	-
COMB	0.47	-	0.24*	0.17	-	-	0.02	-	0.26	-	-	-	-
COML	0.29	0.07	2.11*	0.31	-	-	1.88	-	-	-	-	-	-
CTCE	1.58	-	2.04*	-0.02	-	-	-0.55	-	-	-	-	-	-
DFCC	0.75	0.24	2.22*	0.43	-	-	-	-	0.06	-	-	-	-
HASU	0.10	-	2.11*	0.11	-	-	-	-	-	-	-	-	-
HNB	1.22	-	2.17*	0.58	-	-	-	-	-	-	-	-	-
LFIN	0.01	0.74	2.04*	0.41	-	-	-	-	0.89	-	-	-	-
LOLC	0.10	-	2.16*	-0.37	-	-	-1.11	0.58	-	-	-	-	-
LVEN	0.43	-	2.01*	0.14	-	-	0.86	-	-	-	-	-	-
MBSL	3.21	-	2.12*	0.10	-	-	-0.17	-	-	-0.28	-	-	-
NDB	0.56	-	2.06*	0.26	-	0.59	0.07	-	-	-	-	-	0.31
NTB	0.03	-	-	1.54	0.74	-	-	-	-	-	-	-	-
PMB	1.88	0.30	2.16*	0.83	-	-	0.15	-	-	-	-	-	-
SAMP	0.03	-	2.14*	1.48	-	1.04	-	-	-	-	-	-	-
SEMB	1.19	-0.97	2.12*	2.09*	0.33	0.78	-	0.99	-	-	-	-	0.00
SEYB	0.09	1.33	2.01*	0.16	-	-	-	0.95	-	-	-	-	-
TFC	0.65	-	2.01*	2.67*	-	-	4.56	-	-	-	-	-	-
UAL	0.54	-	2.08*	0.11	-	-	-	-	-	-	-	-	-
VANI	1.09	-	-	-	-	-	-	-	-	0.99	-	0.23	-0.36

Note: *significant at 5% level

Analysis in terms of the industry level

The impact of firm specific news releases on share prices with regard to the industrial level is important since it enables a comprehensive understanding about the phenomenon. A solitary multiple-regression model is used which generates results reflecting the general relationship between firm specific news categories and the abnormal returns. According to the results indicated in Table 2, all the coefficients of firm specific news categories indicate negative relationship except for earnings announcements, analysts' recommendations, and changes in board of directors. Thus, negative coefficients explain there is inverse relationship between pertinent news categories and abnormal return. Further, analysis reveals that earnings announcements, analysts' recommendations, and changes in board of directors indicate positive coefficient demonstrating positive relationships with price changes. However, only the dividend announcements show significant impact on the abnormal return according to the p-values obtained. Regression model appears to be weekly significant since independent variables intend to explain 5.1% of the abnormal return as shown in the Table 2.

Table 2: Regression results of the analysis performed in industry level

Firm Specific News Category	B	P-Value
AGM	-0.00690	0.75
Financing	-0.01330	0.583
Dividend Announcements	-0.16910	0.000*
Earnings Announcements	0.00421	0.836
Analysts	0.00375	0.934
Asset changes	-0.01490	0.666
Changes in BOD	0.00158	0.945
Directors share dealings	-0.01927	0.577
Labor related	-0.01230	0.784
Management related	-0.00342	0.939
Product related	-0.00968	0.873
Legal issues	-0.00596	0.876
R2		9.50%
Adjusted R2		5.10%

*Significant at 5% level

Summary of the analysis

As per Table 1, dividend announcements show significant impact on the abnormal returns. Further, there is only two out of remaining twelve firm specific news categories relating to three companies which have significant impact on abnormal returns measured based on stock price changes. All the other news categories have insignificant impact according to t-statistic obtained through multiple regression analysis. Moreover, the industry level analysis also indicated that impact of firm specific news categories and abnormal return is weakly significant. Aggregate findings of the analysis demonstrate that the impact of firm specific news releases and abnormal return is insignificant except for dividend announcements. Abnormal returns tend to point out the response of share prices to the firm specific information. Consequently, it is apparent that the overall impact of firm specific news releases on share price changes is insignificant in the companies listed under Bank, Finance and Insurance Sector at CSE. These findings are consistent with Thompson et al. (1987) and Berry and Howe (1994).

Conclusion and Future Directions of the study

Determining whether there is an impact of firm specific news releases on share prices is important to all capital market participants and governing bodies in varying degrees. Especially, having a good understanding of this relationship is crucial to parties that are in the acquisition of information since that enables them to effectively manage their investment in an effective and efficient manner. The empirical findings suggested that there is an insignificant relationship between share prices and firm specific information except for dividend announcements. The results could be due to the limitations of the current study such as small sample size, selection criteria and assumptions of the models.

However, the findings are inconsistent with the expectation of the researcher which is based on Ryan and Taffler's (2004) findings since dividend announcements show significant relationship in both firm and industry level analysis. Addressing the research problem of identifying the key information categories driving price changes become complicated since there was no significant price changes driven by firm specific information are identified. Further, result of the individual firm level analysis suggested that earning announcements and news relating to changes in board of directors had shown significant impact on share prices in relation to three companies from the full sample which is a negligible fact. According to the result of the analysis, the impact of firm specific information on share prices is less significant except for dividend announcements. Hence, the management could use dividend announcements as a controlling mechanism in order to have fluctuations in the stock prices.

This research is limited to the bank, finance and insurance sectors of the Colombo Stock Exchange. There are 19 other business sectors in CSE. Therefore, the future researchers should carry out studies capturing all the sectors of the Colombo stock exchange. Moreover, future researches need to determine subcategories of the categories specified in this study in measuring impact of firm specific information on share prices and economic significance of the news categories.

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Appendix 1: Description of Firm Specific News Categories

News Category	Type of news contain in the category
AGM	News relating to AGM
Financing	Issues relating to new share capital(equity, bonds, rights, warrants)
Dividend Announcements	Cash dividend, stock dividend and stock split announcements and corrections
Earnings Announcements	Quarterly and annual earning announcements and corrections

Analysts recommendations	Recommendations made by analysts firms to the investors and the CSE
Asset changes	Acquisitions and disposition of tangible and intangible assets, announcements of joint ventures, mergers, capital expansion plans
Changes in BOD	Changes in board structure of listed companies
Directors share dealings	The granting/exercise of share options with directors' share purchase and sales
Labor related	Events that affect employees , employee benefits and job security
Management related	Changes in management personnel, management compensation agreements and other related issues
Product related	News relating to the new products and services, changes in pricing strategies
Legal issues	legal issues relating to civil action damage claims and other issues
Non classifiable	All events that cannot elsewhere categorized

THE MEDIATING ROLE OF WORKING CONDITIONS ON THE RELATIONSHIP BETWEEN SOCIAL COMPLIANCE AND EMPLOYEE RETENTION

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Abstract

Organizations operating in the global market are faced with the challenge of satisfying the requirements of buyers for social compliance. Existence of a working environment safer and comfortable for the workforce provides evidence of social compliance. Sri Lanka is regarded as a country which maintains a very high standard in relation to employing workers, in comparison with other countries in the Asia Pacific region. However, the wellbeing of employees in the apparel sector of Sri Lanka is questionable where their intention to leave is high even in the presence of social compliance. Mediating role of working conditions in the context of social compliance in retaining employees has not been the focus of many studies conducted in the apparel sector of Sri Lanka. This study aimed at identifying whether working conditions could improve the relationship between social compliance and employee retention. A pre designed questionnaire was used to collect data. The responses of a sample of 143 blue collar employees in the apparel sector of Sri Lanka revealed that working conditions mediate the relationship between social compliance and employee retention. The implication of this result is that by improving the working conditions employees can be motivated to stay in the job.

Key words: Social Compliance, Working Conditions, Employee Retention,

Introduction

Employee turnover occurs when employees leave their jobs and must be replaced. Replacing exiting employees is costly to organization and destructive to service delivery. It is therefore imperative for management to reduce, the frequency at which employees, leave to the minimum. Retention is a voluntary move by an organization to create an environment which engages employees for long term. (Chaminde, 2007). The main purpose of retention is to prevent the loss of competent employees from the organization as this could have adverse impact on productivity and service delivery. However, retention of high performing employees has become more challenging for managers as this category of employees frequently move from one job to another as they are being attracted by more than one organization at a time. (Samuel and Chipunza, 2009)

Globalization and the diffusion of industry supply chains to developing countries have provoked a fierce debate over how best to improve labour standards in these emerging centers of production. Child labour, hazardous working conditions, excessive working

hours and poor wages continue to be a problem at many factories in developing countries, creating embarrassment for the global brands that source from those factories. Given the limited capacity of governments of many developing countries to enforce their own labour laws, multinational corporations have developed their own “code of conduct” for suppliers, as well as a variety of monitoring mechanisms aimed at enforcing compliance with these codes. Monitoring for compliance with codes of conduct is currently the principal way that both global corporations and labour rights nongovernmental organizations address poor working conditions in global supply chain factories (Romis, 2007).

In the current global market environment, in which Sri Lanka strives to enhance its share of exports, the challenges have not been easy to overcome. Social compliance has become extremely important for any industry related to the export- oriented market. It’s not only regarding existing labour law of the country and the buyer code of conduct but also making a working environment safer and comfortable for the workforce. As buyers from major markets are increasingly insisting on adherence to social compliance norms, conformance with the rules of accountability, not only its policies and practices but also for its supply chain has become important. A social compliance program is usually expected to ensure adherence to rules of social accountability, initiated by certified conformance to international standards such as SA8000. Companies need to focus on the social concerns of internal and external stakeholders and their impact on business. Compliance of apparel companies of Sri Lanka with stakeholder concerns is reflected in the commitment towards civil and human rights, compliance with employment, health and safety, hygiene and environment laws and betterment of the society (Owen et.al., 2000).

It is evident from the data available in the industry that a major problem faced by manufacturing organizations in the apparel industry of Sri Lanka is the loss of its top and critical talent, over a period of one year from the date of recruitment. Employees are resigning or being terminated in the first few months of employment indicating high rates of exit of competent employees. As a result organizations face difficulties in recruiting and replacing employees. This results in high amount of sub-contracting/home working as well as temporary worker engagement and operating extensive hours to cover shipments while violating the laws of the country. The expectation is that effective social compliance and employee work condition factors would allow organizations to increase the level of retention of employees and overall productivity. However what is indicated by the high turnover rate is that social compliance practices have not had the expected outcomes. It is explained in literature that if employees’ expectations towards the organization are not fulfilled, the consequences for job satisfaction and commitment to work result in the employees deciding to leave the organization (Arnoux-Nicholas et.al., 2016). Cottini et.al. (2011) has also explained that workers in hazardous workplace conditions are indeed more likely to leave their current employers voluntarily.

A possible cause for this behavior is explained in deterrent theory. Accordingly, rational and profit maximizing firms decide to comply with regulation only when the expected cost of noncompliance exceeds the expected benefit (Becker, 1968; Stigler, 1970). Moreover, it is argued that a firm’s propensity to comply with regulations is positively related to the probability of detection and the expected penalty of violation. The deterrence theory has been applied to occupational safety and health (Viscusi, 1979), minimum wage compliance (Ashenfelter & Smith, 1979), and to private monitoring of

minimum wage in the US garment industry (Weil, 2005; Weil & Mallo, 2007). They find that more stringent forms of monitoring by manufacturers are associated with better contractor compliance with minimum wage regulations. Deterrence theory predicts that reputation-conscious buyers who face a higher probability of detection and expected penalties for poor working conditions in their supply chains are more likely to rigorously regulate their suppliers than other buyers. The implied meaning of the deterrence theory is organizations attempt to comply with social standards at the minimum levels possible. The ultimate impact of deterrence may be the employees not receiving the expected benefits of social compliance. Moreover, findings of Lund-Thomsen & Nadvi (2010) suggest that there are difficulties in applying social standards in certain institutional contexts. The researcher identified a tension, from the suppliers' perspective, between what buyers wanted to enforce regarding social compliance and what local actors - including employees, owners and managers - perceived to be appropriate. This tension existed regardless of the governance mode. For example, the Bangladeshi supplier firms are compliant for fear of the large social unrest that would accompany unemployment if the buyer firms stopped sourcing from Bangladesh (Bell & Newitt, 2010; Ruwanpura & Wrigley, 2011).

With the above explanations it leads to a question as to whether there may be instances where social compliance may still be there in the absence of proper working conditions. Thus, this study attempts to identify whether working conditions could mediate the relationship between social compliance of a company and the intention of its employees to stay in the job.

The rest of the paper is organized as follows. Section 2 addresses the literature on social compliance, working conditions and intention to stay. In Section 3, the research methodology is described. The results of the survey are presented in Section 4. Section 5 discusses the results in relation to the literature and presents managerial and theoretical implications.

Literature Review

This section explains the literature related to the theories and empirical findings on social compliance, working conditions, and employee retention .

Social Compliance

The social compliance consisted of four dimensions: Corporate/ Supplier Compliance & National Laws, Private voluntary customer code of conduct, Stakeholder involvement on business and Consumer ethical concerns (Lund-Thomsen, 2008; Lund-Thomsen & Nadvi, 2010).

Corporate/ Supplier Compliance & National Laws

Supplier compliance with social norms has been the interest of many buyers located in many parts of the world. They have even formed arrangements among themselves to ensure that suppliers adhere to social standards. Multi-principal collaboration aimed at assessing supplier compliance falls into the category of "coopetition", where competing firms in the same industry work jointly towards the same

goal, ensuring suppliers' compliance with shared codes-of-conduct. While cooptation combines the benefits of cooperative and competitive behaviours, it is seen by some as producing greater benefits than pure collaborative agreements (Le Roy and Fernandez, 2015). Buyers use shared information and knowledge to analyze the environmental and social deficiencies of suppliers; they learn from one another and define corrective actions for non-compliant suppliers (Arya and Salk, 2006). Alignment of the principals will also improve the relationship with the suppliers as the trust-based social contract developed by the collaborating buyers gives the supplier a consistent message which is easily translated into strong incentives to comply (Tate et al., 2010).

Private Voluntary Customer

The underlying assumption is that information collected through factory audits will be used by labor rights NGOs to exert pressure on global brands to reform their sourcing practices and buy the brands themselves, which rely on this information to police and pressure their suppliers to improve standards within their factories (Conroy, 2007). If these factories fail to remediate workplace problems, brands are expected to switch their orders to other producers.

Stakeholders & Corporate Social Environmental Responsibility (CSER)

The main idea is that an organization's success is dependent on how well it manages the relationship with stakeholders such as suppliers, NGOs, government agencies, (Freeman, 1994) whereby they can influence Corporate Social Environmental Responsibility activities by either limiting or stopping the provision of resources to the organization (Frooman 1999; Yang and Rivers 2009). Stakeholder theory can be associated with the literature of CSER broadly as it provides a suitable theoretical framework for analyzing the relationship between an organization and broader society, to provide direction to the organization in terms of transforming intangible social and environmental issues into tangible stakeholder interests (Clarkson, 1995; Donaldson and Preston, 1995). Reflecting this, CSER is seen as a voluntary activity that organizations undertake to satisfy societal or stakeholder obligations which may include social, economic, legal, ethical and environmental responsibility to stakeholders and the society in which they operate (Carroll & McCombs, 2003; Gray 2010; Varenova et al. 2013). According to stakeholder theory, a principal function of organizations and their management is to handle stakeholders' diverse expectations and demands as they are perceived as essential to understanding the problems in the advancement of CSER practices. However, this premise does rely upon the notion of stakeholders' involvement with the organization. Freeman (1994) reported the significant role of various stakeholders and their influence on organizations' CSER activities and failure to satisfy stakeholder groups may cause corporate failure (Deegan et al. (2002).

There is some support that organizations try to manage only powerful stakeholders for their survival, which is consistent with legitimacy theory (Gray et al. 1996; Deegan and Islam, 2014). For example, Deegan and Islam (2014) assert that international buyers who outsource products from developing countries force organizations to comply with agreed standards in respect to child labour and working conditions. However, organizations have economic, legal, ethical and discretionary responsibilities to all

stakeholders in the broader community. Carroll & McCombs' (2003) conceptualization of CSER is embedded with various moral and ethical considerations providing normative "prescriptions", in terms of fairness and equity. According to stakeholder theory this suggests that the organizations' CSER behavior is morally motivated, whereby "all persons or groups with legitimate interests participating in an enterprise do so to obtain benefits and [...] there is no prima facie priority of one set of interests or benefits over another" (Donaldson and Preston, 1995, p. 68). This suggests that there is need to gain the views of the 'secondary' stakeholders (NGOs, media and government etc) on CSER not only to advance their interests but to understand their influences and relationships with organizations.

Consumer Ethical Concerns

Ethical consumption is defined as the purchase of a product that concerns a certain ethical issue, such as child labor, animal well-being, fair trade and organic produce. People engage in ethical consumption to benefit the natural environment and others (Pelsmacker et al., 2005a).

Employee Retention (Intention to Stay)

Employee intentions to stay may be defined as an employee's cognitive response to the working conditions of a particular organization and to the economic condition of a nation as whole, which stimulates an employee not to search for better alternative jobs. Intention to stay has been described as a set of cognitions including not thinking of quitting a job and refraining from the search for alternative employment (Tett and Meyer, 1993).

Retaining top talent remains a primary concern for many organizations today. Critical analysis of workforce trends points to an impending shortage of highly-skilled employees who possess the requisite knowledge and ability to perform at high levels, meaning that organizations failing to retain high performers will be left with an understaffed, less qualified workforce that ultimately hinders their ability to remain competitive (Rappaport. Bancroft, and Okum, 2003).

Existing literature (Abassi and Hollman, 2000) highlights factors affecting problems in employee retention in the organizations such as hiring practices; managerial style; lack of recognition; lack of competitive compensation system; toxic workplace environments. Others include lack of interesting work; lack of job security; lack of promotion and inadequate training and development opportunities, amongst others. These are intrinsic motivational factors which can assist managers to influence employee retention in their organizations. The problem, however, is that managers have failed in identifying and properly use these variables as retention strategies thereby resulting in the prevailing high turnover rate in the organizations.

Working Condition/ decent work

The concept of decent work integrates fundamental rights of workers (ILO, 1999a). As per ILO prescription (ILO, 1999a), the essential rights are related with freedom of association, quality of work and the nonappearance of enforced labour and child labour

in any abusive form. Finally, social dialogue comprises rights of workers in deliberations with employers regarding work-related issues. Anker et al. (2002) identified 11 statistically measurable dimensions of decent work. Among them, practice of decent working hours, presence of unacceptable work including child labour and the practice of workplace relations through social dialogue are the towering indicators.

International Labour Organization (ILO) conceptualized the decent work (Barrientos & Smith, 2007) highlighting four interdependent pillars such as access to employment and productive income, standards and rights at work, access to a social protection system, and voice at work through social dialogue (Bell & Newitt, 2010). Social upgrading is thus treated as an aggregate of quantifiable and non-quantifiable 'elements' or 'aspects' of the ILO's decent work. Therefore, the degree of social upgrading is conceptualized by the elements of decent work embraced. The more elements of decent work a firm has embraced, the more socially upgraded it is considered to be.

Impact of Working Conditions on Employee Retention

Dawis and Lofquist (1984) explain that the extent to which an employee is willing to stay in the job is determined by the expectations of the employer and the employee. According to their explanation the employment contract consists of the expectations of both the employee and the employer. If there are mismatches, adjustments between these two parties has to take place. Even after the adjustments take place the employee may not be satisfied. When no more adjustment proves possible, the person leaves the job. This explanation implies that in order for an employee to stay in a job, his/ her expectations must match with what the employer is ready to provide.

Methodology

Conceptual Framework and Hypotheses

A conceptual framework as shown in Figure 1 was developed for this study in order to analyze the relationships identified among the three constructs explained above; social compliance, working condition, and intention to stay/employee retention.

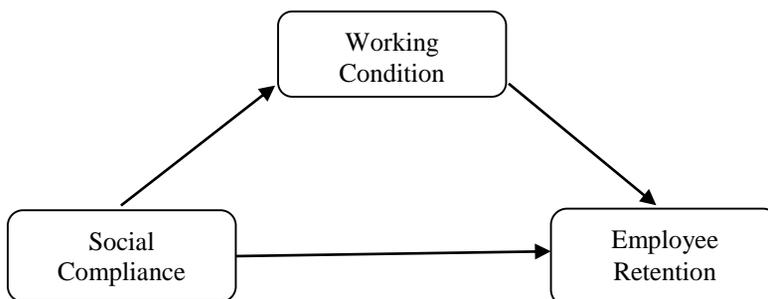


Figure 1: The Conceptual Framework

The conceptual framework explains that working condition could mediate the relationship between social compliance of an organization and employee retention in the job. Following are the hypotheses that were derived from the conceptual framework.

H1: Social compliance positively influences employee retention.

H2: Social compliance positively influences working conditions.

H3: Working conditions positively influence employee retention.

H4: Working conditions mediate the relationship between social compliance and employee retention.

Data Collection

A survey instrument was developed with the indicators identified for each of the constructs as shown in Table 1 in order to proceed with the questionnaire development and data collection. A five point Likert scale was used to measure the perceptual evaluations of the respondents for the questions presented in the survey instrument.

The survey instrument was administered among 143 blue collar employees in the apparel sector of Sri Lanka. Data collection took place over a period of 14 days from 20th November to 04th December 2018. The sample of 143 blue collar employees represented four companies in which supplier compliance/ company COC and national laws, private voluntary customers code of conduct, stakeholders & CSER involvement on business and customer ethical concerns were in existence. Majority of the respondents of the selected sample were in the group 18-25 years, representing 49.65% of the sample. 81.12% of the sample consisted of female employees. More than 50% of the employees in the sample were those who have completed their O/L as a highest educational qualification. Majority of the respondents have worked in the organization for more than 3-5 years.

For the purpose of this research, convenience sampling was used, and convenience sampling involves selecting sample elements that are most readily available to participate in the research and in a position to provide the information required by the researcher.

Table 1: Operationalization of Constructs

Construct	Dimensions	Indicators	Reference
Social Compliance	Corporate/ Supplier compliance & national laws	Adherence to code of conduct	Lund- Thomsen (2008)
		Violating COC has identified either major or minor misconduct	
		Management regularly keep updates on local law amendments	Lund- Thomsen & Nadvi (2010)
	Providing regular trainings on COC and local law amendments		
		Is there any production improvement because of adhering to COC	
	Private voluntary customer	Complying with customer COC Conducting internal audit by covering all related codes	Conroy (2007)

	code of conduct	<p>Providing regular training on COC updates</p> <p>Customer audit result and numbers of non-conformities</p> <p>New order placements/withdrawal based on audit results</p> <p>The amount of company LTO</p>	
Social Compliance	Stakeholders involvement on business	<p>Complying with stakeholder's COC</p> <p>Conducting internal audit by covering all related codes</p> <p>Creating good working environment based on COC</p> <p>Ensuring employees' human rights</p> <p>Creating opportunity for Collective Bargaining, freedom of association, and employee welfare based on COC</p> <p>Stakeholders surprise audits/ visits will help to maintain consistent standard in the workplace</p> <p>Providing regular training on COC updates</p> <p>New order placements/withdrawal based on audit results</p>	<p>Clarkson (1995)</p> <p>Donaldson (1995)</p> <p>Carroll (2003)</p> <p>Varenova et. al. (2013)</p> <p>Deegan et.al. (2002)</p>
	Consumer ethical concerns	<p>New order placements/withdrawal based on audit results</p> <p>Customer attraction based on audit results</p> <p>Based on audit results the buyers tend to place new orders</p> <p>Ensuring the job security and number of LTO</p> <p>Company involvement on CSR projects</p> <p>Company involvement in sustainability</p> <p>Improvement of company efficiency and productivity</p>	<p>De Pelsmacker et.al. (2005)</p> <p>Caruana (2007)</p> <p>Korthals (2001)</p> <p>Matthews (1994)</p> <p>Harper & Makatouni (2002)</p> <p>Shaw & Duff (2002)</p> <p>De Pelsmacker et.al. (2005)</p> <p>Friedman (1995)</p> <p>Rudell (2006)</p>

Working condition	Freedom of Association	Vosko (2006)
	Health & Safety	Benanch et. al. (2014)
	Wages & Benefits	Bosmans et.al. (2016)
	Working Hours	
	Workplace Grievance	
Retention	Anti-Harassment & Anti-Abuse	
	Willing to stay on this company	Tett & Meyer (1993)
	Hard to leave the friends	
	Considerable factors prior to resign from the company	

Analysis

The unit of analysis of this study is the individual employee. The responses of individual employees to the questionnaire were used to establish the internal consistency of the measures used in the questionnaire. Regression analysis was carried out to test the hypotheses that were developed at the outset of the study. Hypotheses 1, 2 and 3 were tested using bi-variate regression analysis while hierarchical regression analysis was used to test hypothesis 4.

Results

Reliability of the measures used in the survey instrument could be established by examining them for internal consistency. Data collected from the sample of respondents revealed that the measures are consistent with the Cronbach alpha exceeding the threshold value of 0.7, as shown in Table 2.

Table 2: Results of the Reliability Test

Variable Name	Cronbach's Alpha	N of Items
Corporate/ supplier compliance & national law	0.912	5
Private voluntary customer code of conduct	0.884	8
Stakeholders' involvement on business	0.937	7
Consumer ethical concerns	0.917	7
Working Conditions	0.886	6
Employee Retention	0.709	3

Role of the mediator variable was the most important concern of the study. The mediator is considered an intervening variable which explains the relationship between a predictor variable and a criterion variable. Mediator variable in this study is the working condition. It is the variable that was used to explain the relationship between the predictor variable social compliance and the criterion variable employee retention.

In addition to the analysis of the mediation effect, testing the first three hypotheses provided results for the relationships between social compliance and employee retention, relationships between social compliance and working conditions and also the relationship between working conditions and employee retention. Tables 3 to 14 provide the model summaries, ANOVA tables and the coefficient tables that produced these results.

Table 3: Model Summary: Social Compliance and Employee Retention

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.806 ^a	.650	.648	.44736

Table 4 ANOVA Table: Social Compliance and Employee Retention

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	52.490	1	52.490	262.275	.000 ^b
	Residual	28.219	141	.200		
	Total	80.709	142			

Table 5 Coefficient Table: Social Compliance and Employee Retention

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	52.490	1	52.490	262.275	.000 ^b
	Residual	28.219	141	.200		
	Total	80.709	142			

The R² value for the relationship of social compliance with Employee Retention in Table 3 was 0.650 which indicates that social compliance explained 65% of the variation in employee retention. The calculated F ratio as shown in Table 4 is significant at 1% level of significance ($p < 0.001$) and supported the reliability of the explanatory power of the model.

The results of regression analysis shown in Table 5 reveal that social compliance has a regression coefficient of 0.806 with the 0.01% level of significance. Hence social compliance can be considered as a predictor in determining employee retention. This shows that social compliance has a significant positive effect on employee retention.

Table 6 Model Summary: Social Compliance and Working Condition

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1		.893 ^a	.798	.796
				.40518

Table 7 ANOVA Table: Social Compliance and Working Condition

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	91.302	1	91.302	556.136	.000 ^b
	Residual	23.148	141	.164		
	Total	114.450	142			

Table 8 Coefficient Table: Social Compliance and Working Condition

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	.547	.137		3.986	.000
	Sct	.860	.036	.893	23.583	.000

The model summary in the Table 6 revealed that R squared is recorded as 0.798. Hence it indicates that the social compliance explained 79% of the variation in working condition. The calculated F ratio in Table 7 is 556.136 which is significant at 1% level of significance ($p < 0.001$) supports the reliability of the explanatory power of the model.

Hence social compliance can be considered as a predictor in determining the working condition. This shows that social compliance standards have a significant effect on working condition.

The results of regression analysis shown in Table 8 reveal that social compliance has a regression coefficient of 0.893 with the 0.01% level of significance. Hence social compliance can be considered as a predictor in determining working condition. This shows that social compliance has a significant positive effect on working condition.

Table 9 Model Summary: Working Condition and Employee Retention

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.872 ^a	.760	.758	.37070

Table 10: ANOVA Working, Condition and Employee Retention

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61.333	1	61.333	446.311	.000 ^b
	Residual	19.376	141	.137		
	Total	80.709	142			

Table 11: Coefficient Table, Working Condition and Employee Retention

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.14	.131		8.679	.000
1	wct	.73	.872	23.583	.000

The R^2 value in Table 9 for the relationship between working condition and employee retention was 0.760 which indicates that working condition explained 76% of the variation in employee retention. The calculated F ratio in Table 10 is 446.311 which is significant at 1% level of significance ($p < 0.001$) and thus supports the reliability of the explanatory power of the model.

The results of regression analysis shown in Table 11 reveal that working condition has shown a regression coefficient of 0.872 with the 0.01% level of significance. Hence working condition can be considered as a predictor in determining employee retention. This shows that working condition has a significant positive effect on employee retention.

Table 12: Model Summary, Social Compliance, Working Condition and Employee Retention

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.874 ^a	.764	.760	.36904

Table 13: ANOVA Table, Social Compliance, Working Condition and Employee Retention

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61.642	1	30.821	226.305	.000 ^b
	Residual	19.067	140	.136		
	Total	80.709	142			

Table 14: Multiple Regression Coefficient Table, Social Compliance, Working Condition and Employee Retention

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
	(Constant)	1.115	.132		8.451	.000
1	Sct	.111	.074	.138	1.507	.134
	Wct	.629	.077	.749	8.197	.000

The R² value for the multiple regression, run with social compliance and working condition as predictors and intention to stay as the dependent variable was 0.7640 as shown in Table 12. This indicates that the social compliance and working condition together explained 76.4 % of the variation in employee retention. The calculated F ratio is 226.305 in Table 13 which is significant at 1% level of significance ($p < 0.001$) and thus supports the reliability of the explanatory power of the model.

Table 14 shows that social compliance beta value 0.893 declined to 0.138 after the inclusion of working condition, reflecting the mediating effect of the working condition. So, it means that the conceptual framework which was constructed is nomologically valid and factors which were taken into consideration are relevant to the real condition of apparel sector of Sri Lanka.

Discussion and Conclusions

This research intended to investigate the mediating effect of working condition on the relationship between social compliance and employee retention. The deterrence theory was helpful in explaining why some companies are not adhering to the social compliance requirements and some are adhering due to fear of losing their business. The fact that working conditions may be overlooked when firms are engaging in social compliance only as a legal requirement, was argued upon with the aid of deterrence theory. Based on bivariate regression analysis, ANOVA analysis, and coefficient analysis a positive relationship could be identified between social compliance and working condition, social compliance and intention to stay as well as working condition and employee retention. The mediation effect of working condition was evident from the results of the hierarchical regression analysis. The implication of this result is that by improving the working conditions the employees can be motivated to stay in the job.

The perceptions of the employees on social compliance show that social compliance is in practice in the apparel sector of Sri Lanka. Their perceptions on working conditions in the apparel sector of Sri Lanka are also positive. At the same time results reveal that if working conditions are improved, employees can be encouraged to retain in their jobs. In other words managers need to know that the working conditions require more attention as a strategy for employee retention. This is what Dawis and Lofquist (1984) explained when they said that management must always attempt to reduce the gap between the perceived expectations of the employees regarding the working conditions and the existing working conditions. Managers may encourage open dialogue with employees to

show that they care and are interested in the employee. Insights gained through this exercise can be used as a means to demonstrate commitment and concern to employees by way of improved working conditions.

Conducting internal audits based on working condition will enable corrective and preventive actions in place to avoid, minimize the identified non-compliances. It's an advantage to have risk assessment which covers the clauses in the social compliance standard and reduce the severity of the identified risks. This will help to improve the working condition of the facility and improve the intention to stay and retain employees in apparel sector.

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ANTECEDENTS OF BRAND LOYALTY OF SPORTSWEAR BRANDS AMONG YOUNG CONSUMERS IN SRI LANKA

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Abstract

The current intense competition in the industry where sportswear products are available is a great challenge to organizations to build long term relationships with their customers. Therefore it is important for the key market players to identify and evaluate the degree of brand loyalty in sportswear and the antecedents of being brand loyal to such brands in order to face the fierce competition. In fact young consumers all over the globe are more attracted to sports brands in the world. Thus, the aim of the research is to examine the Antecedents of brand loyalty of sportswear brands among the young consumers in Sri Lanka. The survey method is used with 251 structured questionnaires collected from young consumers in the Western Province of Sri Lanka. The respondents are selected through the judgmental sampling technique. Both descriptive and inferential statistics are used for the analysis. Findings revealed that there is a high brand loyalty for sport brands among young consumers in Sri Lanka and brand name, product quality, style, price, promotion, habit and store environment are the antecedents for brand loyalty. Companies in the fashion and shoes industry can invest on sports brands as there is a high tendency for the same from the young generation in Sri Lanka. Further, companies in the fashion industry should place more focus on brand, quality, style, price, promotion, store environment and inculcate the habit of purchasing the sports brands in their business and marketing strategies.

Key words: Brand Loyalty, Sportswearbrands, Sri Lanka, Young Generation.

Introduction

Nowadays people do not only wear sportswear for sports, but wear sportswear on common, everyday occasions (Cotton Incorporated 2012: Womens Wear Daily, 2012) and this includes a range of sportswear such as Jackets, T-shirts, Shirts, Vests (inner sleeves), Pants, Shorts, Skirts, Bras Leggings, and Shoes.

According to Euromonitor International (2018), the global sportswear industry increased and generated an additional \$55 billion in new sales by 2017. Further it disclosed that sportswear consumption has been increasing by an average of 4% since 2010, with 2017 showing an increase of 6%. It can be seen that there are number of new entrants to the already crowded sportswear market and brands such as Under Armour and Athletica are some new sportswear players that have grown rapidly due to their focus on niche markets, such as performance apparel and yoga inspired sportswear (Euromonitor International (2018).

Euromonitor International (2018) stated further that an increase in sportswear consumption could be attributed to factors such as the consumer's need for fitness, health consciousness, competition among brands, the market and an increase of more sports inspired stylish designs. Athletic wear has become part of the consumers lifestyle, with more than nine out of ten (approximately 93%) wearing their athletic apparel for activities other than exercising; with 85% wearing them around the house, 65% running errands in them, 42% wearing them while shopping and 20% wearing them when going out to eat (Cotton Incorporated, 2012). Therefore, it can be said that sportswear apparel has become a part of a consumers' day to day life.

Further, when it comes to sportswear specifically, consumers use sportswear products for both casual and sporting events (Cotton Incorporated, 2012). This factor may have led to increased sportswear consumption among young people. Consumers form relationships with brands they love (Fournier, 1998) leading to brand loyalty. Nowadays most companies, especially those in the sportswear industry try to enhance brand loyalty among their customers.

Scholars claim that sportswear consumption varied across the general population though none of the scholars have paid attention to the Asian context. For instance, Dawes (2009) revealed that consumers in the UK sportswear market were not loyal to a particular brand and consumers switched from one brand to another. On the other hand MacCarthy and Jayarathne (2010, 2011) and Jayarathne (2018) discussed the significance of the fashion industry in Asia and the significance of the fashion including clothes and shoes among the young consumers in Sri Lanka.

Boom in the sportswear for non-sport activities consequently could influence the fashion industry, especially among the young generation and also the level of significance of the fashion industry in Asia, yet the nature of sport brand loyalty and the antecedents of the same in the Asian Context have not been investigated by any researcher. Addressing such requirements, the current paper aims at examining the antecedents of the brand loyalty for sports brands among the Young Generation in Sri Lanka.

Literature Review

Sportswear

Sportswear can be defined as clothes, shoes, and accessories which are specifically designed for sports and exercise purposes. Sportswear includes shirts, shorts, track kits, wet suits, headwears, sport shoes etc. Nike, Adidas, Speedo, Fila, Reebok, Puma and Umbra are the main sportswear brands and they are currently dominating the sportswear industry.

Brand Loyalty

In broad-spectrum, brand loyalty can be defined as the strength of preference for a specific brand when compared with other similar brands available. Over the years numerous researchers have defined brand loyalty in many different ways. Oliver (1997) defined loyalty as "...a deeply held commitment to repurchase or re-patronize a preferred

product or service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts that have the potential to cause switching behavior”.

It is important to have a strong brand loyal customer base in order for a brand to become strong and exist in the market. Before 1980, companies mainly focused on how to attract and grab more customers from their competitors and increase their customer base. At that time companies didn't pay much attention to retain their existing customers. Customer loyalty to specific brands has been a crucial point of strategic marketing planning over the last years (Kotler and Armstrong 2010). Along with this fact their focus shifted towards keeping already existing customers. This has become more and more important strategy since now in the times of countless offers, buyers tend to jump from one brand to another (Kapferer, 1992).

Loyalty towards the brand is crucial for any company. According to Giddens and Hofmann (2002) there are three important outcomes which are generated as a result of having a strong brand loyalty. The first outcome is a higher level of sales volume. The second reason for the importance of brand loyalty is the ability to charge premium prices from products. The third reason for the significance of brand loyalty is that they started a product search. Customers who are loyal to a certain brand are ready to search for that brand and are less sensitive to competitor brands and their products. This will cause low cost in terms of advertising, marketing, and distribution. It will cost 5 times more to attract a new customer as it does to retain an already existing one.

Among the above three points, Aaker (1991) especially supports the third point, which indicates that the customer loyalty can reduce the vulnerability of getting caught to competitive actions. As long as customers pay no interest to competitor's products, the latter may become discouraged because the money and time they spend to attract already satisfied customers is a waste. Yet another positive effect of brand loyalty is that loyal customers often provide more feedback to companies, allowing them to enhance their products and services according to the consumers' wishes (Wong et al., 2009).

Despite the significance of brand loyalty, attention has seldom been paid to investing inbrand loyalty for the sportswear brands in the Asian context. Further, young consumers in Sri Lanka are cosmopolitan and fashion conscious (Jayarathne 2018); thus investigating a tendency to wear more sportswear brands is important, though it has not been investigated yet. Addressing such gaps, the current paper derives the first research objective as (1) to assess the degree of brand loyalty in sportswear brands in young consumers in Sri Lanka. The corresponding hypothesis is derived as there is a high degree of brand loyalty for the sportswear brands in young consumers in Sri Lanka.

Antecedents of Brand Loyalty

The studies conducted by various researchers regarding the brand loyalty of sportswearthey have identified eight factors that influence consumers' brand loyalty towards certain sportswear brands. Those factors can be determined as: brand name (Keller (2003), Cadogan and Foster, (2000), Calbourne(1996) and Kohli and Thakor (1997) , habit (Sproles& Kendall, 1986) price (Cadogan and Foster (2000) and Bucklin (1998),

promotion (Rowley (1998), product quality, style, store environment, and service quality (Lau *et al.* (2006). Since those eight factors and their influence on sportswear brands have not been studied in the Sri Lankan context, they will be investigated throughout this paper.

- **Brand Name**

Brand image refers to consumers' perceptions of a brand as consumers remember the brand (Keller, 2003). According to Kohli and Thakor (1997), brand name is the creation of an image or the development of a brand identity and is an expensive and time-consuming process. Brand name has a strong impact on customer loyalty because consumers' perceptions are linked to brand names and as a result emphasis on brand names is heightened. Yee and Sidek (2008) identified a significant positive relationship between brand name and brand loyalty. Strong brand names can lead to brand loyalty (Selnes, 1993). Further, Dawes (2009), Kinuthia and Keren (2012) and Yee, et al (2008) found that the most influencing factor to the brand loyalty is brand name.

- **Product Quality**

Product Quality contains the features and characteristics of a product or service that bears an ability to satisfy stated or implied needs. In other words, product quality is defined as "fitness for use" or "conformance to requirement" (Russell and Taylor, 2006).

Functional attributes in sportswear include quick-dry, breathable, waterproof, odor-resistant, lightweight, and antimicrobial and, durability which is known as the use life of garments. For instance, some consumers wear their sportswear for heavy work and some for leisure and sports, as they need a lot of movement, while durability is an important consideration in purchasing sportswear (Gronroos 1990). According to a study by Swinker and Hines (2007), the quality is important in clothing purchase and in consumer loyalty thus companies need to provide goods with the best possible quality.

- **Price**

Kotler and Armstrong (2010) define price as, "The amount of money charged for a product or service". According to Cadogan and Foster (2000), price is probably the most important consideration for the average consumer. Consumers with high brand loyalty are willing to pay a premium price for their favorite brand. So it can be said that if consumers are brand loyal, buying interest could not easily be influenced by price.

Furthermore, customers have a strong belief in the price and value of their favorite brands so much so that they would compare and evaluate prices with alternative brands (Evans *et al.*, 1996; Keller, 2003). Consumers' satisfaction can also be built by comparing price with perceived costs and values. It is observed that consumers will purchase the product if the perceived values of the product are greater than the cost. It is important to note that loyal customers are willing to pay even more if the price increases because they would prefer to pay a higher price to avoid any perceived risks (Yoon and Kim, 2000).

Normally, long-term loyalty and the services offered to loyal customers increase the tolerance of the customers towards higher prices. Price becomes a primary key in consumer judgment about the value of the product and their assessment of the value of the goods at retail shops. Price becomes a focal point in consumer judgment about the value of the

product and their assessment of the value of the goods at retail shops (De Ruyter&Bloemer, 1999).

Loyal consumers may be willing to pay more for a brand (Lau et al., 2006). Yee and Sidek (2008) found a positive relation between brand loyalty and price and also they stated that consumers with high brand loyalty are less price sensitive.

- **Style**

Style is the visual appearance, which includes line, silhouette and details affecting consumer perception towards a brand (Frings, 2005). According to a research conducted by Duff (1999) who investigated a niche market in women's sportswear. Here the results showed that sportswear shoppers were becoming more fashion conscious and were demanding products with more style; moreover, consumers have a tendency to wear different attires for different occasions while being loyal to the brands.

- **Store Environment**

According to Omar (1999) "the store environment was the single most important factor in retail marketing success and store longevity." Further he said that positive attributes of the store, which comprises store location, store layout, and in-store stimuli, affect brand loyalty to some extent. It can be said that the store location and number of outlets are critical in altering consumer shopping and purchasing patterns. "If consumers find the store to be highly accessible during their shopping trip and are satisfied with the store's assortment and services, these consumers may become loyal afterwards" (Evans *et al.*, 1996). Therefore, a store's atmosphere is one of the crucial factors that could influence the consumers' decision making.

"The stimuli in the store, such as the characteristic of other shoppers and sales people, store layout, noises, smells, temperature, shelf space and displays, signs, colours, and merchandise, affect consumers and serve as elements of apparel attributes" (Abraham and Littrell, 1995), which may sequentially, affect consumer decision making and satisfaction with the brand (Evans *et al.*, 1996). Milliman (1982) said that the background music played in the stores affects attitudes and behavior. Further the slow-beat musical selection leads to higher sales volume as consumers spend more time and money in a calm environment.

- **Promotion**

Promotion, especially through advertising, is important in differentiating brands in a particular product category as well as establishing ideas or perceptions in the consumers' minds. Advertising is a non-personal presentation of information in mass media about a product, brand, company or store. So good advertising can attract fickle consumers and consumers to become brand loyal (Czemiawski and Maloney, 1999). As per Yee et al (2008), it is an important influencer for the brand loyalty of sportswear. In 2010 and in 2011 the study of Mohommad and Mohammadreza and the study of Khraim found the same results.

- **Service Quality**

According to Gronroos, (1990) "service quality is that the service should correspond to the customers' expectations and satisfy their needs and requirements". Further, Service quality is a kind of personal selling, and involves direct interactions between sales people

and potential buyers. Also he said that “Consumers like to shop at specific stores because they like the services provided and are assured of certain service privileges.”

It can be said that the impact of sales people-consumer relationships will generally result in long term alignment of consumers towards the store or brand. Trust in sales people appears to relate to overall perceptions of the store’s service quality, and results in the consumer being totally satisfied with the stores at the end of the day. Furthermore, according to Leung and To (2001) personalization (i.e. reliability, responsiveness, personalization and tangibles) significantly influence consumers’ experience and evaluation of service, and in turn, affects the brand loyalty of consumers.

- **Habit**

A habit can be defined as a learned mode of behavior that has become nearly or completely involuntary. A consumer usually either consistently sticks with the same brand of product or the same store (Sproles and Kendall, 1986). Consumers who have favorite brands and stores have formed habits in choosing these repetitively. Store attractiveness keeps many consumers coming back to the same store. According to Baker et al (1994) how consumers view store image has long been considered an important part of consumer decision-making. The image influences the consumer’s perceptions of goods and services purchased (Kunkel and Berry, 1968). This is because of the consumers’ views and feeling toward the store might create a habit to shop at the given store repetitively or make them loyalty to that store.

Even though the above factors influence brand loyalty either directly or indirectly they hardly examined their influence on brand loyalty of sportswear brands and in the Sri Lanka context with special reference to young consumers who are highly motivated to wear sportswear for day-to-day activities as well. Thus, addressing such a gap in the literature, the current study derives the second objective as (2) to examine the antecedents of the brand loyalty of sportswear brands among young consumers in Sri Lanka. The hypothesis is derived as the above discussed eight factors could significantly influence the brand loyalty of sportswear brands in Sri Lanka.

Conceptual Framework

The Figure 1 depicts the conceptual framework derived from the review of the literature.

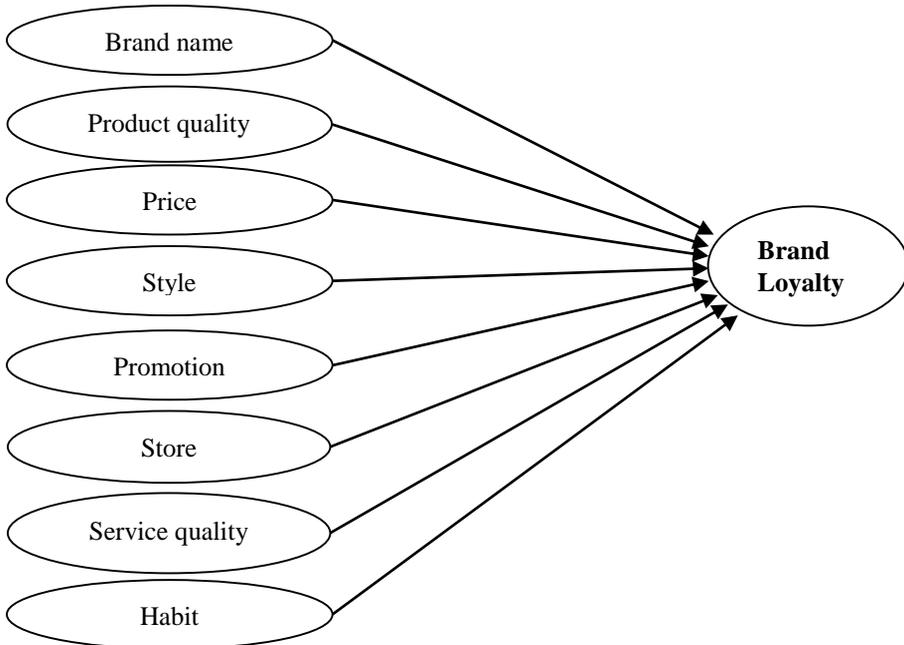


Figure 1: Conceptual Framework

Methodology

The justification for selection of the methodology for a research study is comprehensively discussed by Dewasiri et al. (2018_{a,b}) and Dewasiri et al. (2017). Accordingly, this study is based on two quantitatively driven research questions 1). What is the degree of brand loyalty of sportswear brands in Sri Lanka? and

2). What are the antecedents of sportswear brand loyalty in the same context?.

Hence, this quantitative study is carried out under the correlation approach. The study gathered data, from a survey of young consumers who used sportswear in the recent past or use them currently. This is a single cross sectional study where the data were collected during March 2018. As the majority of young population lives in the Western Province (i.e. more than 28 % of the total population with the highest annual growth rate of 1.5% - Department of Census and Statistics Sri Lanka 2017, www.statistics.gov.lk) and being the commercial area in Sri Lanka the sample is selected from the Western Province to represent the country. Thus, the judgmental sampling is used. Structured questionnaire is the data collection instrument and 251 respondents participated. All the latent variables are measured on priory basis using Five point Likert Scale (1 – strongly agree, 5 – strongly disagree). Brand Name, Product quality, Style, Price, and Habit are measured using the scales of Bae et al (2009). Promotion, Store Environment, Service Quality, and Brand

Loyalty are measured through the scale of Chou et al (2013), Barker et al (1994), OlgunKitapci et al (2013), and Zehir et al (2011).

Analysis and Findings

Validation of the measurements

Unidimensionality is ensured for all the measurements of the latent variables through Exploratory Factor Analysis. The convergent validity was ensured through the KMO, Bartlett's Test of Sphericity, Average Variance Extracted, and Composite Reliability (Hair et al., 2012). The results are given in Table 1.

Table 1: Results of the Convergent Validity

Variable	KMO	BTS-Sig	CR	AVE
Standard Value	.5 <	.05 <	.7 <	.5 <
Brand Name	0.724	0.000	0.856	0.599
Product Quality	0.874	0.000	0.957	0.788
Style	0.762	0.000	0.866	0.620
Price	0.608	0.000	0.770	0.529
Habit	0.624	0.000	0.806	0.582
Promotion	0.714	0.000	0.843	0.575
Store Environment	0.749	0.000	0.935	0.675
Service Quality	0.895	0.000	0.961	0.693
Brand Loyalty	0.804	0.000	0.858	0.549

Source: Survey Data,2018

Cronbach's Alpha values obtained for all the latent variables are greater than 0.7 ensuring the inter-item reliability (Hair et al., 2012). The results are given in Table 2.

Table 2: Cronbach's Alpha values

Variable	No of items	Cronbach's alpha Standard size 0.7<
Brand Name	4	0.772
Product Quality	6	0.945
Style	4	0.789
Price	3	0.552
Habit	3	0.637
Promotion	4	0.745
Service Environment	7	0.918
Service Quality	11	0.939
Brand Loyalty	5	0.792

Source: Survey Data,2018

The discriminant validity is ensured as the AVE values of the respective constructs exceed the square of the correlation values of the respective rows and columns (Fornell and Larcker, 1981)

Table 3: Values for Discriminant Validity

	BN	PQ	ST	Px	HB	PR	SE	SQ
BN	0.599							
PQ	0.389	0.788						
ST	0.226	0.186	0.620					
Px	0.011	0.440	0.006	0.529				
HB	0.265	0.350	0.173	0.037	0.582			
PR	0.302	0.360	0.073	0.001	0.326	0.575		
SE	0.459	0.345	0.257	0.547	0.408	0.369	0.675	
SQ	0.336	0.269	0.338	0.001	0.331	0.323	0.591	0.693

Source: Survey Data, 2018

Degree of Brand Loyalty in Sportswear Brands in Sri Lanka

According to the first hypothesis the level of Brand Loyalty is assessed for Sportswear Brands among the young consumers in Sri Lanka through one-sample T-test. The results in Table 4 (a) and (b) show that brand loyalty for sportswear brands is at a high level and it is statistically significant.

Table 4 (a): Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
BL_MEAN	251	2.40	4.60	4.4000	.50604
Valid N (listwise)	251				

Table 4 (b) One-Sample Test

	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
BL_MEAN	5.589	199	.000	.20000	.1294	.2706

Antecedents of Brand Loyalty in Sportswear Brands in Sri Lanka

In achieving the second objective of the study the second hypothesis is tested through a multiple regression. The results are given in Table 5 (a) and (b).

Table 5 (a) : Model Summary^b

Model	R	R Squared	Adjusted R Square	Std. Error of the Estimate
1	.763 ^a	.727	.724	.13976

a. Predictors: (Constant), SQ_MEAN, P_MEAN, PRO_MEAN, S_MEAN, BN_MEAN, H_MEAN, PQ_MEAN, SE_MEAN

b. Dependent Variable: BL_MEAN

According to the model summary (Table 5 a) the adjusted R squared value is 0.724 and it indicates that 72.4% of brand loyalty is explained by the antecedents such as brand name, product quality, style, price, promotion, habit, store environment, and service quality.

Table 5 (b) : Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.374	.080		4.649	.000
	BN_MEAN	.229	.027	.307	8.459	.000
	PQ_MEAN	.154	.016	.284	9.467	.000
	S_MEAN	.110	.016	.171	6.703	.000
	P_MEAN	.127	.016	.169	7.842	.000
	H_MEAN	.080	.020	.112	3.930	.000
	PRO_MEAN	.144	.022	.191	6.547	.000
	SE_MEAN	.089	.019	.138	4.708	.000
	SQ_MEAN	.014	.027	.017	.501	.617

a. Dependent Variable: BL_MEAN

According to the coefficient values (Table 5b) all the antecedents of brand loyalty of sportswear brands are significant except service quality. The highest contribution to the brand loyalty is given by the brand name. Product quality, price, promotion, style, habit, and sales environment are respectively contributing to sportswear brand loyalty in Sri Lanka. It discloses that the brand name is the most important factor that influences the brand loyalty in sportswear brands in Sri Lanka.

Discussion and Conclusion

The study is conducted under the main purpose of examining the antecedents of the brand loyalty of sportswear brands in Sri Lanka. Two specific objectives drive the paper. They are first to assess the degree of brand loyalty of sportswear brands in Sri Lanka.; the second is to examine the antecedents of sportswear brand loyalty while identifying the salient factor for the brand loyalty.

The current study discloses that there is a higher degree of brand loyalty for the sportswear brands in Sri Lanka among the young generation. It reflects the same trend found out in another Asian country, i.e. Malaysia in the study conducted by Yee and Sidek (2008). Equally, Lydia et al (2012) also found that there is a high tendency towards brand loyalty in sportswear brands.

Further, the results of the study disclose that brand name, product quality, style, price, habit, promotion, store environment influencing brand loyalty in sportswear except the service quality in the Sri Lankan context. This finding mostly supports the knowledge contributed by the other similar studies but in different context. In particular, Yee, and Sidek, (2008), claim that brand name, product quality, style, price, promotion, service quality and store environment influence the brand loyalty of sportswear. The research results of Mohommad and Mohammadreza (2010) and Khraim (2011) are equal to the same they identified as factors in their studies on brand loyalty on sportswear and cosmetics. However, the current study paves the way towards habit as it has not been directly discussed in the literature. Further, service quality in the stores where sportswear brands sell is not significant in the Sri Lankan context as per the findings of the current study.

The current study also discloses that brand name is the salient antecedent in brand loyalty for sportswear. This finding agrees with the literature review. For instance, the studies conducted by Dawes, (2009), Kinuthia and Keren (2012) and Yee and Sidek (2008), the most influencing factor to the brand loyalty is brand name. Mohommad and Mohammadreza (2010) found product quality as the most influencing factor followed by brand name.

However, as the current study focuses only on young consumers addressing such limitation a researcher can investigate the same among other generations as well in the future. Further, this study can be extended by covering the entire country since the current version judgmentally selects the sample. Further another researcher can investigate the diversity of brand loyalty in sportswear with the demographic features of the consumers.

Managerial Implications

The study discloses that there is a high brand loyalty in sportswear among the young consumers in Sri Lanka. This is an important insight for the companies that operate in the fashion designing, manufacturing and retailing sectors in Sri Lanka. They should design, manufacture and make available more sportswear brands and should encourage the current sportswear customers to retain in such brands while attracting prospective customers.

Further, the study found that the brand name, product quality, style, price, promotion, habit and store environment are influencing the brand loyalty of sportswear brands of the young consumers in the Western Province in Sri Lanka. Thus, companies that operate in fashion and footwear industry should pay more attention to make high quality stylish products under sports brands for a suitable price while productively promoting the same. Simultaneously, they should inculcate the habit of purchasing and being loyal to sportswear brands among the young generation in Sri Lanka. Retailers of clothing or shoes should allocate more space for sportswear brands and should design and maintain the store environment more cleanly and pleasantly by playing pleasant music, decoration with attractive decor, convenient layout all with more visibility and elegant arrangements in order to encourage customer visits and revisits which create long term relationships with them.

As it is also found that the brand name is salient for brand loyalty in sportswear among the young consumers in Sri Lanka, the corporates should make use of all possible marketing and promotions strategies to make the current and potential target markets aware that they offer a range of products under sportswear brands.

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DETERMINANTS TOWARDS DOCTORS' PRESCRIBING INTENTION OF BRANDED MEDICINES: A CASE OF ANTIBIOTICS IN THE SRI LANKAN PHARMACEUTICAL INDUSTRY

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Abstract

Restrictions on Promoting, Advertising and Sales along with differences in perception on branded and generic medicines have made pharmaceutical market a unique marketplace. In Sri Lanka, the situation is more complicated as most of the Allopathic Medicines are considered 'Prescription only'. Hence, there is a concern whether there could be a competitive advantage in branding of pharmaceuticals in Sri Lanka. However, the world Pharmaceutical Market has increasingly come to understand the importance of Pharmaceutical Branding. Doctors have been identified as the most influential group for customers' purchase decision of a particular brand of medicine. In Sri Lanka, only few studies have been specifically dedicated to pharmaceutical marketing and to the authors' knowledge, little research has explored doctors' prescribing intention of branded medicines. The overall objective of this study was therefore to examine the determinants towards doctors' prescribing intention of branded medicines (Antibiotics) in Sri Lanka. Quantitative data was collected by means of a survey questionnaire administered to a representative sample of 120 MBBS qualified doctors in District of Colombo, Sri Lanka. Inferential statistics revealed that Brand Loyalty and Quality of the Medicine are the factors having a strong effect on Doctors' Prescribing Intention of Branded Medicines in Sri Lanka. Demographic profile of doctors' shows significant impact on prescribing intention. Affordability to the Patient and Customer Relationship Management (CRM) of the Pharmaceutical Company are not significant in Sri Lankan context. These insights will help pharmaceutical marketers to develop better pharmaceutical marketing strategies and policy makers to develop measures to achieve better clinical effectiveness with economic efficiency in prescribing medicines in Sri Lanka.

Keywords: Branding, Loyalty, Prescribing Intention, Pharmaceutical Industry, Sri Lanka

Introduction

Background of the Study

The pharmaceutical industry introduced branding comparatively late. During the 1980's and 1990's the pharmaceutical industry enjoyed success over an extended period of time. Strong research and development (R&D), aggressive defense of patents and use of the dominant promotional tool were some of the key success factors of the industry. Therefore, the industry had been product and R&D driven but not market driven.

However, in early 2000's the picture had changed. Many of the blockbuster products had gone off-patent and generic competitors entered into the market and the industry had increasingly realized the importance of building strong brands due to increasing costs of R&D and the generic competition after patent expiration. On the other hand, one of the major problems faced by pharmaceutical companies in brand building is, the rivalry amongst generic competitors with low price 'Branded Generics' after the patent expiry.

Pharmaceutical industry differs from Fast Moving Consumer Goods (FMCG) industry in many aspects. They are mainly, restrictions in advertising, generic competition after the expiration of the patents and the unique characteristics in the target market. Further, Pharmaceutical industry is one of the most regulated industries in the world. When considering the Sri Lankan context, there are restrictions on Advertising and Sale of most of the medicines.

Doctors have been identified as the major influencing group on medicine purchase decisions of patients (consumers) due to their roles as influencers, gatekeepers, deciders, while patients perform the role of buyers and users. In this context, the pharmaceutical market is heavily dependent on the doctors' prescribing behavior. Hence, doctors' prescribing behavior of a particular brand is a key influencing factor for a consumer to purchase such brands.

Problem Statement

Considering the above identified importance, the lack of academic research on pharmaceutical branding (Griffiths 2008) and, to the authors' knowledge, little research that has explored doctors' prescribing intention of branded medicines in Sri Lanka. The present study aimed at studying the determinants towards doctors prescribing intention of branded medicines in Sri Lanka.

Objectives of the Study

As per the above problem statement, the objectives of the study were to identify the determinants towards Doctor's Prescribing Intention of Branded Medicines, examine the influence of each determinant and to explain the influence of type of medical institute /hospital, where doctors are practicing, on Doctor's Prescribing Intention in the Sri Lankan context.

Literature Review

Prescribing Intention of Doctors

Kapferer (1997) (as cited in Schuiling and Moss 2004) has stated that the Pharmaceutical companies develop molecules but what doctors prescribe is brands and the brand has an existence in both doctors and patients minds that goes beyond the product itself. It is important to study doctors' prescribing intention as they are previously identified as the strongest influencing group, vice versa. Because the brands will also have a stronger influence on the behavior and attitudes of patients and doctors (Schuiling and Moss, 2004). This represents an insurmountable difference versus FMCG which are contrary to what certain authors highlight. Doctors can be convinced by arguments rather than purely being

rational. Doctors are also influenced by other factors such as trust or the quality image of the manufacturer. Also, they need to be reassured. Sometimes, the doctors make decisions for emotional reasons which are not rational based on limited information (Chandler & Owen 2002 as cited in Schuiling and Moss 2004, p.13).

Nayak (2013) found evidence of branding and/or habit persistence for specific antimicrobial drugs. For example, the combination drug sulfamethoxazole-trimethoprim is almost always prescribed by physicians as either Septra or Bactrim (brand-names), while amoxicillin is mostly prescribed as the generic. Howard in 1997 (cited in Nayak, 2013) has found that specialists are actually significantly more likely than non-specialists to prescribe antimicrobial drugs in their generic form, possibly indicative that specialists are more aware of the efficacy and existence of generics, resulting in greater generic prescribing.

The elements for which a physician prescribes the generics that are very complex to model can be influenced by a number of characteristics inclusive of patient characteristics, physician characteristics, drug specific characteristics, the way the physician gets information about drugs, financial incentives the physicians may experience, regional preferences, to state laws regulating generic substitution and direct-to-physician advertising. Nayak (2013) has developed a model to describe prescribing intention. According to his view, the patient's preference for a prescription of a generic or brand-name form of a drug is basically determined by the quality and cost differences between the generic and the brand. Therefore, assuming the generic has a cost (CG), which is less than the cost of the brand-name (CB), the patient would choose to have the brand-name prescribed only if the brand had a higher quality value (QB), over the quality value of the generic (QG), that is; $QB - QG > CB - CG$ (Nayak, 2013, p.11) Furthermore, Nayak (2013) stated as physicians and patients do not know the quality of the generic relative to the brands of the same drug. Hence, there is a cost to determine the quality of the generic and a rational consumer would choose to have the generic form of the drug prescribed if $QG - QB > CB - CG + CI$ (Nayak, 2013, p.12).

CI is information cost, can also be considered as a switching cost and means that a price differential between the brand and generic of same quality can persist for a given drug. This switching cost is a function time. If the patient gets utility from buying the brand-name version of the drug then, essentially the patient has a willingness to pay premium for the brand-name form. Under perfect agency, physician characteristics should not influence generic prescribing habits (Nayak, 2013).

Doctors' Prescribing intention can be explained by Theory of Planned Behavior (TPB) and Theory of Reasoned Action. According to Knabe (2012), the Theory of Reasoned Action suggests that a person's behavior is determined by the intention of that person to perform the behavior and that this intention is, in turn, a function of the person's attitude towards the behavior and the person's subjective norm. The best predictor of behavior is intention. Intention is the cognitive representation of a person's readiness to perform a given behavior, and it has been considered to be the immediate precursor of behavior.

The intention is determined by three things; Attitude towards the specific behavior, Subjective norms and Perceived behavioral control. The theory of planned

behavior says that only specific attitudes towards the behavior in question can be expected to predict that behavior. In addition to measuring attitudes towards the behavior, it is also needed to measure people's subjective norms, their beliefs about how people they care about will view the behavior in question. To predict a person's intentions, knowing these beliefs can be as important as knowing the person's attitudes. Finally, perceived behavioral control influences the intention. Perceived behavioral control refers to someone's perceptions of their ability to perform a given behavior. These predictors lead to intention. A general rule, the more favorable the attitude and the subjective norm, and the higher the perceived control the stronger should be the person's intention to perform the behavior in question. (Knabe, 2012)

Prescribing intention of a particular brand of medicine can be either a planned behavior due to their attitudes towards branded medicines. For example, even if the doctors want to prescribe a high quality branded drug to their patients, it cannot be done due to the patients' incapacity to afford it. Therefore, the doctors are compelled to prescribe a generic or a brand in consideration the patient's affordability.

On the other hand, some doctors probably may want to prescribe a certain brand of medicine but, they are forced to prescribe a generic version with regard to some of the institutional norms. That includes the theory of reasoned action. Therefore, it is obvious that, sometimes the doctors have to behave against their attitudinal will owing to various reasons. Accordingly, the necessity arises to study their intention rather than their attitudes.

Determinants towards Doctors' Prescribing Intention

Brand loyalty of patients is a powerful tool to influence not only medical practitioners but also in the development of pharmaceutical brands (Griffiths, 2008). The reason for practitioners to prescribe more expensive branded medicines rather than inexpensive generic alternatives is due to brand loyalty (Griffiths, 2008).

A study done by Ahmed et al.,(2013) in Bangladesh highlights that doctors' preferences are not fully unbiased and can be influenced by pharmaceutical companies. Khajuria, and Khajuria (2013), have undertaken a study with the aim to elucidate the detailed impact of various marketing promotional strategies on physician drug prescription. They stated that, a large number of pharmaceutical companies market same drug molecule with their different brand names in India. This situation invites competition amongst pharmaceutical manufacturers and they influence the prescribing physician by adopting different marketing strategies.

Table 1: Determinants towards Doctors' Prescribing Intention

Determinant	Reference
Brand Loyalty	Du Plooy (2012); El-Dahiyat and Kayyali (2013); Griffiths (2008); Kohli and Buller (2013); Praestegaard (2010),
Affordability to the Patient	El-Dahiyat and Kayyali (2013); Kumar et al. (2015); Martín (2009); Nayak (2013); Suplet, Suárez and Lewek, Smigielski, and Kardas (2015); Theodorou et al. (2009)

Quality of the Medicine	Dunne et al. (2014); Inamdar and Kolhatkar (2013); Kumar et al. (2015); Lewek, Smigielski, and Kardas (2015); Lira et al.(2014); Narendran & Narendranathan (2013); Shafi (2014); Shrank et al. (2011)
CRM of the Pharmaceutical Company	Ahmed et. al,(2013); Chavan (2012); Khajuria and Khajuria (2013); Masroujeh (2009), Nyagonde (2003)
Type of Practicing Medical Institute of the Doctor	Shrank et al. (2011)

According to Lewek, Smigielski, and Kardas (2015); Nayak (2013); Theodorou et al. (2009) doctors are concerned on the affordability of their patients at the time of prescribing. Doctors tend to prescribe quality medicinal products because of their high efficacy (Inamdar and Kolhatkar, 2013). Shrank et al.,(2011) stated that there is an impact of doctors' practicing medical institute on their prescribing intention. Even though a considerable number of factors have been identified in the literature as determinants towards doctors' prescribing intention of branded medicines, a few factors were chosen as determinants, shown in Table 1, based on empirical evidences, in consideration to Sri Lankan context.

Conceptualization and Hypothesis Development

Conceptual Framework

Based on the literature review, a conceptual model was developed as shown in Figure 1. The conceptual model indicates that there are positive relationships between independent variables and the dependent variable. The conceptual framework is a linear model depicting relationship between the independent and dependent variables. Brand Loyalty, Affordability to the patient, Quality of the medicine (quality includes safety and efficacy) and Customer Relationship Management of the Pharmaceutical Company were considered to be the independent variables, whereas Prescribing Intention of Doctors was considered as the dependent variable. The type of medical institute of the Doctors were taken as the control variable.

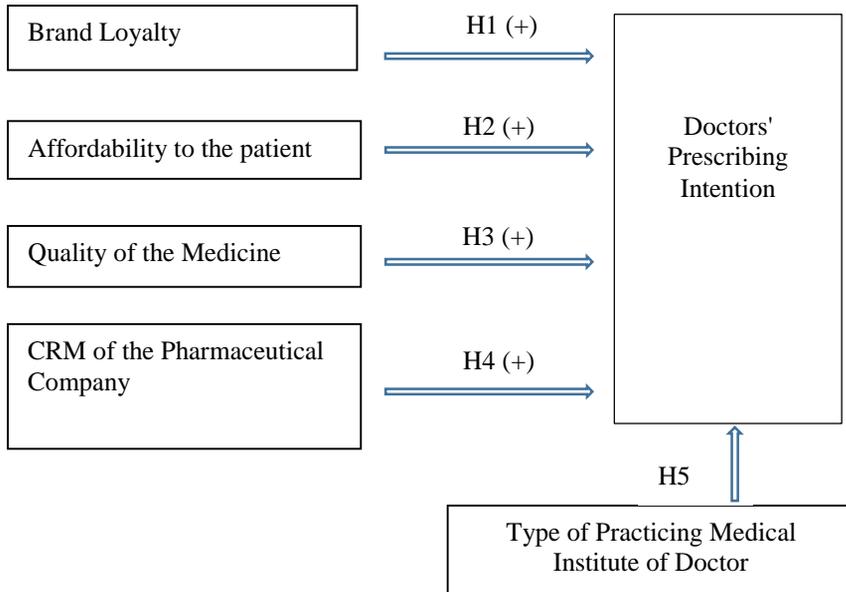


Figure 1. Conceptual framework for the study
 Source: Authors developed through literature review

Based on the above literature that supported these expected relationships between the key constructs, the following research hypotheses were formulated.

Hypotheses of the Study

- H1: Brand loyalty of the doctors positively influences their prescribing intention for branded pharmaceuticals.
- H2: Affordability to the patient positively influences doctors' prescribing intention for branded pharmaceuticals.
- H3: Higher Quality of the drug, positively influences doctors' prescribing intention for branded pharmaceuticals.
- H4: Higher CRM of the Pharmaceutical company positively influences doctors' prescribing intention for branded pharmaceuticals.
- H5: Type of medical institute where doctors practice has an effect on prescribing intention of doctors.

Methods

The study was carried out as a questionnaire survey. The items measuring the key constructs consisting of the four independent variables and the dependent variable of the questionnaire were operationalized by adopting items from the past studies. They were measured on a Seven point Likert scale. The brand loyalty of the doctor was measured

using four items consisting of preference for antibiotics brand over generic, well-known brand, brand trust and ethical reputation of the firm (El-Dahiyat and Kayyali, 2013; Kohli and Buller, 2013; Praestegaard, 2010). Affordability to the patient was measured using five items income level of patient, price of the brand, rapid recovery, preference for cheapest brand and assured benefits for money (El-Dahiyat and Kayyali, 2013; Kumar et al., 2015; Suplet et al., 2009). The quality of medicine scale covered four items including quality perception of brands over generics, brands having less side-effects over generics, brands being safer than generics and brands being more effective than generics (Kumar et al., 2011; Lira et al., 2014). CRM of the firm was measured through five items representing information provided through symposia or scientific meetings, valuable information materials, medical reps with up-to-date pharmaceutical knowledge, medical reps' professionalism with rational approach and medical reps' regular visits to introduce new products (Chavan, 2011; Masroujeh, 2009; Nyagonde, 2003). The doctors' prescribing intention was operationalized using eight items consisting of prescribing well-known brands, considering substitutes for current brands, effectiveness of the generics over brand name, brand advertising of the company, seriousness of the disease, patient's preference, brand efficacy and doctor's past experience. (Chavan, 2011; El-Dahiyat and Kayyali, 2013; Kumar et al., 2015; Lira et al., 2014; Praestegaard, 2010). The control variable as the type of medical institute was measured as a nominal categorical variable. For this the Category of the medical institute/institutes the doctors were working for, recorded as Teaching or General Hospital + Private practice, Base Hospital + Private Practice or Private hospital or Clinic (Shrank et al., 2011).

The elements of the population were comprised of any MBBS qualified doctor who is either a consultant or a general practitioner, of all age categories, both genders, and working for either public sector, but doing private practice or private sector hospitals. Empirical scope of the study has been narrowed down to the District of Colombo, Sri Lanka. Sample size of this study was 120 doctors from the District of Colombo. The sample of 120 doctors consists of 60 doctors who are employed in the Government Sector and at the same time practicing in the Private Sector hospitals, and another 60 doctors purely practicing only in the private hospitals. This is because the majority of the doctors practicing in the Private Sector hospitals are the government employed doctors. Because of unavailability of the suitable sampling frame and other practical difficulties, judgmental sampling method was used for collecting data.

Eighty four (84) questionnaires were collected out of one hundred and twenty (120) questionnaires distributed. Therefore, the response rate is recorded as 70%. The adequacy of the sample size was determined based on the rules of thumb proposed by Roscoe (1975 as cited in Sekaran, 2006). Accordingly, the sample size should preferably be 10 times or more of the number of variables in the study and minimum number should be 60. In this study, there are six (6) sets of variables in the conceptual model to measure the intended relationships, accordingly, 84 questionnaire were adequate for testing the hypotheses using multiple linear regression procedure.

Results and Discussion

Reliability and Validity

According to Sekaran (2006, p.307) the Cronbach's alpha coefficient indicates how items in a data set are positively correlated with each other. Closer the reliability reaches 1.0, better the reliability and validity. Generally, a level below 0.6 is considered to be poor in reliability and those which reach 0.7 and above are acceptable. Table 2 shows the Reliability Statistics for variables after improving Cronbach's Alpha values by deleting a few poor items in some variables. According to Cronbach's alpha values, all variables are reliable. Further, the content validity was assured as the items were adopted from the established literature whilst a factor analysis was undertaken to make convergence validity and unidimensionality of the items measuring each construct.

Table 2: Reliability Statistics after improved Alpha value by deleting effected items

Variable	Cronbach's Alpha	Number of Items
Brand Loyalty (BL)	.787	3
Affordability to the Patient (A-to -P)	.617	4
Quality of the Medicine (QoM)	.920	4
CRM of the Pharmaceutical Company	.775	6
Prescribing Intention (PI)	.781	12

Descriptive Analysis

Each indicator statement in the questionnaire is measured on a 1-7 Likert scale. On the scale, level 7 indicates the highest agreement to the given statement while 1 is for the lowest. Neutral point of the Likert scale is 4. Table 3 shows the Descriptive statistical analysis, performed to describe the present level of intensity of each determinant. This clearly shows that mean values of all independent variables are very closer or a little higher than the neutral point, whereas the value of the dependent variable is a little lower. Affordability to the patient has relatively high mean value than other independent variables. Also, values of the independent variables have not reached "somewhat agree" level (5). This implies that Brand Loyalty, Affordability to the patient, Quality of the medicine and CRM of the Pharmaceutical Company are the factors considered to some extent when prescribing an antibiotic. The mean value which is higher than the neutral point describes positive answers. However, we can conclude that doctors are inclined for brands than generics in Sri Lankan context while affordability is concerned more important than the other variables.

Both brand loyalty and quality of the medicine show the minimum response of 1 and maximum response of 7. Hence, it seems that some respondents are of the opinion that shows "strongly disagree"- level 1 whereas; others are of the opinion that shows "strongly agree"- level 7. But, it seems that the responses for Affordability to the patient, and CRM

of the Pharmaceutical Company, are not much varied from the highest to lowest levels of the Likert scale but, varying around the neutral point. Minimum value for the CRM of the Pharmaceutical Company is 2.17. Therefore, respondents generally do not “strongly disagree” for items in the relevant data set. Responses for prescribing intention are varying between 1.83 and 6.75.

Table 3: Descriptive Statistics new variables

Variable	Mean	Std. Deviation	Minimum	Maximum
Brand Loyalty (BL)	4.34	1.57	1.00	7.00
Affordability to Patient (A-to-P)	4.94	1.09	1.50	6.50
Quality of Medicine (QoM)	4.10	1.49	1.00	7.00
Customer Relationship Management (CRM)	4.64	1.04	2.17	6.67
Prescribing Intention (PI)	3.87	0.88	1.83	6.75

Table 4 depicts the association between the independent variables and the dependent variable. All independent variables are correlated with dependent variables at 0.01 significant levels while CRM of the Pharmaceutical Company is correlated at 0.05, which is a significant level. Association between the dependent and independent variables are statistically significant as all significance values are below 0.05. The highest correlation of 0.477 lies between BL (Brand loyalty) and PI (Prescribing Intention) at 0.01, which is a significant level. On the other hand, BL and the A-to-P (Affordability to the Patient) has a weak positive association. BL and the QoM (Quality of the Medicine) has also a weak positive association

Regression Analysis

R^2 in Table 5 describes the proportion of variance in the dependent variable, explained by the variance in the independent variables in the overall model, which is 0.315. Therefore, the independent variables altogether explain 31.5% of variance of the dependent variable. According to the ANOVA table (Table 6) the overall model is significant. Table 7 shows positive Beta values for all the independent variables that indicates the positive relationship towards with the dependent variable.

Table 4: Correlation Between Independent Variables and the Dependent Variable

		BL	A-to-P	QoM	CRM	PI
BL	Pearson Correlation	1	.324**	.316**	.136	.477**
	Sig. (2-tailed)		.003	.003	.217	.000
A-to-P	Pearson Correlation	.324**	1	.355**	.408**	.313**
	Sig. (2-tailed)	.003		.001	.000	.004
QoM	Pearson Correlation	.316**	.355**	1	.251*	.406**
	Sig. (2-tailed)	.003	.001		.021	.000
CRM	Pearson Correlation	.136	.408**	.251*	1	.225*
	Sig. (2-tailed)	.217	.000	.021		.040
PI	Pearson Correlation	.477**	.313**	.406**	.225*	1
	Sig. (2-tailed)	.000	.004	.000	.040	

**Correlation is significant at the 0.01 level (2-tailed).

Correlation is significant at the 0.05 level (2-tailed)

Table 5: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	Durbin-Watson
1	.561 ^a	.315	.280	.74442	1.725

Table 6: Analysis of Variance (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	20.103	4	5.026	9.069	.000 ^b
Residual	43.779	79	.554		
Total	63.882	83			

The significance value of the relationship between Brand loyalty and Prescribing Intention is 0.001, which is less than 0.05. Therefore, the null hypothesis of H1 is rejected with 95% level of confidence. According to Du Plooy (2012); El-Dahiyat and Kayyali (2013); Griffiths (2008); Kohli and Buller (2013); Praestegaard (2010), the positive relationship between brand loyalty of the doctors and their prescribing intention is consistent in the Sri Lankan context. Significance value of the relationship between Quality of the Medicine and Prescribing Intention is 0.02 which is less than 0.05. Therefore, the null hypothesis of H3 is rejected with 95% level of confidence. According to Dunne et al. (2014); Inamdar and Kolhatkar (2013); Kumar et al. (2015); Lewek, Smigielski, and Kardas (2015); Lira et al. (2014); Narendran and Narendranathan, (2013); Shafi (2014); Shrank et al. (2011), the positive relationship between quality of the medicine and doctors' prescribing intention is acceptable in the Sri Lankan context.

Null hypothesis of H2 and H4 are not rejected as the corresponding significant values were greater than 0.05. Therefore, according to El-Dahiyat and Kayyali (2013); Kumar et al. (2015); Lewek, Smigielski and Kardas (2015); Nayak (2013); Suplet et al. (2009); Theodorou et al. (2009), absence of the positive relationship between the Affordability to the Patient and doctors' prescribing intention is inconsistent with the previous findings. At the same time, absence of the positive relationship between CRM of Pharmaceutical Company and Doctors' prescribing intention according to Ahmed et. al.(2013); Chavan (2011); Khajuria and Khajuria (2013); Masroujeh (2009); Nyagonde (2003), is found to be inconsistent. On the other hand, according to the Beta values, all independent variables show weak positive relationships with the dependent variable.

Table 7: Regression Coefficient Table

	B	Std. Error	Beta	t	Sig.	VIF
1 (Const)	1.786	.460		3.886	.000	
Brand Loyalty	.203	.056	.364	3.601	.001	1.178
Affordability	.059	.088	.074	.678	.500	1.380
Quality	.143	.061	.244	2.366	.020	1.227
CRM	.070	.086	.084	.813	.419	1.219

Effect of Medical Institute of the Doctors

Table 8 shows that there is a significant difference in opinions among some groups of doctors by Medical Institute to which they are attached. Table of Multiple Comparison (Table 9) shows that there is a significant difference in opinions of the doctors working for Government Teaching/General Hospitals with private practice (Category 1) comparably to the doctors practicing in Provincial / Base Hospitals with private practice (Category 2). It is evident that the doctors practicing in Provincial / Base Hospitals with private practice have more intention to prescribe branded medicine than those who work for Government Teaching /General Hospitals with private practice. Therefore it is clear that there is an effect of the type of hospital on Doctors' Prescribing Intention in Sri Lankan context. This finding is consistent with Shrank et al. (2011).

Table 8: ANOVA for Mean Differences by Medical Institute

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.879	2	2.939	4.105	.020
Within Groups	58.003	81	.716		
Total	63.882	83			

Table 9: Multiple Comparisons for Medical Institute attached as Control Variable

(I) MI	(J) MI	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-.61621*	.22071	.018	-1.1432	-.0893
	3	-.34439	.25644	.376	-.9567	.2679
2	1	.61621*	.22071	.018	.0893	1.1432
	3	.27183	.29197	.622	-.4253	.9689

*. The mean difference is significant at the 0.05 level.

Conclusion, Implications and Further Research

In the Sri Lankan context, the doctors are inclined to branded medicines than the generic alternatives. Brand Loyalty is a factor that commonly affect doctors' prescribing intention, out of the four factors that have been selected as the independent variables. The second factor, which has a strong effect, is Quality of the Medicine. Presumably, the doctors' perception is that the branded medicines are of higher quality than the generics. At the same time, mean value for questions on quality of the medicine is a little above the neutral point. It shows that the doctors do not perceive all brands are high in quality, safety and efficacy. This model accounts for only 31.5% of the total variance of the dependent variable. Therefore it can be concluded that the Sri Lankan doctors tend to prescribe branded medicines due to some other determinants which have not been studied in this conceptual model.

The mean values of both sets of questions for Affordability to the Patient and CRM of the company are also a little higher than the neutral point. On the other hand, these factors show the highest mean values among independent variables. Also, it is observed that Brand Loyalty shows a positive association with Patients' Affordability. Accordingly, Patients' Affordability might have direct influence on brand loyalty. As a result of this, it is suspicious whether Affordability to the Patient might have an indirect impact on Doctors' Prescribing Intention. But, Brand Loyalty may be overriding the effect of Patients' Affordability on Prescribing Intention in the selected model. Furthermore, it can be suspected whether doctors are concerned to some extent on their patients' affordability, along with the medicinal product quality. Accordingly, we can assume that, the doctors might not always go for the innovative product and can be satisfied with a branded generic having acceptable quality with a reasonable price. Interestingly, a significant difference on the prescribing intention of branded medicines can be seen between the doctors involved in working at Teaching/General Hospitals with private practice and the doctors involved in working at Provincial Hospitals with private practice. This could be due to the differences of patient profile.

The findings have implications for pharmaceutical marketers in Sri Lanka. With special reference to antibiotic products, developing and marketing a pharmaceutical brand

is still worthier than marketing a generic product in the Sri Lankan context although there are restrictions for marketing and issues related to patent licenses. Recommendations can be brought about for pharmaceutical industry decision makers to enhance the competitiveness of companies based on above findings, which can include developing pharmaceutical brands, improving the quality of the product and highlighting the quality related information in promotional activities. This can also imply the need for local pharmaceutical manufacturers to develop brands together with quality perception targeting doctors. This needs brands to create trust and emotional bonding with doctors and promote brands with help of opinion leaders in the health care sector in Sri Lanka. Besides, if quality can be brought into generic drugs and offered at a reasonable price, doctors may be influenced to prescribe them. Accordingly, health expenditure of the country can be reduced. Therefore, Sri Lankan policy makers can use the findings of this research to develop measures to achieve better clinical effectiveness and economic efficiency in drug prescribing.

Finally, the current study has some limitations in the areas of randomness of the sample and its size in drawing conclusions to the population of the study. It has also selected only five factors that can affect doctors' prescribing intention of antibiotics. Additionally, the study mainly depends on quantitative and survey research method which inhibits generating fresh insights into the sector. Thus, it is possible to undertake further research in the same area. The future studies can use a more representative random sample of doctors. Further, it is possible to identify and incorporate more independent variables in the model which can have a significant effect on prescribing intention of the doctors compared to what is included in the current study. This is initially possible by employing a qualitative in-depth interviews with doctors to identify some other important variables and then incorporate in the conceptual model for later investigating their effect through quantitative surveys. Furthermore, the suggested indirect impact of the Affordability to the patient on Prescribing Intention can be conceptualized and tested by arguing Brand Loyalty as a mediator in Sri Lankan context.

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