

RESEARCH CONFERENCE ON BUSINESS STUDIES – 2018

(RCBS – 2018)

Theme

“SMART Management Towards Business Excellence”

20th September, 2018

BOOK OF EXTENDED ABSTRACTS

Faculty of Business Studies,

Vavuniya Campus of the University of Jaffna

Sri Lanka

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Vice Chancellor's Message

I am happy to give this message to the 2nd Research Conference organized by the Faculty of Business Studies, Vavuniya Campus of the University of Jaffna. This is the second time the Faculty of Business Studies has organized this Research Conference. Vavuniya Campus is organizing a Conference. I am happy to congratulate the Rector and the Dean of Faculty of Business Studies and his team for initiating this Conference.

This Research Conference is useful for the academics to meet and share their knowledge. Vavuniya Campus is now developing its infrastructure and academic activities. Organizing this Research Conference is supporting its development and active developments.

The 2nd Research Conference on Business Studies (RCBS-2018) is focusing on the specific topic 'SMART Management Towards Business Excellence'. The Conference areas are Management, Business, Accounting, Economics, Project Management, English Language Education, and Information Technology. I believe that this Research Conference would bring in new knowledge to the region and to the country as a whole.

Once again, I congratulate the team for organizing this conference and wish them all success to continue with such endeavor in the future too.

Prof. R. Vigneswaran

Vice Chancellor

University of Jaffna

Rector's Message

It is with great pleasure and privilege I am writing this message to the proceeding of the 2nd Research Conference on Business Studies (RCBS-2018) will be held on 20th of September 2018 in Faculty of Business Studies, Vavuniya Campus of the University of Jaffna, Vavuniya, Sri Lanka. The main theme of this conference is 'SMART Management Towards Business Excellence'. The conference aims to address the current issues that include various areas such as Management, Business, Accounting, Economics, Project Management, English Language Education, and Information Technology.

Research is inevitable for creation and dissemination of knowledge. One of the major tasks of higher educational institutions is to undertake research and encourage research culture in those institutions.

I am very much pleased with the research activities of the Faculty of Business Studies. University Grants Commission (UGC) allocate considerable amount of fund as block grant and research allowances for academic which motivate the academics involvement in research and our staff efficiently utilize the allocation. The Research Conference on Business Studies is a part of the research activities of the Faculty of Business Studies.

The theme of this conference is "SMART Management Towards Business Excellence". will provide a forum for the researchers to present and discuss their research findings; exchange their views and ideas with their counterparts and also to develop research culture.

I take this opportunity to thank and congratulate the organization committee, Dean of the faculty and faculty staff for their untiring effort in making this research session a successful event. My thanks are also due to keynote speakers, all the delegates who are participating for this conference.

I wish the Research Conference on Business Studies all success

Dr.T. Mangaleswaran
Rector
Vavuniya Campus

Dean's Message

I am happy to send the message to the Second Research Conference of Business Studies (RCBS 2018). The second conference organized by the Faculty of Business Studies on the theme of “SMART Management Towards Business Excellence.”

The meaning of SMART is all organization have access to the same data. The difference is in insight deeper and faster than the competition. SMART is the one of the pillar of business excellence. The SMART consists of five phases – Aim, Assess, Architect, Act and Advance – to help the organizations to quickly improve its business excellence.

The business excellence initiative provides organizations with roadmap for excellence, giving organization better insights on how organization can improve its business performance. An organization follows the SMART management it can be achieved business excellence.

The conference is for the academicians, researchers, students, and for corporate having special interest in their research and practice to share experience and knowledge. The conference will bring their creative ideas of a common platform.

I wish and congratulate convener and his team for organizing this research conference and publishing the conference proceeding successfully.

Dr. A. Pushpanathan
Dean
Faculty of Business Studies

Convener's Message

I am glad to send a message to the Proceedings of the Research Conference on Business Studies for the 2nd Research Conference on Business Studies (RCBS-2018) as the convener of the conference.

The conference focuses on the theme: 'SMART Management towards Business Excellence' to address the current issues in the areas of Management, Business, Accounting, Economics, Project Management, English Language Education, and Information Technology. Researchers working in academia and other professionals through research contributed to widening their knowledge and network. We received forty-seven extended abstracts. These abstracts were blind-reviewed by subject specialists. Forty-one papers found their place in these proceedings of the RCBS-2018. We grouped the Papers for six tracks: Accounting and Finance, E-Business and Marketing, Economics and Entrepreneurship, Information Systems and Technology, Knowledge and Human Resource Management, and Organizational Behaviour and Project Management.

The conference organizing committee is indebted to Prof. K.H.R. Wijewardana, Vice Chancellor of the Rajarata University of Sri Lanka, the Chief Guest, Prof. R. Vigneswaran, Vice Chancellor of the University of Jaffna, the Special Guest, and Dr. T. Mangaleswaran, Rector of Vavuniya Campus. We pay our special gratitude to the Guests of Honor, both Dr. Nik Thompson, Senior Lecturer, School of Information Systems, Curtin University, Australia and Mr. Samantha Rathnayake, Management Consultant, Postgraduate Institute of Management, University of Sri Jayewardenepura, Sri Lanka for delivering the key note addresses. We thank Dr. A Andrew, Director, University Business Link Cell, the Eastern University of Sri Lanka for the valedictory address. Finally, I always remember Dr. A. Pushpanathan, Dean of the Faculty of Business Studies, the Pillar of the faculty, for his unwavering guidance and support in making this event a successful one.

Mr. A. Rukshan
Convener, RCBS-2018

Chief Editor 's Message

On behalf of the Editorial Committee of the Research Conference on Business Studies 2018 (RCBS – 2018), it is a great pleasure and privilege in presenting the proceedings of the Extended Abstracts of RCBS – 2018 at this occasion. The aim of RCBS – 2018 is straightforward; to bring together leading researchers of the local and international community and to attract original high quality research papers focusing on “SMART Management towards Business Excellence”. In this regard, the extended abstracts were accepted for presentation and publication in this proceedings. This edition of proceedings was designed to group the papers in the following tracks Accounting & Finance, E-Business & Marketing, Economics & Entrepreneurship, Information Systems & Technology, Knowledge and Human Resource Management and Organizational Behavior & Project Management. Papers included in this proceedings had covered wide range of topics addressing the challenges faced by the business world in order to keep track towards business excellence. In addition to this RCBS – 2018 was glorified by the contribution made by two eminent local and international keynote speakers who have proven tracks in focus. It is our genuine hope that RCBS – 2018 will create an opportunity to our society to succeed in the theme of symposium. This is a real effort to provide a platform to the researchers as well as end users of research spirits so that it would be a greatest contribution as academic human beings to the country's development. I congratulate the authors on their immense contribution towards the success of RCBS – 2018.

I would like to extend my gratitude to Prof. R Vigneswaran, Vice-Chancellor, University of Jaffna for the authorization, guidance and fullest corporation in making this event success and to Dr. T Mangaleswaran, Rector, Vavuniya Campus for initiating and extending his fullest guidance and corporation in organizing RCBS – 2018. Also, I would like to extend my sincere thanks to Dr. A Puspanathan, Dean, Faculty of Business Studies and Mrs. J S Thevaruban, Head, Department of Finance and Accountancy, Mr. A Rukshan, Convener of RCBS - 2018 for encouraging me to do this duty successfully. Also, I must thanks to give my heartiest appreciation for all co-editors, members of the Editorial committee, reviewers and other staff members who contributed their professional commitment promptly in handling the activities on the preparation of proceedings. Thereafter, I would like to extend my gratitude to Dr. G.Jeyaseelan on his remarkable language editing in order to release a quality proceedings. Also, I would like to give my heartiest appreciation Mr. Suthesan Kulasingham too for his hard working on formatting compiling the proceedings as track wise.

Finally, I sincerely hope that you will find the symposium both enjoyable and valuable. Enjoy the historic, cultural and developing venue of Vavuniya in Sri Lanka while you are here. I wish you all a highly fruitful academic experience at RCBS -2018.

Mr. G R M Gamlath
Chief Editor – RCBS 2018
Senior Lecturer – Department of Finance & Accountancy
Vavuniya Campus of the University of Jaffna

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Accounting & Finance

Ethical Accounting Practices on Financial Performance: Special reference to SMEs in Galle District, Sri Lanka

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Introduction

Over the years, a great deal of research has focused on business ethics. It has been conceptualized and measured in several ways. Small and Medium Enterprises (SMEs) in Sri Lanka are described as one of the most dynamic and vibrant sectors of the economy at present and accounting for 80 per cent of all businesses. During the last 10 years, there has been noticeable growth in the number of organizations, the amount of investment and the range of services provided. SMEs are very diverse and contributing greatly to the economic development. Many businesses operate their accounting activities today, without a keen interest in bothering whether their actions are right or wrong and extent of employees understanding of the term accounting ethics while the level of compliance is highly infinitesimal. The way SMEs cares little about the source of wealth tends to make some of these business operators to begin to wonder about the necessity of accounting ethics for the performance of the organization. This study is intended to examine the impact of ethical accounting practices on the financial performance of SMEs in the Galle district.

Research questions

1. What is the relationship between ethical accounting practices and financial performance of SMEs?
2. What is the impact of ethical accounting practices on the financial performance of SMEs?

Objectives of the study

1. To establish whether ethical accounting practices have any relationship with the performance of SMEs.

2. To identify the impact of ethical accounting practices on the performance of SMEs

Literature review

According to the First code of Professional Conduct and Ethics of the Chartered Accountants of Sri Lanka, it clearly depicts the value of ethical conduct as "ethical conduct in the true sense is more than merely abiding by the letter of explicit prohibitions. Rather, it requires an unswerving commitment to honourable behaviour, even at the sacrifice of personal advantage" and this code is mandatory for all the members of the Chartered Accountants of Sri Lanka to observe in respect of the performance of professional service (Chartered Accountants of Sri Lanka, 2016).

Agboola, et al (2015) investigated a study on Organizational Ethics and Employee Level of Productivity in Nigerian Private Universities. They found that employee level of productivity is one of the many possible outcomes of ethical issues in an organization. An organization with strong ethical beliefs leads to a greater sense of commitment among its employees. Eginwin and Dike (2014) examined a study with reference to some selected Oil Exploration and Producing Companies in Nigeria. Return on Investment (ROI), Earning per Share (EPS), and Dividend per Share (DPS) were used to proxy for firm financial reporting variables. The researcher identified some key accounting ethics variables which help in carrying out the research and these are; integrity, independence, objectivity, competence and accountability. Based on the findings, the results revealed that there is a positive relationship between the accounting ethics and the quality of financial reporting with respect to return on investment (ROI), earning per share (EPS), and dividend per share (DPS).

Methodology

This study is a quantitative study where the researcher used a self-developed questionnaire to collect data from the sample selected. There are 637 SMEs registered with the Chamber of Commerce, Galle district which are doing their operations in the area. Out of the population of 637, the researcher selected 50 SMEs. Objectivity (OBJ), integrity (INT), confidentiality (CON), professional competence and due care (PCD) and professional behaviour (PB) were used to measure the independent variables. Overall profits and losses were used to measure the dependent variable (i.e financial performance (FP)).

Hypotheses of the study

H₁₀: There is no significant relationship between objectivity and financial performance.

H₁₁: There is a significant relationship between objectivity and financial performance.

H₂₀: There is no significant relationship between integrity and financial performance.

H₂₁: There is a significant relationship between integrity and financial performance.

H₃₀: There is no significant relationship between confidentiality and financial performance.

H₃₁: There is a significant relationship between confidentiality and financial performance.

H₄₀: There is no significant relationship between professional competence and due care and financial performance.

H₄₁: There is a significant relationship between professional competence and due care and financial performance.

H₅₀: There is no significant relationship between professional behaviour and financial performance.

H₅₁: There is a significant relationship between professional behaviour and financial performance.

Results and Discussions

Correlation Analysis

According to the Table 1, it can be observed that there is a significant positive relationship between dependent and independent variables of the study. The correlation value between objectivity and financial performance is 0.502** which is significant at the level of 1%. Further the significant value between objectivity and financial performance of SMEs 0.000 which is less than 0.01. Pearson correlation between integrity and financial performance is 0.548**. The significant value is 0.000 and it is less than 0.01 and it presents a positive significant relationship between integrity and financial performance of SMEs. The correlation value between confidentiality and financial performance of SMEs is 0.736** which is significant at the level of 1%. Further the significant value between objectivity and financial performance of SMEs 0.000 which is less than 0.01. The correlation value between professional competence and due care and financial performance of SMEs is 0.791**. The significant value is 0.000 and it is less than 0.01 so its significant at level 1%. It can be observed that the correlation value between confidentiality and financial performance of SMEs is 0.472** which is significant at the level of 1%. Further the significant value between Professional behaviour and financial performance of SMEs 0.001 which is less than 0.01.

Table 1: Correlation Analysis

		OBJ	INT	CON	PCD	PB	FP
OBJ	r	1	.494**	.391**	.432**	.163	.502**
	Sig.		.000	.005	.002	.258	.000
INT	r	.494**	1	.319*	.323*	.079	.548**
	Sig.	.000		.024	.022	.587	.000
CON	r	.391**	.319*	1	.784**	.539**	.736**
	Sig.	.005	.024		.000	.000	.000
PCD	r	.432**	.323*	.784**	1	.559**	.791**
	Sig.	.002	.022	.000		.000	.000
PB	r	.163	.079	.539**	.559**	1	.472**
	Sig.	.258	.587	.000	.000		.001
FP	r	.502**	.548**	.736**	.791**	.472**	1
	Sig.	.000	.000	.000	.000	.001	

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

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

Source: Researcher constructed.

Regression Analysis

Table 2: Regression analysis for objectivity and financial performance

Model	Unstandardized Coefficients		Standardized Beta	t	Sig.
	B	Std. Error			
(Constant)	2.074	.553		3.753	.000
Objectivity	.537	.133	.502	4.026	.000

Source: Researcher constructed.

According to the Table 2, there is a statistical significance (p-value = 0.000) of objectivity on financial performance.

According to the Table 3, there is a statistical significance (p-value = 0.000) of Integrity on financial performance.

Table 3: Regression analysis for integrity and financial performance

Model	Unstandardized Coefficients		Standardized Beta	t	Sig.
	B	Std. Error			
(Constant)	1.775	.556		3.192	.002
Integrity	.638	.141	.548	4.542	.000

Source: Researcher constructed.

Table 4: Regression analysis for confidentiality and financial performance

Model	Unstandardized Coefficients		Standardized Beta	t	Sig.
	B	Std. Error			
(Constant)	2.005	.307		6.523	.000
Confidentiality	.549	.073	.736	7.527	.000

Source: Researcher constructed.

According to the Table 4, there is a statistical significance (p-value = 0.000) of Confidentiality on financial performance.

Table 5: Regression analysis for professional competence and due care and financial performance

Model	Unstandardized Coefficients		Standardized Beta	t	Sig.
	B	Std. Error			
(Constant)	.937	.376		2.491	.016
Professional competence and Due care	.788	.088	.791	8.971	.000

Source: Researcher constructed.

According to the Table 5, there is a statistical significance (p value = 0.000) of Professional Competence and due care on financial performance.

According to the Table 6, there is a statistical significance (p-value = 0.000) of Professional behaviour and due care on financial performance.

Table 6: Regression analysis for professional behavior and financial performance

Model	Unstandardized Coefficients		Standardized Beta	t	Sig.
	B	Std. Error			
(Constant)	2.115	.588		3.598	.001
Professional Behavior	.590	.159	.472	3.711	.001

Source: Researcher constructed.

Table 7: Testing of Hypotheses

Hypotheses	Sig value	Status
H ₁₀	0.000	Rejected
H ₁₁		Accepted
H ₂₀	0.000	Rejected
H ₂₁		Accepted
H ₃₀	0.000	Rejected
H ₃₁		Accepted
H ₄₀	0.000	Rejected
H ₄₁		Accepted
H ₅₀	0.001	Rejected
H ₅₁		Accepted

Source: Researcher constructed.

Discussion and findings

The significant value between objectivity and financial performance of SMEs is 0.000 and it states that there is a significant relationship between objectivity and financial performance of the SMEs. The main reasons behind this are when all the personnel working in and out of the business are unbiased and having zero conflict of interest it is good for the financial performance of the SME. Further, the significant value between integrity and financial performance of SMEs is 0.000 and it states that there is a significant relationship between integrity and financial performance due to the honest practices and straightforwardness of the employees as well as employers of the SME. A significant value between confidentiality and financial performance also 0.000 and it present that there is a significant relationship between confidentiality and financial performance. To have a

significant relationship between confidentiality and financial performance business unit as well as its stakeholders need to maintain professional confidentiality and business relationship confidentiality. It can state that there is a significant relationship between professional competence and due care and financial performance by observing the significant value 0.000 and when authorized personnel maintain professional knowledge it has a positive impact on the financial performance of the SMEs. It can be proved that there is a significant relationship between professional behaviour and financial performance at the significant value 0.001. When accountants, finance managers and other authorized personnel comply with relevant laws and regulations and avoid actions that discredit the profession it is very good for the organization and then that organization can financially perform really well.

Conclusions and Recommendations

Conclusions

By analyzing the results of the Pearson correlation coefficient it can be stated that there is a significant relationship between independent variables and dependent variable and their numeric values were objectivity against financial performance 0.502, integrity against financial performance 0.548, confidentiality against financial performance was 0.736, professional competence and due care was 0.791 and the correlation between professional behaviour and financial performance is 0.472. Further the regression analysis revealed that there is a positive significant relationship between the ethical accounting practices and financial performances with reference to fifty SMEs in Galle district as well as ethical accounting practices such as objectivity, integrity, confidentiality, professional competence and due care and professional behaviour having a significant impact on the financial performance of the SMEs.

Recommendations

To adopt ethical accounting practices a SME, first needs to give a proper knowledge to the stakeholders about the impact of being ethical and how positively they can perform after adopting these practices because nowadays there is a lack of knowledge among people about this topic and sometimes business units tend to be unethical because of the lack of knowledge. Business entities including SMEs and other large scale companies can have a committee in their organization to maintain the ethical practices of their stakeholders and organization as a whole and rewarding the personnel who follow the ethical practices efficiently. SMEs can arrange a pleasant work environment for employees by using the accounting ethics as a base.

References

Agboola, G M, Epetimehin, O S, Akinyele, S T & Ashipaoloye, F K 2015, 'Organizational ethics and employee level of productivity in Nigerian Private Universities', *European Journal of Business and Management*, vol.7, no.28.

Chartered Accountants of Sri Lanka, 2016, 'Code of Ethics'https://www.casrilanka.com/casl/images/stories/2017/2017_pdfs/code_of_ethics_2016.pdf (Accessed on 24/01/2018).

Eginiwin, J E & Dike, J W 2014, 'Accounting ethics and the quality of financial reporting: a survey of some selected oil exploration and producing companies in Nigeria', *Journal of Business and Management*, vol. 16, no.7, pp. 26-36.

Impact of Quality of Sustainability Reporting on the Financial Performance of Companies

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Introduction

The financial performance and financial information are linked with each other. Financial performance is recorded as financial information in the financial statements. Based on the financial information, the financial performance would be affected in the future. Financial analysts rely on financial information to analyse the financial performance and make predictions about the future direction of a company's share price. Based on the financial information, the stakeholders also make their financial decisions and it would affect the firm's future financial performance.

Over the past decades, reporting has evolved to meet the fluctuating needs of users. Public reporting has developed from disclosing only core financial data to including detailed information encompassing environmental, social and economic impacts of company operations and products, as well as other non-financial data. Firms all over the world are increasingly being challenged to expand and enlarge their financial reportage to include both those targeted at profiteering as well as social efforts being made to improve the environment. Hence, the sustainability reporting has emerged as a business philosophy and fast gaining momentum in this millennium especially in the phase of the adoption of International Financial Reporting Standards (IFRS) which emphasizes a lot on reporting and disclosure.

A sustainability report is an organizational report that gives information about economic, environmental, social and governance performance. Sustainability reporting is an extension of Corporate Social Responsibility (CSR) to include the environmental and economic dimensions instead of only social responsibility disclosures. It provides comprehensive sustainability details of a company and CSR now includes matters such as climate change, global warming, and animal rights, conservation of biodiversity and human rights as well as social equity.

The number of organizations that disclose information on their sustainability performance has increased considerably in recent years. According to the Governance and Accountability Institute Inc. (2012), 53 per cent of the 500 largest companies listed on the US stock exchange follow the S&P 500 (SPX) stock index-published sustainability reports, whereas 63 per cent follow the Global Reporting Initiative (GRI) indicators. A report published by KPMG (2013) indicated that nearly 93 per cent of the 250 largest companies around the world publish this type of report. This data demonstrates that sustainability reporting is now a common practice whose standardization improves with the increasing use of the GRI. Despite the differences in terms of sustainability practices between countries worldwide, the GRI provides a unified standard for sustainability reporting and, in principle, offers the possibility of comparing information, proceeding with benchmarking between various organizations and informing investors about corporate sustainability performance.

The primary objective of financial reporting is to provide high-quality financial reporting information concerning economic entities, primarily financial in nature, useful for economic decision making. Providing high-quality financial reporting information is important because it will positively influence capital providers and other stakeholders in making investment, credit, and similar resource allocation decisions enhancing overall financial performance.

The Global Reporting Initiative guidelines (GRI) identify principles for defining report quality. This group of principles guides choices on ensuring the quality of information in the sustainability report, including its proper presentation. The GRI Sustainability Reports are prepared on the basis of certain principles which define the contents and quality of the report. These include Materiality, Stakeholder Inclusiveness, Sustainability Context, Completeness, Balance, Comparability, Accuracy, Timeliness, Clarity and Reliability.

Today, the finance sector is considered as one of the key contributing sectors behind economic solidity and growth, and it is highly observable to public evaluation. The general public now has high expectations of the government and private sector for responsible behaviour. Today's finance sector's business environment is too competitive and dynamic where challenges are updated day by day. In order to face the new challenges, firms should build good bond economically, environmentally and socially. Therefore, most of the companies engage with the CSR activities and tend to build their corporate image through sustainability reporting.

There are 62 companies listed under the banking, finance and insurance sector in the Colombo stock exchange. But, not all the companies produce sustainability

reports. The low percentage of sustainability reporting is due to many factors such as high reporting cost, difficulty in measuring performance, difficulty in convincing the companies to be proactive in sustainability reporting, lack of awareness and companies' assumptions of additional cost and resources required for reporting, the poor performance of companies and inconsistency in reporting.

Sustainability reports vary considerably in their quality largely due to their voluntary nature and the lack of an accountability framework in sustainability reporting. Thus, companies are free to choose from the guidelines in any way they prefer, and this contributes to the difficulty of assessing the quality. Those shortages of sustainability reporting highlight the importance of developing a quality measure of sustainability reporting. The topic of sustainability reporting in Sri Lanka receives relatively less attention in research compared to other parts of the world since sustainability reporting is not mandatory in Sri Lanka, as with many other countries in the world. Therefore, this study attempts to cover this lacuna in the sustainability reporting research agenda in the region, by filling the knowledge gap by measuring the quality of sustainability reporting and the measurement of the impact of quality variation on the financial performance in a Sri Lankan context.

Problem Statement

From the background described above, the problem of the study was identified as "what is the extent of the impact of quality of sustainability reporting of companies on their financial performance in the Banking, Finance and Insurance sectors in Sri Lanka?"

Research Questions

Based on the research problem identified above, the following research questions were raised for the study.

1. What is the extent of the quality of sustainability reporting of companies in the Banking, Finance and Insurance sectors in Sri Lanka?
2. What is the relationship between the quality of sustainability reporting and the financial performance of the companies in the Banking, Finance and Insurance sectors in Sri Lanka?
3. Is there any significant influence of quality of sustainability reporting on financial performance in the companies in Banking, Finance and Insurance sectors in Sri Lanka?

Objectives of the Study

1. To identify the level of quality of sustainability reporting of companies in the Banking, Finance and Insurance sectors in Sri Lanka.
2. To explore the relationship between the quality of sustainability reporting and the financial performance of the companies in the Banking, Finance and Insurance sectors in Sri Lanka
3. To evaluate any significant influence of quality of sustainability reporting on Financial Performance in the companies in Banking, Finance and Insurance sectors in Sri Lanka.

Literature Review

The company's financial performance can be viewed from the financial statements reported by the company. Consequently, a good performing company will reinforce management for quality disclosure (Herly&Sisnuhadi, 2011). Return on assets is a better metric of financial performance than income statement profitability measures like return on sales (J Hagel et al, 2010). Sustainability report can be defined as "a firm-issued general purpose non-financial report that provides information to investors, stakeholders, and the general public about the firm's practices involving environmental, social, and governance (ESG) issues, either as a stand-alone report or as part of an integrated report" (Ioannou and Serafeimin, 2012). An integrated report is a single document that presents and explains a company's financial and non-financial environmental, social, and governance performance (Eccles and Krzus, 2010). Global Reporting Initiative (GRI 2006) defines sustainability reporting is the practice of measuring, disclosing and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development.

Sustainability reporting is promoted by governments and stock exchanges by adopting laws and regulations that specifically mandate this form of disclosure. Ioannou and Serafeim (2012) found that companies that initiate sustainability disclosures after the adoption of Mandatory Corporate Social Responsibility (MCSR) laws, reduce energy as well as waste and water consumption significantly, while they increase investments in employee training.

Disclosure of sustainability information forces companies to manage these matters more effectively to avoid having to disclose bad sustainability performance to their multiple stakeholders. According to Rob Gray (2006), the performance of companies implementing sustainability principles is superior because sustainability is a catalyst for enlightened and disciplined management and the concept of corporate sustainability has long been very attractive to investors

because of its aim to increase long-term shareholder value. Sustainability reporting quantity and quality have attracted major interest in accounting literature since the publication of a remarkable paper by Hasseldine, Salama and Toms (2005). Using a subjective measure of environmental disclosure quality, Hasseldine et al (2005:231) offer the first empirical evidence that the “quality of environmental disclosure rather than mere quantity has a stronger effect on the creation of environmental reputation amongst executive and investor stakeholder groups.

A study done by Wijesinghe and Senarathne (2011) reveals a positive and significant relationship between Corporate Social Responsibilities and Return on Assets. According to SAM and Robeco (2011), results reveal the positive and significant relationship between sustainability reporting and financial performance. The principles for defining report quality are particularly important for stakeholders, including investors, since they allow the latter to "make sound and reasonable assessments of performance, and take appropriate action" (GRI, 2014, p. 13). These principles cover six main aspects – balance, comparability, accuracy, timeliness, clarity, and reliability – the analysis of which is essential for understanding the objectives of sustainability reporting, as well as of certain impression management practices that tend to question the transparency of information.

Conceptualization of Variables

This study was a cross-sectional explanatory study. The main concepts of the study are the quality of sustainability report and the financial performance. The first concept is indicated with balance, clarity, accuracy, timeliness, comparability, and reliability. The latter is indicated by Return on Asset. The quality indicators were measured by perceived responses of various users of sustainability reports and the Return on Assets was measured by the calculation of ratio using annual reports of companies.

Qualities of sustainability reporting were identified from the literature review on the principles of Global Reporting Initiative as given below: **Balance** means that the report should contain information reflecting positive and negative aspects of the enterprise's activities to enable an assessment of overall performance. The report should avoid selections and omissions, but should possibly provide a well-balanced assessment of the enterprise's effects. **Comparability** is defined as the quality of information that enables users to identify similarities in and differences between two sets of economic phenomena. Information related to economic, social and environmental effects should enable comparing these data against assumed objectives, enterprise's past performance and the performance of the other organizations. **Accuracy** is the condition or quality of being true, correct, or exact;

freedom from error or defect; precision or exactness. Presented information should be sufficiently accurate to reflect the actual state while being understandable for the most numerous group of stakeholders. **Timeliness** means that having information available to decision-makers before it loses its capacity to influence decisions. It refers to the time it takes to reveal the information and is related to decision usefulness in general. **Clarity** as the quality of being clear and easy to understand. The information contained in the report should be comprehensible and have a readable form. **Reliability** relates to the quality of measurement in terms of the consistency or repeatability of the measures. Information should be gathered, analysed and disclosed in a way that enables internal and external auditors to verify their veracity.

Operationalization of variables

The qualities of sustainability reporting were operationalized by identifying indicators which were measured using the five-point rating scaled questionnaire. The indicators for the dimensions of the quality were: **Balance:** positive and negative aspects and materiality; **Comparability:** comparativeness between time period and comparativeness between firms; **Accuracy:** Sufficiency and detailed information; **Timeliness:** periodicity and frequency; **Clarity:** usefulness, understandability, and accessibility; and **Reliability:** assurance and supportive documentation. The financial performance was operationalized with a single indicator, Return on Assets, which was measured by the calculation of ratio, net income being the numerator and total assets being the denominator.

Hypotheses

To answer the research questions of this study, the following hypotheses were formulated based on the literature review:

H1: There is a significant positive relationship between Quality of Sustainability Reporting and Financial Performance of Companies.

H2: Quality of Sustainability Reporting has a significant positive impact on Financial Performance of Companies.

Methodology

The study was carried out using 5-year data obtained from the sample of 20 listed companies operating in the banking, finance, and insurance industries in Sri Lanka. The data on net income and total assets were extracted from the 100 relevant annual reports to use them in calculating Return on Assets in order to measure the financial performance. A self-administrated questionnaire was designed and distributed among 100 users of sustainability reports of sample companies, consisting of

managers, investors, stockbrokers, tax officers and auditors, along with the copies of the reports under review to measure the quality of the reporting.

A sample of the study included twenty out of forty-three companies, which practice sustainability reporting, operating in the banking, finance, and insurance, industries in Sri Lanka listed in Colombo stock exchange for a period of five years from 2012 to 2016. 100 users of the sustainability reports of those 20 companies were identified for involving them in evaluating the degree of quality of reports using the questionnaire given to them.

Method of Data Analysis and Hypothesis Testing

The descriptive, correlation and regression analyses were applied as the techniques to analyze and evaluate the data collected using the software SPSS version 22.0. The descriptive analysis was made to find out the frequency distribution, mean, and standard deviation for every variable. Correlation and regression analyses were done between the average quality level of sustainability reporting in a year and return on assets in the corresponding year. A hypothesis testing was done by forming the Null Hypothesis (H_0) and Alternate Hypothesis (H_A). Hypotheses were tested using the results of correlation (Pearson's Product Movement Correlation) and regression (linear) analyses choosing a probability level of significance (p-value) at 5% for measuring the error judgment.

Results and Discussion

A descriptive analysis was done on the data collected on the quality level of sustainability reporting and return on assets. The results of the analysis as presented in Table 1.1 indicated that the data recorded on all the variables are approximately normally distributed. The mean values of 2.57 and 2.95% were found for the quality level of sustainability reporting and return on assets respectively. The quality of sustainability reporting and its dimensions are found at a moderate level among the companies in the financial industries, and the variations in the quality dimensions and indicators are insignificant as indicated by the standard deviations and other statistics.

Pearson's Correlation analysis as extracted in Table 1.2 indicated that the quality of sustainability reporting is positively and significantly correlated with the returns on assets of the companies with a coefficient of 0.575.

Linear regression analysis as summarized in Table 1.3 revealed that the quality of sustainability reporting has significantly explained the variation in return on assets, the indicator of financial performance, with the R^2 value of 0.33.

Table 1.1: Descriptive Statistics

Variables	N	Mean	Std. Deviation	Range	Minimum	Maximum	Skewness	Kurtosis
Balance	100	2.616	0.918	3.67	1.00	4.67	0.23	-1.09
Comparability	100	2.538	0.784	3.20	1.20	4.40	-0.03	-1.12
Accuracy	100	2.568	0.867	3.25	1.00	4.25	-0.13	-1.17
Timeliness	100	2.585	0.805	3.50	1.00	4.50	0.17	-0.85
Clarity	100	2.530	0.815	3.50	1.00	4.50	0.27	-0.71
Reliability	100	2.563	0.821	3.50	1.00	4.50	0.24	-1.03
Overall Quality of Sustainability Reporting	100	2.567	0.776	3.08	1.20	4.28	0.08	-1.17
Financial Performance (ROA)	100	2.948	0.779	3.78	1.11	4.89	-0.07	-0.46

Source: Output of SPSS Analysis

Table 1.2: Correlation between the Quality of Sustainability Reporting (IV) and Financial Performance (DV)

Variables		Quality of Sustainability Reporting	Financial Performance
Quality of Sustainability Reporting	Pearson Correlation	1	0.575**
	Sig. (2-tailed)		0.000
	N	100	100
Financial Performance	Pearson Correlation	0.575**	1
	Sig. (2-tailed)	0.000	
	N	100	100

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

Source: Output of SPSS Analysis

Table 1.3: Regression between the quality of sustainability reporting (IV) and Financial Performance (DV)

Method	R	R ²	Adjusted R ²	F	Sig. F	b - Constant	B - QSR	Beta	t	Sig.t
Linear	0.575	0.330	0.324	48.375	0.000	1.465	0.577	0.575	6.955	0.000

Source: Output of SPSS Analysis

According to results the Regression Equation for the financial performance is: $FP = 1.465 + 0.577(QSR)$. The b value of the equation, the gradient of the regression, is 0.577, which is significant at 95% (Sig.t = 0.000). As indicated by R², 33% of the variance of financial performance is explained by the quality of sustainability reporting with the standardized beta of 0.575. The F value is 48.375, that is significant at 95% (Sig.F= 0.000), which suggests that quality of sustainability reporting has significantly explained 33% of the variance of financial performance of the companies in the sample.

Hypothesis Testing

The hypothesis H_1 was: There is a significant positive relationship between the quality of sustainability reporting and the financial performance ($r < 0$). The Null hypothesis was formulated as H_0 : There is no significant positive relationship between quality of sustainability reporting and the financial performance ($r > 0$). According to the results of the Pearson correlation analysis, the coefficient of correlation is 0.575, which was significant at 95% confidence level ($P > 0.05$). Therefore, according to the correlation coefficient the Null hypothesis is rejected and the alternative hypothesis is accepted since the positive correlation coefficient is significant. Hence, the data supported the hypothesis that the quality of sustainability reporting is positively and significantly correlated with the financial performance of the companies under the study.

The hypothesis H_2 was: The quality of sustainability reporting has a significant positive impact on the financial performance ($b > 0$). The Null hypothesis was formulated as H_0 : The quality of sustainability reporting has no significant positive impact on the financial performance ($b = 0$). According to the results of linear regression analysis, the coefficient of regression (b) is found at 0.577 which was significant at 95% confidence level ($P > 0.05$). Therefore, according to the regression coefficient the Null hypothesis is rejected and the alternative hypothesis is accepted since the b value is found significant. Hence, the data supported the hypothesis that the quality of sustainability reporting has a significant positive impact on the financial performance of the companies under the study.

It is concluded that the quality of sustainability reporting has been moderately and positively, significantly, correlated with the financial performance of the companies operating in the banking, financing, and insurance industries in Sri Lanka. Further, the quality of sustainability reporting has a significant impact on the financial performance of the companies in the industries. Hence, the quality of sustainability reporting has a significant influence on determining the financial performance of companies in the banking, financing, and insurance industries in Sri Lanka. It is therefore recommended that companies can improve their financial performance if they enhance the quality of sustainability reporting.

References

Al-Matari, E. M., Al-Swidi, A. K., & Fadzil, F. H. B. (2014). The measurements of firm performance's dimensions. *Asian Journal of Finance & Accounting*, 6(1), 24-49.

Alotaibi, K. O., & Hussainey, K. (2016). Quantity versus quality: the value relevance of CSR disclosure of Saudi companies.

Baviera-Puig, A., Gómez-Navarro, T., García-Melón, M., & García-Martínez, G. (2015). Assessing the communication quality of CSR reports. A case study on four Spanish food companies. *Sustainability*, 7(8), 11010-11031.

Diouf, D., Diouf, D., Boiral, O., & Boiral, O. (2017). The quality of sustainability reports and impression management: A stakeholder perspective. *Accounting, Auditing & Accountability Journal*, 30(3), 643-667.

Dissanayake, D., Tilt, C., & Xydias-Lobo, M. (2016). Sustainability reporting by publicly listed companies in Sri Lanka. *Journal of Cleaner Production*, 129, 169-182.

Eccles, R. G., Krzus, M. P., Rogers, J., & Serafeim, G. (2012). The need for sector-specific materiality and sustainability reporting standards. *Journal of Applied Corporate Finance*, 24(2), 65-71.

Global Reporting Initiative, & Global Reporting Initiative. (2014). About GRI. Retrieved April, 11, 2014.

Grigoras-Ichim, C. E., & Morosan-Danila, L. (2016). Hierarchy of Accounting Information Qualitative Characteristics in Financial Reporting. *The USV Annals of Economics and Public Administration*, 16(1 (23)), 183-191.

Hagel, J., Brown, J. S., & Davison, L. (2010). The best way to measure company performance. *Harvard Business Review*, 89, 1-4.

Hasseldine, J., Salama, A. I., & Toms, J. S. (2005). Quantity versus quality: the impact of environmental disclosures on the reputations of UK PLCs. *The British accounting review*, 37(2), 231-248.

Herly, M., & Sisnuhadi. (2011). Corporate governance and firm performance in Indonesia. *International Journal of Governance*, 1(1), 1-20.

Ioannou, I., & Serafeim, G. (2012). What drives corporate social performance? The role of nation-level institutions. *Journal of International Business Studies*, 43(9), 834-864.

Plumlee, M., Brown, D., Hayes, R. M., & Marshall, R. S. (2015). Voluntary environmental disclosure quality and firm value: Further evidence. *Journal of Accounting and Public Policy*, 34(4), 336-361.

Reddy, K., & Gordon, L. (2010). The effect of sustainability reporting on financial performance: An empirical study using listed companies Retrieved from https://en.wikipedia.org/wiki/Integrated_reporting

Rob Gray, (2006) "Social, environmental and sustainability reporting and organisational value creation?: Whose value? Whose creation?", *Accounting, Auditing & Accountability Journal*, Vol. 19 Issue: 6, pp.793-819, <https://doi.org/10.1108/09513570610709872>

SAM Research, &Robeco Quantitative Strategies. (2011).

Wijesinghe, K. N., & Senaratne, S. (2011). Impact of disclosure of corporate social responsibility on corporate financial performance in bank, finance and insurance sector in Sri Lanka.

Impact of Financial Literacy on Firm Performance of Sri Lankan SMEs: Special Reference to Ratnapura District

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Introduction

Financial literacy is a vital factor to understand finance functions in organizations and to run an organization. Financial literacy is a combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing (Atkinson & Messy 2012). Substantially, in a well-established corporation, preparation of a financial statement is a mandatory legal requirement by legal bodies. In the case of Micro, Small and Medium size enterprises (SMEs), still do not have compulsory legislation for preparing the financial statements. SMEs are small in financial nature therefore, they face problems and issues regarding their sustainability, such as lack of a source of funds, unskilled labour and high competition (Chepngetich 2016). With lack of a source of fund and low level of financial literacy, SMEs face difficulties to prepare their financial statements (Mabhanda 2015). In addition, illiteracy may cause financial crisis (Atkinson & Messy 2012). Therefore, this study focuses on the impact of financial literacy on firm performance of Sri Lankan SMEs.

Research Problem and research question

Financial literacy is very important to both organizations and the general public. Several studies (Kimundun, Erick & Shisia 2016; Lusimbo & Muturi 2016; Fatoki 2014) indicate the relationship between financial literacy and SMEs performance in various countries and this level of financial literacy highly determine the firm performance. These findings prove that the organizations cannot achieve the highest growth without improving their financial knowledge. Generally, this problem significantly dominates to the SME businesses and its performance also. It is necessary to correctly identify the factors influencing financial literacy and the impact of financial literacy factors on the financial performance of SMEs. Therefore, the research question is:

What is the impact of financial literacy factors on the financial performance of SMEs in Sri Lanka?

The objective of the study

To investigate the impact of financial literacy on the financial performance of SMEs in Rathnapura District, Sri Lanka

Literature Review

Several definitions have been provided by different agencies to define the SMEs. But, there is no generally accepted definition in Sri Lanka. Therefore, according to the Ministry of Industries and Commerce, SMEs are identified as follows:

Table 1. Criteria of SMEs

	Criteria	Medium	Small	Micro
Manufacturing Sector	Annual Turnover (Rs' Million)	251-750	16-250	Less than 15
	No. of employees	51-300	11-50	Less than 10
Service Sector	Annual Turnover (Rs' Million)	250-750	16-250	Less than 15
	No. of employees	51-200	11-50	Less than 10

Source: Ministry of Industries and Commerce

Financial literacy refers the knowledge of money and financial products that people can apply to financial choices in order to make informed decisions about how to handle their finances (Basu 2005) and performance refers to the total economic results of activities undertaken by an organization, whether directly or indirectly (Lusch&Laczniak 1989).

Several researchers proved that there is a relationship between financial literacy and firm performance. Kimundun, Erick & Shisia (2016) proved that there was a positive relationship between financial literacy and performance. Chepngetic (2016) argued that the borrowing financial literacy negatively influences on financial performance and budgeting related financial literacy positively influence financial performance. Further, management with low financial literacy shows a minimal growth rate or no growth (Lusimbo& Muturi 2016).

Methodology

Dependent variable

Firm performance of the SMEs is considered as the dependent variable and they measured as Growth in sales in relation to owner expectations (GSO), Growth in

sales in relation to competitors (GSC), Growth in profits in relation to owner expectations (GPO), Growth in profit level in relation to Competitors (GSC), Increase in number of employees (NOE), Increase Fixed assets of the organization in relation to owner expectation (IFAO), and Increase Fixed assets of the organization in relation to competitors (IFAC).

Independent variables

Bookkeeping: Small businesses depend largely on their quality of accounting information. Therefore, bookkeeping as an indicator of financial literacy. This is measured by the preparation of financial statements (FS).

Financial planning budgeting and control: To use scarce resources, financial planning, budgeting and controlling have become important for the success of businesses. This is measured by financial objectives (FO).

Finance and information related skills and use of technology: Use of finance and information related skills support for the preparation of financial reports. It is measured by computer literacy (CL).

Risk management: To avoid risk insurance is important. Therefore, the risk is measured by business insurance (BI).

Understanding business terminology: Understand business terms such as interest rate, tax rate, inflation rate, investment will support the sustainability of the business. Understanding business terminologies (BT) are used as measures.

Understanding of Funding sources: SMEs should need well financial knowledge to choose the best funding sources for their success. This is measured by having a business bank account (BBA).

Hypotheses of the study

H₁: Bookkeeping has a significant impact on firm performance.

H₂: Financial Planning, budgeting and control has a significant impact on firm performance

H₃: Finance and Information Related Skills and Use of Technology have a significant impact on firm performance

H₄: Risk management has a significant impact on firm performance

H₅: Understanding of business terminologies has a significant impact on firm performance

H₆: Understanding of funding sources has a significant impact on firm performance

Population and Sample

SMEs were identified according to the definition of the Ministry of Industries and Commerce. Population includes 315 SMEs registered under chamber of commerce in Rathnapura and the researcher selected 100 SMEs by using convenience

sampling method. Selected SMEs are functioning in Ratnapura, Pelmadulla, and Balangoda Divisional secretariat located in Ratnapura district.

Questionnaires were distributed among SMEs and able to collect 100 questionnaires by discussing their financial literacy and firm performance from the selected sample during October 2017.

Method of Data Analysis

The rank order probit model was used to measure the impact of financial literacy on firm performance. Since the dependent variable has 5 point Likert scale with ordinal data. Therefore, the rank order probit model was used. The following model was created:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

ε

Y = Financial Performance, β_0 = constant, β_1 to β_6 are the coefficients of each independent variable and X_1 to X_6 are each independent variable.

Results and Discussion

There is a 58% owner or key person have accounting or financial related knowledge of the business. When referring the age of the SMEs most of them are newly started their business. This is 44% of the sample and which are running 1- 5 years. Among sample SMES, 30% of SMEs have been running their business, more than 20 years. According to the education level of the SMEs, most of them are studied up to Ordinary Level (O/L) and Advanced Level (A/L). Finally, all independent variable except funding sources has a significant impact on the financial performance of SMEs. Following Table 2 shows the results of the rank order probit model.

Table 2. Rank order probit model results

Dependent Variable	H ₁	H ₂	H ₃	H ₄	H ₅	H ₆
GSO	0.795***	0.536*	0.586**	0.746**	0.301	-0.375
GSC	1.122***	0.296	0.673**	0.481*	0.564**	-0.188
GPO	1.026***	1.030***	0.716**	1.043***	0.510*	-0.093
GSC	1.135***	0.479	0.548**	0.584**	0.888***	-0.577
NOE	1.259***	0.853***	0.45	-0.22	0.456*	0.439**
IFAO	0.863***	0.31	0.427	0.845***	0.570**	-0.005
IFAC	1.201***	0.797**	0.075	0.476*	0.913***	0.145

*, ** and*** represent the significant level at 10%, 5%, and 1% respectively

According to the above Table 2, the coefficients of each hypothesis are presented based on the rank order probit model. Bookkeeping significantly impacts on the financial performance of SMEs which were measured by GSO, GSC, GPO, GSC,

NOE, IFAO, and IFAC. Financial planning, budgeting and control impact on GSO, GPO, NOE, and IFAC, Finance and Information related skills and use of technology significantly impact on GSO, GSC, GPO and GSC, Risk management impact on GSO, GSC, GPO, GSC, IFAO, and IFAC, understanding business terminologies has impact on GSC, GPO, GSC, NOE, IFAO, and IFAC and understanding of funding sources significantly impact NOE. Based on these coefficient values, the hypotheses testing results are presented in the Table 3. \

Table 3. Hypotheses testing results

Dependent Variable	H ₁	H ₂	H ₃	H ₄	H ₅	H ₆
GSO	Accepted	Accepted	Accepted	Accepted	Rejected	Rejected
GSC	Accepted	Rejected	Accepted	Accepted	Accepted	Rejected
GPO	Accepted	Accepted	Accepted	Accepted	Accepted	Rejected
GSC	Accepted	Rejected	Accepted	Accepted	Accepted	Rejected
NOE	Accepted	Accepted	Rejected	Rejected	Accepted	Accepted
IFAO	Accepted	Rejected	Rejected	Accepted	Accepted	Rejected
IFAC	Accepted	Accepted	Rejected	Accepted	Accepted	Rejected

Conclusion

This study focused on identifying the impact of financial literacy on firm performance of SMEs. By using the rank order probit model it is identified that the financial literacy highly impacts on SMEs performance. Furthermore, the researcher selected financial literacy factors of bookkeeping, risk management, understanding business terminologies, finance related skills and use of technology, financial planning budgeting and controlling significantly impact on financial performance of SMEs respectively. Therefore, the study concludes that the financial literacy is an important factor to determine the firm performance.

Reference

Atkinson, A & Messy, A 2011 ‘Assessing Financial Literacy in 12 Countries an OECD Pilot Exercise’ *netspar discussion paper*

Atkinson, A & Messy, A 2012 ‘Measuring Financial Literacy’ *OECD Working Papers on Finance, Insurance and Private Pensions*

Basu, S 2005 ‘Financial literacy and the life cycle’ *White Paper: White House Conference on Aging*. [Online] Available from: http://216.87.66.5/member/govt_relation.

Chepngetic, P 2016 ‘Effect of Financial Literacy and Performance SMEs. Evidence from Kenya’, *American Based Research Journal*, Vol 5, Issue 11, 26-35

Fatoki, O 2014 'The Financial Literacy of Micro-Entrepreneurs in South Africa', *Journal of Social Science*, Vol 40, Issue 2, 151-158

Kimundun, G, Erick, O & Shisia, A 2016 'A Study on the Influence of Financial Literacy on Financial Performance of Small and Medium Enterprises in Ruiru Town, Kiambu Country, Kenya', *International Journal of Economics, Commerce and Management*, Vol IV, Issue 11, 416-433

Lusch, RF & Laczniak, GR 1989 'Macroenvironmental forces, marketing strategy and business performance: A futures research approach', *Journal of the Academy of Marketing Science*, Vol 17, no 4, 283-295. DOI: 10.1007/BF02726639

Lusimbo, EN & Muturi, W 2016 'Financial Literacy and the growth of Small Enterprises in Kenya', *International Journal of Economics, Commerce and Management*, Vol IV, Issue 6, 828-845

Mabhanda, W 2015 'Lack of financial literacy exacerbates SMEs' appalling state in Gweru city' *International journal of research and development organization*, Vol 1, no 12

Integrated Reporting - Is it value relevant

A quantitative study on Colombo Stock Exchange

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Introduction

Business world has been rapidly advanced and almost all people are willing to concentrate towards its future betterment. Hence the necessity of proper communication between entity and its stakeholders has been arisen and this emphasizes the reporting requirement in business organizations. When considering the Accounting arena, the reporting dimensions have been gradually evolved and it is still transforming for new aspects which gives superior disclosures. At the beginning there was financial reporting, and then sustainability reporting come in to practice and now the business paradigm is moving towards Integrated Reporting (IR). The movements towards IR led to a criticism that the sustainability reporting is unable to demonstrate the holistic view of an entity. Stakeholders are not willing refer number of reports so as to take the view of the entity (Hoque, 2017). At the present time IR is being explored by companies throughout the world. Local regulatory bodies in some countries impose laws and regulations for business organizations to comply with IR. Since this concept has no long history, it is still developing and new aspects are blooming as a result of investigations done by various scholars. Many researches in international context have proved that IR adds value to the business entity. Sometimes these findings may not suitable to generalize in Sri Lankan context since those studies have been conducted by using data relating to their own countries and economies. Thus the purpose of this study is to examine whether IR adds value to the companies listed in Sri Lanka.

The research question of this study is “Is there any relationship between IR and market return in listed companies in Sri Lanka?”. The objective of this study is to examine whether there is a relationship between IR and market return in listed companies in Sri Lanka. Market return is one of most influencing factors towards the determining the investors behavior (Ahmad,2017). Amir and Lev (1996) concluded that non-financial information has a significant relation to stock price and its value-relevance. Since there are few studies on outcomes and benefits of

IR, only few companies have adopted IR (Higgins et al.,2014). Most companies in Sri Lanka also still have not adopted IR. IR adopted firms have highest market valuation (Yeo et al.,2014). So this study helps to identify the relationship between IR and market return in Sri Lankan context. It will be useful for the IR non adopted companies to adopt IR by knowing its value addition to the entity.

Literature Review

Evolution of Financial Reporting Paradigm

At various times scholars and academicians as well as practitioners emphasized various reporting aspects which depicts various dimensions in reporting perspectives. Social reporting mostly highlighted the impact of business operations on society; that means social impact of businesses. The True-blood Committee Report (AICPA, USA, 1973) observes that an objective of financial statements is to report on those activities of the enterprise affecting society which can be determined and described or measured and which are important to the role of the enterprise in its social environment. Environmental reporting focused towards the contribution of business entities to sustainable and eco-friendly industry. Cormier and Gordon (2001) found that environmental disclosures seem to be related to information costs and benefits. Triple Bottom Line reporting demonstrates that only earning profit is not enough by the business entity and it should necessarily be concerned about the betterment of the people and ultimately the prosperity of the planet. Sustainability reporting depicts economic, environmental, social and governance performance of an entity by producing many reports. Users were able to refer the particular report and get the idea about pertaining matters. With the time, users disinclined to refer many reports in order to grab the holistic view of the entity. Stakeholders are not willing to refer number of reports so as to take the view of the entity (Hoque, 2017).

Empirical Findings on Value Relevance of IR

Number of studies have investigated the effect of IR towards the firm's Value. The Firm value has been differently persuaded by various scholars. So various determinants were used for measuring firm's value. Almost all studies try to investigate how IR affects firm's value and whether or not it creates additional value to the business entity.

Kosovix and Patel (2013) have investigated the value-relevance of IR for the market values of companies listed on Johannesburg Stock Exchange's Main Board, in South Africa. That was a pure quantitative study. The data for 2009 and 2011 has been collected from selected companies' annual reports. The self-constructed disclosure index has been applied for defining the IR and determining the relationship between IR and a company's value-relevance. As per the findings disclosure of level of compliance value of IR adopted companies have been

increased from 2009 to 2011. The degree of incorporation of IR affects to determine the level of compliance between the sectors and characterizes.

Firms with higher IR score have higher market valuation (Yeo et al., 2014). Further this study has revealed that equity investors do value IR. This study has used 100 South African companies listed on Johannesburg Stock Exchange for the period 2009 to 2012. IR was valued by using a self-constructed index.

Lee et al., (2015) have investigated the association between IR and firm Valuation. The sample was the listed firms in South Africa. This study has explored the association between cross-sectional variation in IR disclosures and firm valuation in the period after the implementation of IR. As the conclusion it suggests that the firm valuation is positively associated with IR disclosures. Study revealed that the benefits of IR exceed its costs.

Martinez (2016) has investigated the effects of IR on the firm's Value by considering the voluntary adopters of the IIRC's framework. The purpose of this paper was to evaluate potential external benefits related to capital markets of the IR Framework on a sample of international voluntary adopters. The selected data sample is comprised exclusively of firms included in the IIRC's database as of September 2016. The results indicate IR is positively associated with market value and expected future cash flows, but not with bid-ask spread or implicit cost of capital.

Senaratne et al., (2015) investigated how IR as a managerial technology diffuses in an emerging economy taking Sri Lanka as the case. This is a mix study that used both qualitative and quantitative data. Data was collected through annual reports and semi structured interviews. The study finds that the early adopting companies of IR in Sri Lanka have been engaged in sustainability reporting (SR) in the past. The study finds a transitional approach to IR in these companies evolving through the incremental changes to systems and processes that are already established in them in relation to SR.

Methodology

For this study, all companies listed on Colombo Stock Exchange (CSE) which are adopted IR have been selected and it was revealed that 61 companies have adopted IR by 2016 financial year. The analyzing time period was determined based on the financial year which IR adopted for each company. The ex-post years were considered as the reporting years from the year which IR adopted, to year 2016. Ex-ante years were equal number of years as ex-post years. Thus, the total number of observations were 164. Data was collected from annual reports of selected companies. Research data was analyzed through descriptive statistics and student

t-test analysis in order to estimate the relationship between IR and market return. Significance level of this study was 0.01 (99% confidence interval). All IR adopted companies have been selected for analysis. There were two groups of firms' market return by looking at the same firms before and after the adoption of IR. So Paired t-test was applied for data analysis.

Development of Hypothesis

Following hypotheses were developed in line with available literature.

H₀: There is no association between IR and market return

H₁: There is an association between IR and market return

Results and Discussions

Table 1 represents the descriptive data relating to independent variable in two conditions

Table 1: Paired Sample Statistics

	Mean	N	Std. Deviation	Std. Error Mean
After IR adoption	0.2404	164	0.3107	0.0243
Before IR adoption	0.0430	164	0.9094	0.0900

In the Paired Samples Statistics table, the mean for the after IR adopted condition (IR) is 0.2404. The mean for the before IR adopted condition is 0.0430. The standard deviation for the after IR adopted condition is 0.3107 and for the before IR adopted condition, 0.9094. The number of participants in each condition (N) is 164. Table 1 revealed that the Mean number of market return for after IR adopted condition was greater than the Mean for the before IR adopted condition. Thus, it can be concluded that the years after adopting IR were able to make significantly more market return than the years before IR adoption.

The proposed associations in the research model were tested by using t-test analysis. The Table 2 shows the results.

A paired-samples t-test was conducted to compare market return in after IR adoption and before IR adoption conditions. There was a significant difference in the scores for after IR adopted (M=0.2404, SD=0.3107) and before IR adopted (M=0.0430, SD=0.9094) conditions; $t(163)=-2.5527$, $p = 0.0113$. These results suggest that IR adoption really does have an effect on market return ($p < 0.05$). Therefore, it can be rejected the null hypothesis that there is no association between Integrated Reporting and market return and accept alternate hypothesis that there is an association between Integrated Reporting and market return. Specifically, this study finding suggest that when company adopt IR, market return of the company increases.

Table 2: Paired Samples Test

Paired Differences					t	df	Sig.(p) (2-tailed)
Mean	Std. Deviation	Std. Error Mean	99% confidence interval of the difference				
			Lower	Upper			
0.1974	0.5987	0.077	0.0451	0.3496	2.5527	163	0.0113

Conclusions and Recommendations

There is a significant difference between companies market return before and after adoption of IR. Further results conclude that after IR adopted years have higher mean value of IR while before IR adopted years record lower mean value. Since this study consider all companies which adopted IR listed in CSE, findings can be generalized to the population with high reliability. But this study was conducted in Sri Lankan context only. So, result reflects the condition within Sri Lankan companies listed in CSE. This study contributes to depict the relationship between IR adoption and market return. As IR is linked with the value creation process of corporate entities, the findings of the study will have wider social implication in terms of convincing corporate entities to adopt IR since it directly associated with market return. Market return is one of most influencing factors determining the investors behavior (Ahmad,2017). Identifying IR as a significant factor that determining the market return, entities' management is able to identify the necessity of adopting IR. As an emerging phenomenon, few studies only available in Sri Lankan context which demonstrates IR and its' association with entity related factors. Hence, this study provides some useful insights into IR with relating to market performance of an entity. Companies should realize that financial factors lonely do not influence to the performance of the entity. Amir and Lev (1996) concluded that non-financial information has a significant relation to stock price and its value-relevance. As non-financial reporting, IR can be considered as a significant factor which plays a vital role in accounting arena while influencing firms market performance.

References

- Ahmad, S., 2017. Factors Influencing Individual Investors' Behavior: An Empirical Study. *Journal of Business and Financial Affairs*, 6(4), p. 297.
- American Institute of Certified Public Accountants, 1973. *Objectives of financial statements: Report of the Study Group on the Objectives of Financial Statements*, USA: Study Group on the Objectives of Financial Statements.

Amir, E. & Lev, B., 1996. Value-relevance of nonfinancial information. *Journal of Accounting and Economics*, 22(1-2), pp. 3-30.

Cormier, D. & Gordon, I. M., 2001. An examination of social and environmental reporting strategies. *Accounting, Auditing & Accountability Journal*, 14(5), pp. 587-617.

Higgins, C., Stubbs, W. & Love, T., 2014. Walking the talk(s): Organisational narratives of integrated reporting. *Accounting, Auditing & Accountability Journal*, 27(7), pp. 1090-1119.

Hoque, M. E., 2017. Why Company Should Adopt Integrated Reporting?. *International Journal of Economics and Financial*, 7(1), p. 248.

Kosovic, K. & Patel, P., 2013. *Integrated Reporting- is it value relevant?*, s.l.: Jonköping University.

Lee, K. W., Hian, G. & Yeo, H., 2015. The Association between Integrated Reporting and Firm Valuation. *Review of Quantitative Finance and Accounting*, forthcoming, 4(1), p. 47.

Martinez, C., 2016. *Effects of Integrated Reporting on the Firm's Value: Evidence from Voluntary Adopters of the IIRC's Framework*, s.l.: s.n.

Senaratne, S., Gunarathne, N., Herath, R. & Bandara, C., 2015. *Diffusion of Integrated Reporting in an emerging Economy*. Colombo, University of Sri Jayewardenepura, pp. 120-137.

Yeo, G., Wai, L. K. & Thiruneeran, 2014. *Integrated Reporting and Corporate Valuation*. s.l., Singapore Accountancy Commission and The Institute of Singapore Chartered Accountants, p. 5.

The Cause-Effect Relationship between Growth and Profitability: Evidence from Listed Manufacturing Companies in Sri Lanka

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Introduction

Organizations have different mission and objectives which predominantly can be observed in their strategies. Some of the major aims are size, growth and profitability. There is a long debate that which factor either size or growth becomes the major source of the increase in profitability. Lots of researches have been done to conclude this debate. As far as growth is concerned it is a very critical factor for the success of the business, moreover, it also becomes the source of evolution and development of a country's economy (Asimakopoulos, Samitas and Papadogonas, 2009).

The relationship between growth and profitability is needed to be identified by considering the industry factors, Economic conditions and competition because those factors have great influence on growth and profitability. Growth and profitability are closely related to the firm size, which is an important indicator of both of them. Companies need to create a balance between growth and profitability in order to work efficiently and also for the progress of the stakeholders. The study intends to find out: Is there any relationship between growth and profitability? There is a lack of studies have been conducted to find the real agreement on how the growth is related to firm profitability. Then the researcher going to finds out those relationships through this research while filling of this research gap. The major objectives of this study are, empirically test the relationship between firm's growth and profitability, as measured by ROA and Net profit, find out the effect of Sales growth on the ROA and Net profit and examine the effect of Assets growth on the ROA and Net profit.

The objective of the study is related to the relationship between growth and profitability is needed to be identified for measure the effect on each other of variables of this study, such as the relationship between growth and profitability as measured by return on assets from assets growth and net profit from sales

growth. Other than that industry factors, economic conditions and competition have a great influence on growth and profitability.

This research raises the research questions of, is the Sales growth effect to firm's Profitability? And is the Assets growth effect to firm's Profitability? Those questions oriented to find out the relationship between growth and profitability.

Literature Review

The study on the small and medium size Australian firms defined that growth rates are highly volatile over time and the relationship with profitability is not always clear, one aim of this study was to determine if firms intentionally traded off profits for growth or whether there was evidence of growth enabling profits. The research utilizes data from the Business Longitudinal Survey by the Australian Bureau of statistics over the period of 1994-95 through to 1997-98. Using a regression equation with lagged profit and growth variables, they found no evidence of a relationship between growth and profitability, for those study researchers used 2330 numbers of Australian small and medium firms as a large sample (Fitzsimmons et al, 2005).

Another study of Velnampy and Nimalathasan (2007) indicated that sales are positively associated with profitability ratios except for Return on equity, and numbers of depositors are negatively correlated to the profitability ratios except for Return on equity, likewise, a number of advances are also negatively correlated with the Return on investment and Return on average assets.

Methodology

It is vital to present a framework for a research and also useful to get the idea behind this research. Through conceptualization, one may identify the relationship between variables that are taken into consideration. Based on the research hypotheses, growth as the independent variable, where the profitability as the dependent variable, sales growth and assets growth consider for determining the firm's growth and return on assets (ROA) and net profit has been taken to determine for firm's profitability. To illustrate the relationship between those, the following conceptual model was developed.

Frame for drawing sample included those manufacturing companies having at least five (5) years of annual reports at the website of Colombo Stock Exchange in Sri Lanka, therefore, it will be a random selection. Twenty (20) companies were selected with five (5) years data sample from 2009/10 to 2013/14 as balanced panel data sample. Here secondary data were used for the study and data were collected from annual reports as Quantitative methods approach

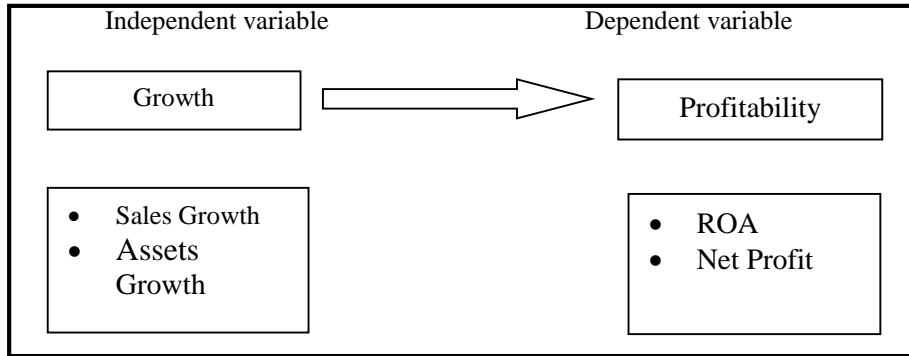


Fig. 1: Conceptual Framework

With quantitative data, the task of the test of research hypotheses can be done through the E-views Statistical Package. The method of Descriptive statistics with the Pearson Coefficient of Co-relation and Lag Regression was incorporated to analyze the data. The researcher has constructed Panel Regression model to study the effect of exploratory variables, if there is a serial correlation problem researcher will be used Lag Regression model to skips that serial correlation problem. The equation of Lag Regression model is;

$$\text{Model 1} \quad : \quad \text{NPR}_{it} = \beta_0 + (\beta_1 * \text{SGR}_{it}) + (\beta_2 * \text{AGR}_{it}) + \text{NPR}_{it-1} + e$$

$$\text{Model 2} \quad : \quad \text{ROA}_{it} = \beta_0 + (\beta_1 * \text{SGR}_{it}) + (\beta_2 * \text{AGR}_{it}) + \text{ROA}_{it-1} + e$$

The researcher formulates the following four hypotheses for this study.

H₁: There is a significant relationship between Sales Growth and ROA.

H₂: There is a significant relationship between Sales Growth and Net Profit.

H₃: Assets Growth exhibit a significant relationship with ROA.

H₄: Assets Growth exhibit a significant relationship with Net Profit.

Results and Discussions

The researcher is using E-views statistical package for analyzing quantitative data of the present study to achieve the research objectives. E-views offer academic researchers, corporations, government agencies, and students access to powerful statistical, forecasting, and modelling tools through an innovative, easy-to-use object-oriented interface.

The minimum value of NPR, ROA, AGR and SGR is -112.56%, -0.24:1 of total average assets, -29.16% and -94.49% in respectively. The maximum value of NPR and ROA is 112.75% and 0.44:1 of total average assets with respect as well as the maximum value of AGR and SGR is 139.36% and 756.44% in respectively.

Mean of NPR become to 6.62% and mean of ROA become to 0.04:1 of total average assets, as a percentage it is 4% and it is not demonstrated remarkable financial performance, because normally financially sound companies show average ROA in between 15% - 20%. Mean of AGR and SGR is 10.81% and 17.24% respectively. The standard deviation of NPR, ROA, AGR and SGR is 24.04%, 0.09:1 of total average assets, 21.87% and 81.96% respectively.

Table 2: Lag Regression and Pearson Coefficient of Co-Relation Analysis

Results of Panel Data – Lag Regression Analysis				
Description	Pooled Regression Model (With one period of Lag)		Random Effect Model (With one period of Lag)	
Dependent Variables	NPR	ROA	NPR	ROA
Constant (C, β_0)	4.255321* [1.84**],[0.070***]	0.022675 [2.15],[0.035]	4.255321 [2.05],[0.043]	0.022675 [2.24],[0.028]
SGR	-0.028506 [1.09],[0.278]	-0.000137 [1.28],[0.203]	-0.028506 [1.22],[0.227]	-0.000137 [1.34],[0.185]
AGR	0.198887 [2.09],[0.040]	0.000708 [1.70],[0.094]	0.198887 [2.33],[0.023]	0.000708 [1.77],[0.081]
R- squared (R^2)	0.206	0.234	-	-
Adjusted R^2	0.175	0.204	-	-
F statistics	6.585	7.729	-	-
Prob. (F-statistic)	0.001	0.000	-	-

*Coefficient of Correlation, **t-statistic, ***Significant value (Prob.)

Source: Data analysis results from e-views statistical package

The researcher found the figures of correlation (β) and the probability of t-test (P value) from the Pooled Regression model and Random Effect Model under the Lag Method-Panel Regression model. According to the statistical analysis from E-views Statistical Package, table 2 can be abstracted for the present to research findings.

Table 2 shows the significant and coefficient statistic for two sub-methods of Pooled Regression and Random Effect models. According to the Pooled Regression model SGR shows -0.028506 of coefficient and 0.278 of P value on NPR, which shows SGR, is insignificant on NPR without correlation. Therefore, the researcher expressed that Sales Growth hasn't any significant relationship on Net Profit. In the same model SGR shows -0.000137 of the coefficient and 0.203 of P value on ROA, which shows SGR, is insignificant on ROA without correlation. Therefore, the researcher expressed that Sales Growth hasn't any significant relationship on ROA.

On the other hand, Pooled Regression model shows that AGR has 0.198887 of the coefficient and 0.040 of P value on NPR, which shows AGR is significant at 5% of significance level on NPR with weekly and positive correlation. Therefore, the researcher expressed that Assets Growth has a positive significant relationship on Net Profit. In the same model, AGR has 0.000708 of coefficient and 0.094 of P value on ROA, which shows AGR is significant at 10% of significance level on ROA with weekly and positive correlation. Therefore, researcher expressed that Assets Growth has positive and marginal significant relationship on ROA.

According to the Random Effect model of above table SGR shows -0.028506 of coefficient and 0.227 of P value on NPR, which shows SGR, is insignificant on NPR without correlation. Therefore, the researcher expressed that Sales Growth hasn't any significant relationship on Net Profit. In the same model, SGR shows -0.000137 of coefficient and 0.185 of P value on ROA, which shows SGR is insignificant on ROA without correlation. Therefore, the researcher expressed that Sales Growth hasn't any significant relationship on ROA.

On the other hand, Random Effect model shows that AGR has 0.198887 of coefficient and 0.023 of P value on NPR, which shows AGR is significant at 5% of significance level on NPR with weekly and positive correlation. Therefore, the researcher expressed that Assets Growth has a positive significant relationship on Net Profit. In the same model, AGR has 0.000708 of coefficient and 0.081 of P value on ROA, which shows AGR is significant at 10% of significance level on ROA with weekly and positive correlation. Therefore, the researcher expressed that Assets Growth has a positive significant relationship on ROA.

Lag Regression Model

$$\text{Model 1: } \text{NPR}_{it} = \beta_0 + (\beta_1 * \text{SGR}_{it}) + (\beta_2 * \text{AGR}_{it}) + \text{NPR}_{it-1} + e$$

Above table shows statistical data for one dependent variable of NPR under the Lag model for Pooled Regression model, the researcher is using that statistical data for point out the model 1 of Lag regression. According to the table 2 value of the coefficient of determination factor (R^2) is 0.206 at 5% of significance level. That result implied that 20.6% of the total variance in NPR could be explained by the independent variables, it is showing 20.6% of the independent variable (Growth) impact on the dependent variable (Measurement of NPR).

The value of R^2 range normally at a percentage of 0 to 100 therefore according to R^2 value of NPR remaining 79.4% of the variability was not explained, here R^2 value is 20.6% normally that is lower than the 50%, therefore, there is an impact of an independent variable on a dependent variable which was significant at 5% level. Further, the probability of F statistics is 0.001 that was lower than 0.05, that means by the model was significant. Adjusted R^2 value (0.175) is always a bit

lower than the R^2 value (0.206) because it reflects the number of variables as it relates to data.

$$\text{Model 2: } ROA_{it} = \beta_0 + (\beta_1 * SGR_{it}) + (\beta_2 * AGR_{it}) + ROA_{it-1} + e$$

Above table shows statistical data for another dependent variable of ROA under the Lag model for Pooled Regression model, the researcher is using that statistical data for point out the model 2 of Lag regression. According to the table 2 value of the coefficient of determination factor (R^2) is 0.234 at 10% of significance level. That result implied that 23.4% of the total variance in ROA could be explained by the independent variables, it is showing 23.4% of the independent variable (Growth) impact on the dependent variable (Measurement of ROA).

The value of R^2 range normally at a percentage of 0 to 100 therefore according to R^2 value of NPR remaining 76.6% of the variability was not explained, here R^2 value is 23.4% normally that is lower than the 50%, therefore, there is an impact of an independent variable on a dependent variable which was significant at 10% level. Further, the probability of F statistics is 0.000 that was lower than 0.05, that means by the model was significant. Adjusted R^2 value (0.204) is always a bit lower than the R^2 value (0.234) because it reflects the number of variables as it relates to data.

Hypotheses testing shows, H1 and H2 are rejected by saying if there is no any relationship between Sales Growth and Profitability as measured by Net Profit and ROA, while that H3 and H4 are accepted at 10% and 5% of significance level respectively by saying of Assets Growth exhibits positive significant relationship with Profitability as measured by Net Profit and ROA.

Conclusion and Recommendations

First research objective can be achieved when the Growth of firm measured by the Assets Growth because Assets Growth is indicated positive significant relationship on Profitability. Second research objective cannot be achieved, because Sales Growth hasn't indicated any effect on Profitability, but third research objective can be achieved when the Growth of firm measured by the Assets Growth because Assets Growth is indicated positive significant relationship on Profitability

According to the findings of the present study, both models of Pooled Regression and Random Effect models show that Sales Growth hasn't any significant relationship on Net Profit and Return on Assets, therefore one of the Growth measurements of Sales Growth did not show any relationship on Profitability as measured by Net Profit and Return on Assets. But, Assets Growth has a positive significant relationship on Net Profit and Return on Assets, therefore, another Growth measurement of Assets Growth show Positive significant relationship on

Profitability as measured by Net Profit and Return on Assets. Therefore, the researcher can say, Independent variable of firms' Growth is positively impacting on the dependent variable of firms' Profitability when the firms' Growth measured by the Assets Growth.

Manufacturing companies are one of the major parts of the economy of Sri Lanka, therefore the profitability of the manufacturing companies highly influence on the economic growth and gross domestic product (GDP). On the other hand, that manufacturing companies included exporting activities with their operations, therefore manufacturing companies of Sri Lanka positively impact on foreign exchange and growth of the economy. Then the researcher further suggests to, achieve the survival of those manufacturing companies and contribute to the economy of Sri Lanka by considering the growth of assets for profitability.

References

Fitzsimmons, J.R., Steffens, P.R., and Douglas E.J. (2005). Growth and Profitability in Small and Medium Sized Australian Firms. *AGSE Entrepreneurship Exchange, Melbourne, February 2005.*

Velnampy, T., and Nimalathan, B. (2007). Organizational Growth and Profitability: A Case study Analysis of Bank of Ceylon, *Journal of Business Studies, III.*

The impact of daily market-based ratios on daily stock market return: evidence from Colombo Stock Exchange, Sri Lanka

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Introduction

Analysts and investors over the years have used the Price Earnings ratio (PER), Market to Book ratio (MBR) and Dividend Yield ratio (DYR) for stock selection. They have continued to investigate the impact of market-based ratios on the stock exchange in the recent years. In order to determine the earnings and market return, book value and dividend would be useful for predicting the behaviour of future stock return. The effects of PER states that stocks with low PER earn significantly higher return than stocks with high PER. As a result, there is an inverse relationship between the PER and stock return, and therefore, an investor could attain increasingly higher return by investing the right stock with low PER. Likewise, the effects of MBR states that securities with high ratios between market value and book value, obtain lower return than those securities with low MBR. The predictive power of DYR stems from the role of dividends in capturing the permanent element of return (Guler and Mustafa, 2008). The All Share Price Index (ASPI) measures the movement of share return of all listed companies in Colombo Stock Exchange (CSE). It is based on market capitalization. The weighting of shares is conducted in proportion to the issued ordinary capital of the listed companies, valued at a current market price. This is the longest and broadest measure of the CSE. The ASPI is a market capitalization weighted index where the weight of any company is taken as the number of ordinary shares listed in the market. As of the 31st of March, 2017, the total market capitalization of CSE was LKR 2,662.86 Billion. This research study would be significant to the stock market players and all interested parties in the CSE who use the effect of daily market-based ratios to measure their trading expectations. Also, this study would assist the investment managers to make the investment analysis in the CSE. Findings of this study can be used by analysts and investors for their day-to-day investing strategies.

Research problem

Previous studies have examined the impact of market ratios on stock market return mainly for the developed countries with very little studies being done on the developing countries. These results cannot be generalized to the CSE due to the differences in stock market activities. The CSE has undergone numerous changes such as the introduction of the Central Depository System and Automated Trading System (ATS) (version 7) and after the implementation of ATS (version 7), it provides the platform for both debt and equity. As a result, these changes contribute to the calculations of daily share return. This study attempts to contribute to the existing literature on the impact of daily market ratios on the daily stock market return of a developing country like Sri Lanka. In this context, this study addresses the impact of daily market ratios (PER, MBR and DYR) on daily stock market return (ASPI). This research, therefore, sought to fill this research gap by answering the following research questions.

- What would be the impact of daily market ratios on the daily stock market return of CSE?
- What would be the relationship between daily market ratios and daily stock market return of CSE?

Objectives of the study

- to investigate the impact of daily market ratios on the daily stock market return of CSE
- to identify the relationship between daily market-based ratios and daily stock market return of CSE.

Literature review

Fama and French (1992) examined MBR and PER effects in the New York Stock Exchange (NYSE) and American Stock Exchange (AMEX) stocks during the period from 1963 to 1990. In this study, they observed the significant relationships between PER and stock return, MBR and stock return and size and stock return. Basu (1977) investigated a study to identify the relationship between the investment performance of the common stock and PER of NYSE during the period from September 1956 to August 1971. The results found that there was a significant inverse relationship between investment performance of common stock and PER. Aydogan and Guner. (2000) investigated the effect of market-based ratios on stock price across 19 emerging equity markets. The results reveal that PER and MBR have predictive power of future stock price for a longer period of time. Akdeniz, Altay and Aydogan (2000) examined the impact of firm-specific factors on stock return in the ISE during the period from 1992 to 1998. The found

that MBR and firm size explain stock return. They also found that there was no significant impact of earnings-price ratio on the stock price. Lau, Lee and McInish(2002) examined the relationship between stock return and systematic risk with firm size, MBR, PER, the ratio of cash flow to price and sale growth in 163 companies listed in the Kuala Lumpur Stock Exchange and 82 companies listed in the Singapore Stock Exchange during the period from 1988 to 1996. Analysis for Singapore Stock Exchange found that there was no significant relationship between the MBR and PER with stock return. Analysis for the Kuala Lumpur Stock Exchange found that there was a significantly positive relationship between the PER and stock return. But the relationship between the MBR and stock return was not significant.

Muthui (2003) examined whether there is any significant difference in return between low PER stocks and high PER stocks for companies quoted in the NSE using the NSE 20 share index. The analysis found that there was no statistically significant difference in return of shares with low PER and those of high PER. Guler and Mustafa (2008) examined the predictability of stock return in the 12 emerging stock markets by using PER, DYR and MBR during the period from 1997 to 2003. They found that MBR and DYR had a significant impact on predicting stock return. Fun and Basana (2012) empirically examined the relationship between the PER and stock price of 45 companies listed in the Indonesia Stock Exchange during the period from 2005 to 2010. The results found that there was no significant relationship between PER and stock return. Maxwell and Kehinde (2012) examined the relationship between the PER and stock price of 50 companies listed on the Nigerian Stock Exchange during the period 2001 to 2006. The results found that there was no significant relationship between PER and stock return. Muhammad and Rashid (2014) empirically examined the impact of DYR and PER on Stock Return for 111 non-financial listed firms in Karachi Stock Exchange (KSE), Pakistan during the period from 1998 to 2009. They found that PER and size of the firm have a significant positive impact on stock return. Also, they found that there was a significant negative relationship between DYR and stock return.

Deyshappriya (2014) investigated trading strategies of the day of the week effect in the CSE. The study confirmed the existence of stock market anomalies as both days of the week effect and monthly effect, particularly during the war period. It found that these seasonality patterns limit the validity of the Efficient Market Hypothesis in the context of CSE.

Gaps in the Literature

Most studies focused on only the foreign stock markets and considered a few years' data set. This study would be capable of providing in-depth analysis considering the period of 22 years from 2nd of January, 1996 to 31st of March, 2017.

Methodology

Research approach

This research study adopts ex-post facto research approach as it seeks to explore the impact of daily market ratios on the daily stock market return by following quantitative method. Historical data is used for the analysis.

Data collection

The data used for this research was generated from the CSE official CD (Microsoft Excel track sheets of daily market indices and daily market ratio) from 2nd of January, 1996 to 31st of March, 2017.

Conceptual framework

Figure-1 below shows the conceptual framework of this research study, which is based on the extant empirical literature review, depicts the relationship between independent variables and dependent variables.

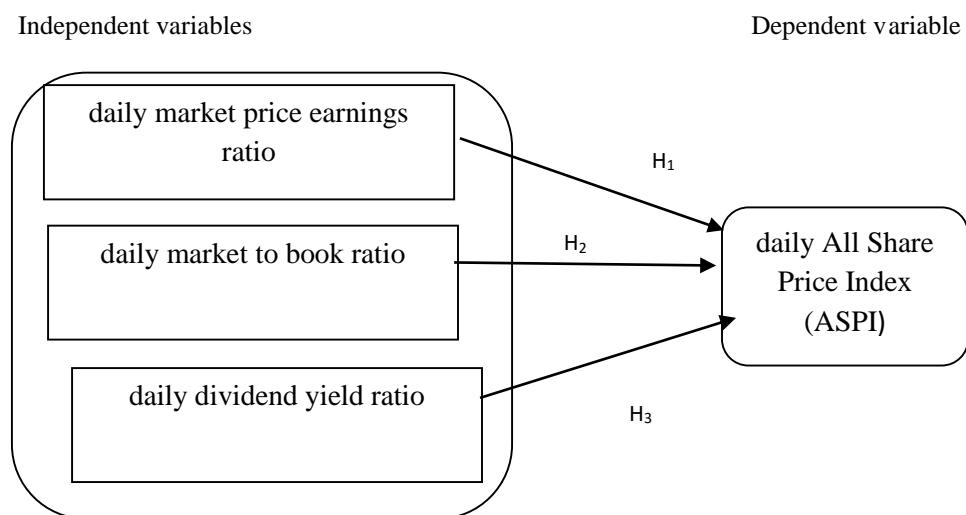


Fig. 1. conceptual framework

Source: Researcher's compilation.

Hypotheses of the study

As a follow-up to the research questions and objectives of the study, the following series of hypotheses were formulated.

H_{1a0}: There is no significant impact of daily market price earnings ratio on daily ASPI of CSE.

H_{1a1}: There is a significant impact of daily market price earnings ratio on daily ASPI of CSE.

H_{2a0}: There is no significant impact of the daily market to book ratio on daily ASPI of CSE.

H_{2a1}: There is a significant impact of the daily market to book ratio on daily ASPI of CSE.

H_{3a0}: There is no significant impact of daily dividend yield ratio on daily ASPI of CSE.

H_{3a1}: There is a significant impact of daily dividend yield ratio on daily ASPI of CSE.

Results and Discussions

The analyses were performed by E-Views using the unit root test, causality test, diagnostic test, correlation analysis and regression analysis.

Unit root test

The Augmented Dickey-Fuller (ADF) test was employed to check the unit root test. To reject the null hypothesis, the data are non –stationary, the ADF statistics must be negative than the critical values and significant.

Table 1: Unit root test

Variables	Augmented Dickey-Fuller test statistic	Prob.*	Order of Integration
D(LASPI)	-37.33650	0.0000	I (1)
D(PER)	-68.52932	0.0000	I (1)
D(MBR)	-84.98805	0.0001	I (1)
D(DYR)	-45.99139	0.0000	I (1)
Test critical values: 1% level		-3.959839	
5% level		-3.410686	
10% level		-3.127127	

*MacKinnon (1996) one-sided p-values.

Source: Researcher's E-Views result.

According to the Table 1, there is the presence of stationarity at first differencing level of series since the ADF statistics are less than the critical values at 1%, 5% and 10% respectively. Tests of ADF is applied for stability first difference relating to data for the period from 2nd of January, 1996 to 31st of March, 2017 of ASPI.

Causality test

The Granger causality test was conducted to test the causality of the impact of the independent variables on the dependent variable.

Table 2: Granger Causality Tests

Sample: 5098, Lags:2			
Null Hypothesis:	Obs	F-Statistic	Probability
DPER does not Granger Cause DLASPI	5091	0.01377	0.9863
DLASPI does not Granger Cause DPER		42.9795	3.E-19
DMBR does not Granger Cause DLASPI	5091	5.52241	0.0040
DLASPI does not Granger Cause DMBR		143.516	2.E-61
DDYR does not Granger Cause DLASPI	5091	0.78890	0.4544
DLASPI does not Granger Cause DDYR		48.8846	9.E-22

Source: Researcher's E-Views result.

As indicated in the Table 2, it was revealed that PER does not granger cause ASPI (p – value $0.9863 > 0.05$) however, ASPI of the CSE granger cause PER (p-value = $3.E-19 < 0.05$). Hence, there is a unidirectional relationship between ASPI and PER. MBR does granger cause ASPI since (p-value = $0.0040 < 0.05$), also the ASPI granger cause MBR at (p-value = $2.E-61 < 0.05$). The DYR does not granger cause ASPI (p-value = $0.4544 > 0.05$), but the ASPI granger cause DYR as indicated (p-value = $9.E-22 < 0.05$).

Diagnostic test

There are often two problems, namely heteroscedasticity and multicollinearity, which will impair the effect of estimation of a multiple regression model. Heteroscedasticity occurs when the variance of the error terms differs across observations, the presence of which results in inefficient estimates of the coefficients although they remain unbiased.

Table 3: Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	68.54375	Prob. F(3,5091)	0.0000
Obs*R-squared	197.8033	Prob. Chi-Square(3)	0.0000
Scaled explained SS	4403.531	Prob. Chi-Square(3)	0.0000
Heteroskedasticity Test: White			
F-statistic	2269.518	Prob. F(9,5085)	0.0000
Obs*R-squared	4079.422	Prob. Chi-Square(9)	0.0000
Scaled explained SS	90816.78	Prob. Chi-Square(9)	0.0000

Source: Researcher's E-Views result.

In this study, the researcher used the Breusch-Pagan-Godfrey test and White test to detect whether there was a problem of heteroscedasticity. The results indicate that all had no presence of such a problem.

Correlation analysis

Table 4 shows the correlation between the dependent and independent variables. Correlations between independent variables should not be considered harmful until they exceed 0.80 or 0.90. If the correlations among independent variables are more than 0.8, the problem of multicollinearity will occur. This problem may lead to strange results in regression analysis, for instance, the adjusted R² becomes too high and not statistically significant. In this study, all the correlations among independent variables are lower than 0.80 indicating that no multicollinearity exists between the variables.

Table 4: Correlation matrix

Variables	DLASPI	DPER	DPBR	DDYR
DLASPI	-			
DPER	0.646626	-		
DMBR	0.508462	0.588603	-	
DDYR	-0.593878	-0.403538	-0.325213	-

Source: Researcher's E-Views result

Note: * $p < .05$, ** $p < .01$

According to the Table-4, there was a positive correlation between PER and ASPI ($r = 0.65$). There was also a positive correlation between MBR and ASPI ($r = 0.51$). There was a negative correlation between DYRR and ASPI ($r = -0.59$).

Regression analysis

Table 5: Regression analysis

Dependent Variable: DLASPI				
Sample (adjusted): 2 5098		Included observations:		5095
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.000181	4.35E-05	4.166483	0.0000
DPER	0.009512	0.000278	34.18167	0.0000
DMBR	0.022711	0.001815	12.51608	0.0000
DDYR	-0.026734	0.000712	-37.55751	0.0000
R ²	0.563954			
Adjusted R ²	0.563697			
F-statistic	2194.792			
Prob(F-statistic)	0.000000			
Durbin-Watson stat	1.908844			

Source: Researcher's E-Views result.

The result reveals that the model for this study is well fitted (F-statistic= 2194.792). The coefficient of determination (R-square), which measures the goodness of fit of the model, indicates that 56.39% of the variations observed in the dependent variable were explained by the independent variables. The result shows that PER

has a positive and significant impact on ASPI (PER coefficient = 0.009512, $p = 0.00 < 0.05$, t-value = 34.18167). Therefore, the alternative hypothesis H_{1a1} is supported. The results are in line with previous studies performed by Fama and French (1992), Lau, Lee and McInish(2002) and Muhammad and Rashid (2014). However, these findings are contrary to Altay and Aydogan (2000), Muthui (2003), Fun and Basana (2012) and Maxwell and Kehinde (2012) found that there was no significant impact of PER on stock market price. MBR has a positive and significant impact on ASPI (MBR coefficient = 0.022711, $p = 0.00 < 0.05$, t-value = 12.51608). Therefore, the alternative hypothesis H_{2a1} is supported. The results are in line with previous studies performed by Fama and French (1992) and Guler and Mustafa (2008). However, these findings are contrary to Lau, Lee and McInish(2002) found that there was no significant impact of PBR on stock market price. DYR has a negative and significant impact on ASPI (DYR coefficient = -0.026734, $p = 0.00 < 0.05$, t-value = -37.55751). Therefore, the alternative hypothesis H_{3a1} is supported. The results are in line with previous studies performed by Guler and Mustafa (2008) and Muhammad and Rashid (2014). The Durbin Watson statistic is 1.908844 which indicates that there is no autocorrelation.

Conclusions and Recommendations

The results from the analysis revealed that there was a positive correlation between PER and ASPI. There was also a positive correlation between MBR and ASPI and there was a negative correlation between DYR and ASPI. Results also reveal that PER has a significant and positive impact on ASPI of the CSE. PBR has a significant and positive impact on ASPI of the CSE. And DYR has a significant and negative impact on ASPI of the CSE. The analysis of this study would be helpful for the financial analysts, potential investors and future researchers.

This study recommends that the CSE should consider this impact while revising their strategies in order to make value for the shareholders as the relationship in PER, MBR and DYR has the significant impact on the daily return on ASPI. This study also recommends that potential investors to use the daily market-based ratio to predict the daily stock return. CSE should create the policies that will enhance the companies' (which are listed in the CSE) earnings after tax and number of shares traded and dividends since these variables are statistically significant.

References

Akdeniz, L, Altay, SA &Aydogan, K 2000, 'Cross Section of Expected Stock Returns in ISE', *Russian and East European Finance and Trade*, vol. 36, no. 5, pp. 6-26.

Aydogan, K &Guner, G 2000, 'P/E and Price-to-Book Ratios as Predictors of Stock Returns in Emerging Equity Markets', <http://aydogan.bilkent.edu.tr/emqpaper.pdf>, [Accessed on 28.12.2017].

Basu, S 1977, 'Investment performance of common stocks in relation to their price-earnings ratios: A test of the efficient market hypothesis', *The Journal of Finance*, vol. 32, no. 3, pp. 663-682.

Deyshappriya NPR 2014, 'An Empirical investigation on stock market anomalies: the evidence from Colombo Stock Exchange in Sri Lanka' *International Journal of Economics and Finance*; vol. 6, no.3, pp: 177-187.

Guler, A & Mustafa, KY 2008, 'Price-earnings ratio, dividend yield, and market-to-book ratio to predict the return on the stock market: evidence from the emerging markets', *Journal of Global Business and Technology*, vol. 4, no. 1, pp. 16-25.

Fama, EF & French, KR 1992, 'The Cross-Section of Expected Stock Returns', *Journal of Finance*, vol. 47, no. 2, pp. 427-465.

Fun, LP &Basana, SR 2012, 'Price-Earnings Ratio and Stock Return Analysis', *Journal of Management*, vol. 14, no. 1, pp. 7-12.

Lau, ST, Lee, CT &McInish, T 2002, 'Stock returns and beta, firms size, E/P, CF/P, book-to-market, and sales growth: evidence from Singapore and Malaysia', *Journal of Multinational Financial Management*, vol. 12, no. 3, pp. 207-222.

Maxwell, OO & Kehinde, EF 2012, 'Testing the Relationship between Price to Earnings Ratio and Stock Returns in the Nigerian Stock Exchange Market', *International Journal of Accounting, Finance & Economics Perspectives*, vol. 1, no. 1.

Muhammad, A & Rashid, Z 2014, 'Impact of Dividend Yield and Price-Earnings Ratio on Stock Returns A Study Non-Financial Listed Firms of Pakistan', *Research Journal of Finance and Accounting*, vol. 5, no.19, pp. 68-74.

Muthui, M 2003, 'Price-Earnings Ratio and Share Preference at Nairobi Stock Exchange', Unpublished MBA project, University of Nairobi, <http://www.nse.co.ke>, [Accessed on 18.01.2018].

The impact of Portfolio Structure on Financial Performance of listed private Commercial Banks in Sri Lanka

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Introduction

The banking sector has become an extremely competitive powerful industry in the world today. There are many different kinds of banks are operating their business in Sri Lanka. Portfolio, product portfolio and portfolio management concepts were tested on many occasions in developed markets and developing markets widely. But especially the bank portfolio structure has not been widely studied and largely missing from the literature.

Research Questions

Q₁: What is the relationship between portfolio structure and financial performance?

Q₂: What is the impact of portfolio structure on financial performance?

Objectives of the Study

1. to identify the relationship between portfolio structure and financial performance.
2. to investigate the impact of portfolio structure on financial performance.

Literature Review

Ludsana and Nirujah (2014) examined the impact of service portfolio structure on performance in a listed hotel in Sri Lanka. The study covered 15 listed hotels over the period of 2009 to 2013 and a negative relationship was observed between income from accommodation, food, ROCE and ROA. Likely income from other operating service and ROA and ROCE also negatively related. David and Dionne (2005) found that the majority of large banks to a certain degree intuitively diversify the loan portfolio. Also, they found that due to the size of large banks it is assumed that loan portfolio diversification will happen naturally. Velampy and Pratheepkanth (2012) found that the portfolio system has a positive association

with Performance. The overall result of efficiency and effectiveness performance of portfolio system was high view in the portfolio structure. According to the system, the efficiency and effectiveness performance rate is 60% as high level.

Methodology

The quantitative approach is considered to be a suitable approach for this study. Portfolio structure such as income from deposits, income from loans and income from pawning are measured through ratios which selected banks recorded as at 31st of December of each year. Based on the Purposive sampling method the researcher selected only 10 banks.

Conceptual Framework

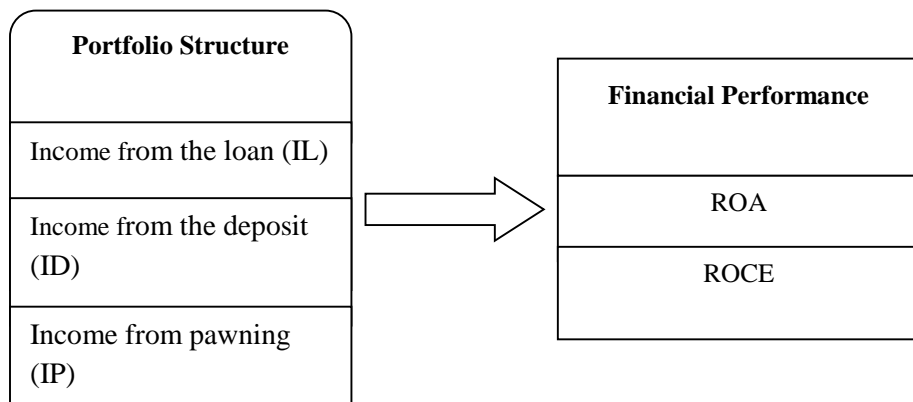


Figure 1: Conceptual Model

Hypotheses of the Study

H_{0a}: There is no significant impact of IL on ROA.

H_{1a}: There is a significant impact IL on ROA.

H_{0b}: There is no significant impact of ID on ROA

H_{1b}: There is a significant impact of ID on ROA

H_{0c}: There is no significant impact of IP on ROA.

H_{1c}: There is a significant impact of IP on ROA

H_{0d}: There is no significant impact of IL on ROCE.

H_{1d}: There is a significant impact of IL on ROCE.

H_{0e}: There is no significant impact of ID on ROCE.

H_{1e}: There is a significant impact of ID on ROCE.

H_{0f}: There is no significant impact of IP on ROCE.

H_{1f}: There is a significant impact of IP on ROCE.

Results and Discussions

Correlations Analysis

According to the Table 1, the IL is negatively correlated with ROA and ROCE which is significant at 0.1 level. The ID is positively correlated with ROA with the R-value of 0.094 but it is not significant. As well as the ID is positively correlated with the ROCE with the r- the value of 0.066 but it is also not at a significant level. The IP is positively correlated with ROA with the R-value of 0.278 which is significant at a level of 0.1. The IP is negatively correlated with the ROCE with the r- the value of -0.002 but it is not at a significant level.

Table 1: Correlations Matrix

Variables	IL	ID	IP	ROA	ROCE
IL	1				
ID	0.762**	1			
IP	0.728**	0.722**	1		
ROA	-0.026*	0.094	0.278*	1	
ROCE	-0.016	0.066	-0.002	-0.020	1

*p<0.1 correlation is significant at 0.1 level

**p<0.05 correlation is significant at 0.05 level

***p<0.01 correlation is significant at 0.01 level

Impact of Portfolio Structure on ROA and ROCE

Table 2: Pooled regression analysis

Variables	ROA			ROCE		
	Cof	Se	sig	Cof	Se	Sig
IL	-0.9418	0.4238	0.031**	-0.0653	0.1187	0.585
ID	0.0403	0.4042	0.921	.0964	0.1132	0.399
IP	0.9259	0.3106	0.005***	-0.0201	0.0870	0.818
Intercept	1.229	3.2854	0.710	.1213	0.9203	0.896
R Squared	0.1882			0.0160		
Adjusted R ²	0.1353			0.0482		
F- Value	3.55			0.25		
P- value	0.0214			0.8618		
Durbin- Waston	1.179			1.823		

Table 2 shows the impact of the portfolio structure of both models. In the model 1, R square value of 0.1882 denotes that 18 % of the observed variability in ROA can be explained by the differences in the independent variables. Remaining 82% variance in the ROA is attributed to other variables. The F value is 3.55, that is significant at 0.05% (p =0.0214). That the previous researchers (Ludsana & Nirujah 2014) also found that there is a significant impact of portfolio structure on ROA at 0.01% (p=0.006) with the F value of 7.128. There may be the reason for

the portfolio structure has been significantly impacting on firm performance the ROA ratio consist the total assets so, the bank's total assets are a higher value than others such as liabilities, equity and also may say that profit or losses. Model 2, that the square of the R square is 0.0160, which indicates that the three indicators of banks portfolio structure determinants explain 0.16% of the variation in ROCE collectively.

Significant of Portfolio Structure on ROA and ROCE

Table 3: Significant of portfolio Structure on ROA and ROCE based on Pooled regression

Variables	ROA	ROCE
IL	Negative significant	Negative insignificant
ID	Positive insignificant	Positive insignificant
IP	Positive significant	Negative insignificant

The above table 3 describes the significance of the portfolio structure on ROA, ROCE, according to that IL has negative significant relationship on ROA, ID has a positive insignificant relationship on ROA and IP has a positive significant relationship on ROA. IL and IP have a negative insignificant relationship on ROCE, ID has a positive insignificant relationship on ROCE. That's means portfolio structure (IL, IP and ID) has no significant with ROCE.

Table 4: Hypothesis direction based on the Pooled regression

Variables	ROA		ROCE	
	H ₀	H ₁	H ₀	H ₁
IL		Accepted H _{0a}	Do not reject H _{0d}	
ID	Do not reject H _{0b}		Do not reject H _{0e}	
IP		Accepted H _{0c}	Do not reject H _{0f}	

Based on ROA the Hausman test prob > chi 2= 0.6706 since this value is more than 0.05. Therefore, RE is the most suitable for understanding the impact of portfolio structure on the financial performance of ROA. Based on ROCE the Hausman test prof>chi 2= 0.2966 since this value is more than 0.05. Therefore, RE is the most suitable for understanding the impact of portfolio structure on the financial performance of ROCE. Therefore, the final results of both models can be considered based on pooled regression and RE regression Analysis.

Regression result based on the Random Effect (RE)

Table 5: Portfolio structure on ROA based on RE regression

ROA				ROCE		
Variables	Cof	Se	Sig	Cof	Se	Sig
IL	-0.7406	0.3787	0.051*	-0.0717	0.1216	0.555
ID	-0.0475	0.3854	0.902	0.1464	0.1188	0.218
IP	0.4558	0.2754	0.098*	-0.0290	0.0893	0.745
Intercept	5.7374	4.4018	0.192	-0.2723	1.0933	0.803
Wald chi	9.91			1.55		
Prob>chi	0.1652			0.6718		

The above table 5 shown the regression result based on the RE regression analysis. In order to identify the impact of portfolio structure on financial performance, the result of RE regression reminds that it is capable enough of explaining a considerable fission of the total variability of 9.91 and 1.55. In this table Model, 1 represents the Wald chi value of 9.91 with insignificant of 0.1652 and IL has the negative coefficient of -0.7406 at the significant level of 0.051 ($p > 0.1$) as well as IP has the positive coefficient of 0.4558 at the significant level of 0.098 ($p > 0.1$). ID has the negative coefficient of -0.0475 at an insignificant level. Model 2, represent the Wald chi value of 1.55 with insignificant of 0.6718. IL and IP have the negative coefficient of -0.0717, -0.0290 at the insignificant level and ID has the positive coefficient of 0.1464 at the insignificant level. That's means portfolio structure (IL, IP and ID) has not been significant with ROCE

Significant of Portfolio Structure on ROA and ROCE

Table 6: Significant of portfolio Structure on ROA, ROCE on RE regression

Variables	ROA	ROCE
IL	Negative significant	Negative insignificant
ID	Negative insignificant	Positive insignificant
IP	Positive significant	Negative insignificant

The above table 6 describes the significance of the portfolio structure on ROA, ROCE, according to that IL has negative significant relationship on ROA, ID has

a negative insignificant relationship on ROA and IP has a Positive significant relationship on ROA. IL and IP have the negative insignificant relationship on ROCE and ID have the positive insignificant relationship on ROCE. That's means portfolio structure (IL, IP and ID) has no significant with ROCE.

Table 7: Hypothesis direction based on the RE regression

Variables	ROA		ROCE	
	H ₀	H ₁	H ₀	H ₁
IL		Accepted H _{0a}	Do not reject H _{0d}	
ID	Do not reject H _{0b}		Do not reject H _{0e}	
IP		Accepted H _{0c}	Do not reject H _{0f}	

Conclusions and Recommendations

This study examined the impact of portfolio structure on performance in listed banks in CSE. The study covered 10 listed banks over the period of 2012 to 2016 and the major findings of the study are summarized below: There is negative significant relationship observed between IL and ROA at 0.05 levels, there is positive significant relationship observed between IP and ROA at 0.05 levels, there is positive relationship between ID and ROA but no significant impact. There is negative relationship observed between IL, IP and ROCE as well as there is a positive relationship between ID and ROCE but no significant impact, that means portfolio structure (IL, IP and ID) has no significant impact with ROCE based on Pooled Regression Analysis. There is negative significant relationship observed between IL and ROA at 0.1 levels, there is negative relationship observed between ID and ROA but no significant impact, there is positive significant relationship observed between IP and ROA at 0.05 levels. There is a negative relationship between IL, IP and ROCE as well as there is a positive relationship between ID and ROCE but no significant impact, that means portfolio structure (IL, IP and ID) has not been significant with ROCE based on RE Regression Analysis. Therefore, the overall result of both analyses revealed that there is a significant relationship between service portfolio structure and firm performance of ROA in Sri Lankan listed banks. However, there is no significant impact of portfolio structure on the financial performance of ROCE. It may be an inappropriate mix of portfolio structure. Furthermore, banks performance indicates negative and positive value in the financial year of last 5 years. Therefore, the firm must consider the structure of the portfolio to boost performance.

Banks should consider more diversify their service portfolio with the profitable service to enhance the performance to survive in the competitive environment by enlarging its service portfolio structure a bank can more effectively use its underutilized resources and capabilities. It should obtain more liquidity assets from the alternative investment opportunities and also it should correct the deviation between the liquidity and profitability it helps to the management to maintain the portfolio structure effectively. Banks must review their portfolio structure to find out the right mixture for the financial performance based on their capabilities Performance standards should be established and communicated to the investors.

References

David, H & Dionne, M 2005, 'Banks' loan portfolio diversification', *Qualitative Research in Financial Markets*, vol. 4, no. 1, pp. 6-25.

Ludsana N, Niruja, R, 2014, 'Service Portfolio structure & firm performance: A study on selected hotels in Sri Lanka', *ISCB*, University of Kelaniya, https://www.academia.edu/17011247/Service_Portfolio_Structure_and_Firm_Performance_A_Study_on_Selected_Listed_Hotels_in_Sri_Lanka.

Velnampy, T &Pratheepkanth, P 2012, 'Portfolio structure & performance: A study on the selected financial organization in Sri Lanka', *International Journal of Business Management*, vol. 2, no. 2, pp. 1-9.

E-Business & Marketing

DOI and e-CRM of licensed commercial banks: The literature review and future research propositions

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Introduction

In 1962, Everett Rogers, Professor of rural sociology published a theory for the adoption of innovations among individuals and organizations from over 508 diffusion studies. Under this theory of innovation diffusion (DOI), there are four fundamentals: innovation, communication channels, time and a social system. Thus, diffusion is the process by which an innovation is communicated through specific channels over time among the members of a social system. Nowadays customer relationship management (CRM) is concerned with using technology in implementing relationship marketing strategies. Electronic customer relationship management (e – CRM) is the outcome of changes in traditional marketing by integrating technologies of new electronic channels such as web wireless and voice technologies and combines them with e-business application into the overall enterprise customer relationship management strategy. Banks are looking for new ways to increase their customer potentials and service quality via e-CRM (Sue, Fjermestad and Romano, 2004).

Apart from government banks, private owned licensed commercial banks play a significant contribution to the banking service sector. Therefore, they are converting their usual servicing facilities into innovative technology-based services to their customers (Das, 2013). There are a vast amount of banks attractively providing banking services. Hence, they needed to embrace applications of technologies into their activities.

Most of the researches have been conducted to test the technology-based marketing activities in CRM rather than testing what theory says about in the marketing activities in e-CRM. Even though, there is a lack of research or study about innovation diffusion application on e-CRM. At the same time, e-CRM and private banking system related studies are also not an accountable manner. This is the significant “knowledge gap” for this study. Especially, all previous researchers

have done a single area of innovation diffusion theory application studies, e.g., characteristics of innovation (Lee, Hsieh, and Hsu, 2011; Teo, Tan, and Wei, 1995). However, this study was reviewed and suggested future empirical research propositions of a complete theory of innovation diffusion applications in e-CRM in private owned licensed commercial banks. Especially, relationship through the electronic is needed to be considered and evaluated whether innovated or diffused? Because of knowing these aspects can help in finding the appropriate solutions. The problem statement of this study is “To what extent an innovation diffusion theory (DOI) applied on electronic customer relationship management (e-CRM) in private owned licensed commercial banks?” (Cooper and Schindler, 1998). Therefore, the research objectives are to diagnose the literature and establish the future propositions for the relationship between diffusion of innovation theory (DOI) and e-CRM of private owned licensed commercial banks.

Literature review

Rogers’ diffusion theory mostly deals with technology implication in advanced education and environment related to education (Medlin, 2001; Parisot, 1995). “Technology” and “Innovation” are used as synonyms by Rogers as diffusion research includes innovation in terms of technology. There are two parts in technology: Software which is information based tool and Hardware which is visible objects in terms of technology. Communication is defined as it is a set of the process which helps the users to share ideas and information from one person to another for common realization. Channels are used between sources in the communication process (Sahin, 2006). Diffusion is one kind of communication which consists of innovation, two individual or units of adoption and channels as communication elements. Rogers (2003) stated that most behavioral researches do not consider the time aspect and time dimension in diffusion is illustrated as strength. A time dimension is included in the innovation-diffusion process, adopter categorization, and rate of adoptions. Murray (2009) stated that the potential adopters decide to adopt or reject an innovation after analyzing the innovation. However, time, energy, and careful consideration are required to decide on the adoption or rejection of innovation for the potential adopter. Individuals’ innovativeness as the primary criterion for categorizing adopters is affected by the nature of the social system. Rogers defined that categories of adopter are meant as the classification of individuals in a social system in terms of innovation. Rogers (2003) defined that individuals in each category are similar in terms of innovativeness. Innovativeness means to what extent individuals adopt innovation with other groups in the social system.

Summary of the variables of Innovation Diffusion Theory (DOI) and Electronic – Customer Relationship Management (e-CRM) have been shown in the following

tables (Table 1. and Table 2.). From first to last, researchers tried to summarize all the referential sources of the current research topic.

Table 1. Innovation Diffusion Theory

Variables	Dimensions	Sources
Innovation	1. Relative advantage	(Everett Rogers, 2003; Teo, Tan and Wei, 1995; Murray, 2009)
	2. Simplicity	
	3. Compatibility	
	4. Trialability	
	5. Observability	
Communication channels	1. Mass media channels	(Everett Rogers, 2003; Murray, 2009)
	2. Interpersonal channels	
Time	1. Knowledge	(Everett Rogers, 2003; Murray, 2009)
	2. Persuasion	
	3. Decision	
	4. Implementation	
	5. Confirmation	
Social system	1. Innovators	(Everett Rogers, 2003; Murray, 2009)
	2. Early adopters	
	3. Early majority	
	4. Late majority	
	5. Laggards	

Table 2. Electronic-customer relationship management

Variables	Dimensions	Sources
Pre-purchase e-CRM features	1. Site customization	Khalifa and Shen (2005)
	2. Membership	(Khalifa and Shen, 2005; Pan and Lee, 2003)
	3. Site information	Khalifa and Shen (2005)
At-purchase e-CRM features	1. Privacy/Security	(Khalifa and Shen, 2005; Theron and Terblanche, 2010)
	2. Payment methods	(Khalifa and Shen, 2005; Das, 2013)
	3. Product or service customization	(Khalifa and Shen, 2005; Jutla, Craig and Bodorik, 2001)
Post-purchase e-CRM features	1. FAQs	(Khalifa and Shen, 2005; Sheth and Solomon, 2014)
	2. Problem-solving	(Khalifa and Shen, 2005; Pan and Lee, 2003)
	3. Online feedback	(Khalifa and Shen, 2005; Romano and Fjermestad, 2003)

Methodology

Robust theoretical and conceptual frameworks can be developed by incorporation of constructs from different research traditions and disciplines (Douglas et al.,1994). Researchers have reviewed the past literature on Innovation diffusion theory associated with electronic customer relationship management along with underpinning aspects. Webster and Watson (2002) stated that an adequate review facilitates theory development, closes areas where a plethora of research exists, and uncovers areas where research is needed. They strongly suggested a systematic and structured approach in search and review in writing sound information system literature reviews. Therefore, researchers have conducted an exhaustive and systematic electronic search using bibliographic sources with keywords such as “Innovation diffusion theory in online banking”, “Innovation diffusion theory in e-banking”, “Innovation diffusion theory in electronic customer relationship management” and “Electronic customer relationship management in banks” in our literature search and analysis. A total of 150 electronic copies of articles were identified from 1962 to 2018 from digital libraries and online databases also, more or less 30 articles in the area of DOI in e-CRM were concerned in this current study.

Results and Discussions

Early in 1995, Teo, Tan, and Wei have studied that the innovation diffusion theory provides a basis on which factors promoting electronic financial data interchange (EDI) adoption could be identified. However, they have suggested that financial EDI being an inter-organizational system; its potential benefits can only materialize if it is widely accepted by organizations. In 2016 Buc and Divjak have done a study on environmental factors in the diffusion of innovation model: diffusion of e-learning in a higher education institution and they indicated the time required for the initial part of the process, before making a decision on the adoption of innovations depends on the potential absorption capacity of the organization to accept innovation. Moreover, also another study had done by Cheng, Kao, and Lin (2004) on the topic of an investigation of the diffusion of online games in Taiwan: An application of Rogers’ diffusion of innovation theory. They recommended that the future research should concentrate on the perceived attributes of the innovativeness of online games as a modern entrainment device, such as their relative advantages, compatibility, trialability, observability, and complexity. Same like, Diffusion of innovation theory is modified and applied in the study on 3G services adoption among university students to achieve the objective (Ong, Poong and Ng, 2008). The relationship between innovation and performance has been identified by Ferreira, Lusía and Dodinho and Manuel (2005). As per Roberts and Raphael (2007), Innovation is quickly adopted among the competitive banks.

Most of the innovation activity is created in related to ideas from outside the crucial firm. This study gives more importance on the relationship between innovation and competitive advantage. The effectiveness of Information technology in Indian banking sector has been analyzed by Jha, Gupta, and Yadav (2008). This study reveals that Indian banking sectors are vastly adopting the technology access, Up-gradations, and innovation in its different functions. For these reasons, the following propositions were formulated:

Proposition 1: *There is a significant relationship between diffusion of innovation and e-CRM of private owned licensed commercial banks.*

Proposition 2: *Innovation has a significant impact on e-CRM of private owned licensed commercial banks*

Zhang, Yu, Yan, and Spil (2015) have done a case study in a primary care clinic using diffusion of innovation theory to understand the factors impacting patient acceptance and use of consumer e-health innovations. That study has been concerned about e-health innovation and e-appointment scheduling services. Finally, researchers have listed out the factors which contribute to the low the adoption rate. They are insufficient communication about the e-appointment service to the patients, lack of value of the e-appointment service for the majority of patients who could easily make phone call-based appointment. There are limitation of the functionality of the e-appointment service, incompatibility of the new service with the patients' preference for oral communication with receptionists and the limitation of the characteristics of the patients (low level of Internet literacy, lack of access to a computer or the Internet at home and a lack of experience with online health services).

There were different studies about customers' online banking technology acceptances and the significant part of the relevant information offerings (Pikkarainen, Pikkarainen, Karjaluoto and Pahnla, 2004). According to Abu-Shanab and Anagreh (2015), e-CRM is the latest important exhortation within the business domain and is perceived as one of the effective tools in the banking sector. Reaching out to the right customer with a right service at the right time through the right means is the only way to beat out the competitors and to survive these days. Through the study on the impact of technology on competitive marketing by banks: A case study approach, Masocha, Chilya and Zindiye (2011) suggested that the personal contact which has been eroded by the arrival of technological marketing can be fully replaced by the use of such methods and the result is long-term customer relationships. Without sidelining the traditional communication methods such as the radio and TV, these only need to be massively used, and the effects are also substantive. The study on information and communication technology and banks profitability in Nigeria recommended that more attention has to be directed

towards the use of Information and Communication Technology in banking operations. Because the industry serve as a wheel of the Nation's economy while appropriate policies must be put in place to ensure proper monitoring and the determination of the optimum size required to attain organizational efficiency (Agbolade, 2011).

Sue Scullin, Fjermestad and Romano (2004) have done a study on the topic of e-relationship marketing: changes in traditional marketing as an outcome of electronic customer relationship management and they indicated that Call centers are evolving into e-contact centers with the help of eCRM. Marketing managers have a wealth of eCRM tools available to them to help them achieve their goals and objectives. Together eCRM and marketing managers can successfully implement new products, launch new marketing campaigns, and satisfy customer needs and wants. There were some studies regarding e-CRM in banks and its importance on survival in the technology era. Mishra and Dey (2013) have discussed customer-centric banking services, and they have indicated that marketing of banking services includes organizing the right activities related to right services to the right people at the right time at the right place and with right communication and promotion. Therefore, communication and time concern are positively influenced on the betterment of customer relationship management, especially in e-CRM. In the circumstances of the proliferation of electronic devices, consumers are adopting electronic banking technologies. Kolodinsky, Hogarth, and Hilgert (2004) have done a study about US consumers' e-banking adoption. Researchers discussed the differences in individual's characteristics influence on measures regarding adoption of diffusion of innovation. Therefore, the social system of a specific context categorically influences on adoption of electronic banking activities. From the above discussions, the following propositions were developed:

Proposition 3: *Communication channels have a significant impact on e-CRM of private owned licensed commercial banks*

Proposition 4: *Time has a significant impact on e-CRM of private owned licensed commercial banks.*

Proposition 5: *the Social system has a significant impact on e-CRM of private owned licensed commercial banks.*

Therefore, the proposed model is presented here below:

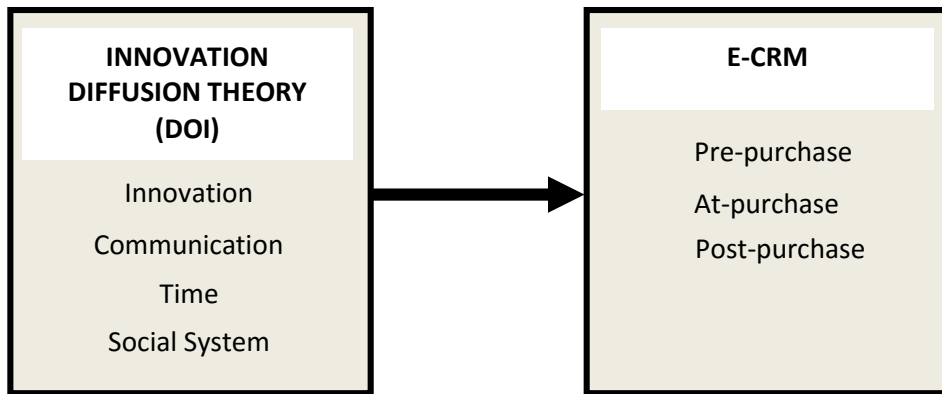


Fig. 1. Proposed model for the relationship between DOI and e-CRM

Conclusions

Based on the literature, five propositions are concluded and waiting to be tested. We can gain a stronger empirical foundation of application of innovation diffusion theory in e-CRM and may answer the propositions summarized in the paper, which therefore contribute to better understanding of DOI in e-CRM practice. The research framework is one of the very first studies which incorporates direct variables from the literature of DOI and e-CRM. The dimensions of the critical drivers are carefully identified and analyzed. Indeed, this integrative framework advances electronic banking research. Also, this research suggested that theory proposed by Everett Roger can be integrated into one framework so that the understanding and prediction of diffusion of innovation (DOI) with e-CRM is far more comprehensively grounded than by using only one line of research. This can move us towards a more wide-ranging understanding of the diffusion of innovation with e-CRM.

Recommendations

To conclude, these future propositions provide integration of existing research and a springboard for future systematic research in the area of innovative e-CRM. Next, empirical testing is needed to validate the proposed research model and to examine the relative importance of dimensions and antecedents. The relative importance of dimensions of DOI with e-CRM could be an exciting area worthy of further investigations.

References

- Abu-Shanab, E. and Anagreh, L., 2015. Impact of electronic customer relationship management in the banking sector. *International Journal of Electronic Customer Relationship Management*, 9(4), pp.254-270.
- Agbolade, O.K., 2011. Information and communication technology and banks profitability in Nigeria. *Australian Journal of Business and Management Research*, 1(4), p.102.
- Buc, S. and Divjak, B., 2016. Environmental factors in the diffusion of innovation model: diffusion of e-learning in a higher education institution. In *Central European Conference on Information and Intelligent Systems* (p. 99). Faculty of Organization and Informatics Varazdin.
- Cheng, J.M., Kao, L.L. and Lin, J.Y., 2004. An investigation of the diffusion of online games in Taiwan: An application of Rogers' diffusion of innovation theory. *Journal of American Academy of Business*, 5(1/2), pp.439-445.
- Cooper, D.R., and Schindler, P.S., 1998. The research proposal. *Business research methods*, 6, pp.86-103.
- Das, S.K., 2013. Social and innovative banking strategies for sustainable banking in India. *International Journal of Economics, Finance, and Management*, 2(2).
- Ferreira, L.L. and Dodinho, M.M., 2005. *Service Innovation and Economic Performance: An Analysis at Firm-level* (No. 05-08). DRUID working paper.
- Jha, B.K., Gupta, S.L. and Yadav, P., 2008. Use and Effectiveness of New Technologies in Indian Banking: A Study. *ICFAI Journal of Services Marketing*, 6(1).
- Jutla, D., Craig, J. and Bodorik, P., 2001, January. Enabling and measuring electronic customer relationship management readiness. In *System Sciences, 2001. Proceedings of the 34th Annual Hawaii International Conference on* (pp. 10-pp). IEEE.
- Khalifa, M. and Shen, N., 2005, January. Effects of electronic customer relationship management on customer satisfaction: A temporal model. In *System Sciences, 2005. HICSS'05. Proceedings of the 38th Annual Hawaii International Conference on* (pp. 171a-171a). IEEE.

- Kolodinsky, J.M., Hogarth, J.M. and Hilgert, M.A., 2004. The adoption of electronic banking technologies by US consumers. *International Journal of Bank Marketing*, 22(4), pp.238-259.
- Lee, Y.H., Hsieh, Y.C. and Hsu, C.N., 2011. Adding innovation diffusion theory to the technology acceptance model: Supporting employees' intentions to use e-learning systems. *Journal of Educational Technology & Society*, 14(4), p.124.
- Masocha, R., Chiliya, N. and Zindiye, S., 2011. The impact of technology on competitive marketing by banks: A case study approach. *African Journal of Marketing Management*, 3(3), pp.68-77.
- Medlin, J., 2001. An array of hope for gene technology. *Environmental Health Perspectives*, 109(1), p.A34.
- Mishra, S.D. and Dey, S.K., 2013. E-CRM in Indian banking industry: A tool for survival in the technology ERA. *ZENITH International Journal of Business Economics & Management Research*, 3(6), pp.62-68.
- Murray, C.E., 2009. Diffusion of innovation theory: A bridge for the research-practice gap in counseling. *Journal of Counseling & Development*, 87(1), pp.108-116.
- Ong, J.W., Poong, Y.S. and Ng, T.H., 2008. 3G services adoption among university students: Diffusion of innovation theory. *Communications of the IBIMA*, 3(16), pp.114-121.
- Pan, S.L. and Lee, J.N., 2003. Using e-CRM for a unified view of the customer. *Communications of the ACM*, 46(4), pp.95-99.
- Parisot, A.H., 1995. *Technology and teaching: The adoption and diffusion of technological innovations by a community college faculty* (Doctoral dissertation, Montana State University-Bozeman, College of Education, Health & Human Development).
- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., and Pahnla, S., 2004. Consumer acceptance of online banking: an extension of the technology acceptance model. *Internet research*, 14(3), pp.224-235.

- Roberts, P.W. and Raphael, A., 2007. Retail Banking on Innovation: the Dynamics of Innovative Activity and Competitive Advantage, the case of Australian Retail Banking 1981 to 1995. *Journal of Organization Science*, 14, pp.107-122.
- Rogers, E.M., 1962. 1995. *Diffusion of Innovations*. New York.
- Rogers, E.M., 2003. Elements of diffusion. *Diffusion of innovations*, 5(1.38).
- Romano, N.C. and Fjermestad, J., 2003. Electronic commerce customer relationship management: A research agenda. *Information Technology and Management*, 4(2-3), pp.233-258.
- Sahin, I., 2006. A detailed review of Rogers' diffusion of innovations theory and educational technology-related studies based on Rogers' theory. *TOJET: The Turkish Online Journal of Educational Technology*, 5(2).
- Sheth, J.N. and Solomon, M.R., 2014. Extending the extended self in a digital world. *Journal of Marketing Theory and Practice*, 22(2), pp.123-132.
- Sue Scullin, S., Fjermestad, J. and Romano Jr, N.C., 2004. E-relationship marketing: changes in traditional marketing as an outcome of electronic customer relationship management. *Journal of Enterprise Information Management*, 17(6), pp.410-415.
- Teo, H.H., Tan, B. and Wei, K.K., 1995. Innovation diffusion theory as a predictor of adoption intention for financial EDI. *ICIS 1995 Proceedings*, p.14.
- Theron, E. and Terblanche, N.S., 2010. Dimensions of relationship marketing in business-to-business financial services. *International Journal of Market Research*, 52(3), pp.373-392.
- Zhang, X., Yu, P., Yan, J. and Spil, I.T.A., 2015. Using diffusion of innovation theory to understand the factors impacting patient acceptance and use of consumer e-health innovations: a case study in a primary care clinic. *BMC health services research*, 15(1), p.71

Development of Conceptual Model for Social Media Characteristics and Consumers' Purchase Intention

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Introduction

Social media marketing is an evolving topic in the marketing field. During the past decade, the fast pace of web-based technology led to a drastic change in the way we do marketing. The rapid evolution of the internet and specifically the social media has offered consumers countless new opportunities to search and share information about products and services from the desk itself with less effort rather going out to field (Khatib,2016). Earlier days, consumers were waiting for companies to push messages toward them but now directly seeking information on social media. In this manner, under the web-based technology, social media as everybody knows and familiars with their use have already become part of daily routine of most people, it would majorly impact on inducing consumers' purchase intention. As social media is penetrating rapidly into the society, organizations are ever more adapting them as a partner of their promotional and brand enriching activities (Gallaugher&Ransbotham, 2010). Even though Social Media is being recognized as a powerful bondage between consumers and organizations, a small number of organizations feel comfortable in the adaptation of this new phenomenon (Kaplan &Haenlein, 2010; Bartlett, 2010; Hackworth & Kunz, 2011) because the influence of social media on consumers' purchase intention is still unclear among them. Thus it is essential to emphasize the influence of social media on consumers' purchase and business success (Smith, 2011). Even though only a small number of organizations feel comfortable in the adaptation of this new phenomenon (Kaplan &Haenlein, 2010; Bartlett, 2010; Hackworth & Kunz, 2010).

Recent studies consider social media as a newly emerging promotional tool (Berinato&Clark, 2010) that upsurges marketing communication successfully (Dholakia & Durham, 2010; Kozinets, De Valck, Wojnicki&Wilner, 2010;

Trusov, Bucklin & Pauwels, 2009), and very few emphasis on how firms may benefit from them (Dong-Hun, 2010). To the best of our knowledge, there is a lack of studies examining the impact of social media on consumers' purchase intention. Taprial and Kanwar (2012) stated five properties that are more powerful and distinguish the social media from traditional media. They are accessibility, speed, interactivity, longevity and reach. Pjero and Kercini (2015) had researched by focusing on social media and its influence on consumer behavior, observed that information about products and services offered in the virtual world could positively impact on consumers' purchase intentions. At present, more good responses on the products or services, the more attractiveness for consumer purchasing come from social media platforms. Most of the top brands and services noticed it and started to focus on social media marketing. Given the growing number of Internet users, the factors of social media that influence the purchase intention of customers need to be explored (Kaplan&Haenlein, 2010). Social networking sites of brands assist in making better decisions than before purchasing goods and services (Wang & Chang, 2013). Considering this gap, the present study mainly focuses on analyzing the past studies to prepare the future research on consumers' purchase intention with social media. In the current scenario of marketing, in order to do the promotional activities effectively, it is very appropriate to develop propositions and a new model to make firms to get very much understanding of the importance of social media in terms of building consumers' purchase intention. Because, the higher the purchase intention, the higher a consumer's readiness to purchase a product (Husnain, Qureshi, Fatima&Akhtar, 2016).

The problem statement of this study is "What are the characteristics of Social media influence on consumers' purchase intention?" The research objective is to diagnose the future propositions for the association between social media and consumers' purchase intention.

Main Objective of the study

- To understand the impact of social media on consumers' purchase intention

Sub-objective of the study

- To understand the various characteristics of social media and their impact on consumers purchase intention

Literature Review with Conceptual Model

Social media as a group of Internet-based applications that build on an ideological and technological foundation of Web 2.0 and that allow the creation and exchange of User Generated Content (Kaplan &Haenlein, 2010). Parr (2010) defined that the

social media as the use of electronic and internet tools to share and discussing information and experiences with other interested communities in more efficient ways. Social media can put the consumers in the central role of the business activities and provides a new aspect of tools for the interaction of consumers. Businesses have to think that how the social media has affected consumer buying behavior. In order to do the promotional activities, the emergence of the social media helps to make customers aware of products and to take their buying decision easier. Therefore, the consumers' purchase intention can be easily changed. Purchase intention can measure the probability of a consumer's product purchasing (Dodds, Monroe & Grewal, 1991; Schiffman & Kanuk, 2000). A recent survey seeks out that Web 2.0 benefits businesses to increase consumers' satisfaction 50 percent (Bughin & Chui, 2010). There is 69 percent of companies adopting Web 2.0 have gained assessable business profits (Quarterly, 2009).

Nowadays, consumers actively receive information about products and services by consulting others through online social media platforms. They search for others' valuable comments again and again before making a purchase. Furthermore, Stelzner (2011) writes that social media signifies marketing opportunities which can connect firms directly with their consumers and he also found that 90% of marketers indicated that social media was important for their business, 33% of marketers are forming metrics to measure social media as part of their return on investment (ROI). According to Scarborough and Norman (2016), 44 percent of entrepreneurs use social media to communicate with current and potential customers. This figure is still going up as more people search for information on social media. A study conducted by Kim and Ko (2012) also indicated that 70 percent of consumers browsed social media in order to get appropriate purchasing information and out of them, there was 49 percent made purchase decision according to what they got from these social media platforms. The association between social media and consumers' decision-making states that social media affect advertising attitudes, brand attitudes, and purchasing intentions of the consumer (Khatib, 2016). Purchase intention is an indicator for evaluating consumer behavior (Ahmad, 2016).

Understanding the social media characteristics is crucial for both individuals and companies to compete in the market. If consumers have a good understanding of social media skills and perception of social media characteristics, they will make their life easier. When companies are employing social media, as part of their marketing strategy, they understand that the characteristics of social media will survive by competing in the current market. Ahmad (2016) has done a research to test the role of social media as information providing sources in the healthcare industry in Saudi Arabia. He identified that usability characteristics (connectedness, openness, speed, accessibility, and participation) of social media

play a vital role as to search information by potential buyer and the finding of that research was that social media had direct influences on every stage of the consumer decision-making process as well as influencing general opinions and attitude formation. This finding is consisting with previous literature (e.g., Kaplan & Haenlein, 2009; Mangold & Faulds, 2009). Khatib (2016) had found out that social media appears to affect consumer behavior of users positively. Therefore, it is indispensable for online marketers to pursue social media factors which have a positive effect on consumer purchase intention.

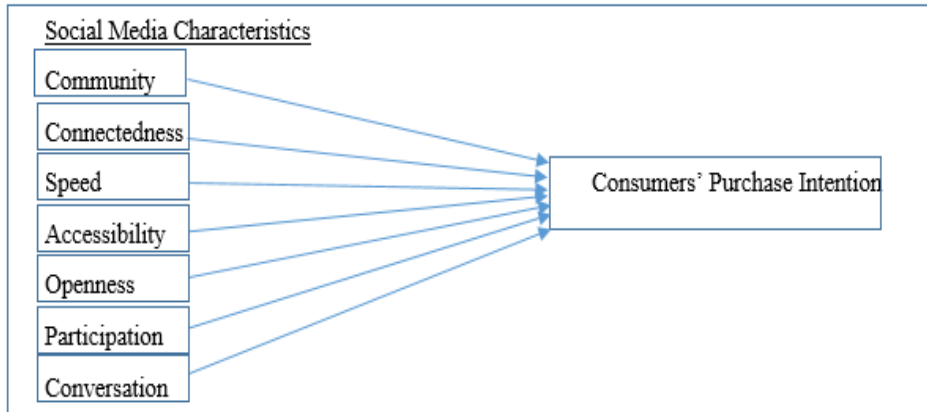
Ahmad (2016) proposed and examined a five-factor model that impacts purchasing behaviors. These factors comprise the independent variables of social media usability viz. connectedness, openness, speed, accessibility, and participation, whereas the dependent variable is purchasing behavior. Mayfield (2008) and Chen (2014) pointed out five fundamental characteristics that shared by almost all social media platforms: community, connectedness, speed, accessibility, openness, participation and conversation.

Table 01: Constructs and Past Studies

Variable	Measures	Sources
Social media	<i>Community</i> : online or virtual group formed by people who share the common interests.	Mayfield (2008); Teo, Chan, Wei, and Zhang (2013); Chen (2014)
	<i>Connectedness</i> : integration of online resources and people through sharing and making use of links.	Mayfield (2008); Riedl, Köbler, Goswami, and Krcmar (2013); Chen (2014); Ahmad (2016)
	<i>Accessibility</i> : No special skills are needed, and slight efforts are needed to access social media	Khatib (2016), Mayfield (2008), Chen (2014); Han (2014)
	<i>Openness</i> : Encourages feedback and participation without constraints and no barriers to make use of and share content.	Mayfield (2008); Chen (2014); Taprial and Kanwar (2012); Ahmad (2016); Khatib (2016); Davis (1989); Yoo & Donthu (2000); Wathne, Roos, Von and Krogh (1996);
	<i>Speed</i> : the degree to which how fast the content is available and accessible to users.	Mayfield (2008); Taprial, Varinder, Kanwar and Priya (2012); Chen (2014); Ahmad (2016)
	<i>Participation</i> : Two or more interested parties voluntarily interact with each other on social media making contributions and feedbacks	(Kaplan, Andreas, Michael Haenlein (2010); Mayfield, 2008; Taprial et al. (2012). Burgoon, Bonito, Bengtsson, Ramirez, Dunbar, and Miczo (2000), Chen (2014)
	<i>Conversation</i> : The ideal form of interactivity where two-way communication exists in social media.	Kaplan et al. (2010); Mayfield (2008), Chen (2014), Taprial and Kanwar (2012); Han (2014)

Purchase Intention	The probability of willingness to buy products or services in future	Liu(2013), Kim, Kim & Johnson (2010), Kim, Park, Lee, Knight, Xu, Jeon and Moon (2010).
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As a result, the proposed model would be as follow:



Research Propositions

Spanner (2007) stated that two characteristics of social media namely, community and connectedness which signify the sociability function of social media. People who are in the community which has similar interests would be willing to have attention and discussions as well as trust among community members (Yang, Mai & Ben-Ur, 2011). A study on online ties or connectedness suggested that product-related risks have a moderating impact on consumers' perceived value on purchasing (Riedl, Kobler, Goswami, & Krcmar, 2013). The social web among communities has had an impact on peoples' ability to acquire and share correct information about products or services available in the market both before making a purchasing decision and after purchasing (Khatib, 2016). Interactivity is linked to web site quality. Playfulness, connectedness and shared communication are online interactivity dimensions which were proven as essential factors to improve purchase intention and to make customers loyalty on brands (Chen & Yen, 2004). Community is being represented as a vital source to gather information about products by consumers and community members quickly and accurately to enhance their purchasing decision (Muniz & O'Guinn, 2001). Concerning the characteristic of social media connectedness which has the positive effect on buyer trust on purchasing decision (Mayfield, 2008). Based on the above discussion the following proposition is developed.

Proposition 1: The community and connectedness features of social media have an impact on consumers' purchase intention

The technology acceptance model (TAM) has been continuously studied and expanded by many researchers in order to measure the user acceptance and usage

of technology and thus its influence on their behavioral intentions. One of the conclusions in the TAM model is that even if potential users perceive the given system or technology is useful, it will be moderated by their belief if they think the system or technology is too problematic to use and performance benefits of usage are outweighed by the effort of using the system or technology (Davis, 1989). In the case of social media, it is reasonable to be inspired by the TAM model and therefore employs some concepts from it. Social media, as a new form of internet technology and communication tool, does require users to basic knowledge about internet and computer technology. Three characteristics of social media that are speed, accessibility, and openness (Taprial& Kanwar, 2012); (Mayfield, 2008). These three characteristics can be categorized under the construct perceived ease of use in the TAM model.

The speed of using social media has a significant positive influence on buyers' trust on social media, and consequently, it leads to a positive effect on consumers' purchasing behavior (Taprial and Kanwar, 2012); (Ahmad,2016). According to Mayfield (2008); Taprial, and Kanwar (2012); Ahmad, (2016); Khatib (2016) consumers trust on purchasing will be enhanced due to the accessibility of social media and information available on social media. (Kim & Lim, 2011); (Yoo&Donthu, 2000) found out that convenience of use or accessibility of social media is one of the important reasons to choose online shopping mall as well as impacts on consumer attitudes and behaviors on purchasing. Regarding the social media openness, the positive influence of openness on buyer trust is supported with statistical significance. However, openness helps users to create trust on social media (Mayfield, 2008); (Ahmad, 2016). So based on these facts, the following proposition is proposed:

Proposition 2: The social media characteristics of speed, accessibility, and openness have an impact on consumers' purchase intention

Even though the sociability is the most appealing characteristics of social media, it will not be effective unless people participate and involve with other participants in the platform. A finding stated that participants' perceived values from persistence participation on social media positively affect persistent participation intentions and behavior in purchasing (Al-Debei, Al-Lozi, &Papazafeiropoulou, 2013). Burgoon et al. (2000) and Mayfield (2008) indicated that consumers' participation on social media platforms viz. searching for information and sharing, chatting, commenting, etc. has a significant influence on consumers' trust on them. From the above discussion, the following proposition is developed.

Proposition 3: There is an influence of participation characteristic of social media on consumers' purchase intention

Conversation on social media platforms is stated as online word of mouth which is more effective in spreading information as it is documented in the form of written words and people can find the required information about products or services according to their wish. Kantarin (2012) showed that there is a positive effect existing between online WOM and purchase intention. There is a finding that causes and effect relationship between social media (Web 2.0) experience and consumers' purchase intention has been highlighted in the Foresee Results Report (2011) which scrutinized particularly the social networking and interaction orientation variables which are to be expected to impact online consumers' purchase intention and purchasing behavior. Lee (2012) and Khatib (2016) argued that interactivity on social media enhances loyalty, repurchase intention, and brand preference and he continued that interaction leads to build and maintain the relationship and feedback loop as conversations are more lively and two-way. Based on the above reviews, the following proposition is proposed

Proposition 4: There is an influence of Conversation characteristic of social media on consumers' purchase intention.

Conclusions

Based on the past literature referred, four propositions were proposed, and the future researchers would test these. The research conceptualization model incorporates direct variables from the literature of social media and purchase intention. The researchers have carefully identified the dimensions under the two variables viz. social media and consumers' purchase intention. Certainly, this integrative proposed framework will improve future researchers to conduct studies on the area of social media marketing in terms of consumers' purchase intention since social media as an unconventional means of the promotional way it plays a vital role for marketers to survive in the competitive marketplace in the contemporary business world. Empirical testing is essential in order to validate the proposed research model and to examine the relative importance of dimensions and antecedents. The relative importance of characteristics of social media with purchase intention could be exciting area and well-intentioned for further more future investigations.

References

Ahmad, A.E.M.K., 2016. Social Media Usability and Its Impact on Buyer Purchasing Behavior Based on Buyer's Trust: Saudi Arabia Context. *International Journal of Business Administration*, 8(1), p.87.

Al-Debei, M.M., Al-Lozi, E. and Papazafeiropoulou, A., 2013. Why people keep coming back to Facebook: Explaining and predicting continuance participation

from an extended theory of planned behavior perspective. *Decision support systems*, 55(1), pp.43-54.

Bartlett, M., 2010. How to use social media to develop realtor relationships. *Credit Union Journal*, 14(39), p.4.

Berinato, S. and Clark, J., 2010. Six ways to find value in Twitter's noise.

Bughin, J. and Chui, M., 2010. The rise of the networked enterprise: Web 2.0 finds its payday. *McKinsey Quarterly*, 4, pp.3-8.

Burgoon, J.K., Bonito, J.A., Bengtsson, B., Ramirez Jr, A., Dunbar, N.E. and Miczo, N., 1999. Testing the interactivity model: Communication processes, partner assessments, and the quality of collaborative work. *Journal of management information systems*, 16(3), pp.33-56.

Chen, L., 2014. The influence of social media on consumer behavior: An empirical study on factors influencing consumer purchase.

Chen, K. and Yen, D.C., 2004. Improving the quality of an online presence through interactivity. *Information & Management*, 42(1), pp.217-226.

Davis, F.D., 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, pp.319-340.

Dholakia, U.M. and Durham, E., 2010. One café chain's Facebook experiment. *Harvard Business Review*, 88(3), p.26.

Dodds, W.B., Monroe, K.B. and Grewal, D., 1991. Effects of price, brand, and store information on buyers' product evaluations. *Journal of marketing research*, pp.307-319.

Dong-Hun, L., 2010. Korean consumer & society: the growing popularity of social media and business strategy. *SERI Quarterly*, 3(4), p.112. Fore See Results, 2011. Top 100 online retail satisfaction index. Retrieved January 20, 2012, from http://www.foreseeresults.com/research-white-papers/_downloads/top-100-online-retail-satisfaction-index-2011-foresee.pdf. Moreover, Ransbotham, S., 2010. Social media and customer dialog management at Starbucks. *MIS Quarterly Executive*, 9(4).

Hackworth, B.A. and Kunz, M.B., 2011. Health care and social media: building relationships via social networks. *Academy of Health Care Management Journal*, 7(2), p.1.

Han, M.C., 2014. How social network characteristics affect users' trust and purchase intention. *International Journal of Business and Management*, 9(8), p.122.

Husnain, M., Qureshi, I., Fatima, T. and Akhtar, W., 2016. The impact of electronic word-of-mouth on online impulse buying behavior: The moderating role of Big 5 personality traits. *J Account Mark*, 5(190), pp.1-10.

2012. The effect of electronic word of mouth, trust and perceived value on behavioral intention from the perspective of consumers. *International journal of academic research in economics and management sciences*, 1(4), p.56.

Kaplan, A.M. and Haenlein, M., 2010. Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), pp.59-68.

Kaplan, A.M. and Haenlein, M., 2010. Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), pp.59-68.

Khatib, F., 2016. The impact of social media characteristics on purchase decision empirical study of Saudi customers in Aseer Region. *International Journal of Business and Social Science*, 7(4), pp.41-50.

Kim, J., Kim, J.E. and Johnson, K.K., 2010. The customer-salesperson relationship and sales effectiveness in luxury fashion stores: the role of self-monitoring. *Journal of Global Fashion Marketing*, 1(4), pp.230-239.

Kim, A.J. and Ko, E., 2012. Do social media marketing activities enhance customer equity? An empirical study of a luxury fashion brand. *Journal of Business Research*, 65(10), pp.1480-1486.

Kim, K.H., Park, S.Y., Lee, S., Knight, D.K., Xu, B., Jeon, B.J. and Moon, H.I., 2010. Examining the relationships among attitude toward luxury brands, customer equity, and customer lifetime value in a Korean context. *Journal of Global Academy of Marketing*, 20(1), pp.27-34.

Kim, S.Y. and Lim, Y.J., 2001. Consumers' perceived importance of and satisfaction with internet shopping. *Electronic Markets*, 11(3), pp.148-154.

Kozinets, R.V., De Valck, K., Wojnicki, A.C. and Wilner, S.J., 2010. Networked narratives: Understanding word-of-mouth marketing in online communities. *Journal of marketing*, 74(2), pp.71-89.

Lee, J.N., 2012. A study on the structural relationship of interaction, identification, and loyalty of the online brand community in China. *Journal of Digital Convergence*, 10(11), pp.235-241.

LIU, D., 2013. Factors influencing Chinese Consumer Online Group-Buying Purchase Intention: An Empirical Study.

Mangold, W.G. and Faulds, D.J., 2009. Social media: The new hybrid element of the promotion mix. *Business Horizons*, 52(4), pp.357-365.

Mayfield, A., 2008. What is social media? Retrieved from Crossing: <http://www.icrossing.com/icrossing-what-is-social-media>

Muniz, A.M. and O'guinn, T.C., 2001. Brand community. *Journal of consumer research*, 27(4), pp.412-432.

Parr, B., 2008. It is Time to Define Social Media: No More Arguing. Here's the Definition.

Pjero, E. and Kërcini, D., 2015. Social Media and Consumer Behavior–How Do it Works in Albania Reality?. *Academic Journal of Interdisciplinary Studies*, 4(3 S1), p.141.

Quarterly, M., 2009. How companies are benefiting from Web 2.0: McKinsey global survey results. *Business Technology Office*, (September 2009) http://www.mckinseyquarterly.com/How_companies_are_benefiting_from_Web_20_McKins ey_Global_Survey_Results_2432.

Riedl, C., Köbler, F., Goswami, S. and Krcmar, H., 2013. Tweeting to feel connected: A model for social connectedness in online social networks. *International Journal of Human-Computer Interaction*, 29(10), pp.670-687.

Scarborough, N.M., 2016. *Essentials of entrepreneurship and small business management*. Pearson.

Schiffman, L. G. & Kanuk, L. L. (2000). *Consumer Behavior* (7th ed.). Wisconsin: Prentice Hall.

Smith, B.G., 2010. Socially distributing public relations: Twitter, Haiti, and interactivity in social media. *Public relations review*, 36(4), pp.329-335. Spanner., 2007. What is social media?. Retrieved April 20, 2011. From http://www.icrossing.co.uk/fi_leadadmin/uploads/eBooks/What_is_Social_Media_I_Crossing_ebook.pdf

Stelzner, M.A., 2011. Social media marketing industry report. *Social Media Examiner*, 41, pp.1-10.

Taprial, V. and Kanwar, P., 2012. *Understanding social media*. Bookboon.

Teo, H.H., Chan, H.C., Wei, K.K. and Zhang, Z., 2003. Evaluating information accessibility and community adaptivity features for sustaining virtual learning communities. *International Journal of Human-Computer Studies*, 59(5), pp.671-697.

Trusov, M., Bucklin, R.E., and Pauwels, K., 2009. Effects of word-of-mouth versus traditional marketing: findings from an internet social networking site. *Journal of marketing*, 73(5), pp.90-102.

Wang, J.C., and Chang, C.H., 2013. How online social ties and product-related risks influence purchase intentions: A Facebook experiment. *Electronic Commerce Research and Applications*, 12(5), pp.337-346.

Wathne, K., Roos, J. and Von Krogh, G., 1996. Towards a theory of knowledge transfer in a cooperative context. *Managing Knowledge-Perspectives on cooperation and competition*, pp.55-81.

Yang, J., Mai, E. and Ben-Ur, J., 2012. Did you tell me the truth?: The influence of online community on eWOM. *International Journal of Market Research*, 54(3), pp.369-389.

Yoo, B., Donthu, N. and Lee, S., 2000. An examination of selected marketing mix elements and brand equity. *Journal of the academy of marketing science*, 28(2), pp.195-211.

Factors Influencing on Customer Satisfaction of FTTH Broadband Services in Vavuniya District

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Introduction

Customer Satisfaction can be defined as a feature or characteristics that can fulfill a need of a consumer in a better way than competitors. If a company provides a product or service as per the requirements of their consumers, it will lead the satisfaction of those consumers. The higher or lower satisfaction of a consumer will depend upon the quality of brand characteristics that offered by a company (Gerpott, T. J,2001). For the retention of consumers, it is essential to satisfied consumers (Guo, L, 2009). The unsatisfied consumers of a company will not take much time to switch the operator (Lin, J. S. C., 2011).

Penetration of fixed-line broadband services among the fixed line telephone users in Vavuniya is significant in Sri Lanka. Most of the broadband consumers have been satisfied with access through ADSL or 3G (HSPA) data services with affordable prices and not much interested with new incoming technologies such as Fiber to The Home (FTTH) or LTE. The FTTH broadband services were introduced very recently and utterly different from previous broadband access technologies. It is crucial to know about customer satisfaction level of the FTTH broadband internet access. Hence it is essential to examine the factors affecting the FTTH broadband services. The objectives of the present study are;

- To identify the factors influencing the customer satisfaction of FTTH broadband services in Vavuniya District.
- To measure the impact of influencing factors on the customer satisfaction of FTTH broadband services in Vavuniya District.

This study is focused on the level of customer satisfaction in the telecommunications industry for FTTH broadband access services and examines the factors influencing the customer satisfaction in the Telecommunication services in Vavuniya District.

Literature review

Telecommunications enables undertaking social, economic, political, cultural, trade and commercial activities. Hence, the nature of a country's telecommunications industry affects its pace of commercial and domestic activities. Of course, the telecommunications industry plays a vital role in the Sri Lankan economy. Service quality, service recovery, pricing, brand image, and customer services are playing a vital role in customer satisfaction in telecommunication services.

Despite the widespread recognition attached to customer satisfaction, researchers have not yet agreed on one global definition for it. Although the constructs have been thoroughly explored, one theoretical model has not and likely will not be accepted due to the complex process involved in arriving at a customer's judgment of satisfaction or dissatisfaction. Swan and Combs (1976) defined satisfaction as a post-purchase attitude. Westbrook (1980) introduced the notion that customer satisfaction involves cognitive and affective aspects in pre-purchase, purchase and post-purchase phases of buying goods and receiving services. Rust and Oliver (1999) suggest that customer satisfaction or dissatisfaction emerges as a response to a single or prolonged set of service encounters.

Service quality is a consumer's overall impression of the relative inferiority or superiority of an organization and its services (Bitner and Hubbert, 1994). Service recovery refers to the actions an organization takes in response to a service failure (Gronroos, 1988). Pricing is an essential factor in the marketing mix. Balmer (2009) highlights the importance of brand image, asserting that a link exists between an individual's image of the organization and that person's behavior towards it. Customer service is an essential factor of the marketing mix for any product or service.

Methodology

The Conceptual model of the present study is illustrated in Figure 1. The conceptual model indicates the independent and dependent variables of the Study.

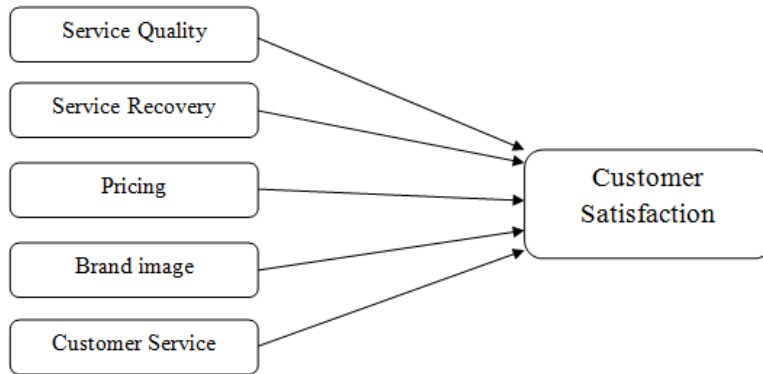


Fig. 1: Conceptual Model

Service quality, service recovery, pricing, brand image, and customer service considered as independent variables and customer satisfaction considered as the dependent variable of this study.

FTTH broadband customers in Vavuniya District considered as a population of this study. The total population of this study is 249. 152 customers were selected as sample of this study, and the random sampling technique was used for this study purpose. The structured questionnaire issued among the randomly selected customers in Vavuniya District and Likert five scale method is using in the questionnaire.

The collected data were analyzed by using Statistical Package for Social Sciences (SPSS 20.0). Regression analyses were done for measuring the impact on the independent and dependent variables in the present study.

Results and Discussions

The regression analysis was done for measuring the impact of independent and dependent variables of this study. The results indicated that the service quality of the Telecom industry has a significantly positive impact on the customer satisfaction of the FTTH broadband ($\beta = 0.658, p > 0.1$). The brand image has also positively significant impact on the customer satisfaction ($\beta = 0.284, p > 0.5$). The service recovery of the FTTH broadband has a negative impact on the customer satisfaction ($\beta = -0.271, p > 0.1$). The results are illustrated in Table 1.

The R^2 of the present study has highly significant ($\Delta R^2 = .773, p < .01$). It indicates that the factors influencing the customer satisfaction have a significant impact on the customer satisfaction of the present study. Further, the influencing factors have 73% (of the variance in the customer satisfaction. A significant simple linear regression equation was found $F = 17.704, P < .01$. The F value also has

significance in this study. The results indicated in Table 2 and Table 3. Therefore, the factors have profoundly impact on the customer satisfaction of the FTTH broadband services. Especially service quality and brand image have a higher impact on the customer satisfaction than the other variables in this study.

Table 1: Regression Results of the Independent and Dependent Variables

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.786	.463		1.699	.099
Service quality	.705	.166	.658	4.252	.000
Service recovery	-.315	.140	-.271	-	.033
				2.252	
Price fairness	.159	.142	.165	1.121	.273
Brand image	.273	.143	.284	1.918	.046
Employee customer orientation	-.029	.115	-.033	-.254	.801

Source: Survey Data

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate	Durbin-Watson
1	.879 ^a	.773	.729	.44486	2.206

Source: Survey Data

Table 3: Anova

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	17.518	5	3.504	17.704	0.000
Residual	5.145	172	.198		
Total	22.663	177			

Conclusions and Recommendations

Based on the empirical results, this study concludes those service quality and brand images are the most critical factors of customer satisfaction with FTTH broadband services.

Second, the result of the significant impact of the brand image on the customer satisfaction. The finding indicates that brand image is an essential element in the customers' perspective. Therefore, it has a significant impact on the customer satisfaction.

References

Auh, S., and Johnson, M. D. (2005). Compatibility effects in evaluations of satisfaction and loyalty. *Journal of Economic Psychology*, 26, 35-57.

Balmer, J.M.T. (2009), "Corporate marketing: apocalypse, advent, an epiphany," *Management Decision*, Vol. 47 No. 4, pp. 544-572.

Bitner, M.J. and Hubbert, A.R. (1994), "Encounter satisfaction versus overall satisfaction versus quality," in Rust, R.T. and Oliver, R.L. (Eds), *Service Quality: New Directions in Theory and Practice*, Sage, London.

Bodet, G. (2008). Customer satisfaction and loyalty in service: two concepts, four construct several relationships. *Journal of retailing and consumer services*, 15, 156-162. Offline environments. *International journal of research in marketing*, 20, pp153-175.

Gerpott, T. J., Rams, W., & Schindler, A. (2001) Customer retention, loyalty, and satisfaction in the German mobile cellular telecommunications market *Telecommunications Policy*, 25, 249-269.

Gronroos, C. (1988), "Service quality: the six criteria of good perceived service quality," *Review of Business*, Vol. 9, pp. 10-13.

Guo, L., Xiao, J. J., and Tang, C. (2009). Understanding the psychological process underlying customer satisfaction and retention in a relational service. *Journal of Business Research*, 62, 1152.1159.

Lin, J. S. C., and Wu, C. Y., (2011). The role of expected future use in relationship-based service retention. *Managing Service Quality*, 21(5), 535-551.

Rust, R. T., and Oliver, R. L. (1994). Insights and managerial implications from the frontier. In R. T. Rust & R. L. Oliver (Eds.), *Service quality: New directions in theory and practice* (pp. 1–19). Thousand Oaks, CA: Sage

Rust, R. T., and Zahorik, A. J. (1993). Customer Satisfaction, Customer Retention, and Market Share. *Journal of Retailing*, 69 (2), 193-215.

Swan, J. and Combs, L. (1976). Product performance and consumer satisfaction: a new concept, *Journal of Marketing*, 40 (7), 25–33.

Westbrook, Robert A, (1980), —Interpersonal Affective Influences on Consumer Satisfaction with Product. *Journal of Consumer Research*, Vol. 7, pp. 49-54

The implication of Service Quality On Customer Satisfaction in Performance Evaluation in Finance Firms in Sri Lanka

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Introduction

When we talked about the finance sector in Srilanka, there is a huge competition there. If the firms are wishing to exist in the finance sector, it is essential to pay attention to the customer satisfaction. No matter whether the organization is small, significant, profit-oriented, non- profit oriented, locally operating or globally operating one, customer satisfaction and service quality are key factors which affect for all of the organizations. In order to evaluate the customer satisfaction, we should have to have a performance evaluation system in our firms. Performance measurement is a critical factor to achieve the firm's objectives, translating strategy into action, monitoring and implementing the process of the organization. Primary objective of this study is to evaluate the implications of service quality and customer satisfaction of finance firms in Srilanka. Complementary objectives are to identify the necessity of customer satisfaction and to examine the usage level (utilization level) of customer satisfaction.

Literature Review

Basic Concepts of Performance Management

Neely (1995) described performance measures as the process of qualifying action so that it is a process of qualifying of an action which correlated with performance.

Importance of non-financial measures

Monroe and Woodliff (2009) it is clear that non-financial measures have many advantages over financial ones. It is argued that companies should be encouraged to disclose non-financial performance measurements provide evidence on the effect of voluntary disclosure of non-financial performance information and the impact on financial statement users.

Reasons for using non-financial measures

Brancato (1995) Scholars and practitioners use a diverse set of reasons to explain the use of non-financial information for measuring and rewarding managerial performance.

Service quality

Traditionally service quality has been defined as the difference between customer expectation and perception of the service.

Based on the study researcher developed hypothesis which shows the relationship between the independent variables and the dependent variable.

H1-Tangible features of finance firms positively influence customer satisfaction.

H2-Responsiveness features of finance firms positively influence customer satisfaction.

H3-Knowledge features of finance firms positively influence customer satisfaction.

H4-Recovery features of finance firms positively influence customer satisfaction.

H5-Reliability and trust features of finance firms positively influence customer satisfaction.

H6-Accessibility and flexibility features of finance firms positively influence customer satisfaction.

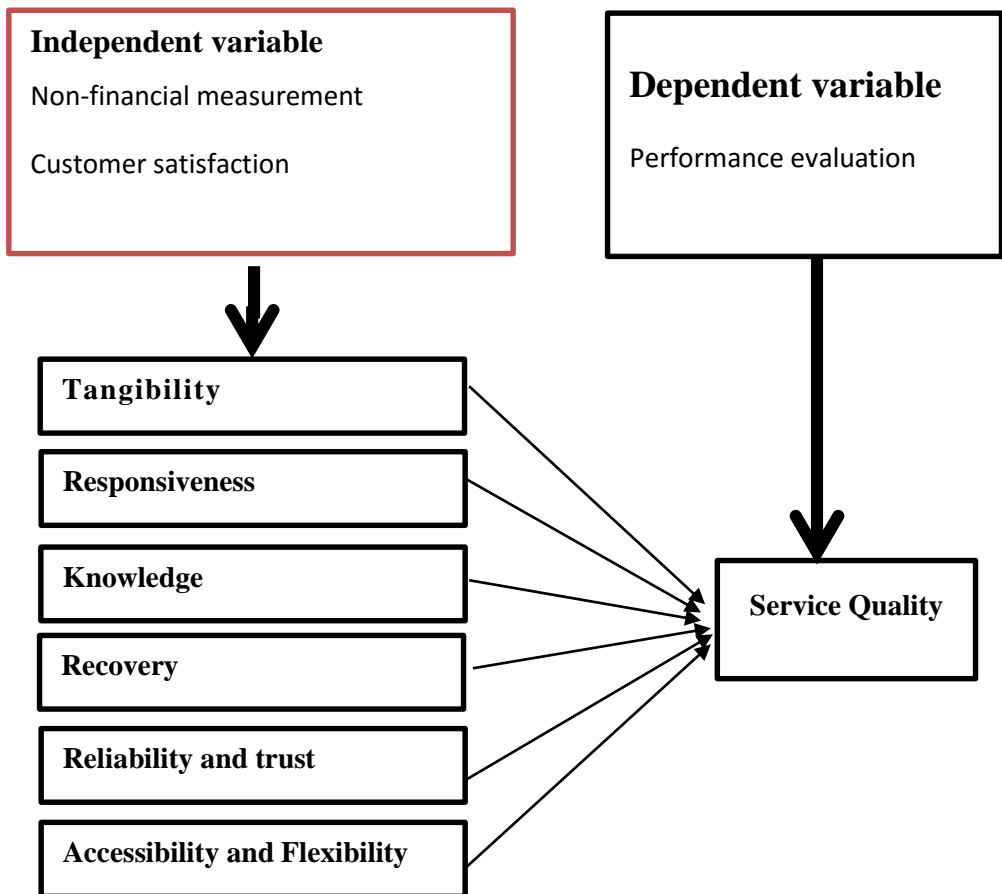
Methodology

Research methodology or a study design refers merely to the system of collecting data for a particular research project. Such data may be collected in order to conduct theoretical or practical research.

A quantitative approach was followed in the survey. The population of this study is all the customers who are related to the financial industry in Srilanka. To collect enough data to test hypothesis a survey was conducted to collect the data from the sample. So 200 questionnaires were distributed randomly to the customers all over the Srilanaka. Equal numbers of customers were asked to fill out the questionnaire for each chosen firm. Subjects were asked to assess their perception of various items representing service quality and customer satisfaction. Assessments were

based on a five-point like scale ranging from “very poor” (1) to “excellent” (5) was used to measure 20 items.

The data collected by the researcher is analyzed in such a way to make interpretations. The inferential analysis includes Linear Regression analysis, Descriptive Analysis, and correlation. Statistical Package for Social Sciences (SPSS) 21.0 is used to analyze data.



Source: - Developed by the researcher

Result

According to the analysis part of the research, it was proved that there is a positive relationship between the independent variables and the dependent variable. This study proved that non -financial measurement variables have a significant impact on performance evaluation of financial firms as a dependent variable. Descriptive analysis is used for the scale measurement of the research.

Table 01: - Descriptive Analysis

Details of Variable	N	Mean	Std. Deviation
Tangibles	150	3.020	.462
Responsiveness	150	3.795	.510
Knowledge	150	3.479	.539
Recovery	150	3.479	.539
Reliability	150	3.785	.553
Accessibility and flexibility	150	3.729	.724
Customer satisfaction	150	.964	.181

Table 01 indicates that customers of finance firms in Srilanka perceived responsiveness with the highest mean scores ($M = 3.795$, $SD = 0.519$) to be the most dominant service quality and evident to a considerable extend to followed by Tangibles ($M= 3.020$, $SD= 0.462$), Knowledge ($M= 3.479$, $SD= 0.539$), Recovery ($M= 3.479$, $SD= 0.539$), Reliability ($M= 3.785$, $SD= 0.553$), Accessibility and Flexibility ($M= 3.729$, $SD= 0.724$) which were all rated as high practices by finance firms in Srilanka. The Standard deviations are quite high. This means that the effect of service quality on customer satisfaction is an approximation to a normal distribution. This also indicates that respondents are in favor of customer satisfaction.

Table 2 Model Summary

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	0.771	0.594	0.573	0.118

Regression analysis

Above table shows the R square value of 0.594. It means that the service quality is contributing to the customer satisfaction by 59.4% and remaining 40.6% can be attributed by other factors which are not studied because they are on beyond the scope of the study.

Therefore the entire hypothesis can be accepted by rejecting the entire null hypothesis.

Tangibility, responsiveness, knowledge, recovery, reliability and trust, accessibility and flexibility are non-financial measures, and they have the positive

impact on the service quality of the organization. Overall service quality should impact to the performance evaluation of finance firms in SriLanka.

Conclusion

From the analysis carried out in order to answer the research question, how far how the non-financial measures are utilized in performance evaluation process of finance firms in Srilanka. Study which includes theoretically trying to find out what was used to measure service quality in financial firms, finding out how customers' perceived service quality in finance firms by identifying what dimensions bring customer satisfaction.

The results of this study indicated that the service quality is an essential aspect of customer satisfaction. These results dimensions of service quality have significant influence on customer satisfaction. These dimensions included tangibility, reliability, responsiveness, knowledge, recovery, and accessibility. This finds reinforcement for finance managers to emphasize the five dimensions of service quality.

Based on the following tips finance managers of the banks/ finance companies or the administrative sector companies can improve their service quality by managing the customer expectations.

The further researcher should be carried out in order to enhance the understanding of the concepts of service quality and customer satisfaction and how those factors can be measured because of the importance for service-providing organizations in term of profitability and growth. A similar study could be conducted with a large sample size so that the results can be generalized to a large population. This study can be carried out in other areas comprised of multiple countries in order to find out the applicability.

References

Anam, H.Z., Kausar, T.U., & Mohsin, A, (2015), "Impact of service quality, corporate image and customer satisfaction towards customers' perceived value in the banking sector in Pakistan," *International Journal of Bank Marketing*, Vol. 33(4)

Neely, A. (1999). The performance measurement revolution: why now and what next. *International Journal of Operations & Production Management*, Vol.19(2), 205-228. [Http://www.businessdictionary.com](http://www.businessdictionary.com)

Brancato, C.K. (1995). Non-financial information for measuring and rewarding managerial performance Brancato, *New York, NY: The Conference Board*.

Westbrook, R.A. (1981). Consumer satisfaction with retail outlets. *Journal of Retailing*, 57(3)

Zeithaml, V.A., Berry, L.L and Parasuraman, A. (1996) The behavioral consequences of service quality, *The journal of marketing*

Post Purchase Dissonance of Undergraduates towards Slow Moving Consumer Goods

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Introduction

Consumer Behaviour is one of the major areas of marketing hence determining the behavior of consumers is very difficult. Post-purchase dissonance has become as a problematic condition to cause dissatisfaction after the purchase made. Post-purchase dissonance might be experienced when there is a gap between customers' positive expectations and negative results. Post-purchase dissonance is widely encountered where consumers have two conflicting thoughts simultaneously by considering the pros and cons of the purchased products. Through the previous researches, it is confirmed that post-purchase dissonance mostly occurs with high involved Slow Moving Consumer Goods (Kaish, 1967; Oshikawa, 1969; Selvarajan, 2016). In the case of Slow Moving Consumer Goods where consumers pay much attention in respect to durability and high price, Post-purchase dissonance arises eventually. Post-purchase dissonance might result in stop using the products, increased complaints, brand switching, negative word of mouth and increased number of dissatisfied customers. As post-purchase dissonance is contributed as a major problem in the post-purchase evaluation, it is critical to identify the major determinants of post-purchase dissonance and ensure customer satisfaction towards their purchase. In support of previous findings, this present study attempts to examine post-purchase dissonance of laptop computers among undergraduates in Vavuniya Campus of the University of Jaffna, Sri Lanka as undergraduates noticeably experience a higher level of post-purchase dissonance due to numerous factors. The researchers have derived following objectives,

- To examine the impact and the relationship of the major determinants on post-purchase dissonance of laptop computers among the undergraduates.
- To recommend the remedial actions to reduce post-purchase dissonance by Slow Moving Consumer Goods.

Literature Review

According to Kassarijian and Cohen (1965), Post-purchase dissonance occurs when the consumers start to doubt their wisdom about the rightness about the purchased product along with the negative attributes on it. People usually experience dissonance only with the purchase of high involvement products as luxury goods and expensive goods (Knicki and Williams, 2003; Hasan and Nasreen, 2012). Further, Kulkarani (2013) claimed when the students go for purchasing laptops; they give the highest priority to brand image followed by experience and word of mouth as they usually shop with their shopping companions, especially friends and family.

Sweeney *et al.*, (2000) proposed 22- item scale for assessing dissonance including three dimensions which are emotion, the wisdom of purchase and concern over the deal. Selvarajan (2016) identified beliefs, customs, family background, emotional reaction, personal performance, culture, religious value, and peer group influence ought to be the significant determinants of post-purchase dissonance, and among them, word of mouth communication has become as the significant predictor in creating post-purchase dissonance in Sri Lanka. Along with these studies, Safna and Selvarajan (2018) suggested emotional discomfort, the wisdom of purchase, concern over the deal, product alternatives and opinion leadership are contributed to being the significant antecedents to create post-purchase dissonance with the purchase of Slow Moving Consumer Goods. Emotional discomfort is a person's psychological discomfort occurs when consumers feel about the adverse outcomes of the purchased items. The wisdom of purchase is treated as a rational component when consumers doubts about the rightness about the product. Concern over the deal is a matter when there are high interventions made by salespeople. Product alternatives create post-purchase dissonance where there is complexity among the similarity between alternatives when the brand is a critical aspect in high involvement products like laptops. Opinion leadership grows importance where consumers go for the acceptance and opinions of others to justify their purchased products and go for satisfied customers (Sweeney *et al.*, 2000; Safna and Selvarajan, 2018).

Based on the review of the related studies, the hypotheses and the conceptual framework were developed to conduct present study.

H₁: There is a significant impact of emotional discomfort on post-purchase dissonance of laptop computers among undergraduates.

H₂: There is a significant impact of the wisdom of purchase on post-purchase dissonance of laptop computers among undergraduates.

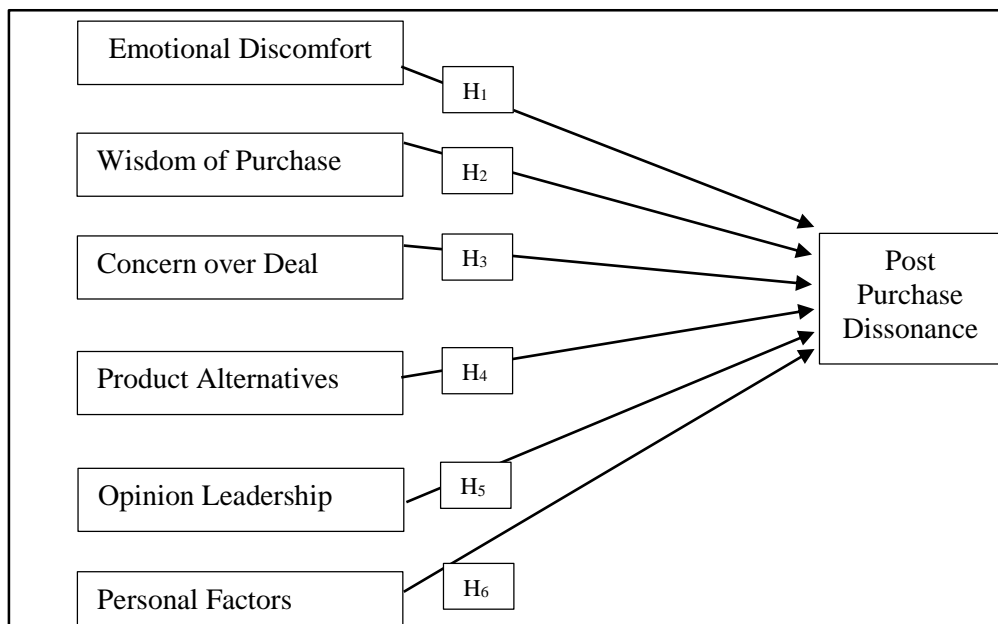
H₃: There is a significant impact of concern over a deal on post-purchase dissonance of laptop computers among undergraduates.

H₄: There is a significant impact of product alternatives on post-purchase dissonance of laptop computers among undergraduates.

H₅: There is a significant impact of opinion leadership on post-purchase dissonance of laptop computers among undergraduates.

H₆: There is a significant impact of personal factors on post-purchase dissonance of laptop computers among undergraduates.

Figure 1. Conceptual Model



Source: Sweeney *et al.*, 2000; Safna and Selvarajan, 2018

Methodology

In order to conduct the research, the researchers resorted to the method of primary data collection of data, a sample size of 100 undergraduates from the total population (860) within undergraduates of Vavuniya Campus of the University of Jaffna, Sri Lanka have been selected through using stratified random sampling method. Sample size has been selected after reviewing sufficient literature and study conducted on the similar field (Bose and Sarker, 2012).

The questionnaire was developed based on the 22-item measure scale of dissonance proposed by Sweeney *et al.*, (2000) consists of questions measured by

a five-point Likert scale method. In order to ensure that the results obtained from the research are accurate and reliable, SPSS 20.0 (Statistical Package for Social Sciences) was used to derive the primary values from accepting or rejecting the formed hypotheses. The Cronbach's alpha ranging from 0.709 to 0.856, hence indicating acceptable reliability for all measured constructs.

Results and Discussions

The information which was gathered from the survey represents the gender distribution 42% male and 58% female. The highest proportion of the family income of the respondents (45%) falls to the income level of Rs.20000 to 60000 followed by the 60000 to 100000 income level. The majority of respondents were age group of 24-26.

Testing of Hypotheses- Regression and Correlation Analysis

In this study, the researchers have used Simple linear regression and Pearson correlation analysis to determine the impact and the relationship of the factors on post-purchase dissonance in case of Slow Moving Consumer Goods in order to test the hypotheses.

Table 1. Model summary of correlations of the factors and Post purchase dissonance

	Independent Variables	Hypotheses	Pearson Correlation (R)/Beta Value	R Square	Ad. R Square	Sig. Value	Result
Dependent Variable - Post purchase dissonance	Emotional discomfort	H ₁	.534	.285	.278	.000	Supported
	Wisdom of purchase	H ₂	.407	.166	.157	.000	Supported
	Concern over deal	H ₃	.459	.210	.202	.000	Supported
	Product alternatives	H ₄	.623	.388	.382	.000	Supported
	Opinion leadership	H ₅	.692	.117	.108	.000	Supported
	Personal factors	H ₆	.342	.107	.099	.000	Supported

In the above table represents the significant values of factors creating post-purchase dissonance (emotional discomfort, the wisdom of purchase, concern over the deal, product alternatives, opinion leadership, and personal factors) and post-purchase dissonance. If these variables are less than 0.01, the researcher can identify a relationship between the factors and post-purchase dissonance. According to the details in the above table, the significant value is 0.000 for all six factors. Therefore, there is a relationship between the factors and post-purchase dissonance towards the purchase of laptops among undergraduates. If the Pearson correlation value is plus value ($p=0.000$), there is a positive relationship and significant impact between the variables. By identifying the Pearson correlation values (which is equal to R and Beta values), researchers could identify there are a positive relationship and significant impact between all six factors and post-purchase dissonance. Emotional discomfort and post-purchase dissonance have a positive correlation and significant impact ($r=0.534$). In the case of emotional discomfort, the adjusted R square is 0.278 which means emotional discomfort was able to explain 27.8% of the variance in post-purchase dissonance. The wisdom of purchase and post-purchase dissonance have a positive correlation and significant impact ($r=0.407$). In the case of the wisdom of purchase, the adjusted R square is 0.157 which means wisdom of purchase was able to explain 15.7% of the variance in post-purchase dissonance. Concern over deal and post-purchase dissonance have a positive correlation and significant impact ($r=0.459$). In the case of concern over the deal, the adjusted R square is 0.202 which means concern over the deal was able to explain 20.2% of the variance in post-purchase dissonance. Product alternatives and post-purchase dissonance have strong positive correlation and significant impact ($r=0.623$). In the case of product alternatives, the adjusted R square is 0.382 which means product alternatives were able to explain 38.2% of the variance in post-purchase dissonance. Opinion leadership and post-purchase dissonance have strong positive correlation and significant impact ($r=0.692$). In the case of opinion leadership, the adjusted R square is 0.108 which means opinion leadership was able to explain 10.8% of the variance in post-purchase dissonance. Personal factors and post-purchase dissonance have a positive correlation and significant impact ($r=0.342$). In the case of personal factors, the adjusted R square is 0.099 which means personal factors were able to explain 9.9% of the variance in post-purchase dissonance.

As per this, emotional discomfort, the wisdom of purchase, concern over the deal, product alternatives, opinion leadership (Sweeney *et al.*, 2000; Czinkota *et al.*, 2001; Safna and Selvarajn, 2018) and personal factors have a positive relationship and significant impact on post-purchase dissonance. Therefore, all the alternative hypotheses from H_1 to H_6 are supported and accepted by indicating that emotional discomfort, the wisdom of purchase, concern over the deal, product alternatives and personal factors are contributed to being the major determinants to create post-

purchase dissonance in Slow-Moving Consumer Goods in light of previous literature.

Conclusions and Recommendations

The primary objective of conducting this research was exploring the relationship and the impact of significant determinants which create post-purchase dissonance in Slow-Moving Consumer Goods. With the acceptance of all the hypotheses in the research model statistically confirmed that these factors emotional discomfort, the wisdom of purchase, concern over the deal, product alternatives, opinion leadership, and personal factors have strong positive relationship significant impact on post-purchase dissonance towards the purchase of laptops. The researchers suggested that these factors might create post-purchase dissonance with other durable and high involved technological based product like smartphones and other electronic equipment. As per the previous studies, this present study also proved that opinion leadership has the highest influence in creating post-purchase dissonance when it comes to Slow Moving Consumer Goods. This study addressed and supported to the previous study conducted by Safna and Selvarjan (2018) by identifying an additional factor as personal factors determining post-purchase dissonance which might include age, gender, and income levels. Also, the researchers could identify that middle-income people feel a high degree of dissonance where money is considered as an important factor in purchasing Slow Moving Consumer Goods like laptops.

This study might be an eye-opener for marketers to take remedial actions to weaken the factors that create post-purchase dissonance in the marketplace of Slow Moving Consumer Goods. By providing sufficient information through enhancing customer reinforcement, customer relationship and customer complaint handling mechanism might weaken opinion leadership, emotional discomfort, and personal factors. By establishing brand awareness, differentiation and innovation could build brand image against attracting towards product alternatives. Ensuring the high involvement of consumers and better decision on the purchase might weaken the factors concern over deal and wisdom of purchase. These research findings might be useful to market key players in Slow-Moving Consumer Good industries in Sri Lanka as well as Multi-National Companies to implement better strategies to reduce post-purchase dissonance and remain their customers as long time happy and satisfied customers for the overall sustainability of the organizations.

References

Bose, T.A., and Sarker S. (2012). Cognitive dissonance affecting consumer buying decision making: A study based on Khulna Metropolitan Area. *Journal of Management Research*, 4(3), pp.191-221.

Hasan, U., and Nasreen, R. (2012). Cognitive Dissonance and its impact on Consumer Buying Behavior. *IOSR Journal of Business and Management*, 1 (4), 07-12. Retrieved from <http://dx.doi.org/10.1007/BF02725204>

Kaish, S. (1967). Cognitive Dissonance and the classification of consumer goods. *The Journal of Marketing*, 31(4), 28-31. Retrieved from <http://dx.doi.org/10.2307/1249462>

Kassarjian, Harold, H., and Cohen, and Joel, S. (1965). Cognitive Dissonance and Consumer Behavior. *California Management Review*, 8(1), pp.55-64.

Knicki, A., and Williams, B.K. (2003). *Management: A Practical Introduction*. Boston: Mc Graw-Hill.

Kulkarani, V. (2013). A factorial study of consumer behavior of laptops of postgraduate students in Pune. *International Journal of Management*, 4(2), pp.9-21.

Oshikawa, S. (1969). "The theory of cognitive dissonance and experimental research." *Journal of Marketing Research*, 429-30.

Safna, M.I.N., Selvarajan, P. (2018). The factors impact on Post Purchase Dissonance of laptop computers among undergraduate students: With particular reference to Vavuniya Campus of the University of Jaffna, Sri Lanka. *International Research Journal of Marketing and Economics*, 5(3), pp.1-14.

Selvarajan, P. (2016). Evaluating the Post Purchase Dissonance of Sri Lankan Buyers: An Ethnographic Approach, *ACADEMICIA: An International Multidisciplinary Research Journal*, 6(7), pp.1-11.

Sweeney, J.C., Hausknecht, R. (2000). Cognitive Dissonance after purchase: A multidimensional scale. *Psychology and Marketing*, 17(5), pp.369-385.

Perceived motivational factors of sustainable consumption behavior: Future propositions

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Introduction

Sustainable consumption' has developed a core policy objective of the new era in national and international arenas (Dermody et al., 2015). The study of sustainable consumption can be discovered at a series of scales, from the global to the continental to the household. Consumption is now recognized as a critical driver of unsustainable development. The urgent need to promote more sustainable consumption behaviors has been prominently reaffirmed in the post-2015 agenda laid out by the United Nations (2015) in the Sustainable Development Goals (SDGs), where it features as a distinct goal (SDG 12). In response to the question how consumers can be motivated to reorient their consumption practices toward more sustainable ones (Jackson, 2005), sustainable consumption research has proliferated as a scholarly field (Reisch and Thøgersen, 2015).

Sri Lanka is a developing country which is new to the sustainable consumption concept. A business which manages its resources sustainably will last. A consumer who buys a product which is sustainable will ensure that our environment, as well as our health, is guaranteed. Moreover, a country which promotes sustainable production and industry will thrive for generations to come. However, the question is how many of our businesses and products are truly sustainable and how do we make the switch?

Modern agriculture depends on the use of chemical fertilizers and pesticides for high harvest yields. Although high advanced technology-based agricultural practice has increased crop productivity and abundance, the resulting ecological and economic impacts have not always been positive. Environmental pollution and food safety associated with agrochemical usage has become a significant concern worldwide. Indiscriminate use of agrochemicals and careless application of pesticides have often led to health hazards. The residual effect of pesticides is a source of several health problems including cancer, miscarriages, child deformities, kidney ailments, liver diseases and sterility among men and women. Insufficient knowledge of the farmers about proper handling of pesticides, such as

mixing of pesticides during spraying time, recommended application levels, a method of application, the timing of applications can lead to future health problems.

Past researchers have made studies in sustainable consumption behavior through numerous independent variables such as social consumption motivation, Materialism, environmental concern, (Dermody et al, 2015) environmental attitude, (Ballantyne & Packer, 2005; Kotchen&Reiling, 2000), environmental knowledge (Flamm, 2009; Kaiser et al., 1999; Lynne &Rola, 1988; Oreg& Katz-Gerro, 2006) and mediating variable as pro-environmental self-identity (Dermody et al, 2015), response efficacy (Ping Wang et al, 2013), green advertising (Chan 2000; Chang 2011; Chang 2012; Hartmann and Apaolaza-Ibanez 2009; Kong and Zhang 2014; Schuhwerk and Lefkoff-Hagius 1995). These studies have been made in a different context, so here the researcher is going to make the study by combining human consumption motivation, Materialism, response efficacy as variable factors and pro-environmental self-identity as a mediator.

Thus, the problem statement of the study is “to what extent the social consumption motivation, materialistic consumption motivation, response efficacy, pro-environmental self-identity influence on sustainable consumption behavior and this study extend to provide literature on mediating effect of between perceived motivational factors and sustainable consumption behavior in Sri Lanka.”

Objectives of the study

1. To understand the impact of perceived factors of sustainable consumption (social consumption motivation, materialistic consumption motivation, response efficacy) on sustainable consumption behavior in Sri Lanka
2. To understand the mediating effect of pro-environmental self-identity between perceived factors of sustainable consumption and sustainable consumption behavior
3. To understand the impact of perceived sustainable factors on sustainable consumption behavior

Literature Review

Consumption is a socio-cultural practice involving sense-making, identity construction, group membership and connection, not just an individual cognitive process. (Arnould and Thompson, 2005; Bagozzi, 1975).

In other words, sustainable consumption is defined as follows: the use of goods and services that respond to basic needs and bring a better value of life, while minimizing the use of natural means, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations

(Norwegian Ministry of the Environment 1994). Sustainable consumption focuses on formulating reasonable tactics that foster the highest quality of life, the competent use of natural resources, and the effective fulfillment of human needs while concurrently promoting equitable social development, economic competitiveness, and technological innovation (Tukker et al. 2006).

However, research in psychology, sociology, and marketing science has revealed that “consumer behavior is far more complicated than just a rational response to price signals” (Mont – Plepys 2008: 532). Consumer behavior and consumption practices are influenced by numeral factors beyond economics (Sanne 2002; Buenstorf- Cordes 2008), involving sociological, psychological, technological, and environmental issues. Among these, social and behavioral phenomena shaping everyday life, including collective expectations; cultural norms, values, and attitudes; the way choice options are made available and presented to consumers by different markets; and the existing infrastructure, organization, habits, and routines (Jackson 2005; Tukker et al. 2006). Therefore varying behaviors, and in particular, motivating more sustainable behaviors is far from straightforward, because we are often locked into unsustainable patterns despite our own best intentions

Social consumption motivation is concerned with the images of brands and the images of other people who buy/use the brand (Fitzmaurice & Comegys, 2006). Thus, it is related to social status and social identity. While Fitzmaurice and Comegys (2006) confirmed a significant positive relationship between materialism and social consumption motivation, the link between human consumption motivation and actual behavior is far less clear from the literature and might also be context specific.

According to the American Heritage Dictionary (2000), Materialism is ‘the theory or attitude that physical well-being and worldly possessions constitute the greatest good and highest value in life.’ People with an above-average drive for survival security have a deep concern regarding their safety and accessibility to products that meet basic needs. (eg. Food, water, shelter). Inglehart’s (1977, 1997) notion of materialism underpins survival security motivation, and he argues that insecurity during the earlier years of human can bring about materialism later years of life. Response efficacy is equal to the locus of control, which symbolizes an individual’s perception of whether he or she can bring about change through his or her behavior (Newhouse, 1990).

Response efficacy is equal to the locus of control, which symbolizes an individual’s perception of whether he or she can bring about change through his or her behavior (Newhouse, 1990). People with a strong inward locus of control

believe that their actions can bring about changes. People with an outward locus of control, on the other hand, feel that their actions are insignificant and feel that change can only be brought about by convincing others. A feeling that one can make concrete/meaningful changes in his/her own also has significant impacts on environmental behaviors (Roberts, 1996; Samuelson and Biek, 1991).

Self-identity is a significant predictor of consumption choice-making (Belk, 2010). Pro-environmental self-identity refers to individuals having a sense of self that embraces pro-environmental actions (Van Der Werff, Steg, & Keizer, 2013b). Pro-environmental self-identity is of paramount importance in understanding why consumers consume (un)sustainably. This is because evidence steadily depicts self-identity as an essential predictor of consumption choices (Belk, 2010; Thorbjørnsen, Pedersen, & Nysveen, 2007; Whitmarsh & O'Neill, 2010), with a stronger impact on consumer choice-making than attitudes or values (Gatersleben, Murtagha, & Abrahamseb, 2012). Self-identity influences purchase intentions at low, rather than high, levels of past behavior (Fekadu & Kraft, 2001; Smith, Terry, Manstead, Louis, Kotterman, & Wolfs, 2007). It may be that behavior informs identity construction as people seek behavioral consistency (Bem, 1967), but that, as the behavior becomes routine and automatic (i.e., habitual; Verplanken & Orbell, 2003), it disappears from view and thus from self-identity.

Underpinning theory

Theory of planned behavior was used as the underpinning theory in this study. The Theory of Planned Behavior (TPB) started as the Theory of Reasoned Action in 1980 (Ajzen & Fishbein 1980) to predict an individual's intention to engage in behavior at a specific time and place. The Theory of Planned Behavior is one of the most widely employed models in the learning of pro-environmental behavior (Paul, Modi and Patel, 2016; Wang, Zhang, Yin, Zhang, 2011). The theory was intended to explain all behaviors over which people can exert self-control. The critical component to this model is behavioral intent; behavioral intentions are influenced by the attitude about the likelihood that the behavior will have the expected outcome and the subjective evaluation of the risks and benefits of that outcome.

Methodology

Previous literature provides with a rich foundation on which to build a conceptual framework for the study of sustainable consumption in the organic food sector. According to Douglas et al. (1994), robust theoretical and conceptual frameworks can be developed through an integration of constructs from different research traditions and disciplines. In the current study, the researcher reviews the prior

literature on sustainable consumption practices in organic food and analyze the theories and the underpinning factors.

In this study, the researcher conducted an exhaustive and systematic electronic search using ProQuest, Social Science Citation Index and other bibliographic sources with keywords such as “sustainable consumption behavior,” “organic food and sustainable consumption,” “materialism in organic food” and this study adopted the meta-analysis method.

A total of 62 articles in the area of sustainable consumption during the year from 1994 to 2017 were identified. For any study to be included in our analysis, it has to focus primarily on the sustainable consumption behavior. Electronic copies of the articles obtained and they were stored and analyzed.

Researcher read all related articles and found out the most relevant variables for Sri Lankan context. With the help of those studies, the current conceptual model was formulated. Through the conceptualization, the researcher gives the future propositions for future research studies.

Discussion

Research has a significant contribution to make in simplifying the conversion towards increasing and strengthening sustainable consumption behaviors. However, this is being weakened by a single conceptual focus within much sustainable consumption research, even though sustainable consumption is influenced by uncountable interconnected micro and macro influences. In this study, the researcher has selected social consumption motivation, environmental concern and response efficacy as dependent variables which are going to have an impact on pro-environmental self-identity as well as on sustainable consumption behavior.

Social consumption motivation is concerned with the images of brands and the images of other people who buy/use the brand (Fitzmaurice & Comegys, 2006). Thus, it is related to social status and social identity. Social consumption motivation might have a positive influence on sustainable consumption because of its social visibility in signaling a pro-environmental attitude to significant others, for example, in groups, or, in China, facilitating ‘face’ (mien-tsu). Vermeir and Verbeke (2008), for example, found that perceived social influence has a highly significant positive impact on sustainable food consumption intention.

In the context of the above discussion concerning Social consumption motivation, the researcher has the following proposition

P1: Social consumption motivation has a positive impact on sustainable consumption behavior.

Inglehart's (1977, 1997) socio-political conception of materialism for survival security plays a principal role. Inglehart maintains that materialism is a characteristic of modern culture (the most significant example is the US during the first half of the 20th century).

For this reason, the researcher has formulated this proposition:

P2: Materialism has a negative impact on sustainable consumption behavior.

Response efficacy concerns our belief that a particular action will be useful. It is about whether we think our actions will lead to the desired result (when I do it, will it be useful?). People with an active internal locus of control believe that their actions can bring about changes. People with an external locus of control, on the other hand, feel that their actions are insignificant and feel that change can only be brought about by convincing others.

From the above arguments, the following proposition was formulated.

P3: Response efficacy has a positive impact on sustainable consumption behavior.

Pro-environmental self-identity refers to individuals possessing a sense of self that embraces pro-environmental actions (Van Der Werff, Steg, & Keizer, 2013b). An ethical or green consumer is ecologically conscious and buys products that are environmentally friendly and not harmful to the environment or society (Laroche et al. 2001; Harper & Makatouni, 2002) thus it can be related to ethical self-identity. As a consequence, the researcher proposes the following proposition.

P4: Pro-Environmental self-identity has a positive impact on sustainable consumption behavior.

Some recent articles have provided tentative support for the mediating role of pro-environmental self-identity between values, environmental preferences and behavior (Van Der Werff et al., 2013b). Self-identity has been defined as the label used to define oneself (Cook et al., 2002), which relates to a particular behavior (Conner & Armitage, 1998). Hence, we define an environmental self-identity as the extent to which you see yourself as a type of person who acts environmentally-friendly. Someone with a strong environmental self-identity will more strongly see herself or himself as the type of person who will act environmentally-friendly and consequently be more likely to act pro-environmental. The researcher, therefore, suggests that pro-environmental self-identity will be influenced by the values of social consumption motivation (via the social value of acquisitions), environmental concern and response efficacy.

Given that strong support, the research provides the following propositions.

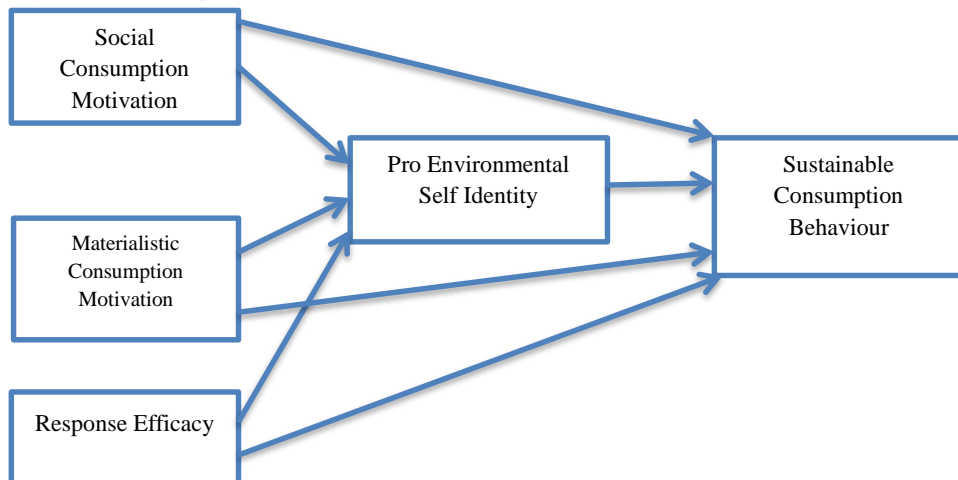
P5: Social consumption motivation has a positive impact on pro-environmental self-identity.

P6: Materialistic consumption motivation has a positive impact on pro-environmental self-identity.

P7: Response efficacy has a positive impact on pro-environmental self-identity.

The critical components of this study's research framework for sustainable consumption of organic food in Sri Lanka can be seen in Figure 1. This framework suggested that sustainable consumption behavior is impacted by social consumption motivation, environmental concern & response efficacy. Pro-environmental behavior is playing a role as a mediator.

Figure 1: Conceptual Framework



Conclusion

In this study, the researcher built on current knowledge and outlined a series of research propositions that can move the readers towards a more comprehensive understanding of sustainable consumption of organic food in Sri Lanka. The research framework explicitly considers social consumption motivation, material consumption, response efficacy & Pro-environmental behavioral critical drivers of sustainable consumption behavior in organic food in Sri Lanka. The dimensions of the critical drivers are carefully identified and analyzed. Understanding sustainable consumption of organic food in Sri Lanka is associated with several variables. In this study, the variables discussed can highly assist the researchers in understanding how consumers are going to deeply involved in sustainable consumption behavior, especially in the organic food sector. Mostly, this

framework helps explain three fundamental issues: (1) to what extent perceived factors of sustainable consumption (social consumption motivation, materialistic consumption motivation, response efficacy) impact on sustainable consumption behavior in Sri Lanka? (2) To what extent pro-environmental self-identity effect between perceived factors of sustainable consumption and sustainable consumption behavior? (3) What is the impact of perceived sustainable factors on sustainable consumption behavior? Also, our research suggested that theories proposed by various prominent researchers can be integrated into one framework so that the understanding and sustainable prediction consumption of organic food in Sri Lanka is far more comprehensively grounded than by using only one line of research. Further research needs to investigate the dynamic influencing factors proposed in the framework, test the model amongst different groups of consumers and refine measurements of the core constructs, and thus, deepen the understanding of sustainable consumption.

Reference

- Ajzen, I. and Fishbein, M., 1980. Understanding attitudes and predicting social behavior.
- Arnould, E.J. and Thompson, C.J., 2005. Consumer culture theory (CCT): Twenty years of research. *Journal of consumer research*, 31(4), pp.868-882.
- Bagozzi, R.P., 1975. Marketing as an exchange. *The Journal of Marketing*, pp.32-39.
- Ballantyne, R. and Packer, J., 2005. Promoting environmentally sustainable attitudes and behavior through free-choice learning experiences: what is the state of the game?. *Environmental Education Research*, 11(3), pp.281-295.
- Belk, R. W. (2010). The ineluctable mysteries of possessions. *Journal of Social Behavior and Personality*, 6(6), 17–55.
- Bem, D.J., 1967. Self-perception: An alternative interpretation of cognitive dissonance phenomena. *Psychological Review*, 74(3), p.183.
- Buenstorf, G. and Cordes, C., 2008. Can sustainable consumption be learned? A model of cultural evolution. *Ecological Economics*, 67(4), pp.646-657.
- Chan, R.Y.K. 2000. The effectiveness of environmental advertising: The role of the claim type and the source country green image. *International Journal of Advertising* 19, no. 3: 349_75.
- Chang, C. 2011. Feeling ambivalent about going green. *Journal of Advertising* 40, no. 4: 19_32.

Chang, C.T. 2012. Are guilt appeals a panacea in green advertising? The right formula of issue proximity and environmental consciousness. *International Journal of Advertising* 31, no. 4: 741_71.

Conner, M. and Armitage, C.J., 1998. Extending the theory of planned behavior: A review and avenues for further research. *Journal of applied social psychology*, 28(15), pp.1429-1464.

Cook, A.J., Kerr, G.N. and Moore, K., 2002. Attitudes and intentions towards purchasing GM food. *Journal of Economic Psychology*, 23(5), pp.557-572.

Dermody, J., Hanmer-Lloyd, S., Koenig-Lewis, N. and Zhao, A.L., 2015. Advancing sustainable consumption in the UK and China: the mediating effect of pro-environmental self-identity. *Journal of Marketing Management*, 31(13-14), pp.1472-1502.

Dictionary, A.H., 2000. The American Heritage® Dictionary of the English Language.

Fekadu, Z. and Kraft, P., 2001. Self-identity in planned behavior perspective: Past behavior and its moderating effects on self-identity-intention relations. *Social Behavior and Personality: an international journal*, 29(7), pp.671-685.

Fitzmaurice, J. and Comegys, C., 2006. Materialism and social consumption. *Journal of Marketing Theory and Practice*, 14(4), pp.287-299.

Flamm, B., 2009. The impacts of environmental knowledge and attitudes on vehicle ownership and use. *Transportation research part D: transport and environment*, 14(4), pp.272-279.

Gatersleben, B., Murtagh, N. and Abrahamse, W., 2014. Values, identity, and pro-environmental behavior. *Contemporary Social Science*, 9(4), pp.374-392.

Harper, G.C. and Makatouni, A., 2002. Consumer perception of organic food production and farm animal welfare. *British Food Journal*, 104(3/4/5), pp.287-299.

Hartmann, P., and V. Apaolaza-Ib_a~nez. 2009. Green advertising revisited. *International Journal of Advertising* 28, no. 4: 715_39.

Inglehart, R. 1977. A silent revolution: Changing values and political styles among Western publics. Princeton, NJ: Princeton University Press.

Inglehart, R., 1997. *Modernization and postmodernization: Cultural, economic, and political change in 43 societies*. Princeton University Press.

Jackson, T., 2005. Motivating sustainable consumption. Sustainable Development Research Network, 29, p.30.

Kaiser, F.G., Wölfing, S. and Fuhrer, U., 1999. Environmental attitude and ecological behavior. *Journal of environmental psychology*, 19(1), pp.1-19.

Kong, Y., and L. Zhang. 2014. When does green advertising work _ The moderating role of product type? *Journal of Marketing Communications* 20, no. 3: 197_213.

Kotchen, M.J., and Reiling, S.D., 2000. Environmental attitudes, motivations, and contingent valuation of nonuse values: a case study involving endangered species. *Ecological Economics*, 32(1), pp.93-107.

Laroche, M., Bergeron, J., and Barbaro-Forleo, G., 2001. Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of consumer marketing*, 18(6), pp.503-520.

Lynne, G.D. and Rola, L.R., 1988. Improving attitude-behavior prediction models with economic variables: Farmer actions toward soil conservation. *The Journal of Social Psychology*, 128(1), pp.19-28.

Mont, O. and Plepys, A., 2008. Sustainable consumption progress: should we be proud or alarmed?. *Journal of Cleaner Production*, 16(4), pp.531-537.

Newhouse, N., 1990. Implications of attitude and behavior research for environmental conservation. *The Journal of Environmental Education*, 22(1), pp.26-32.

Newhouse, N., 1990. Implications of attitude and behavior research for environmental conservation. *The Journal of Environmental Education*, 22(1), pp.26-32.

Norwegian Ministry of the Environment. (1994). Oslo roundtable on sustainable production and consumption. Retrieved from <http://www.iisd.ca/consume/oslo004.html>

Oreg, S. and Katz-Gerro, T., 2006. Predicting environmental behavior cross-nationally: Values, the theory of planned behavior, and value-belief-norm theory. *Environment and Behavior*, 38(4), pp.462-483.

Paul, J., Modi, A., and Patel, J., 2016. Predicting green product consumption using the theory of planned behavior and reasoned action. *Journal of retailing and consumer services*, 29, pp.123-134.

Reisch, L.A., and Thøgersen, J., 2015. Research on sustainable consumption: Introduction and overview. *Handbook of research on sustainable consumption*, pp.1-16.

Roberts, J.A., 1996. Green consumers in the 1990s: profile and implications for advertising. *Journal of business research*, 36(3), pp.217-231.

Samuelson, C.D., and Biek, M., 1991. Attitudes toward energy conservation: a confirmatory factor analysis. *Journal of Applied Social Psychology*, 21(7), pp.549-568. Sanne, C., 2002. Willing consumers—or locked-in? Policies for sustainable consumption. *Ecological Economics*, 42(1-2), pp.273-287.

Schuhwerk, M.E., and R. Lefkoff-Hagius. 1995. Green or non_green? Does the type of appeal matter when advertising a green product? *Journal of Advertising* 24, no. 2: 45_54.

Smith, J.R., Terry, D.J., Manstead, A.S., Louis, W.R., Kotterman, D. and Wolfs, J., 2007. Interaction effects in the theory of planned behavior: The interplay of self-identity and past behavior. *Journal of Applied Social Psychology*, 37(11), pp.2726-2750.

Thorbjørnsen, H., Pedersen, P.E. and Nysveen, H., 2007. “This is who I am”: Identity expressiveness and the theory of planned behavior. *Psychology & Marketing*, 24(9), pp.763-785.

Tukker, A. and Jansen, B., 2006. Environmental impacts of products: A detailed review of studies. *Journal of Industrial Ecology*, 10(3), pp.159-182.

United Nations Environment Programme, 2015

Van der Werff, E., Steg, L. and Keizer, K., 2013. The value of environmental self-identity: The relationship between biospheric values, environmental self-identity, and environmental preferences, intentions, and behavior. *Journal of Environmental Psychology*, 34, pp.55-63.

Vermeir, I. and Verbeke, W., 2008. Sustainable food consumption among young adults in Belgium: Theory of planned behavior and the role of confidence and values. *Ecological Economics*, 64(3), pp.542-553.

Verplanken, B. and Orbell, S., 2003. Reflections on Past Behavior: A Self-Report Index of Habit Strength 1. *Journal of applied social psychology*, 33(6), pp.1313-1330.

Wang, P., Liu, Q. and Qi, Y., 2014. Factors influencing sustainable consumption behaviors: a survey of the rural residents in China. *Journal of Cleaner Production*, 63, pp.152-165.

Wang, Z., Zhang, B., Yin, J. and Zhang, X., 2011. Willingness and behavior towards e-waste recycling for residents in Beijing city, China. *Journal of Cleaner Production*, 19(9-10), pp.977-984.

Whitmarsh, L. and O'Neill, S., 2010. Green identity, green living? The role of pro-environmental self-identity in determining consistency across different pro-environmental behaviors. *Journal of Environmental Psychology*, 30(3), pp.305-314.

Trends and Development of Digital Marketing in Sri Lanka

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Introduction

The development in the information and communication technologies have brought a lot of new and accelerated the current processes of doing businesses. Marketing strategies and improvements have progressed. Marketing is a social process by which individuals and groups receive what they need and want by creating, offering and freely exchanging value-adding products and services with others.

Digital marketing is widely used to promote products or services and reach consumers through digital channels. It extends beyond Internet marketing, including channels that do not require the use of the Internet. These include mobile applications browsing, social media marketing, display advertising, search engine marketing and many other forms of digital media [1].

Even though the internet penetration of Sri Lanka is 32% in January 2018 while lower than global Internet penetration of 53% which indicates a massive opportunity to expose the businesses to digital marketing with the digital medium, still the adaptation of this strategy on current business seems to be low. Awareness about those media and strategy are becoming a need for a business to grow up and to be stable in the market. This research objective is to find out how digital marketing influences the growth of businesses locally and to seek opportunities to improve their marketing strategies to gain more values and profit.

Literature Review

A recent survey shows that marketing via Facebook has influenced 79 % of users to buy the products. According to Sri Lanka Police statistics, Sri Lanka has over 1.2 million Facebook users. Sri Lanka also uses Twitter, Instagram, and LinkedIn, but not within the scope of Facebook [2].

Mobile is exploding in terms of both mobile Internet and location-based applications that are now supported in the business world. Sri Lanka has

experienced an extreme increase in mobile broadband penetration in the past five years, with market penetration rising from 8% in 2012 to 21% in 2017, reflecting an increasing share of mobile customers [3].

Search engine marketing, Email marketing, Google facilities such as Google maps, Social media websites, forums, and blogs are widely being used in the business world for marketing, and currently, many businesses get the consultations from digital marketing companies. Paper per click (PPC) and Google analytics provide more information about the self and competitors among them. Sri Lanka Broadcasting Corporation (SLBC) was also able to make significant changes and increase the number of listeners in just three months to use social media for promotional activities [4].

Methodology

The approach to evaluate how digital marketing strategies influence the growth of the businesses is as follows in three steps.

Step 1: Data tracking and identification of popular business platforms in Sri Lanka.

According to the tech in Asia website which is a media, events, and jobs platform for Asia's tech communities the top 11 most popular websites in Sri Lanka has been selected to evaluate digital strategies used in those websites.

Table 1: Web traffic and Daily page views of the websites

Website	% of traffic from search	Daily pageviews per visitor
Ikman.lk	27.70	12.40
Hirufm.lk	38.20	3.82
Facebook.com	8.30	3.91
Google.com	0.80	9.20
Aliexpress.com	11.70	10.94
Ebay.com	20.00	7.10
Hirunews.lk	16.8	2.67
Youtube.com	16.10	4.79
Topjobs.lk	30.10	7.73
Espncricinfo.com	16.20	3.1
Instagram.com	13.00	3.17

Source: Alexa.com, 2018

Table 1 shows the web traffic, the percentage of all referrals that came from search engines over the tailing month and the estimated daily unique page views per visitor on the site [5]. These statistics interpret that how locally these websites are

popular among Internet users who indicate the opportunity for businesses that can take to sell their values to customers by reaching them.

Step 2: Identify favorite digital marketing channels.

Most of the time, businesses tend to use online media as a digital marketing strategy to reach more customers through social media such as Facebook.com, YouTube and Twitter. Despite the gained facts, some recent incidents happened locally and internationally. It is a proof that social media plays a significant role not only in the business sector but in a social and political environment which directly or indirectly influences the business sector. Facebook and Twitter played a formative role in shaping the course of important events during the 2016 US and 2015 Sri Lankan presidential elections. It allowed people to interact more strongly with the political landscape, controversy, and news surrounding the candidates involved. This force has made marketers focus more on social media marketing than on the other web medias available. AdWords like display ads and video on YouTube also popular in Sri Lanka. Since mobile phones users are quite high, the businesses believe that reaching non-users of the Internet through instant messages on product promotion and brand awareness via SMS also another potential method. E-mail marketing also mostly used in educational, promotional campaigns in Sri Lankan businesses which segment the target market appropriately.

Step 3: Identify how it would affect economically

Sales growth methods are generally categorized into four strategies that increase the customer base, increase the size of business transactions, increase the number of transactions per customer, and increase the prices of goods and services. Digital Marketing addresses one or a combination of these strategies through business visibility and lead generation that involves new customers. Each of the popular websites is being examined to identify the key factors they used to increase revenue through the above strategies.

Results and Discussions

The Effect of Social Media

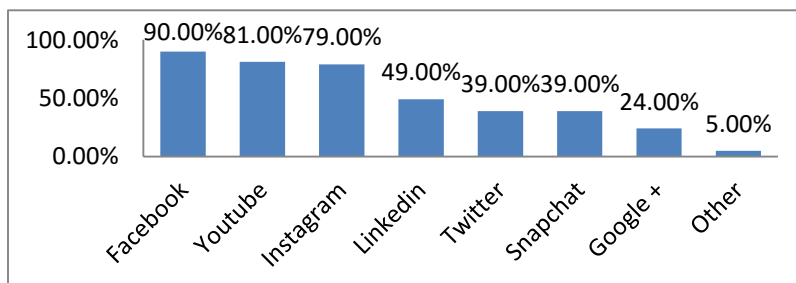


Figure 1: Social Media Channel Users in Sri Lanka

Figure 1 describes the social media users (percentage) through a survey conducted by Seven Media Group between December 2017 to March 2018 across Sri Lanka. It shows that 90% of Internet users are on Facebook, 81% on YouTube and 79% on Instagram which indicates that Facebook, YouTube, and Instagram will provide ample opportunity than others to capture a broad customer base as those have the higher percentage of virtual users.

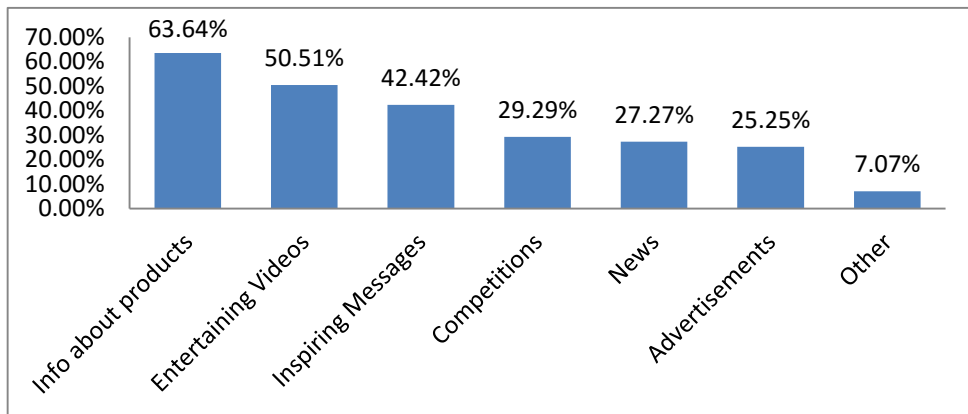


Figure 2: Brands do more on Social Media in Sri Lanka

Figure 2 describes the answers of users that they expect (survey conducted by Seven Media Group between December 2017 to March 2018) from social media that popular brands do promotion, 63.64% on Info about products, 50.51%, on entertaining videos, 42.42%, on inspiring messages, 29.29% on competitions, 27.27% on the news, 25.25% on advertisements and 7.07% for other activities. Video advertising will be the future as more and more people see videos as short as 6-second ads. Personalization is becoming more critical. People are more likely to respond to personalized information than to generic emails.

Following are few tips to encourage the customers and increase revenue and online traffic as identified through the research.

- Update the website focusing on responsiveness

Websites have enormous advantages of Search Engine Optimization (SEO) and mobile responsiveness to increase the customer base. Updating a site is also an excellent time to upgrade security features, which are essential to building consumer trust.

- Utilize PPC and Social Media Ads

It is important to realize that social media can be just as useful in controlling traffic to websites like Google. While fans for a page are not necessarily synonymous

with customers, Facebook's utility as a content distribution network makes the platform as useful as search ads on Google or video ads on YouTube. Investing in both forms of paid advertising can provide good returns for a business.

- Create more content

Content marketing is a great way to reach the audience while presenting the knowledge base of a business.

Conclusion and Recommendations

The statistics discussed in the results sections shows that there is a new trend that can be adapted for improving marketing strategy through social media which may increase the turnover of the product. There are several products in Sri Lanka being popular through some marketing strategies using social media such as Muchee, PizzaHut, Maxxis, United Motors. The google trends show that the search trends for Social Media and E-commerce websites growing together from 2014 to 2018. The Digital marketing strategy will be better and simple technique to promote a brand or product quickly to the local and global customer in future.

Sri Lanka is still adapting digital marketing media to the growth of the business, and there are few popular media uses to market products and services. Sri Lankans still show some degree of hesitation when it comes to making a purchase online for some reasons such as not believing things which are intangible, delivery matters and after sale services. Focusing on the new digital marketing environment increases the prospect that the single market will become part of the global marketplace. If marketers are already focusing on the global market, it is wise to focus on the broad spectrum of social media. The domain of Social Media is not only limited to Facebook and Twitter but also extends to Snapchat, Instagram and so on. Search Engine Optimization (SEO) let the business website better rankings so that it can be easily found for target consumers in Sri Lanka and other parts of the world, create a better user experience by building a more engaging site and improve conversion rate and thereby improve revenue generation.

References

Export.gov, (2018) Sri Lanka-commerce, Available at <https://www.export.gov/article?id=Sri-Lanka-eCommerce> (Accessed: 27th June 2018).

(2018) Internet Usage Statistics in Sri Lanka., Available at <http://www.digitalmarketer.lk/internet-usage-statistics-in-Sri-lanka.html> (Accessed: 20th June 2018).

LMD., (2018) Social Media Usage Stats in Sri Lanka | LMD., Available at <https://lmd.lk/social-media-usage-stats-in-sri-lanka> (Accessed: 26th June 2018).

(2018) Top Sites in Sri Lanka - Alexa., Available at <https://www.alexa.com/topsites/countries/LK> (Accessed: 23th June 2018).

Yasmin, A, Tasneem, S &Fatema, K. (2015) 'Effectiveness of Digital Marketing in the Challenging Age: An Empirical Study. ', *The International Journal of Management Science and Business Administration*, 1(5), pp. 69-80.

Economics & Entrepreneurship

Determinants of Profitability in Organic Paddy Farming in Gampaha District

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Introduction

Agricultural sector plays an important role in economic development in developing countries. It helps to achieve economic development in order to fulfil nations' demand for food, supplying raw materials for industries, generating employment opportunities, and earning foreign exchange. Agricultural sector can be divided into two as organic agriculture and inorganic agriculture. Inorganic agriculture farmers use artificial pesticides and fertilizer as the techniques for their production process. Organic agriculture is a production system that sustains the health of the people, soils and ecosystems. There are about 15000 farmers in Mirigama area and out of these farmers nearly 70% of them used to organic paddy farming techniques because of its healthy, friendly and positive benefits to the people as well as for the safety of the environment. Unfortunately, most of the farmers engaged in inorganic farming methods to cultivate paddy and other vegetable crops in Sri Lanka. But this farming method causes adverse effects in many ways in the farming and as well as in the society. On the other hand, organic farming methods have many advantages but it is not adopted by the farmers in Sri Lanka. Because the farmers try to get the maximum yield by the application of inorganic farming techniques and they try to get those techniques easy way.

Research problem

Organic farming is in advance popularity all over the world, as it can spread agricultural production systems towards attaining improved productivity, farm income and food, as well as environmental safety in a country. Despite the global awareness of environmental degradation and climatic change that could result from the continuous practice of inorganic farming, many paddy cultivators in Sri Lanka are still producing paddy inorganically. In this background, the farmers are not interested much to apply organic fertilizers in their agricultural activities. They expect to get more profit for a short period and they can get those chemicals and fertilizers easily than organic. Thus, they should be encouraged by conducting awareness programs which may increase their attitudes towards the application of organic paddy farming in their cultivation.

Research questions

This study has the following research questions.

- What determine the profits for organic paddy farmers in the study area?
- Do the farming characters significantly affect profits of organic farming in the paddy sector?

Objectives of the study

The objectives of the study are,

- ❖ To identify the major determinants of the profitability of organic paddy farming in the Gampaha district.
- ❖ To examine how those factors do affect the profitability of organic paddy farming in the above district.

Literature review

Sanjib Bhuyan & Michael Postel (2009) have done a study related to the determinants of organic dairy farm profitability: Some evidence from the Northeast United States and their results found that organic dairy farms typically did not earn positive returns to unpaid management and labour and diversification was important for the organic dairy farms in the country.

Another study has done by Bongiwe G. Xaba (2013) to investigate the factors affecting the productivity and profitability of vegetable production in Swaziland using multiple regression analysis and found that, level of education, land under vegetable production and type of marketing agency were the determinants of profitability of vegetable production in Swaziland.

One of other study done by S.K. Ndungu, I. Macharia & R. Kahuthia-Gathu (2013) with the topic on analysis of profitability of organic vegetable production system in Kiambu and Kajiado counties of Kenya and found that, age, farming experience, and number of training attended, availability of irrigation, target market selected, production per acre, cost of production and price per unit were found to have a bearing on the profitability of a given vegetable in the country.

Modelling Irwa Issa and Ulrich Hamm (2017) have examined the adoption of organic farming as an opportunity for Syrian farmers of fresh fruit and vegetables: An application of the theory of planned behaviour and structural equation modelling. Their findings showed that most farmers used at least one of the

practices that are also part of the certified organic production, and hold strong positive attitudes and intentions to adopt organic production within the next five years.

Methodology

The sampling frame was the entire community of paddy farmers in the Mirigama D.S Division. Of which 100 paddy farmers were selected as the research sample by using simple random sampling technique in the study. By issuing a structured questionnaire, the primary data were collected from 100 farmers who are cultivating paddy as the main crop with the application of organic fertilizer in their farming in Mirigama D.S Division.

Determinants of profitability of organic paddy farming were investigated using different methods of statistical analysis such as ordinal probit model and marginal effect in the study.

Ordinal probit model

An ordinal probit model is more appropriate where the dependent variable is an ordinary data and thus to identify the factors which are influencing the profitability of organic paddy farming systems, the above model was applied in this study.

The model used in the study can be written as,

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e_i$$

Where,

Y_i = profitability of organic paddy farming which was categorized in the following order.

- 1 for below Rs10,000/=
- 2 for between Rs 10,001/= and 30,000/=
- 3 for between Rs 30,001/= and 60,000/=
- 4 for between Rs 60,001/= and 90,000/=
- 5 for more than Rs 90,000/

β_0 = Constant term

$\beta_1, \beta_2, \beta_3, \beta_4$, are the coefficients of each independent variable respectively.

X_1 = Distance to the market

X_2 = Storage facilities

X_3 = Credit availability

X_4 = Types of labour

Marginal Effects

Marginal effects measure the expected instantaneous change in the dependent variable as a function of a change in a certain explanatory variable while keeping all the other covariates constant. Using marginal effects, the effect of each independent variable on the dependent variable can be explained in terms of probability.

Results and Discussions

Factors determining the profitability of organic paddy farmers in the study area ordered probit model was applied and the results were displaced in the following table.

Table1. Estimated results of the ordered probit model

Variables	Estimated coefficients	Std. error	t-ratio	p-value
Constant	0.401	0.716	-	-
Storage facilities	-1.118	0.244	-4.58	0.000
Credit availability	-0.480	0.232	-2.05	0.040
Type of labour	0.730	0.240	-3.04	0.002
Distance to the market	0.015	0.014	1.00	0.317
Cut.1	-3.416	0.781	-	-
Cut.2	-1.879	0.734	-	-
Cut.3	-0.446	0.709	-	-

Number of observations = 100

Pseudo R² = 0.1483

LR chi² (4) = 40.58

Log likelihood = -116.57316

Probability > chi² = 0.0000

Source: Estimated by authors

According to the above table, estimated ordered probit model was statistically significant with a log-likelihood test which is 116.57 and goodness of fit model

judged by pseudo R^2 and it is statistically significant indicates that the model is good fitted one.

Further out of four explanatory variables, all farming characteristics are statistically significant at 5% level except distance to the market and based on the significant values of the variables, storage facilities are the important determinants on profits but their effect is negative indicates that the farmers who don't have storage facilities, they have less likely to earn more profits. Similarly, the negative sign of the credit availability which is 0.480 shows that the farmers who don't have credit availability they have less possibility to earn a higher profit and it is statistically significant at 5% level.

On the other hand, the farmers who are hiring the workers from their family will have more probability to earn more profit. But in case of distance from farming place to market has a positive coefficient which is 0.015 and it is the insignificant effect on the profits of the paddy farmers.

After estimated the ordered probit model, the impact of farming characters on different profit levels were analyzed using marginal effects as below:

Table2. Marginal effects of the ordered probit model

Variables	Profit range				
	Pro(1)	Pro(2)	Pro(3)	Pro(4)	Pro(5)
Storage facilities	0.0422	0.3225	-0.0405	-0.2093	-0.1148
Credit availability	0.0181	0.1386	-0.0174	-0.0900	-0.0494
Type of labour	-0.0276	-0.2107	0.0264	0.1368	0.0750
Distance	-0.0005	-0.0043	0.0005	0.0028	0.0015

Source: Estimated by authors

Note: Pro(1), Pro(2), Pro(3), Pro(4) and Pro(5) represents probability of profit levels less than Rs10 000/=, between Rs10 001/= and Rs 30 000/=, between Rs 30 001 and Rs 60 000/=, between Rs 60 001 and Rs 90 000/=, and more than Rs 90 000/= respectively.

Results of the marginal effects in the table show that the marginal effect of storage facilities has positive signs for first and second ranges of profits while more than Rs 90 000/= range of profit has a negative sign. This represents that the farmers who have storage facilities, there is a 4.2% more probability to earn profits less than Rs 10 000/= while those farmers who have those facilities, there is a 32.2% of more probability to earn the profit between Rs10 001/= and Rs 30 000/=. Even they have enough storage facilities in their paddy, they have 11.4% of less probability to earn the profit of than Rs 90 000/=. Because when they have more storage facilities, it will cause to raise their storage cost because they should

maintain their yield with proper facilities such as monitoring, lightning with enough space and chemicals. Hence, it may reduce their profit.

Credit availability has a positive sign for the first range of profit but the negative sign for the last range represents that the farmers who have credit facilities, there is a 1.8% more probability to earn profit below Rs 10 000/=, but 4.9 % of less probability to earn the profit more than Rs 90 000/=. However, as they have credit availability, it will lead to a 13.8% more probability to earn the profit between Rs 10 001/= and Rs 30 000/=. Even they have chances to get more credit facilities with low-interest rates, those loans are not properly used in the farming activities and sometimes they will use the loans for other activities such as build up their houses, daily expenses, caring of children etc. Because of these reasons, they are unable to earn more profits. Unfortunately, in the study area monitoring facilities are not given to the farmers after getting the loans and thus, farmers are not keen to utilize their credits in a proper way in the farming activities.

Compared to hired labour, the farmers who are using family labour, have 13.6% of more probability to earn the profit between Rs 60 001/= and Rs 90 000/=:, while only 7.5% more likely to earn the profits above Rs 90 000/=. This revealed that when family members are doing their farming activities with enthusiasm it will increase the productivity of paddy yield, able to reduce the wastage than using the hired labour.

Conclusion

Results of the ordinal probit model concluded that out of four variables all have significantly influenced the profits of organic paddy farming except distance to the market from the farming place. A storage facility and credit availability have negatively impact while types of labour positive impact on profits of the paddy farming. Marginal effects for storage facility and availability of credit revealed that the farmers who have those facilities, there is a more probability to earn their profits between Rs10 001/= and Rs30 000/= and the farmers who have hired their family labour, the probability of earning profits between Rs 60 001/=and Rs 90 000/=is also more. Based on the discussion with the farmers it showed that major problems faced by the farmers were inadequate time to produce compost and other fertilizers. To prepare organic fertilizers, farmers need to find out inputs like animal manure and some farmers have difficulties to find out those inputs to prepare to compose their area. Currently, farmers are aware of the profitability and importance of the organic paddy farming systems and thus, the most of the inorganic farmers prefer to move from inorganic farming to organic because of its importance and advantages. Unfortunately, they don't have enough facilities and time to produce pure organic products in their paddy farming.

Recommendations

According to the findings, most of the farmers don't have storage facilities and those farmers face many problems due to the failure to response market changes and the natural reasons. Farmers are facing difficulties to protect their harvest from the insects and natural changes in the environment. Thus, it is recommended that increasing the awareness further the farmers would actively engage in organic agriculture and it may also be useful to create awareness among the consuming public regarding the benefits of consuming organic paddy production. Provision of physical facilities for warehouses to protect the harvest of paddy and market infrastructure would help in to promote the culture of organic farming among small farmers in the area.

References

Bongiwe G.,&Xaba., (2013), 'Factors Affecting the Productivity and Profitability of vegetable Production in Swaziland', *Journal of Agricultural Studies*, Vol. 1, No. 2, pp. 37-52.

Modelling Irwa Issa & Ulrich Hamm (2017), 'Adoption of Organic Farming as an Opportunity for Syrian Farmers of Fresh Fruit and Vegetables: An Application of the Theory of Planned Behaviour and Structural Equation Modelling'. [online] available at:https://kobra.bibliothek.unikassel.de/bitstream/urn:nbn:de:hebis:34-2018020254400/1/sustainability_09_02024.pdf..

Ndungu, S.K., & Macharia &Kahuthia-Gathu, R. (2013), 'Analysis of the profitability of organic vegetable production system in Kiambu and Kajiado counties of Kenya', *African Crop Science Conference Proceedings*, Vol. 11, No. 2, pp. 605-611.

Sanjib Bhuyan., & Michael Postel.,(2009), 'Determinants of organic dairy farm profitability: Some evidence from the Northeast United States'. [online] availableat:http://ageconsearch.umn.edu/bitstream/49934/2/BhuyanPostel_org%20dairy%20determinants_AAEA09.pd

Entrepreneurial Orientation of Executive Level Officers in the Education Administrative Service of Colombo District, Sri Lanka

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Introduction

Sri Lanka is still a developing country as a result of many challenges and constraints experienced. Within that 'ineffectiveness of the public sector' is regarded as one of the constraints which create hurdles for the development of the country. Therefore, the ineffectiveness of the public sector is acting as the main barrier and it has failed to provide quality services required to the nation in the process of development (Fernando, 2005). There are several reasons accounted for this ineffectiveness such as non-availability of skilled labour forces and limited resources. Therefore, instead of allocating additional investment on the development of the public sector, the government needs to find alternative solutions to increase the effectiveness of the public sector within the present resource-constrained environment.

Objectives of the Study

1. To identify the relationship between participatory decision making and entrepreneurial orientation of the executive officers attached to the education administration service in Colombo District.
2. To identify the relationship between performance-based reward and entrepreneurial orientation of the executive officers at the education administration service in Colombo District.

3. To identify the relationship between managerial autonomy and entrepreneurial orientation of the executive officers attached to the education administration service in Colombo District.

Literature Review

The term “entrepreneurship” rooted within the French verb “entreprendre”, means doing something different (Long, 1983). Moreover, public entrepreneurship can be defined as a process of creating values in the community by combining limited and unique resources to satisfy the requirement of the society (Fox, 2005). Entrepreneurial orientation (EO) is an employee's commitment to the intensity of the entrepreneurial actions such as taking new challenges, getting involved in risky projects and completing the projects in an innovative manner and actively participating in the organizational development (Fox, 2005). The concept of EO is attached with the risk-taking, handling economic uncertainty, planning, innovative, coordinating administrative and control.

From the public entrepreneurship perspective, innovativeness mostly involves with resolving the emerging problems arrived at the government or a public organization converting government organizations into self-sustaining or profit-making organizations. Further, it provides the existing services, management process in an innovative manner and re-conceptualizing existing resources even though not oriented to income generation. Generally, public sector employees are risk avoiding decision makers. They do not encourage with the logic of "the greater the risk, the greater the reward". According to the public sector pro-activeness, the public sector requires to search creative solutions, introduce changes to the organization and respond rapidly to the challenges (Morris et al, 2002).

The participatory decision making provides the chance for all employees to contribute in the decision-making process and take part in all the decisions. Participatory decision making directly influences to make innovative decisions (Andrews et al, 2007). Public institutes can offer financial and nonfinancial rewards such as employee recognition and emotional rewards such as self-satisfaction (Kim, 2010). Performance-Based Reward system supports to generate the entrepreneurial behaviours among the employees by improving the innovative and proactive attitudes with the behaviour of the employees.

Autonomy is an independent action that can be taken by the individuals. Employees have the freedom to make their own decisions related to the duties and responsibilities of the employee under the workplace autonomy (Kim, 2010).

Methodology

This study is an empirical and quantitative research. This research focuses on the relationship between the managerial characteristics and EO of the executive officers in the educational service, the Ministry of Education, in Colombo District. The following figure 1 presents the conceptual framework of the research.

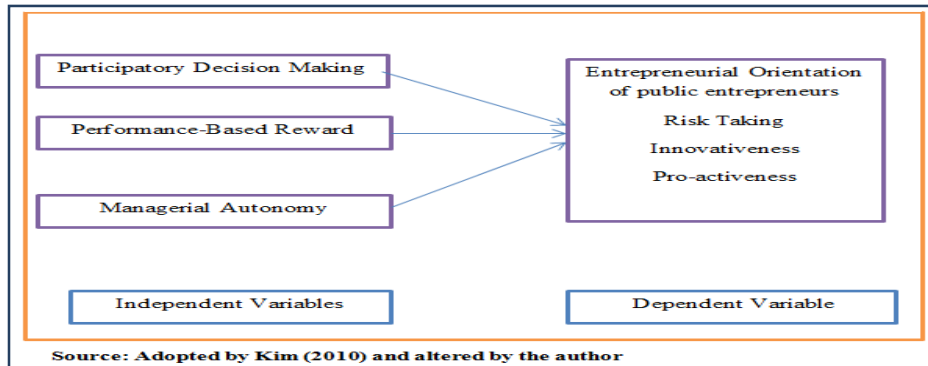


Figure 1: The conceptual framework of the research

Source: Adopted by Kim (2010) and altered by the author

Hypotheses of the Research

Three hypothesis is derived from the conceptual model of the study.

Hypothesis 01:

There is a relationship between PDM and EO of executive officers in the educational service

Hypothesis 02:

There is a relationship between PBR and EO of executive officers in the educational service

Hypothesis 03:

There is a relationship between MA and EO of executive officers in the educational service.

The population of this study consisted with the 94 officers in Educational administrative service, Ministry of Education in Colombo District, Sri Lanka. These Educational Administrative Officers are qualified with the Sri Lankan Educational Administrative Service (SLEAS) examination that has been conducted by the Ministry of Education. The author selected all Colombo district officers in Education Administrative Service, Ministry of Education as the sample.

Both the primary and secondary data collection methods were employed to collect the data in this study. The structured questionnaire used to collect primary data from the officers work at Ministry of Education, Colombo district. Census of Public and Semi-Government Sector Employment Report in 2016, Employment details of the Ministry of Education used to collect the information on public sector employment as a secondary source.

This study is a survey type research. Therefore, the study used the Statistical Package for Social Sciences (SPSS) computer software, 16.0 versions to organize and analyze the data collected through a structured questionnaire. This study used the KMO and Bartlett's test and Factor Analysis for check the Validity and used Cronbach's Alpha test to measure the reliability. The KMO test was used to measure the sample adequacy of the research and Bartlett's Test of Sphericity was used to test the significance. 0.746 value prove the sample adequacy and significance presents as 0.001 for this research model. According to calculated Cronbach's alpha values, the reliability of all the variables is exceeding and near to the 0.7.

Results and Discussions

The Pearson correlation coefficient was calculated for the testing the relationship between independent and dependent variables. Table 1 represents the Pearson Correlation between independent and Dependent Variables.

Table 1. Pearson Correlation values between independent and dependent variables

Independent Variable and Dependent Variable	Pearson Correlation Value	Significant positive / Negative	Strong/ Moderate/ Weak Relationship
PDM and EO	0.565	Significant positive correlation	Moderate Relationship
PBR and EO	-0.069.	Significant negative correlation	Weak Relationship
MA and EO	0.076	Significant positive correlation	Weak relationship

The Pearson correlation between PDM and EO of officers presented a significant moderate positive correlation as its value is 0.565. There is a significantly weak negative relationship between PBR and EO of officers as the calculated correlation value is -0.069. Pearson correlation between the MA and EO of the respondents is also significantly weak but shows a positive relationship with a correlation value

of 0.076. According to the findings based on calculations of Pearson correlation, PDM and MA have positive Pearson correlation coefficients and PBR has a negative Pearson correlation coefficient associating with the EO of officers.

Conclusions and Recommendations

The test result indicated that the education administrative officer's participatory decision making and managerial autonomy are positively associated and the performance-based reward is negatively associated with EO. The finding support that the public sector should develop an entrepreneurial culture within the organization. Public sector managers need to develop an innovative culture by encouraging managerial level officers to develop, introduce and implement the innovative ideas through improvement of the process, procedures in their organizations. For that, public leaders should be visionary leaders who can see the unseen future and public managers should be good listeners to their employees.

Further, this sector needs to modify the reward systems in the organizations because public sector managerial officers are really dissatisfied with the existing rewards. Especially, those officers are expecting intrinsic rewards such as reputation, image, and appreciation rather than the financial rewards. Finally, this study proved that the concept of “Public Entrepreneurship” is a good option for solving problems associated with government ineffectiveness and resource inadequacy (Fernando, 2005; Algewatte and Weerasinghe, 2015).

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References

Alagewatte, D.L. and Weerasinghe, R.N. (2015), ‘Public Entrepreneurship and Delivering Public Services Effectively: A Study in Public Organizations in Galle District, Sri Lanka’

Andrews, R., Boyne, G. A., Law, J. and Walker, R. M. (2007), ‘Centralization, Organizational Strategy, and Public Service Performance’, *Journal of Public Administration Research and Theory*, Vol. 19, pp. 57-80

Fox, J.M. (2005), *Organizational entrepreneurship and the organizational performance linkage in university extension*, Ohio State University, Columbus

Fernando, R.L.S. (2005), 'Entrepreneurship in the delivery of service in public sector organization in Sri Lanka: Prospects for administrative and managerial reforms', NAPSIPAG Annual Conference, retrieved 15 July 2014

Kim, Y. (2010), *Stimulating Entrepreneurial Practices in the Public Sector, The Roles of Organizational Characteristics*, East Carolina University, Greenville

Long, W., 1983, 'The meaning of entrepreneurship', *American Journal of Small Business*, Vol. 8, No. 2, pp. 47-59

Morris, M.H., and Kuratko, D.F., 2002, *Corporate entrepreneurship*, Fort Worth, TX: Harcourt College Publishers

Factors determining the development of SMEs in Jaffna District

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Introduction

SMEs play a prominent role in any economy through generating employment, contributing to Gross Domestic Product (GDP), embarking on innovations and stimulating of other economic activities (ESBA, 2011). This sector is said to be the backbone for all developed and developing nations. SME sector is envisaged to contribute to transforming lagging regions into emerging regions of prosperity (Ministry of Industry and commerce, 2015). End of the local war in Sri Lanka, SMEs in Jaffna district have been facing complex environment and the struggling to develop. At the same time, SMEs have plentiful opportunities to develop in the Jaffna district. There is need to identify the determining factors of development of SMEs. Financial development, growth and customer development were already investigated and empirically tested with the name of financial performance and market performance in SMEs. Organization development explains one of the dimension as the employee development which was not empirically analyzed in SMEs. Sustainable development reveals the social development which is also a unique concept for the SMEs. However, this combination of development concept for SMEs has still not been developed and empirically investigated in the SMEs in the Jaffna district, which is the gap of the study. There is a need to study how these SMEs have been growing and developing by managing external environmental challenges and the internal environment weakness. Therefore, the main aim of this study is to identify the determining factors of development of SMEs in Jaffna district.

Literature review

Development is the process in which someone or something grows or changes and becomes more advanced (Beard, 2000) and gradual growth of something in the organization (Cook, 1998). Ellerby and Taylor (2005) stated that “organization development is aimed at improving organizational effectiveness”. Organizational development defined as a planned intervention of change for group, team or

organization to improve organization (Taute, and Taute, 2012). Further organization development is an approach to change in growth, enhancing human skills and resolving difficulties at both the personal and organizational levels (Dorn, 1994) and it is developing successful, productive organization what supplements are to the serious bodybuilder (Taute&Taute, 2012). Indicators of SME's development are also described as outcome-based as the success of SMEs, the performance, investment over five years and number of markets (AlMadhoun, 2006). According to Bennett and Brodie (1979) indicator of development is the roles a manager takes on performance and effectiveness and success of SMEs. Marin (2002) focus on the identification of the most relevant tendencies in the SMEs sector from the perspective of six indicators considered to be relevant: the number of enterprises, the number of persons employed, the gross value added, the apparent labour productivity, the rate of profitability and the propensity to invest. Among many dimension of development, financial perspective, customer perspective, people (employee) perspective, growth perspective and social perspectives were considered as major elements for this research. Financial perspective encourages to high-level financial performance as cash flow, total revenue, return on equity, return on assets, leverage ratio and liquidity ratio (Tsai and Chou, 2009; Yongvanich and Guthrie, 2006; Hudson, Smart and Bourne, 2001; Lavric, 2010). Customer perspective encourages the identification of measures important to our customers as a number of new customers, product return rate, customer retention rate, on time delivery, share of important customer purchases, customer satisfaction and ranking by important customers (Yongvanich and Guthrie, 2006; Tsai and Chou, 2009; Hudson, Smart and Bourne, 2001). Employees' development was the foundation for organization development which includes sustainable job and benefit, worker development, innovation and training and leadership. Sustainable jobs and benefits are to concentrate on getting people into work, sustain them and allow to increase their hours and pay to a point where they no longer need the state to top up their earnings and **moving people into sustainable work, improve lives and the benefit**(Hubbard, 2009). Worker development emphasis on teamwork and group activities, employee involvement, learning, quality of work life, human resource capacity utilization and productivity (Olaru, Dinu, Stoleriu, Şandru, and Dincă, 2010). Leadership includes employee care, equal and fair treatment, building the confidence and information to employees (Yongvanich and Guthrie, 2006). Growth of organization was indicated by the development of number of branches or sales centres, increased information transfer speed, number of employees, turnover and capital growth, new product introductions, advances in technical, financial, marketing and another field of competence, develop new generation of products and the mentality to face risk (Lavric, 2010; Navickas and Malakauskaite, 2009; Stubblefield Loucks, Martens, and Cho, 2010). Social perspectives are related to benefits for the community, sell products related to the natural, historical and cultural environment, involvement in

the community's ecological projects, contribution to the local infrastructure development, education for the community and reducing risk to human health and safety (Yongvanich and Guthrie, 2006; Prud'homme and Raymond, 2016; Olaru, Dinu, Stoleriu, Şandru, and Dincă, 2010)

Methodology

Quantitative analysis was conducted in this study. The population of this study is SMEs in Jaffna district. SME in Jaffna district is 2323 and micro, small and medium are 2066, 215 and 42 respectively (IDB report, 2016, Hotel association report, 2017, PDHS report,2017). The data were collected from 343 SMEs in Jaffna district and the respondents are the managers/ owners of SMEs. The research instrument was questionnaire which was finalized after the literature review and interviews with managers of SMEs. Exploratory factor analysis utilized to confirm the development factors of SMEs with SPSS statistical package.

Result and discussion

The Kaiser-Meyer-Olkin measure of sampling adequacy tests was constructed for checking out the sample adequacy of the data.

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.855
Bartlett's Test of Sphericity Approx. Chi-Square	7633.612
Df	561
Sig.	0.000

The value of KMO came out to be 0.855(Table 1) indicating that the factor analysis test can proceed correctly and the sample used is adequate the minimum acceptable value of KMO as supported by Othman and Owen(0.5). Bartlett Test of sphericity and correlation were conducted to test the multidimensionality of the variables. The results of the Bartlett Test of sphericity turned out to be highly significant of 0.000 (Table 1) which indicate that the factor analysis processes were correct and suitable for testing multidimensionality. The correlation matrix also depicted a high correlation among the variables certifying the suitability of application of factor analysis technique on the data

Total thirty-four items were considered for the development of SMEs. Initially, factors loaded for all thirty-four items. Eleven items were low factor loading. They are Liquidity rate (0.436), Market share (0.347), Product return rate(0.469), Getting people into work(0.253), Retaining employees(0.127), **Improve lives and the benefit(0.187)**, Quality of work life(0.371),Increased information transfer

speed(0.130), Benefits for the community(0.095), Involvement in the community's ecological projects(0.154) and Contribution to the local infrastructure development(0.023). After deletion of eleven items, the remaining twenty-three items were analyzed. The researcher used the Principle Component Analysis as an Extraction method. There were six components to be extracted for these items. The cumulative proportion of variance criteria was met with 6 components to satisfy the criterion of explaining or more of the total variance. These factors explained 70.56% of total variance, which is very much acceptable for the Principle Component Varimax Rotated factor loading procedure. These twenty-three factors and the variables loading on these factors have been summarized in Table 2.

Table 2: factor loading of variables

Factors	Factor name	Loading
Financial development	Cash flow	0.840
	Total revenue	0.780
	Return on equity	0.834
	Gross profit	0.755
Customer perspectives	Return on assets	0.776
	Number of new customers	0.754
	Customer retention rate	0.685
Worker development and training	Customer satisfaction through on time delivery	0.746
	Employee involvement	0.672
	Productivity	0.786
	Promoting constructive group/ teamwork	0.703
	Developing multi-skilled and new method by initial and continuous training	0.773
Leadership	Employee care	0.705
	Equal and fair treatment	0.578
	Building the confidence	0.507
Growth perspectives	Increased branches or sales centres	0.523
	Number of employees	0.565
	Turnover	0.794
	Capital growth	0.819
Social development	New product introductions	0.741
	Sell products related to the natural, historical and cultural environment	0.654
	The education for the community	0.584
	Reducing risks to human health and safety	0.756

Conclusion and recommendation

This paper discusses the deepest and new insights into the development of SMEs. Six factors emerged and fitted for the development of SMEs. The SMEs in this challenging environment emphasis more on the financial development. Financial performance was mentioned as a major factor in sustainable measurements and earlier researches (Tsai and Chou, 2009). However, almost equal weight is given to customer development. Customer satisfaction and retentions are the major reason for the higher market share (Yongvanich and Guthrie, 2006). Even though SMEs wish the financial performance but they also care about the growth of the organization. Hence they wish to increase investments, employees and branches. Marin (2002) explained increasing employees, branch development and productivity is the major factor of SMEs development. Moreover, worker development is also given due weight age, more emphasis on productivity and promote teamwork. Employees training, sustainable jobs, further sustainable job and benefits were also important with getting, keeping and improving lives and the benefits. This study will have useful implications for theory as well as for the practices for SMEs in the Jaffna district. The findings of this study would contribute to the literature of development in the postwar market of SMEs. Particularly this finding will help to view differently the development of SMEs by applying various factors of development. Therefore, it can be concluded that the development of SMEs will be determined by all the above-mentioned factors.

Reference

AlMadhoun, M., 2006. Training under fire: The relationship between obstacles facing training and SMEs' development in Palestine. *Journal of European Industrial Training*, 30(2), pp.100-116.

Beard, M., 2000. Organizational development: An EAP approach. *Employee Assistance Quarterly*, 16(1-2), pp.117-140.

Bennett, R. and Brodie, M., 1979. A perspective on managerial effectiveness. *Brodie, M. and Bennett, R.(Eds), Managerial Effectiveness*, pp.12-31.

Cook, M.J., 1998. Quality improvement through organizational development. *Total Quality Management*, 9(4-5), pp.35-37.

Ellerby, N. and Taylor, B., 2005. Organisational development, the oasis approach: A human relations perspective.

Hotel associations, 2017. An internal report of the Hotel Association of Northern Province.

Hudson, M., Smart, A. and Bourne, M., 2001. Theory and practice in SME performance measurement systems. *International journal of operations & production management*, 21(8), pp.1096-1115.

IDB, 2016. Internal Reports of Industrial development Board.

Lavric, V., 2010. The Development of the SMEs Sector in Romania. An Approach Regarding the Dynamics and the Perspectives. *Review of International Comparative Management*, 11(5), pp.931-939.

Marin, D., (2002), *Economia României: întreprinderile mici și mijlocii - cu ce ne integrăm?*, Editura Economică

Navickas, V. and Malakauskaite, A., 2009. The impact of clusterization on the development of small and medium-sized enterprise (SME) sector. *Journal of Business Economics and Management*, 10(3), pp.255-259.

Olaru, M., Dinu, V., Stoleriu, G., Șandru, D. and Dincă, V., 2010. The responsible commercial activity of SMEs and specific values of sustainable development in terms of the European excellence model.

PDHS, 2017, Internal Reports Provincial Director of Health Service.

Prud'homme, B. and Raymond, L., 2016. Implementation of sustainable development practices in the hospitality industry: A case study of five Canadian hotels. *International Journal of Contemporary Hospitality Management*, 28(3), pp.609-639.

Stubblefield Loucks, E., Martens, M.L. and Cho, C.H., 2010. Engaging small-and medium-sized businesses in sustainability. *Sustainability Accounting, Management and Policy Journal*, 1(2), pp.178-200.

Taute, W. and Taute, F., 2012. Organizational development: A supplement for the effective organization. *Journal of Workplace Behavioral Health*, 27(2), pp.63-78.

Tsai, W.H. and Chou, W.C., 2009. Selecting management systems for sustainable development in SMEs: A novel hybrid model based on DEMATEL, ANP, and ZOGP. *Expert systems with applications*, 36(2), pp.1444-1458.

Yongvanich, K. and Guthrie, J., 2006. An extended performance reporting framework for social and environmental accounting. *Business Strategy and the Environment*, 15(5), pp.309-321.

Individual Factors Affecting the Business Performance of Women Entrepreneurs in Colombo District, Sri Lanka

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Introduction

Entrepreneurship is a critical factor for an economy of a particular country since it leads to generate income locally or internationally and ultimately facilitates economic progression. It emphasizes not only generating income but also increasing living standards of the people and accelerating production, etc. Hence entrepreneurship can be considered as one of the major drivers of the economic growth especially for a developing country like Sri Lanka.

Women Entrepreneurship is also attracted the attention of the scholars being one of the crucial factors of economic growth of a country. Sri Lanka needs to pay high consideration to women entrepreneurship since more than half portion of women population. Women entrepreneurship generates new job opportunities to the society, it influences to provide innovative management solutions to the business world. Even though a variety of advantages can be identified, still there is a number of barriers associated with a woman entering to the business world such as gender discrimination, matrimonial problems, cultural barriers, lack of finance etc (Hisrich, 1982).

When focusing on the entrepreneur's role and the Sri Lankan economy, past history shows that there is no considerable contribution of women entrepreneurship to the development of the economy of the country. But in recent past, the situation has changed and there is a considerable contribution of women entrepreneurs to the Sri Lankan economy even though the numbers of female entrepreneurs are still relatively low (Hemalatha, 2005).

Research problem of the study is formulated as, “Is there an effect of individual factors namely, human capital, social learning and financial capability on business performance of women entrepreneurs in Colombo District, Sri Lanka”.

The main objective of the research is, to find out the effect of individual factors on the business performance of Women Entrepreneurs: in Colombo District, Sri Lanka.

The sub-objectives of the research are,

- To find out the relationship between human capital and business performance of women entrepreneurs in Colombo District Sri Lanka.
- To find out the relationship between social learning and business performance of women entrepreneurs in Colombo District Sri Lanka.
- To find out the relationship between financial capability and business performance of women entrepreneurs in Colombo District Sri Lanka.
- To identify which factor (out of human capital, social learning and financial capability) has the most influence on the business performance of women entrepreneurs in Colombo District Sri Lanka.

According to the objectives of the study, the following hypotheses were formulated.

- Hypothesis 1: There is a positive relationship between human capital and the business performance of women entrepreneurs in Colombo District Sri Lanka.
- Hypothesis 2: There is a positive relationship between social learning and the business performance of women entrepreneurs in Colombo District Sri Lanka.
- Hypothesis 3: There is a positive relationship between financial capability and the business performance of women entrepreneurs in Colombo District Sri Lanka.

Literature Review

The field of entrepreneurship is a complex study area in modern studies. Nobody can give an exact definition of entrepreneurship as a result. Simply it is an exploiting new profitable business opportunity and creating new organizations by using them (Kearney, 2007).

Women entrepreneurship has attracted the attention of the scholars from the recent past based on the definitions for an entrepreneur. Women have owned and operated the business for decades, but they were not always recognized or given credit for their efforts. According to Hughes (2012), Women entrepreneur is any female who organizes and manages an enterprise, especially at a business or commercialized level.

According to Cooper (1992), it can be identified that personal and industrial factors such as experience, education, the occupation of parents, gender, race, age, and entrepreneur's goals affect women entrepreneurship. Brush (1991) has stated that there is no significant difference between the performance of businesses when comparing men and women individually and the researcher has identified that the most successful factors are, previous occupational experience, business skills, level of education, and personal factors such as motivations and having a mentor.

This study has focused only on human capital, social learning and financial capability as its independent variables.

According to Hisrich (1982), human capital can be defined as the collection of individually developed supportive skills and capabilities through his or her education and experience. This is based on six dimensions, educational level, educational area, previous occupation, previous entrepreneurial experience, experience in the industry, business skills. Further, Hisrich (1982) identified that there is an effect to the business performance from these human capital factors.

Social learning theory was introduced by Bandura in 1977 and the concept mainly relies on the role of entrepreneurial socialization since it explains the behavioural pattern of the entrepreneurs and leads to career development. Social Learning can happen through the observation of the behaviour of other people, especially role models. The study also revealed that there is a positive impact from social learning towards the business performance of women entrepreneurs (Bandura, 1977).

Brophy (1989), stated that availability and capability to find sufficient start-up capital is one of the most influencing environment factors which directly affect the business performance of women entrepreneurs. Similarly, if there are sufficient loan facilities and other financial support services for the entrepreneurs that will also favourably impact the business performance (Bruno & Tybjee 1982).

Chaganti & Parasuraman (1994) defined that business performance is related to financial performance and documented organizational factors. According to Hisrich (1982), five dimensions namely, revenue, profits, the ability to face competition, business expansion, business achievements, can be used to measure the performance of a particular business.

Methodology

The researcher has used a self-developed conceptual framework which indicates Human Capital, Social Learning and Financial Capability as the independent variables while Business Performance as the dependent variable of the study.

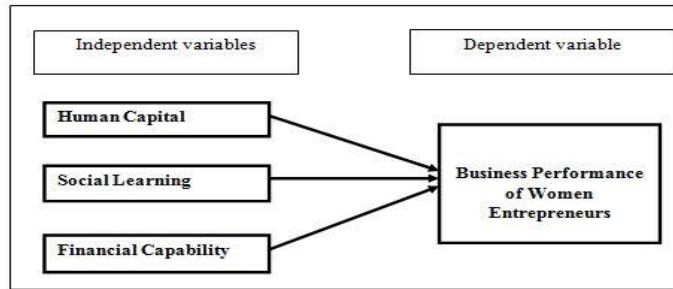


Fig. 1. Conceptual Framework

Source: Compiled by the author

The study population of this research is considered as the total number of women entrepreneurs in Colombo District, Sri Lanka. A target population is a total number of women entrepreneurs who have registered their businesses at the Small Enterprises Development Bureau (SED), Colombo. According to the statistics provided by SED, there are 313 registered women entrepreneurs.

Sampling method of the study is non-probability sampling method due to the difficulties in randomization of selecting the sample from the population and the time limitations.

According to this study, the sample size was determined by using a sampling calculator with 95 per cent of the confidence interval and five per cent of confidence level. According to the output, the sample size is 173 respondents.

The researcher employed basically the primary data collection method for this study. A structured questionnaire was developed through the literature in order to collect the data on dependent and independent variables as well as the general information of the respondents. Self-administrated questionnaires were filled by the women entrepreneurs at the settings such as meetings and the workshops organized by the SED Bureau, Colombo.

As the secondary data sources, the researcher used previous researches, journal articles, statistics available at SED Bureau, Colombo etc.

Statistical Package for Social Sciences (SPSS 16.0) has been used for data analysis.

Results and Discussions

Total 173 questionnaires were distributed with planned non-response amount of 10. The researcher could collect only 164 questionnaires. Reliability

Table 1. Reliability of Variables

Variable	Code	Number of Items	Cronbach's Alpha	Comment
Business Performance	BP	07	0.944	Acceptable
Human Capital	HC	17	0.717	Acceptable
Social Learning	SL	12	0.837	Acceptable
Financial Capability	FC	10	0.824	Acceptable

Source: Compiled by the author based on data generated by SPSS version 16.0

Correlation Analysis

Correlation analysis was done to identify the relationship between the independent variables and the dependent variable.

According to the analysis, all variables were satisfied the requirement. Chi-square values are also in a significant level at the 95% of confidence level. As a conclusion of the results, it can be concluded that there are no inter-correlation issues among the variables of the construct.

Validity

Table 2. The validity of the Model

Variable	Items	KMO Value	Factor loading		Bartlett's Value	Text
			Maximum	Minimum		
BP	17	0.712	0.944	0.767	0.000	
HC	12	0.822	0.968	0.773	0.000	
SL	10	0.753	0.980	0.911	0.000	
FC	07	0.850	0.943	0.620	0.000	

Source: Based on survey data

According to the results of the variables, all satisfied the threshold requirement. Sig value of Bartlett 's Test of Sphericity of all variables is less than 0.05. Finally, it can be concluded that all the indicators and dimensions which were used to develop the construct are soundly valid in terms of construct validity and convergent validity.

As per the table 4.3, all three types of correlation coefficients are positive and significant which indicate that all the independent variables are having positive relationships with the dependent variable.

Table 3. Correlation Analysis

Variable	BP
HC	.329**
SL	.437**
FC	.382**

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

Source: Based on survey data

Hypothesis Testing

H1: There is a positive relationship between Human Capital and Business Performance of Women Entrepreneurs.

The Pearson's coefficient of correlation is = 0.329** (P=0.000); which is a positive value. It implies that there is a weak positive correlation between Human Capital and Business Performance of Women Entrepreneurs. Accordingly, the alternative hypothesis is accepted.

H2: There is a positive relationship between Social Learning and Business Performance of Women Entrepreneurs.

The Pearson's coefficient of correlation is = 0.437** (P=0.000); which is a positive value. It implies that there is a weak positive correlation between Social Learning and Business Performance of Women Entrepreneurs. Accordingly, the alternative hypothesis is accepted.

H3: There is a positive relationship between Financial Capability and Business Performance of Women Entrepreneurs.

The Pearson's coefficient of correlation is = 0.382** (P=0.000); which is a positive value. It implies that there is a weak positive correlation between the Financial Capability and Business Performance of Women Entrepreneurs. Accordingly, the alternative hypothesis is accepted.

Multiple Regression Analysis

The following table shows the summary of the results of multiple regression analysis of the study

Table 4. Multiple Regression Analysis

Dependent Variable	Coefficient	T	Sig.	VIF
BP				
Intercept	.289	.739	.461	
HC	.160	2.292	.023	1.128
SL	.370	5.460	.000	1.069
FC	.311	4.604	.000	1.064
Adjusted R ²	.320			
F	25.837**			
Sig	.000			
N	164			

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

Source: Based on survey data

Accordingly, the linear regression model can be formulated as;

$$BP = 0.289 + 0.16HC + 0.37SL + 0.311FC + e1$$

The multiple regression model with three predictors produced $R^2 = 0.333$, $F = 25.837$ and 'p-value' < 0.05 . The standardized coefficients (beta values) were used to explain the relationship between variables. As shown in Table 4.4, HC, SL and FC have significant positive regression weights, indicating respondents who are having higher scales on these variables were expected to have higher BP. Since the 'p values' of coefficients of all variables are less than 0.05 the relationship is significant. The R^2 indicates the overall quality of the prediction and by looking at R^2 value as shown in Table 4.4, it can be identified that the model explains the minority (less than 50 per cent) of the total variance. HC, SL and FC together explain 33.3 per cent of the total variance of BP. 66.7% of the variance of BP is explained by other factors. Further, all the values of independent variables are significant at 95% of the confidence interval.

Discussions

Findings of the study are mainly discussed referring to the objectives of the study.

The general objective of the research study is to find out the individual factors affecting the business performance of women entrepreneurs. According to the reviewed literature, there are three main variables which describe individual factors. They are Human Capital, Social Learning, and Financial Capability.

According to the sub-objectives of the study, the results of the discussion of the relationship between independents variable and dependent variables are shown in the following table.

Table 5. Supported Hypotheses of the Study

No	Hypotheses	Supported or not
H1	There is a positive relationship between human capital and the business performance of women entrepreneurs	Supported
H2	There is a positive relationship between social learning and the business performance of women entrepreneurs	Supported
H3	There is a positive relationship between financial capability and the business performance of women entrepreneurs	Supported

Source: Compiled by the author

The study found that there are positive relationships between the dependent variable (Business Performance) and the independent variables (Human Capital, Social Learning, Financial Capability). According to the results of correlation analysis, there is a significant positive relationship between Human Capital and Business Performance with 0.329 correlation coefficient, the significant positive relationship between Social Learning and Business Performance with 0.437 correlation coefficient, the significant positive relationship between Financial Capability and Business Performance with 0.382 correlation coefficient.

According to the final sub-objective, the study has identified Social Learning as the most influencing factor among the independent variables since it is having 0.370 of coefficient value according to the multiple regression analysis.

Conclusions and Recommendations

Entrepreneurship is an effective timely solution for most of the economic issues that the country is currently facing such as income disparity, high unemployment rate etc. Because of these reasons empowering entrepreneurs has become a timely need. Addressing that felt need, this research mainly aims to identify the individual factors affecting the business performance of women entrepreneurs with special reference to Colombo district, Sri Lanka.

Findings of the research emphasized that there is a positive relationship between HC and BP, SL and BP as well as FC and BP. Among the independent variables, SL was the most influencing individual factor, followed by FC respectively.

As the recommendations for the improvement of the BP of women entrepreneurs in Colombo district, Sri Lanka, the researcher suggests to pay attention on improving the entrepreneurial education within the country in order to establish an entrepreneurial culture, establishing industrial and business centres, improving the accessibility to finance by establishing mandated loan portfolio specially for female entrepreneurs, introducing gender sensitive banking practices to the bank

officials, improving the financial literacy and awareness of women entrepreneurs, introduce mentorship and advisory services, improve the business development support service packages, easing the legal and regulatory framework burdens for women entrepreneurs etc.

References

Bandura, A., (1977), *Social Learning Theory*, Englewood Cliffs, Prentice- Hall, N.J.

Brophy, D. J., (1989), 'Financing women-owned entrepreneurial firms' as cited in Hagan, O., Rivehun, C., and Sexton, D., 'Women-owned businesses', New York, pp. 55-75.

Bruno, A.V. and Tybjee, T.T., (1982), *The environment for entrepreneurship*.

Brush, C.G., (1991), 'Antecedent influences on women-owned businesses', *Journal of Management Psychology*, Vol. 2, No. 6, pp.9-16.

Chaganti, R. and Parasuraman, S., (1994), 'Venture performance, gender, goals, business strategies and management practices', Working Paper, Rider College.

Cooper, A.C., (1992), *Entrepreneurs, processes of founding, and new-firm performance*.

Hemalatha, S., (2005), 'Women in local politics: A study of women's participation in the politics of Sabaragamuwa province from 1987 to 2005, an unpublished document.

Hisrich, R. D., (1982), 'The woman entrepreneur as a reflection of the type of business', *Frontiers of Entrepreneurship Research*, pp. 54-67.

Hughes, K., (2012), *Global women's entrepreneurship research: Diverse settings, questions and approaches*, Cheltenham: Edward Elgar.

Kearney, C. H., (2007), 'A conceptual model of public sector corporate entrepreneurship', *International Entrepreneurship and Management Journal*, Vol. 4, No. 3, pp.295-313.

Intervention time-series model using transfer function for Tourism arrival in Sri Lanka

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Introduction

Tourism plays a vital role in the economy of most of the countries in the world. Tourism is the main industry in Sri Lanka and its major source of foreign exchange and revenue. World Economic Forum (2017) reported that Spain, France and Germany were the top three most tourist-friendly destinations in the world. At the meantime, Sri Lanka has been ranked 64th in the Travel & Tourism Competitiveness Index (TTCI) out of 141 countries. While further improvements are needed, Sri Lanka is taking small but important steps in the right direction, the report said.

Sri Lankan tourism has had many drawbacks during the last three decades mainly due to the civil war in the country until 2009 afterwards the Sri Lankan tourism industry has been growing dramatically. At present, Sri Lanka has overcome all these drawbacks and the industry is leading to a new era. In such a situation the forecast of tourist's arrivals is important since it would be beneficial the tourism-related industries like airlines, hotels and other stakeholders to adequately prepare for the expected number of tourists in the coming year.

The data related to this collection from Annual Statistical Report of Sri Lanka Tourism-2016. The time span used for the study is from the year 1970 to 2017 with intervention after the year 2009.

Intervention analysis is the application of modelling procedures for incorporating the effects of exogenous forces or interventions in time series analysis. One special kind of ARIMA model with input series is called an intervention model or interrupted time series model. In an intervention of this model, the input series is an indicator variable that contains values one after the post-war of 2009 that occurrence of an event affecting the response series tourism arrival in Sri Lanka. This intervention model can be used both to model and forecast the response series.

The objective of the study is to introduce intervention time series analysis for fitting a most appropriate model to predict tourist arrivals in Sri Lanka by using intervention modelling method.

Literature review

In literature, many research studies can be found on forecasting tourist arrivals in national and international context references. Those studies have used different methodologies to forecast the tourist arrivals based on the nature of the data. Application of Time Series Intervention Modelling for Modelling and Forecasting, Cotton Yield (Mrinmoy Ray, 2014), in this model the intervention being the introduction of Bt Cotton variety in the year 2002. A systematic approach to modelling and forecasting in the time domain are illustrated in the classic work of Box-Jenkins (1970) or later books such as Shummay (1989), Harvey (1994), Wei (1994), and Caylor (1991). Autoregressive integrated moving average (ARIMA) modelling is overall the most accurate method for forecasting international tourist arrivals (Cho, 2001; Chu, 1998; Loganathan & Yahaya, 2010; Chang et al., 2011; Dimitrios et al., 2012; Saayman et al., 2010). The study was done by P.C. Padhan has fitted Seasonal Auto-Regressive Integrated Moving Average (SARIMA) models for forecasting future tourist's arrivals in India. In this fitted models are compared mainly using Mean Absolute Percentage Error (MAPE) values. Another study on forecasting tourist arrivals to Australia has used Box-Jenkins' Auto-Regressive Integrated Moving Average (ARIMA) and SARIMA models in their study. The most popular modelling procedures are those where "intervention" detection and estimation is paramount. Box and Tiao (1975) pioneered this type of analysis in their quest to solve the Los Angeles pollution problem. According to the literature, empirical studies of time series behaviour of the post-war international tourist arrivals to Sri Lanka had been carried out using different modelling approaches. Such as the classical time series decomposition approach (Kurukulasooriya & Lelwala, 2014) with 96% forecasting accuracy, Box-Jenkins' modelling and Holt - Winter's Exponential Smoothing approaches (Gnanapragasam & Cooray, 2016(a) & 2016(b)) with nearly 90% and 88% forecasting accuracy respectively. In this new approach, the transfer function model has been developed for predicting international tourist arrivals to Sri Lanka with 91% forecasting accuracy.

Methodology

Intervention Model

There are several sources of information about interrupted time series designs that are intended for an audience of social scientists. The most comprehensive discussion of the interrupted time series design is provided by Glass, Willson, and Gottman in *Design and Analysis of Time Series Experiments* (1975). Box-Jenkins strategy for time series modelling with features for the identification, estimation and diagnostic checking, and forecasting steps of the Box-Jenkins method.

Suppose that the ARIMA model for X_t (the observed series) with no intervention is With the usual assumptions about the error series $X_t - \mu = \frac{\theta(B)}{\varphi(B)} w_t$. Where $\theta(B)$ is the usual MA polynomial and $\varphi(B)$ is the usual AR polynomial. Let $Z_t =$ the amount of change at time t that is attributable to the intervention. By definition, $Z_t = 0$ before time T (time of the intervention). The value of Z_t may or may not be 0 after time T.

Then the overall model, including the intervention effect, may be written as

$$X_t - \mu = Z_t + \frac{\theta(B)}{\varphi(B)} w_t$$

Intervention analysis may be viewed as a type of regression analysis in which one or more predictor variables observed at equally spaced time points are postulated to have had an impact on a response variable observed at the same time points. In the simplest case, the intervention predictor variable is an indicator variable that takes the value zero before the intervention occurs and the value one after the intervention occurs. However, the predictor variables in an intervention analysis need not be indicator variables. We consider the general stationary intervention model (BoX and Tiao 1975) given by the intervention variables used are defined by X is equal one if year > 2009 otherwise zero.

Results and Discussions

In Figure 1(a), it is obviously observed that from the years 2009 there is a sudden upward trend look like in tourist arrivals. This is the beginning of the internal conflict in Sri Lanka. There are ups and downs in arrivals can be seen from the years 1983 to 2009. This is the period where the internal conflict took place in Sri Lanka. It reveals that there is a rapid increase in growth rate in total tourist arrivals after the post-war period. This is the reason for this study is to use Intervention time-series model using transfer function mainly focus on the international tourist arrivals to Sri Lanka.

By visual inspection of autocorrelation plot (ACF) and partial autocorrelation plot (PCAF) plots (Figure 1(b) and Figure 2(b)), the ACF decays very slowly shows how values of the series are correlated with past values of the series. The Augmented Dickey-Fuller Unit Root test (Table1) also results show that the tourist arrivals series is nonstationary since the series has a trend over time, seasonality, or some other nonstationary pattern. The usual solution of this result is to take the difference of the series from one period to the next and then analyze it. Tourist arrivals data consisted of heteroscedasticity errors. Therefore, Logarithm

transforms and differenced the data were used to transform data to remove the heteroscedasticity errors.

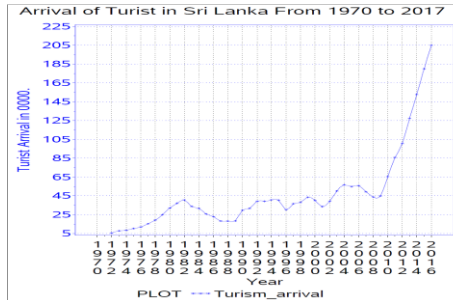


Figure 1. (a) Plot of yearly tourist arrivals

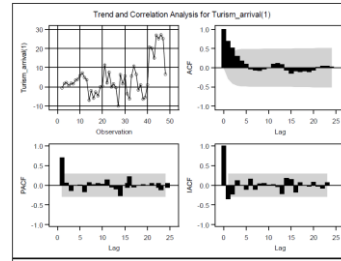


Figure 1(b). The plot of Difference, ACF and PACF

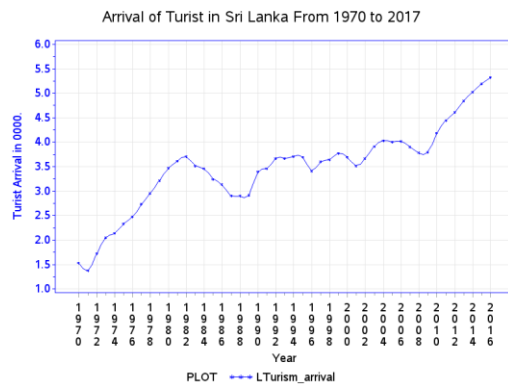


Figure 2(b): Plot of ACF and PACF

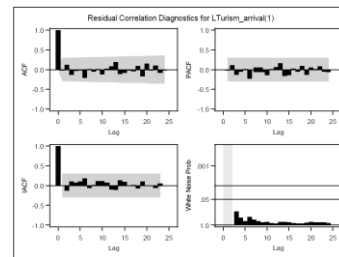


Figure 2(a): Plot of Log transformation of tourist arrivals

The Extended Sample Autocorrelation Function (ESACF) and Scanning methods (Table 2) can tentatively identify the orders of autoregressive $p=2$, order of moving average $q=1$ and difference $d=1$ of ARIMA process with intervention based on iterated least squares estimates of the autoregressive parameters (Tsay and Tiao (1984)) and minimum values of Schwarz's Bayesian Criterion ($BIC=3.9$). Once an appropriate model has been identified and its parameters estimated, it is, of course, necessary to determine whether this choice is adequate. The diagnostic checks including the independence, normality and homoscedasticity of residuals are the most important stage of Intervention model building process. Since the visual inspection of Figure 3, the autocorrelation function plots indicates that these residual autocorrelation plots are white noise and normal probability plot shows a straight line, it is reasonable to assume that the observed sample comes from a normal distribution. This is the statistical evidence that the assumption that the

random errors are an independent sample from a normal distribution. These diagnostics indicate that the model has produced only uncorrelated white noise, which is characteristic of a properly specified model.

Table 1: Augmented Dickey-Fuller Unit Root Tests

Augmented Dickey-Fuller Unit Root Tests							
Type	Lags	Rho	Pr< Rho	Tau	Pr< Tau	F	Pr > F
Zero Mean	1	-16.0023	0.0034	-2.86	0.0051		
	12	-6.1878	0.0788	-1.06	0.2562		
Single Mean	1	-21.8734	0.0030	-3.25	0.0230	5.31	0.0380
	12	23.9424	0.9999	-1.75	0.3976	1.53	0.6867
Trend	1	-21.8682	0.0236	-3.21	0.0961	5.17	0.1838
	12	101.6854	0.9999	-2.27	0.4394	4.15	0.3748

Table 2: oder selection for the Interventional model

ARMA(p+d,q)Tentative Order SelectionTests					
SCAN			ESACF		
p+d	q	BIC	p+d	q	BIC
3	1	3.902	3	1	3.901709
1	2	3.960	0	2	4.851274
0	4	4.357	1	2	3.960112
			4	0	4.034265

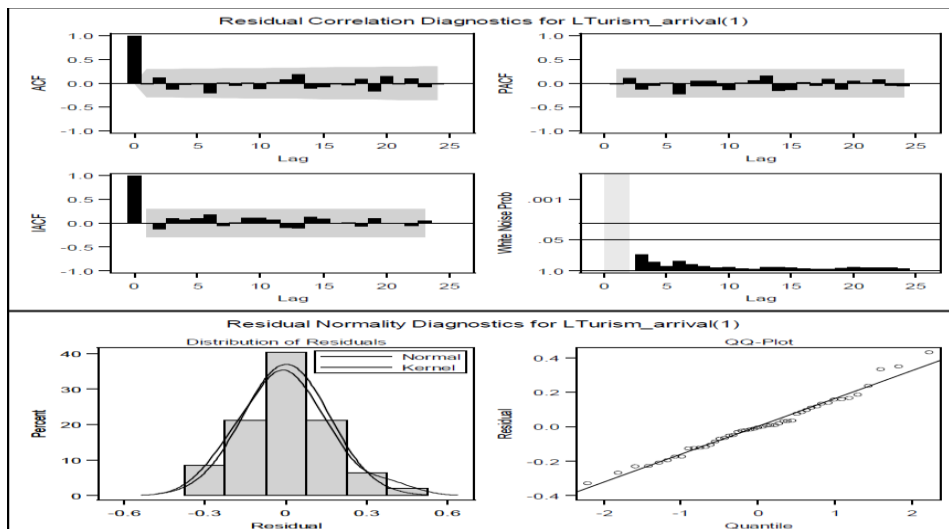


Figure 3: Plots of ACF, PACF, Normal Probability plot for Residual

Table 3 : Model Validation

ARIMA (p, d, q)	R-squared	RMSE	MAPE	AIC
ARIMA(2,1,1)	0.878	130.41	55.46	29.6
ARIMA(1,1,0)	0.578	125.70	58.29	45.2
ARIMA(1,1,1)	0.779	274.90	56.07	30.9
ARIMA(1,1,2)	0.703	719.18	48.45	31.2
ARIMA(2,1,2)	0.793	720.74	4261	31.7
ARIMA(3,1,1)	0.623	115.35	38.35	32.4

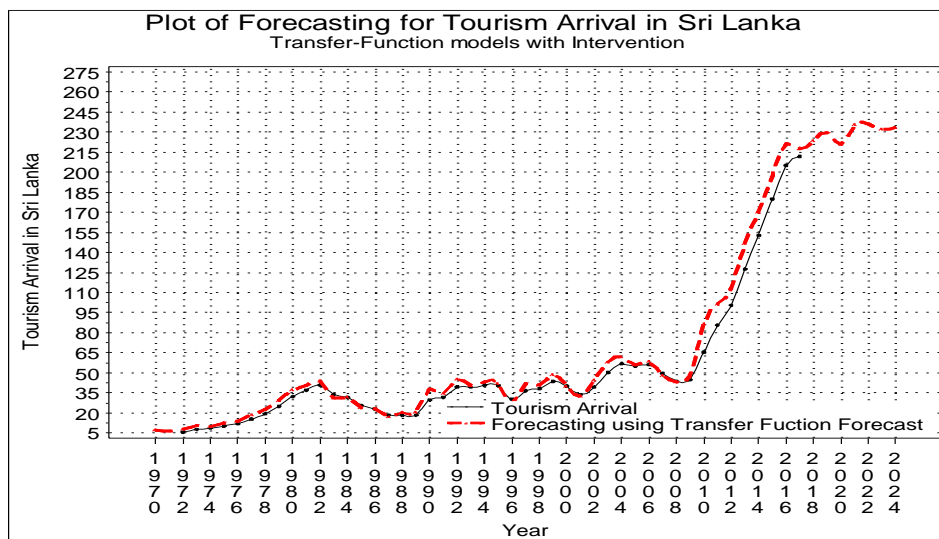


Figure 4: Plot of forecasting and real data for Tourist arrival to Sri Lanka

Conclusions and Recommendations

Key findings indicate that the tourist arrivals patterns in the study period are autoregressive, as such they do depend on the past history of the data and combination of past random noises.

Analysis of performance of the tourist arrivals from preceding 47 years traded value gives us ARIMA (2, 1, 1) model with intervention post-war period which helps us in predicting the future values of tourist arrivals. ARIMA (2, 1, 1) with the intervention was chosen from six different model parameters by using minimum values of RMSE, MAPE and AIC (Table 3), as it provides the best model

which satisfies all the criteria of fit statistics while other five failed the fitted model is

$$(1 - B)\log(Arrivals)_t = 0.067785 + 0.064917X + \frac{1 + 0.17013 B^{**}(1) - 0.28196 B^{**}(2)}{1 + 0.45655 B^{**}(1)} a_t$$

Where B is the backshift operator and it is the random error.

The intervention time-series model using transfer function for Tourism arrival was identified as the appropriate model to Sri Lanka.

References

- Harvey, A.C., & Phillips, G.D.A.(1979) *Maximum likelihood estimation of regression models with an Autoregressive moving average disturbances*Biometrika, 49-58.
- The World Economic Forum Report -2017.*
- D. K. Ishara1* and P. Wijekoon1 2017, *Time Series Analysis for Modeling and Forecasting International Tourist Arrivals in Sri Lanka.*
- Glass, Willson, and Gottman in *Design and Analysis of Time Series Experiments* (1975).
- C. Lim and M. McAleer, *Time series forecasts of international tourism demand for Australia*, Discussion paper no 533, 2001.
- P.C. Padhan 2010, *Forecasting tourists' footfalls in India: an assortment of Completing Models*, International journal of business and Management, Vol 6, No 5, 2010.
- V. Cho 2003, *A comparison of three different approaches to tourist arrivals forecasting*, Tourism Management, Vol.24, No 3, 323-330, 2003. Box, G.E.P. and Tiao, G.C., 1975 pp. 70-79. *Intervention Analysis with Applications to Economic and Environmental Problems*. JASA.
- Box Jenkins, *SARIMA application. South Asian Journal of Tourism and Heritage*. 2010; 3(2): 50-60
- SAS/ETS(R) 9.2 User's Guide (2010), SAS Institute
- Cantor, D. and K. C. Land (1985), *Unemployment and crime rates in the post-world War II United States: A theoretical and empirical analysis*, American Sociological Review 50:317-332.
- Hultkrantz L, Olsson C: *Chernobyl effects on domestic and inbound tourism in Sweden - a time series analysis*. Environmental and Resource Economics. 1997, 9: 239-258.

Cho V 2001, *Tourism forecasting and its relationship with leading economic indicators*. Journal of Hospitality and Tourism Research. 2001; 24:399-420.

Loganathann&Yahayai. *Forecasting international tourism demand in Malaysia using Box Jenkins SARIMA application*. South Asian Journal of Tourism and Heritage. 2010; 3(2): 50-60.

Saayman A &Saayman M. 2010, *Forecasting tourist arrivals in South Africa*. ActaCommerci. 2010; 281-293.

Annual Statistical Report of Sri Lanka Tourism– 2016

Mrinmoy Ray, V. Ramasubramanian2014, *Application of Time Series Intervention Modelling for Modelling and Forecasting Cotton Yield*, Statistics and Applications Volume 12, Nos. 1&2, 2014 (New Series), pp. 61-70

Microfinance and Poverty Alleviation: A Comparative Analysis in Sri Lanka

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Introduction and Research Problem:

A person may face poverty due to the lack of facilities to maintain a minimum standard of living and his inability to invest the resources necessary to achieve these facilities. We must move beyond indices to properly understand poverty and the standard of living. Although, microfinance is a form of financial development that has mainly focused on alleviating poverty by providing financial services to the poor. Mohammad Yuns in 1976, set up with a new concept and model which is called "The Grameen Model." Sri Lankan administrations have carried out a number of poverty alleviation initiatives, microfinance schemes were a relatively new introduction. The Grameen model was experimented in the 1980's by the Sri Lankan financial sector to alleviate poverty because poverty had become a major issue in that society and had not a critical solution. However, microfinance is not available to all citizens state that microfinance does not assist the poor because for the most part they use the loans for consumption instead of investing the funds in businesses. Therefore, this study is important to fill the literature gap which can alleviate poverty through borrowing microfinance from the sub-urban divisions. Although This is a study on the relationship between microfinance and poverty and the objective of the study is to determine whether microfinance can reduce poverty. Moreover, the indebtedness of the beneficiaries, as well as the feasibility of regulating the loan process, are also considered.

Methodology:

The study is focused on semi-urban areas 100 households from Homagama Divisional Secretariat area, Colombo district were chosen as a sample based on simple probability using the voters' registry. Data was collected through a structured questionnaire and interviews. The data analysis was elaborated as two parts: descriptive and statistical analysis. To build the

Multidimensional Assets Poverty Index, questionnaires with unique questions were used and it was the dependent variable in the study. To create the Index, quintile analysis was used on data collected by 29 questions on human capital, material capital, financial capital and natural capital was created on the principal component method. Moreover, data entry was made in computer and analysis was done using the concerned software SPSS 16.0. Tabular and statistical analyses were used to achieve the objectives. The data collected through the questionnaire was analysed in three stages. Multidimensional Assets Poverty Index was built first. Next, the variables that impact the Multidimensional Assets Poverty Index was described using descriptive statistics. Finally, an econometric model was created using the Multidimensional Assets Poverty Index.

Discussion, Results and Conclusions:

According to the table No: 01 the highest income bracket, those who make over Rs 69 000, have populations that are spread into two categories, i.e. the rich and those who are vulnerable. On the other hand, most of those who make over Rs 47 000 a month is placed, between 38% to 100%, in the 'rich' category. The RS 15 000 - 25 000 income category is represented by 45% of extremely poor, 30% of somewhat poor and 25% those who are vulnerable. There were some people suffering from extreme poverty in the Rs 36 000 - 47 000 category, 12.9%, however, most of the households, 32.3%, who make that income belong to the rich category. In the income category of Rs 15 000 - 25 000, has 45% of the extremely poor people. There is a diversity of monthly income of individuals from the poorer than the richer.

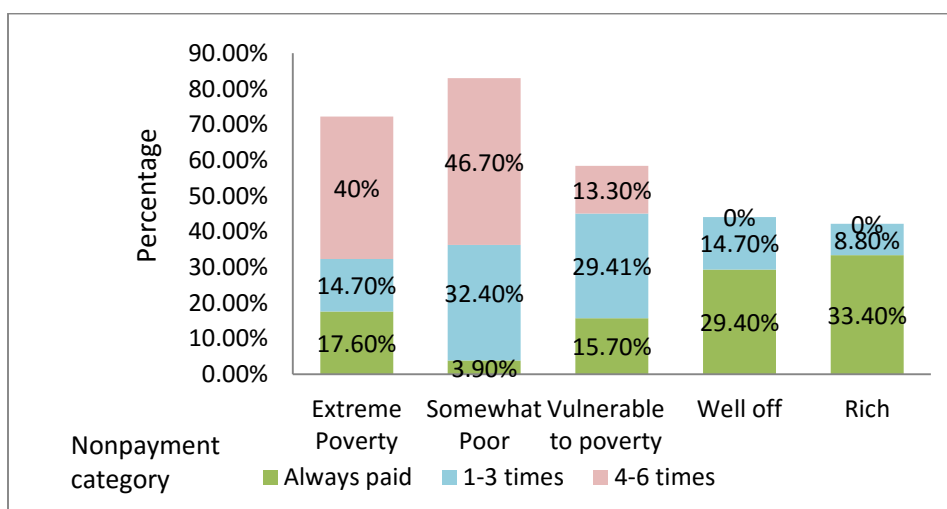
Table 01: Poverty level and monthly income of the household

	Extreme poverty	somewhat poor	Vulnerable to poverty	well off	Rich	Total
15000–25 000	45%	30%	25%	0%	0%	100%
25000–36 000	29.2%	25%	12.5%	25%	8.3%	100%
36000–47 000	12.9%	19.3%	12.9%	32.3%	22.6%	100%
47000–58 000	0%	9.5%	33.3%	19.1%	38.1%	100%

58000–69 000	0%	0%	0%	0%	100%	100%
Over 69 000	0%	0%	50%	0%	50%	100%

Source: Survey data, Jan. 2017

Figure 01: poverty level and the frequency of non-payment



Source: Survey data, Jan. 2017

According to the figure 01, those who have not paid instalments of loans have been divided into three categories based on the number of times they have not paid. These categories are those who have always paid the loan instalments, those who have missed between 1- 3 loan payments and those who have missed between 4- 6 loan payments. Among the well-off and rich income categories, a significant amount of borrowers have always paid their loan instalments. The figure is 33.4% in the 'rich' category and 29.41% in the 'well off' category. None from the well-off and rich income categories have ever missed 4-6 loan instalments. 46.7% of those from the somewhat poor category have missed paying 4-6 loan instalments, which is the highest in this category, and only 3.9% from this income category have always paid their loan instalments. Compared to 14.7% of those in the 'extremely poor' income category, 32.4% in the 'somewhat poor' income category have missed between 1- 3 of their loan instalment payments. It implies the data that the poorer have not paid instalments of loans on time.

Table 02: Poverty level and number of times loans have been taken

No of times	Extreme Poverty	Somewhat Poor	Vulnerable to poverty	Well off	Rich	Total
1	2.2%	2.2%	24.5%	40%	31.1%	100%
2-3	14.3%	21.4%	7.1%	14.3%	42.9%	100%
Over 3	41.5%	39%	19.5%	0%	0%	100%

Source: Survey data, Jan. 2017

As a part of the descriptive statistical analysis, the link between the poverty level and the number of times microfinance loans have been taken has been considered. When families don't have sufficient funds to meet their daily expenses, they tend to take one or more microfinance loans for consumption. The amount which is borrowed has a significant impact on poverty levels. According to the table, these categories are that 41.5 % of those living in extreme poverty has taken more than three loans. However, not a single person that belongs to 'well-off' and 'rich' categories' have taken more than three loans. Most people from these categories have taken only one loan, 40% and 31% respectively. But 'extreme poverty', 'somewhat poor' and 'vulnerable' categories have taken more than three loans 41.5%, 39%, 19.5% respectively. However, it can be identified that other categories without the 'well-off' and 'rich' ' have taken more loans and as the result of that, they faced to indebtedness.

The Regression line for poverty, according to the estimated regression coefficient of the results of the Poverty Regression Model, is $MDPI = -0.280 + 0.388$ (no of times loans were taken) - 1.978 (expected monthly income) Criteria coefficient of the multiple stepwise regression model or R-squared value, a statistical measure of how close the data are to the fitted regression line, is 0.760 and this is a good fit for the model.

According to the results of the study, Microcredit is not an effective tool for poverty alleviation especially for the poor people with previous indebtedness. Therefore, the study suggested between no: of loan terms and the value of the loan should be compared before giving the loan. Further, the poorest cannot repay their loan on time

Table 03: Household poverty model

Model	Unstandardized coefficient		t value	P value
	coefficient	Standard error		
Constant	- 0.280	0.230	- 1.216	.227
No of times loans were taken	0.388	0.031	12.553	.000
Expected monthly income	- 1.978	0.000	- 4.382	.000

Source: Survey data, Jan. 2017

Dependent variable: poverty

as the study recommends the borrowers income level should be categorized and after that selecting the borrowers who have good credit history before issuing the loan. The study proposed most poor people do not know that how to allocate their credit. Hence, a special monitoring campaign should be created after giving the credit. Furthermore, the re-payback period should be increased or payment of loan instalment should be fortnightly if possible monthly. Also proposed a regulation procedure should be made to manage the credit risk.

Keywords: extremely poor, microcredit, Multidimensional Assets Poverty Index

References

Gunapalan, S., Ummah M.A.C.S.(2013), A Study on Microfinance as a tool in Developing Entrepreneurship *Special Reference to Ampara District of Sri Lanka*. Available from: <http://www.seu.ac.lk/researchandpublications/symposium/international/2013/Management/A%20Study%20on%20Microfinance.pdf>

Haque, M.S., Yamao, M. (2008), Can Microcredit Alleviate Rural Poverty? *A Case Study of Bangladesh*. Available from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.193.4690&rep=rep1&type=pdf>

Kirru, J.M,(2007), The impact of microfinance on rural poor household's Income and Vulnerability to poverty [*case study of Makueni*]Kenya. Available

from:http://scholar.google.com/scholar?q=the+impact+of+microfinance+on+rural+poverty+in+kenya&hl=en&as_sdt=0%2C5&as_ylo=2007&as_yhi=

Jayasundera, N.S., (2005), Urban Poverty in Colombo-PEP, Available from:http://www.pepnet.org/fileadmin/medias/pdf/files_events/4th_colombo/proceed/shantha.pdf

Thilakarathna, G.M., Wickramasinghe, U. (2005), Microfinance in Sri Lanka: A Household Level Analysis of outreach and impact on poverty. Available fromhttp://www.pepnet.org/sites/pepnet.org/files/typo3doc/pdf/files_events/4th_colombo/Ganga.pdf

The Financial strength of Central Bank and its Impact on Price Stability; Study on Sri Lanka and India

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Introduction

Background of the study

Central bank plays a key role in an economy of a county being the sole monetary authority. But the importance of an adequate level of financial strength in the context of the central bank is subjected to controversy. The concept of central bank financial strength is disregarded for a longer period of time due to several reasons. It is believed that monetary autonomy in the economy inherent only to central bank provides no more requirement of a financial strength (Stella 2005). Stella claims that unlimited costless ability of central bank in creating domestic fiat money trivializes the need of a financial strength for a central bank as they can print any quantity of money to repay their obligations as well as to absorb the losses. But it is argued that there can be an adverse economic impact from printing money which could results conflicts in policy objectives especially in terms of price stability; which is the primary objective of the majority of central banks around the globe.

This prevailing controversy on this subject inspired this study to investigate the probable relationship between central bank financial strength and price stability in Sri Lankan and Indian context for the time period ranging from 1980 to 2015.

Rationalization of the study

The findings of this study will conclude the impact of central bank financial strength on price stability in Sri Lanka and India. Hence, this study will be significant to the prevailing empirical literature providing an empirical investigation giving an insight on South Asian context with consideration of inherent features of central bank system within the region given focus to Sri Lanka

and India which are two leading economies of the region. In addition, the findings of the study will draw the attention on the importance of the central bank financial strength in maintaining macroeconomic stability in the terms of price stability and will provide a different insight to policymakers with the involvement of the independence of central banks.

Research Problem

The importance of financial soundness of commercial banks is a generally accepted phenomenon. But financial soundness in the context of central banks is an area which is subjected to controversies with the inherent monetary autonomy of central bank. The theoretical and empirical studies provide contradictory findings and views in this regard. The key argument which is drawn by many scholars in this field is that unlimited costless ability of central banks in printing money does not necessarily require a financial strength for a central bank (Stella 2008). But, this argument was questioned later on pointing out the consequences of printing money on the economic stability in particularly to price stability (Sweidan 2011 cited in Perera et al. 2011). Therefore, the importance of financial strength for a central bank and its impact on macroeconomic variables came into the discussion.

Investigating the impact of the financial strength of central banks on price stability especially in Sri Lanka and India would give a different insight to the prevailing limited studies in this field which were only focused on advanced economies.

Accordingly, this can be specified into a specific research question as:
“Does central bank financial strength impact on price stability in Sri Lanka and India during the time period ranging from 1980 to 2015?”

The objective of the research

- To identify the impact of Central Bank Financial Strength on price stability in Sri Lanka and India.

Accordingly, the following hypothesis is formed:

H1: Inflation is negatively associated with Central Bank Financial Strength

Literature review

The concept of central bank finance

It can be observed different terms which have been used in the related literature to refer central bank finances. For instance, ‘central bank finance’, ‘central bank

financial position' are a few of the most used terms in the literature (Stella &Lonnberg, 2008; Ize, 2005). Some studies adopt the term 'financial strength' (Stella, 2005; Cargill, 2005; Klüh&Stella, 2008). In early literature, central bank finance has been discussed in the context of central bank independence (Perera, Ralston &Wickramanayake, 2011).

Accordingly, Central Bank Independence (CBI) has been considered as the degree of freedom of the central bank to pursue monetary policy without interference from political considerations (Sirivedhin&Hataiseree, 2000, as cited in Griffin, 2011). The independence consumed by the central banks in pursuing monetary policy granted more authority to central banks apart from the government authorities which ultimately allows them to make more independent decisions which will lead to a more stable economic environment in the respective country (Maxfield, 1997, as cited in Griffin, 2011).

Later, the concept of Central Bank Independence (CBI) was broadly discussed in many aspects. Among the wide scope of CBI, the financial dimension of CBI came to the discussion focusing on the financial strength of the central bank (Haan&Eijffinger, 2016). Since CBI referred to authority in the central banking system, the Financial authority has drawn the attention as the financial dimension of CBI (Hayat &Farvaque, 2011). The financial strength of the central bank has been defined in the scope of the ability of central banks to attain its policy goals without external financial support (Stella, 2005).

This study uses the term 'Central Bank Financial Strength' (CBFS) following the prevailing empirical studies (Klüh& Stella, 2008; Perera et al., 2011).

This is a concept which has been neglected previously. According to Stella (2005), there are both historical and theoretical reasons for the negligence of CBFS. Focusing on historical reasons first, it can be observed that many fiat money central banks including Group of Seven (G-7) countries had been highly profitable over a long period of time. Therefore 'financial difficulties' is much more a remote concept to them. It is stated that the U.S. Federal Reserve System has been making profits since 1915 (Stella 2005). Hence, being profitable ever in the history made the CBFS is rather a remote concept. Then the theoretical reasons provide that due to the unlimited costless ability in creating money, central banks do not require financial strength as commercial banks.

Measuring central bank financial strength

Empirical studies are provided with a vague range of measurement of CBFS and among them, it has been claimed that following mentioned measurement as the best representative measurement of CBFS (Stella, 2005; Stella, 2008; Benecka et

al., 2012). Also, it has been selected as the only measurement which indicates a significant relationship between economic outcomes after a comprehensive analysis by employing several measurements in a study (Perera et al., 2011).

Relying on a standardized and widely available data set that ensures comparability across countries and using Total Assets as the scaling factor which helps to capture the degree of currency mismatches in the central bank's balance sheet have been pointed out as the prominent advantages of this measurement. Moreover, it is stated that this is a broad measure of capital to assets which is widely available on relatively high standardized and high-frequency basis which has been employed in previous studies (Mora et al., 2012).

Accordingly, this measurement can be depicted as follows.

$$\text{CBFS} = \frac{\text{Equity} + \text{Other Item Net}}{\text{Total Assets}}$$

In this study, it is used the ratio of capital plus OIN as a percentage of total assets to assess the financial strength of central banks in the selected countries following the empirical studies (Klüh& Stella, 2008; Perera et al., 2011; Mora et al.,2012).

Consequences of Central Bank Financial Strength

It is stated that weak CBFS can hamper policy capacity and its outcomes (Stella, 2008). Further, it is mentioned that weak CBFS can constrain the smooth conduct of monetary policy thereby resulting in a dependency on the support from treasuries. Then it would affect the primary concern on price stability and 'to compromise its operational independence and also to impose inefficient restrictions on the financial system to suppress inflation' (Stella, 1997, as cited in Perera et al., 2011, p. 16).

Moreover, it is described that financial weakness of central bank would lead to financial losses which have to be settled through financial repression, reserve money creation or debt issuance which will result in a monetary expansion in the economy (Stella, 2005). If central bank fails to withstand to potential shocks in their balance sheets due to the weak financial position, it would be difficult to fulfil its policy obligations which would weaken the credibility of central banks.

All these findings conclude that to achieve policy objectives as well as to maintain efficiency in central banking, it is a necessity to have an adequate level of financial strength for central banks. It would be unable to meet the basic functions of central banks causing financial distress in the economy due to inadequate CBFS (Stella &Lonnberg, 2008).

Linking Central Bank Financial Strength and Price Stability

Linking price stability with CBFS opens to both empirical and theoretical arguments. This is an area which is subject to debate. It is stated that the financial difficulties of the central bank would weaken the achievements of anti-inflationary policies resulting transfer of excess liquidity to the financial system. (Perera et al., 2011). In theoretical considerations, it is provided that in circumstances where treasury support is not available for a loss-making central bank, it would tend to lower the cost of monetary operations as the first option adjusting minimum reserve requirements (Klüh& Stella, 2008).

Moreover, it is argued that if the central bank goes for a reprinting of money based on interest-free liabilities to repay its obligation as the second option, excess liquidity would flow to the economy. If the sterilization process is not conducted to absorb the excess liquidity back, then there could be a possibility of inflationary pressures (Perera et al., 2011).

In sum, all these arguments support the view of the existing relationship between CBFS and price stability. Accordingly, this study will attempt to model the relationship in between CBFS and price stability in Sri Lanka and India.

Methodology

Research Design and Sample Selection

This study follows a framework of panel data as a quantitative research where data collection methods and techniques follow a quantitative research design. Sri Lanka and India have been selected as the sample since both are South Asian countries and according to Central Bank Independence and Governance (CBIG) index, both countries maintaining a standard level (Ahsan &Skully 2009).

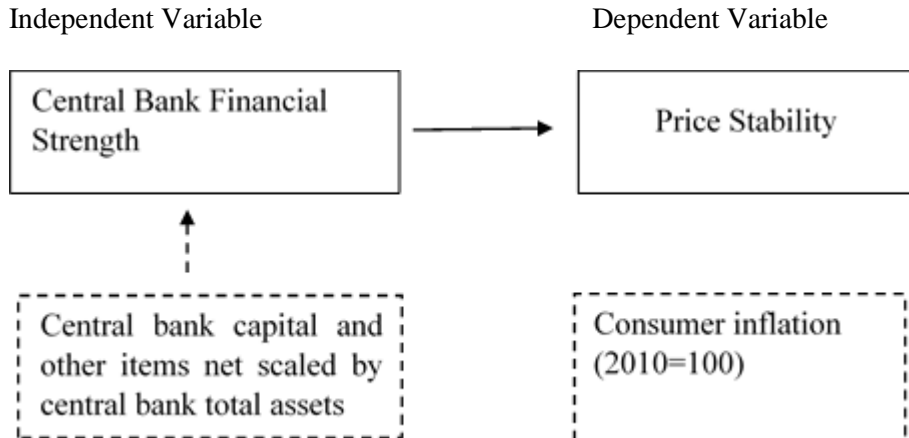
Conceptual Framework

Variables used in the model and their measurement are indicated by the conceptual framework.

Measurement

Data Sources and Data Collection

Secondary data were used to conduct the study. The required data was retrieved from sources such as International Financial Statistics (IFS) of International Monetary Fund, World Development Indicators of World Bank and also from Central Bank of Sri Lanka (CBSL), Reserve Bank of India (RBI).



Model Specification for the Study

Since there is no particular theoretical model to adopt in this study, the model was specified to best fit to the data set where the researcher was given the freedom to alter the model where needed. Accordingly, the model was constructed following the empirical model by Perera et al. (2011, 2013).

Model

$$Y_{it} = \alpha + \beta_1 X_{it} + \varepsilon_{it}$$

Where,

Y_{it} = Year on year change of consumer price index X_{it} = Central Bank Financial Strength

Accordingly, the model can be specified as follows:

$$CPI_INF = \alpha - \beta_1 CBFS + \varepsilon_{it}$$

Prior to the estimation of model, the data set has the model as adjusted to the unit root problem following Levin, Lin and Chu (LLC) and I'm, Pesaran and Shin (IPS) test statistics. Accordingly, all the variables have been converted into first-order integration. In addition, the model validity was tested using Breusch- Godfrey serithe al correlation test and White test statistic to test Serial Correlation and Heteroscedasticity respectively.

Results and Discussions

Estimation Results

$$CPI_INF = \alpha + \beta_1 CBFS + \varepsilon_{it}$$

Accordingly, Pooled regression model was constructed using period weights and white period coefficient covariance to improve the model. The significance of the relationship between the independent variable and the dependent variable was assessed by the following criteria.

Significance of Parameter

H0: There is no significant relationship between the two variables

H1: There is a significant relationship between the two variables

Decision Rule: Reject H0 if P-value < 0.05

The results are summarized in the following table.

Table 1: Significance of parameters of the model

Variable	Coefficient	P value	Level of significance	Conclusion
Constant	0.255147	0.0000		
CBFS	-0.000903	0.0001	0.05	The relationship is significant

Source: Compiled by author (2018)

Overall Significance of the Model

To assess the overall significance of the model, following decision criteria was used.

H₀: The model is not significant as a whole

H₁: The model is significant as a whole

Decision Rule: Reject H₀ if P-value < 0.05

In accordance with the test statistics, the model was significant as a whole.

Table 2: Overall significance of the model

The probability of F statistic	Level of significance	Conclusion
0.000097	0.05	The model is significant as a whole

Source: Compiled by author (2018)

According to the empirical results, it can be observed a significant negative relationship between central bank financial strength and price stability in Sri Lanka and India which is compatible with most of the empirical studies. According to the model, a positive change of 1 per cent in central bank financial strength, ceteris paribus, will result in a 0.0903 per cent decrease of inflation level in both countries at the level of 5 per cent significance. In other words, when the financial strength of central bank increases, the inflation level tends to decline which will ultimately result in price stability as a macroeconomic outcome.

The model for the study can be specified based on the empirical results as follows.

$$\text{CPI_INF} = -0.255147 - 0.000903 \text{ CBFS} + \varepsilon_{it}$$

Conclusions and Recommendations

This study attempts to provide evidence of a probable relationship between central bank financial strength and price stability in Sri Lanka and India. Inflation has been used as a proxy measurement to price stability and to measure the financial strength of central banks, a ratio has been used following the methodology of similar studies. The empirical result of this study proves that price stability, measured by inflation is broadly related to central bank financial strength. Accordingly, it was evidenced a significant negative relationship in between inflation and central bank financial strength which concludes that maintaining the adequate financial strength of a central bank will cause to lower the inflation which affects favourably the price stability of the economy.

The findings of this study are compatible with the previous similar studies in this field. Accordingly, the significant negative relationship between Inflation and central bank financial strength has been proven by several other studies (Stella 2005; Klüh and Stella 2008; Perera et al. 2011; Perera et al. 2013).

These empirical observations offer several policy implications stressing the need of the financial soundness regardless of the monetary authority inherent to central banks. Accordingly, central banks should attempt to avoid losses by implementing appropriate policies in order to maintain favourable balance sheet position with adequate financial health as there is a significant impact from the financial strength of central banks on price stability.

Acknowledgement

My sincere gratitude goes to my supervisors; Mrs W.G.V. Gunasekara, Senior Lecturer of Department of Business Economics, Dr Lishanthi Wijewardene, Senior Lecturer of Business Communication Unit of Faculty of Management Studies and Commerce, the University of Sri Jayewardenepura for the continuous guidance and the support gave me in the completion of this study. I am thankful to Dr. Anil Perera, Senior Economist of Central Bank of Sri Lanka for the inspiration provided in selecting this topic and for the immense support granted me to complete this study.

References

Ahsan, A., &Skully, M. (2009, January). Central bank independence and governance in South Asia. In *Asian Business Research Conference Proceedings*. World Academy of Social Sciences.

Benecká, S., Holub, T., Kadlčáková, N. L., & Kubicová, I. (2012). *Does central bank financial strength matter for inflation? An empirical analysis* (No. 2012/03).

Cargill, T. F. (2005). Is the Bank of Japan's financial structure an obstacle to policy?. *IMF Staff Papers*, 52(2), 311-334.

De Haan, J., & Eijffinger, S. C. (2016). The politics of central bank independence. Griffin, C. H. (2011). The effectiveness of Central Bank Independence via its Internal Characteristics. *International Journal of Banking and Finance*, 8(2), 2.

HAYAT, M. A., & FARVAQUE, E. Which Crises Drive Central Bank Independence Reforms?.

Ize, A. (2005). Capitalizing central banks: a net worth approach. *IMF Staff Papers*, 52(2), 289-310.

Klüh, U & Stella, P 2008, 'Central bank financial strength and policy performance: an econometric evaluation', *IMF Working Papers, International Monetary Fund, Washington*, vol. 08, no. 176.

Mora, M. C. E. T., Castro, M. P., & Adler, G. (2012). *Does Central Bank Capital Matter for Monetary Policy?* (No. 12-60). International Monetary Fund.

Perera, A., Ralston, D., & Wickramanayake, J. (2011). Central Bank Financial Strength And Its Impact On Economic Outcomes.

Perera, A., Ralston, D., & Wickramanayake, J. (2013). Central bank financial strength and inflation: Is there a robust link?. *Journal of Financial Stability*, 9(3), 399-414

Stella, P. (2005). Central bank financial strength, transparency, and policy credibility. *IMF Staff Papers*, 52(2), 335-365.

Stella, P. (2008). *Central bank financial strength, policy constraints and inflation* (No. 2008-2049). International Monetary Fund.

Stella, P., & Lönnberg, Å. (2008). *Issues in central bank finance and independence* (No. 8-37). International Monetary Fund.

Information System & Technology

An Investigation of Performance Management System and its Effectiveness with Special Reference to Garment Factories in Katunayake Export Processing Zone in Sri Lanka

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Introduction

Human capital can be identified as an essential element of sustainable competitive advantage and thus it is indispensable to focus on the way they are managed (Smith and Rupp, 2002). The critical need of streamlining the human resource outcomes with company vision, mission and strategies led the organizations to put more emphasis on improving employee performance. In this background, managing employee performance can be identified as a key strategic lever to develop and sustain core competencies and as an essential requirement for strategy implementation. Hence, most of the organizations are interested in implementing performance management systems. But, the issue is to which extent these systems are effective. The purpose of this study was to study the performance management systems implemented by garment factories located in Katunayake export processing zone in terms of their systems and effectiveness. The main reason for selecting the garment factories is the performance-driven nature of the sector and the attempts and cost incurred by these factories on performance management systems. Due to these reasons, it is essential to study the effectiveness of their implemented performance management systems and identify the most influential factors on the effectiveness.

Literature review

Armstrong (2015:618) defines performance management (PM) system as ‘a set of inter-related activities and processes which are treated as an integrated and key component of an organization’s approach to managing performance through people and developing the skills and capabilities of its human capital’. PM system will consist of a range of activities engaged in by an organization to enhance the performance of a target group or a person and finally the organizational performance. Buchner (2007) emphasizes the relevance of motivational theories in developing proper PM system. He identifies Goal-Setting theory introduced by Locke and Latham in 1990, Control theory by Carver and Scheier (1998) and

Social cognitive theory by Donovan which underpin the concept of performance management.

According to Tovey (2010), a PM system consists of main three phases: planning performance, monitoring performance and reviewing performance and finally performance should be improved as well as unsatisfactory performance should be managed. As Tovey (2010) explains, organizations can achieve the objectives of PM through this process as it is more rigorous, clear and specific. Planning performance is an essential element in the performance management process and it can be identified as 'a process of defining the organizational objectives, establishing an overall strategy for achieving these goals and developing a comprehensive hierarchy of plans to integrate and coordinate activities' (Tovey, 2010). After the completion of the performance planning process, individual and team performance should be monitored systematically. After the completion of monitoring performance, collected evidence of employee performance should be reviewed. The reviewing performance step consists of two sub-elements: performance analysis and performance appraisal. Performance should be appraised once after completing analyzing the performance and it is essential to establish a systematic method of appraising employee performance. Personal development plans can be developed based on the appraisal results in order to ensure the continual growth of the employees. Performance management system should be adequate to clearly identify the skill gaps of the employees. This entire process is significant to understand the deviations from the standards. After appraising performance, it is essential to improve the performance as per the requirements. A well-planned performance management system should facilitate the process of managing unsatisfactory performance.

Methodology

Relevant information regarding the garment factories was gathered from the Board of Investment (2016), Sri Lanka. As the unit of study is individual employees, the sample was selected based on the number of managers and executive level employees who were employed at these selected organizations. The total sample size was one hundred and sixty-one employees. A sample of the managerial and executive employees was selected from the population through convenience sampling technique and researcher developed questionnaires were sent to all the individuals in the selected factories (managers and executives). The independent variables of the study were planning performance, monitoring performance, reviewing performance, improving performance and managing unsatisfactory performance. The dependent variable of the study was the effectiveness of a performance management system.

Results and Discussions

Based on the Person's correlation coefficient values, there was a moderate positive correlation (0.529) between planning performance and effectiveness of the PM system which is statistically significant at one percent of error level and a positive relation (0.631) in-between monitoring performance and effectiveness of the PM system which is significant at 99% confidence level. Also, it was identified that in-between reviewing performance and effectiveness of the performance management system has a positive relation (0.563) at 99% level of confidence. Also, there was a weak positive correlation (0.283) between improving performance and effectiveness of the performance management system at 95% confidence level. Supported with the statistical results, it was found that the correlation between managing unsatisfactory performance and effectiveness of the performance management system has positive value (0.278) at 95% level of confidence level. In addition to that, there was a moderate positive relationship (0.691) between overall PM system and effectiveness of the systems at 99% level of confidence.

Regression analysis was conducted in order to identify the impact of the elements of a performance management system on the effectiveness of the performance management system. Multiple regression analysis was used to describe the way in which independent variables are related to the dependent variable. In addition to that, it can be used to derive a linear model or mathematical equation to predict successive data points as better estimations.

Table 1: Model Summary

Model	R	R Square	Adjusted Square	R	Std. The error of the Estimate
1	.670 ^a	.449	.432		.18493

a. Predictors: (Constant), Reviewing Performance, Monitoring Performance

b. Dependent Variable: Effectiveness of the Performance Management System

Source: Survey data, 2016

Adjusted R square value for the appropriate linear regression model is around 0.432 with lower estimation of standard deviation error value (0.18493) (Table 1). As mentioned in the above table 1, approximately forty-three per cent of the variation of the dependent variable is explained by the two independent variables (reviewing performance and monitoring performance)

Table 2: ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	1.783	2	.892	26.074	.000 ^b
Residual	2.189	64	.034		
Total	3.972	66			

a. Dependent Variable: Effectiveness of the performance Management System
b. Predictors: (Constant), Reviewing Performance, Monitoring Performance

Source: Survey data, 2016

Analysis of variance (ANOVA) table for predicted linear regression line is significant at ninety-five per cent of the confidence interval.

Table 3: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.947	.248		7.840	.000
Monitoring Performance	.222	.057	.458	3.909	.000
Reviewing Performance	.214	.088	.283	2.418	.018

a. Dependent Variable: Effectiveness of the Performance Management System

Source: Survey data, 2016

Regression analysis was conducted further using 'backward regression' and only two independent variables were found to fit with the model (table 3).

Based on the data analysis, it was found that the effectiveness of the PM system in garment factories in the Katunayake Export Processing Zone is at a good level. Based on the data analysis, effectiveness of the performance management system is positively related with planning performance (0.529 at 99% confidence level), A moderate positive relationship was found between monitoring performance and effectiveness of performance management systems (0.631 at 99% confidence level), a moderate positive relationship between reviewing performance and effectiveness of the system (0.563 at 99% confidence level), a weak positive relationship was figured out between the measures taken by the organization in order to improve employee performance and effectiveness of the performance management system (0.283 at 95% confidence level) and a weak positive relationship was found between the mechanisms which were implemented by the organizations to manage unsatisfactory performance and the effectiveness of the performance management system (0.278 at 95% confidence level). These

relationships were in line with the previous studies conducted by Wong and Snel (2003), Rao (2007), Fox (2010), Daoanis (2012), Qureshi and Hassan (2013) and Dewettinck and Dijk (2013), Ferreira and Otley (2009), Biron *et al.* (2011), Mone, *et al.* (2011) and Komati and Zhou (2013) Taylor *et al.* (1984), Zvavahera (n.d.), Buchelt (n.d.), Qureshi and Hassan (2013), Buchner (2007), Haines and St-Onge (2012), Clark (2015) and Rashidi (2015) .

Conclusions and Recommendations

As per the main objective of this research, performance management system and the effectiveness of the system were investigated and positive relationships were found between different practices of performance management and the contribution of those to system effectiveness. In addition to that, monitoring and reviewing performance were noted as the most critical steps to be handled carefully as these two steps have a greater influence on the effectiveness of the system. Hence, it can be recommended for the organizations to follow a systematic process for managing employee performance and specifically focus on monitoring and reviewing employee performance.

References

Armstrong, M., 2006. *Armstrong's Handbook of Performance Management*. Kogan Page Limited.UK.

Armstrong, M., 2014. *Handbook of human resource management practice*. 13 ed. London, UK: Kogan Page.

Biron, B., Farndale, E. and Paauwe, J., 2011. Performance management effectiveness: lessons from world-leading firms. *The International Journal of Human Resource Management*, pp. 1294-1311.

Buchelt, B., n.d. Performance Management as Modern Approach to Employees' Appraisal in Healthcare Entities. pp. 75-92.

BuchnerT. M., 2007. Performance management theory: A look from the performer's perspective with implications for HRD. *Human Resource Development International*, **10(1)**, pp. 59-73.

Clark, P., 2015. *Bringing Meaningful Change to Performance Management*. Association for Talent Development.

Daoanis, L., 2012. Performance appraisal system: It's Implication To Employee Performance. **2(3)**, pp. 55-62.

Dewettinck, K. and Dijk, H., 2013. Linking Belgian employee performance management system characteristics with performance management system

effectiveness: exploring the mediating role of fairness. *The International Journal of Human Resource Management*, **24(4)**, pp. 806-825.

Ferreira, A. and Otley, D., 2009. The design and use of performance management systems: An extended framework for analysis. *Management Accounting Research*, **20**, pp. 263-282

Fox, A., 2010. *The Current State of Performance Management and Career Development*, Hewitte Associates LLC.

Haines, V. and St-Onge, S., 2012. Performance management effectiveness: practices or context?. *The International Journal of Human Resource Management*, **23(6)**, pp. 1158-1175.

Komati, M. and Zhou, Y., 2013. What are the most efficient and effective practices surrounding performance management?. *Cornell University*.

Mone, E., Eisinger, C., Guggenheim, K., Price, B., and Stine, C., 2011. Performance at the Wheel: Driving Employee Engagement in Organizations. *Journal of Business Psychology*, **26**, pp. 205-212.

Qureshi, A. and Hassan, M., 2013. Impact of performance management on the organisational performance: An analytical investigation of the business model of McDonald's. *International Journal of Academic Research in Economics and Management Sciences*, **2(5)**.

Rao, A., 2007. The effectiveness of performance management systems: an empirical study in Indian companies. *The International Journal of Human Resource Management*, **18(10)**, pp. 1812-1840.

Rashidi, R., 2015. A review of the performance management system. *International journal of academic research*, **7(1)**.

Smith, A. and Rupp, W., 2002. Communication and loyalty among knowledge workers: a resource of the firm theory view. *Journal of Knowledge Management*, **6(3)**, pp. 250-261.

Taylor, J. and Baines, C., 2012. Performance management in UK universities: implementing the Balanced Scorecard. *Journal of Higher Education Policy and Management*, **34(2)**, pp. 111-124.

Taylor, M., Masterson, S., Renard, M. and Tracy, K., 1998. Managers' Reactions to Procedurally Just Performance Management Systems. *The Academy of Management Journal*, **41(5)**, pp. 568-579.

Tovey, M., 2001. *Managing Performance Improvement*. Pearson Education, Australia.

Tovey, M., Uren, M. and Sheldon, N., 2010. *Managing Performance Improvement*. Pearson Australia.

Wong, Y. and Snell, R., 2003. Employee Workplace Effectiveness: Implications for Performance Management Practices and Research. *Journal of General Management*, **29(2)**, pp. 53-69.

Zvavahera, P., n.d. An evaluation of the effectiveness of performance management systems on service delivery in the Zimbabwean civil service. *Journal of Management and Marketing Research*.

Effect of generation Y engagement with Facebook brand pages on online sales

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Introduction

Social Network Sites (SNS) such as Facebook, We Chat, LinkedIn, Twitter etc. have become more important in consumers' lives and the use of SNS on regular basis help consumers to contact with numerous numbers of brands and products by "Liking", "Commenting", "Sharing" and so forth. This new trend amid the consumers has made business to understand that if they wish to grasp their prospects and customers, their online existence in SNS is a foundation of their overall marketing strategy. Apart SNSs from the online world is very difficult and for individuals or for business there is no escape from SNSs nowadays (Neti, 2011).

Table 1: Growth of Internet Users in Sri Lanka

<i>Year</i>	<i>Users</i>	<i>Population</i>	<i>% Pen</i>	<i>GDP p.c.*</i>
2000	121,500	19,630,230	0.5	N/A
2007	428,000	19,796,874	2.2	US\$ 1,623
2008	771,700	21,128,773	3.7	US\$ 1,972
2009	1,163,500	21,324,791	5.5	US\$ 2,041
2010	1,776,200	21,513,990	8.3	US\$ 1,807
2016	6,087,164	22,235,000	27.4	US\$ 3,800

Source: Internet World Stats Website

**Per Capita GDP in US Dollars, Source: International Monetary Fund*

Social media channels are fast growing in Sri Lanka due to the significant growth of internet usage as shown in Table 1. Among those SNSs, Facebook has the highest number of users that is 3 – 3.5 million users which account nearly 16% of the local population and 41% of them are Millennials (Generation Y) who are aged between 18 – 24 years and 25 - 34 years. Majority of the users (almost 2.8 million) are concentrated in the western province of the country (Digital Marketing Institute, 2016; Ishara, 2015).

Data explains that Facebook user engagement with brand pages are increasing day by day. In Sri Lanka, especially the generation Y people have been addicted to

SNSs and among all SNSs Facebook on the top. People use Facebook daily for many reasons such as stay connected with friends, entertainment, get information about popular stars or brands, play games, share political views, etc.

Simultaneously, there is a significant growth in the Sri Lankan E-Commerce sector. Infrastructures are spreading around the country not only in the urban areas but also in the rural areas which increase the number of people who use the internet. Now people have more facilities to access the World Wide Web than before. As a result of this e-commerce sector is becoming more and more strong and developed.

Research Problem

Companies which used traditional offline methods to sell their product or services to customers are now moving to online methods. They also invest in online marketing activities to attract more customers to the business. Additionally, companies try to stay connected with their customer through online services. So they gain advantages from both online and offline businesses nowadays.

As NithinBawankule, Google India Director mentioned on 31st March 2016 Daily News website article that Sri Lanka comes to be one of the rapidly developing online shopping markets in Asia region because country online sales are picking up very fast. He further mentioned that customer sales per year in the country are accounted at 300 billion rupees and 1% of it is from online sales. They anticipate this value to be about 3% in three years' time as there is a 100% growth in Sri Lankan online market every year.

Thus, it is clear that at the same time there is a growth of e-commerce as well as a growth of SNSs usage especially Facebook in Sri Lanka. So the companies functioning in the e-commerce sector has begun to use SNSs as another marketing tool. The popularity of Facebook has made the companies who presence in online business to create Facebook brand pages as one method to stay connected with their audience in Sri Lanka.

With all these trends it is important to study that whether the presence in Facebook really helps a company or not. Does Facebook user really engage with brands? Does this engagement increase the online purchasing? Because if there is no any advantage for a company by using SNSs there is no need to waste their time, money and efforts to be in such SNSs.

Hence, this research is trying to give some new insights to the scholars and marketers how the generation Y engagement with Facebook brand pages can influence online sales.

Although there are academic researches on consumer engagement (CE) there is a lack of academic research on "how the CE directly effect on online sales of the companies and how the brand awareness (BA) will mediate such relationship in Sri Lankan context?" This study will fill this gap in the literature and this will be a guide for future researchers on their studies.

Objectives of the Research

Before managers can more assuredly use social media marketing and branding it is essential for them to study and have knowledge about customers' behaviours with brands on SNSs. Since understanding the market and the consumer needs and wants is the first step of the marketing management process this research will be a guide for marketers.

From the final outcome of the study, companies who use Facebook brand pages to market their products can decide in what ways they can motivate their audience and what type of strategies can be used to be a success in the online market.

As the new trends mentioned above in Sri Lanka and research gaps found in literature this research has set out to study the following objectives.

- 1) To find the Sri Lankan consumers' level of activeness on Facebook brand pages.
- 2) To find out whether the Facebook user interactions with brand pages have an effect on online sales of a company.
- 3) To figure out the stimulus of Facebook user interaction with brand pages on BA.
- 4) To identify whether BA can mediate the relationship between CE with Facebook brand pages and online sales.

Literature review

CE is a very interesting concept which has been broadly examined in different disciplines by scholars such as Bowden (2009), Hollebeek (2011), Vivek, Beatty, & Morgan (2012). As consensus by Clader, Malthouse, & Schaedel (2009) and Hollebeek, Glynn, & Brodie (2014) for the success of a company's marketing and sales activities CE is vital.

Recently, scholars have begun to pay their attention to online CE. Many scholars such as Brodie, Ilic, Juric, & Hollebeek (2013), Hollebeek, Glynn, & Brodie

(2014), Clader, Malthouse, & Schaedel (2009) and Tsai & Men (2013) have examined the CE with related to SNSs and brand communities.

Most recent research done by Schivinski, Christodoulides, & Dabrowski (2016) for measuring customer engagement with brands on SNSs provided three dimensions, namely consumption, contribution, and creation in their study. Through this scale, a business can identify consumer level of social media engagement with brands. Further, the researcher mentioned that the scale proposed to be able to use when examining dependent variables such as brand extension, purchase intention and price premium.

A study on Hong Kong students found that the main purpose to join fan pages was “to receive discounts and promotions” or “to get updates on future products” Cheung & Leung (2016). The same result was obtained from another study “Why do consumers follow or like travel brands in social media? For the discounts, alas” done in the USA and the results were clearly in favour of product-related reasons. Over half of respondents claimed access to discounts and sales as a reason (May 2012).

Further, studies show that exposures to earned and owned social media activities for brands have significant and positive impacts on consumers' likelihood to purchase the brands and also their effects are surprising, suppressive on each other (Xie & Lee, 2015). Most importantly, in the long run, there is a considerable effect on the sales of a company from Facebook advertisements. Especially, by gaining “Likes” for the advertisement on Facebook which means a consumer's click on “Like” it can affect strong long-term sales. Moreover, consumer visit to a Facebook brand page has a strong effect on company short-term sales (Brettel, Reich, Gavilanes, & Flatten, 2015).

But another scholar mentioned that sales figures or intention to purchase a brand cannot be measured by “Likes”. It can be used to decide whether marketing activities such as advertisement or promotion are a success or not. So he suggested that further studies need to be conducted to identify whether such activities liking, sharing, commenting and so forth have an effect on purchase intentions and real purchases (Parsons, Using social media to reach consumers: a content analysis of official Facebook pages, 2013).

A study conducted in Malaysia found that CE, brand exposure and e-WOM affect positively on BA. Scholar stated that among those three factors CE has a greater impact on BA (Shojaee & Azman, 2013). According to Keller (2001), active engagement is one of the essential stages to build brand equity. Since BA is one component of brand equity it was proposed that active CE can influence BA.

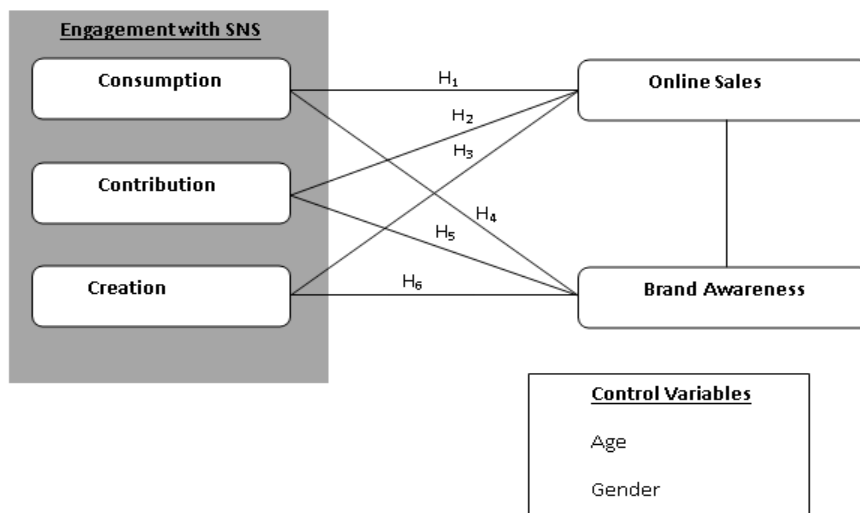
It is probable to purchase brands which have a high level of awareness and therefore it was proposed that BA can mediate the relationship between CE and online sales (Keller, 2001; Yasin, Noor, & Mohamad, 2007).

Through the literature, review author has identified that there can be an effect from CE which will measure with three dimensions introduced by Schivinski, Christodoulides, & Dabrowski (2016) to increase the number of purchases by consumers which will be the online sales and this relationship can be mediated by the BA.

Methodology

Measures

Measurement items for each level in CE were adopted from Schivinski, Christodoulides, & Dabrowski (2016) and items for BA were adopted from Yoo & Donthu (2001). A five-point Likert scale was provided, from 1 – always, to 5 – not at all. For the last item that was considered under BA, reversed scoring was used when analyzing. Measurement item for online sales was adopted from Cheung, Shen, Lee, & Chan, (2015) which was one item scale.



Data Collecting and Testing Methods

The questionnaire was distributed online and the researcher was able to collect 195 complete datasets for the study. Among them 52.8% were male and 47.2% were female. Also, 41.5% were aged between 18-25 years and 58.5% were aged between 26-34 years.

SPSS 24.0 and AMOS 21.0 were used and the Structural Equation Modeling (SEM) technique was used for hypothesis testing. Exploratory Factor Analysis (EFA) was conducted to identify a clean pattern matrix and to check adequacy,

convergent validity, discriminant validity and reliability of each latent variables. Then Confirmatory Factor Analysis (CFA) was conducted according to the result of EFA. Model fit, validity and reliability was checked for the measurement model. After checking the multivariate assumptions structural model was built including all independent, dependent and control variables. Hypotheses were tested at this stage to identify direct effects and the mediation.

Results and Discussions

Exploratory Factor Analysis

For EFA maximum likelihood factoring method was used as the same method will be used in AMOS for CFA and structural model tests. For the final four-factor model several items were removed to get a clean pattern matrix and a good model.

From the EFA clean pattern matrix was found and the final model satisfied all adequacy, convergent validity, discriminant validity, and reliability requirements.

Measurement Model

From the model found in EFA, CFA was conducted in AMOS. To make the model better, a measurement model was finalized with little modifications according to the modification indices. All standardized regression weights were greater than 0.7 and correlations were less than 0.8. Model fit for the final measurement model was as follows.

<u>Model Fit</u>		Table 2: Reliability and Validity Measures of each Factor							
Chi-square	= 152.747								
Degrees of freedom	= 93								
Probability level	= .000								
CMIN/DF	= 1.642								
CFI	= 0.975								
TLI	= 0.967								
SRMR	= 0.0485								
RMSEA	= 0.058								
PCLOSE	= 0.217								
			CR	AVE	MSV	BA	Creation	Contribution	Consumption
		BA	0.904	0.702	0.387	0.838			
		Creation	0.917	0.689	0.572	0.170	0.830		
		Contribution	0.929	0.813	0.572	0.245	0.756	0.902	
		Consumption	0.846	0.580	0.387	0.622	0.430	0.444	0.762

From Table 2 it is clear that the AVE values are greater than 0.5 which is the evidence for convergent validity; MSV values are less than AVE and the square

root of AVE values are greater than inter-factor correlations which are the evidence for discriminant validity; and the CR values are greater than 0.7 which confirm the reliability.

To evaluate common method bias (CMB) issue Harman's single-factor analysis was used. From the EFA it was found that four-factor model explains 70.995% of the variance. Meanwhile, outcomes also suggested that total variance explained by the single factor is lower than 50%, signifying that there is no CMB issue.

Since all the requirements were satisfied by the measurement model factor scores were imputed to use in the structural model.

Structural Model

Multivariate assumptions were checked under two areas outliers/influential and multicollinearity.

Cook's Distance was used for identifying outliers/influential and two records were removed from the total data set as they had abnormal values compared to the other records. VIF values were less than 3 and Tolerance values were greater than 0.1 which supported for no multicollinearity.

Satisfying these two conditions, it can be concluded that the model meets the requirements of the multivariate assumptions

CE and Online Sales

H1: The consumption level of brand-related content on Facebook has a direct effect on online sales

H2: The contribution level of brand-related content on Facebook has a direct effect on online sales

H3: The creation level of brand-related content on Facebook has a direct effect on online sales

Only the consumption level has significant direct effect while contribution and creation have no direct effect on online sales. So, considering the different dimensions of the CE has given a deep view of the considered relationship in this study.

Model Fit

Table 3: Results of the Effect of CE on Online Sales Analysis

Chi-square	= 2.237					
Degrees of freedom	= 2					
Probability level	= 0.327					
CMIN/DF	= 1.118					
CFI	= 0.999					
TLI	= 0.993					
SRMR	=0.0179					
RMSEA	= 0.025					
PCLOSE	= 0.484					
			Estimate	S.E.	C.R.	P
		OS <--- Consumption	.468	.127	3.700	***
		OS <--- Contribution	-.126	.133	-.943	.346
		OS <--- Creation	.139	.155	.894	.371
		OS <--- Income	.090	.047	1.912	.056

Consumption level is the first stage where the consumer gets to know about the brand's sales promotions, new arrivals, competitions, and discounts etc. Consuming does not take any extra efforts like contribution and creation. Once a customer logs in to Facebook most recent posts from friends, brand pages, and social groups etc. are visible on the News Feed. Therefore, without searching any information the Facebook user can see brand contents on his News Feed when he scrolls up and down. He can see posts about sales promotions, new arrivals, competitions, and discounts, etc. which can affect his mind to buy the product.

The study reveals that Facebook users consume more than contribution and creating contents for brands. This means that, Facebook users are highly engaged in activities like reading posts, watching pictures or graphics, following brands, etc. rather than commenting on those posts or sharing those posts. So, high consumption of brand-related content will give more and more information to the customer and therefore high consumption will also affect the customer to decide whether he needs to buy the product or not.

In a website article about online display advertising, it was mentioned that combined search and display ad campaigns get 22% conversions than search only campaigns and therefore display advertising helps to increase sales of the company. When consumer see an advertisement which means in related to current study when consumer consume brand-related content it can increase the sales of the company (Thiagarajan, 2015).

Moreover, a study conducted in the UK with 364 respondents examined that for the purchase intention of a customer and for their purchasing behaviour there is a slight effect from Facebook (Kodjamanis & Angelopoulos, 2013). Yang (2012) also stated that Facebook had a favourable influence on purchase intentions among 256 Taiwan respondents.

Parsons (2013) stated a completely different opinion that sales figures or the intention to purchase a brand cannot be measured by "Likes". It can be used to decide whether marketing activities such as advertisement or promotion are a

success or not. But Brettel, Reich, Gavilanes, & Flatten (2015) stated that most importantly, in the long run, there is a considerable effect on the sales of a company from Facebook advertisements. Especially, by gaining "Likes" for the advertisement on Facebook which means a consumer's click on "Like" it can affect strong long-term sales. Moreover, consumer visit to a Facebook brand page has a strong effect on company short-term sales.

CE and BA

H4: The consumption level of brand-related content on Facebook has a direct effect on the BA

H5: The contribution level of brand-related content on Facebook has a direct effect on the BA

H6: The creation level of brand-related content on Facebook has a direct effect on the BA

Model Fit

Table 4: Results of the Effect of CE on BA Analysis

		Estimate	S.E.	C.R.	P	
Chi-square	= 1.306					
Degrees of freedom	= 1					
Probability level	= 0.253	BA <--- Consumption	.964	.069	14.041	***
CMIN/DF	= 1.306	BA <--- Contribution	.091	.072	1.266	.206
CFI	= 0.999	BA <--- Creation	-.301	.086	-3.498	***
TLI	= 0.987	BA <--- Gender	.162	.084	1.935	.053
SRMR	= 0.0086	BA <--- Age	.070	.084	.834	.404
RMSEA	= 0.040					
PCLOSE	= 0.360					

The study results suggested that consumption level and creation level have a significant direct effect on BA while contribution level has no significant direct effect. According to Keller (2001), active engagement is one of the essential stages to build BA which is one dimension of brand equity in his study. So in-depth view, the current study suggests that only the consumption level and creation level have a direct effect on BA.

So, why contribution has no direct effect? It is easy to understand that if a consumer comes to the contribution level it means that he or she already consumed the brand content. For example, if a Facebook user sees a post on his News Feed about a new brand introduced by a company it is a consumption level engagement and it means now he is aware of the new brand. If he thinks a new brand is useful for his friends he may share the post as a contribution level engagement so that his friends will see the post too. Therefore, consumption affects that user to be aware of the new

brand rather than a contribution which is a direct effect that supports the research finding.

When considering the creation level engagement, the consumer may come to this level when he or she starts using the brand and start liking or disliking the brand. Customers have the ability to show their experience with the brand on Facebook whether it is good or bad by posting pictures, videos or writing reviews. Results suggest that this creation level of engagement has a negative effect on BA which is not even supported by the prior studies.

If I think practically, BA must be increased when consumer highly engages with the brand. There are many factors that can affect BA. For example, as Shojaee& Azman (2013) explained brand exposure and e-WOM also effect on BA. But, in this study, only the CE selected as the independent variable for the model.

Also, most of the studies do not consider BA as one separate factor. It includes one component when studying brand equity. So it comes up with several factors like brand loyalty, perceived quality, brand image and brand association. Total factors consider the brand equity in many studies. But due to the complexity of the model and time limitation, only the BA factor was considered in this study. Not including such factors in the current model is a major drawback of the study and that may influence for the negative results.

Another reason for getting a negative relationship may be the drop of one item from the selected scale. Although there were five items adapted from literature one item was dropped when doing EFA to get a good model fit. Therefore, removing one item may affect the final outcome of the study.

Mediation Effect

H7: The direct effect of consumption level on online sales is mediated by BA

H8: The direct effect of contribution level on online sales is mediated by BA

H9: The direct effect of creation level on online sales is mediated by BA

Model Fit	
Chi-square	= 3.504
Degrees of freedom	= 3
Probability level	= 0.320
CMIN/DF	= 1.168
CFI	= 0.996
TLI	= 0.991
SRMR	=0.0174
RMSEA	= 0.030
PCLOSE	= 0.514

Table 5: Results of the Effect of CE on BA Analysis

	Estimate	S.E.	C.R.	P
BA \leftarrow Consumption	.964	.069	14.041	***
OS \leftarrow Consumption	.435	.178	2.447	.014
OS \leftarrow BA	.035	.132	.264	.792

Through the empirical evidence, this study suggested testing the mediation effect of BA on customer engagement – online sales relationship. Findings of this study proved that there is no such mediation effect to examine.

Tsai & Men (2013) found that remuneration was the primary reason for using brands' Facebook pages, as users often expected to gain some forms of economic incentives. The second most prominent reason was to seek information about product/brand/company-related information. Apart from those reasons consumers appreciated the entertainment value of a brand page as a place where they could escape their daily routines or relax, pass time, and experience aesthetic enjoyment.

Since there are more reasons why consumers engage in Facebook brand pages; those reasons may dominant on consumer's behaviour than the BA when making a decision. For example, if the consumer motivation for consuming brand pages is pursuing economic incentive BA may not influence the consumer. In such a situation it can be assumed that consumer neglect the awareness of a brand and so that BA may not act as a mediator.

Additionally, the hypotheses of this study were built depending on foreign literature as there is a lack of local studies. So it can be also assumed that the above outcomes can differ when considering developed countries and developing countries because of the different conditions in each country in terms of technology, economy, consumer behaviours, etc.

Conclusions

Findings for the four main research objectives can be concluded as follow.

Consumption level has a direct influence on online sales. Finding gives interesting insight that "Liking", commenting or sharing brand-related content and posting brand related contents by the consumer himself does not directly affect the sales growth of the company. Therefore, instead of trying to increase engagement with

brand pages as a whole considering the levels of engagement and focus on those levels will be more beneficial to an organization.

- Generation Y consumers highly consume brand-related content on Facebook than contributing or creating. It can be concluded that the customer has a lower level of activeness with Facebook brand pages because consume is the lowest activeness.
- Consumption level has a direct effect on BA. When a Facebook user uses his account it is possible to see posts about brands. It will make the user be aware of the brand. But the finding suggested that creation level has a negative effect on BA which has no support from literature. Practically it seems impossible and the reason for this result may be dropping some factors effect on BA.
- The study suggested no mediation effect. Which means that when buying something online Facebook user does not consider about BA. The Internet offers consumers to find more options that economically beneficial for them. So they may tend to rely on economic incentives rather than looking for known brands. Because results also show that Facebook users do not spend money on expensive items. As the price they pay is very low they may not buy well-known products online. Rather they may buy online to get discounts even from a brand page they don't know just to get the advantage of the purchasing.

Recommendations

If managers can monitor the consumption level engagement of their consumers and pay careful attention that this level of engagement maintains at a relatively high level they can increase company sales. There is an option that posts can be boost by paying. It is one option that can do to make company advertisements visible frequently. If the company has no enough budgets for such activity another option can be posting the same post again and again. So, these methods will help companies to increase the consumption of the posts by its audience.

Also, companies can increase their sales by targeting highly consuming users as they tend to buy more.

It was also found that only 10% and 54% of the models explain the online sales and BA with respectively. This indicates that there should be more variables that have an effect on online sales and BA. If the managers can study and identify what are those missing factors they may take the full advantage of these findings.

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References

Digital Marketing Institute. (2016, February 10). Retrieved September 2016, from Colombo Digital Marketers:: <http://www.digitalmarketer.lk>

Bowden, J. H. (2009). The process of customer engagement: a Conceptual Framework. *Journal of Marketing Theory and Practice*, 17(1), 63-74.

Brettel, M., Reich, J., Gavilanes, J. M., & Flatten, T. C. (2015). Brettel, M., Reich, J., What drives advertising success on facebook? an advertising-effectiveness model. *Journal of Advertising Research*, 162-175.

Brodie, R. J., Ilic, A., Juric, B., & Hollebeek, L. D. (2013). Consumer engagement in a virtual brand community: an exploratory analysis. *Journal of Business Research*, 66(1), 105-114.

Cheung, C. M., Shen, X., Lee, Z. W., & Chan, T. K. (2015). Promoting sales of online games through customer engagement. *Elsevier*, 241-250.

Cheung, F. S., & Leung, W. (2016). Facebook users' habits in getting commercial information: a study on hong kong students. *Economics, Management & Financial Markets*, 11(3), 56–71.

Clader, B. J., Malthouse, E. C., & Schaedel, U. (2009). An experimental study of the relationship between online engagement and advertising effectiveness. *Journal of Interactive Marketing*, 23, 321-331.

Hollebeek, L. D. (2011). Demystifying customer brand engagement: exploring the loyalty nexus. *Journal of Marketing Management*, 27(7-8), 785-807.

Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social media: conceptualization, scale development and validation. *Journal of Interactive Marketing*, 28, 149-165.

Ishara, S. (2015, January 12). *Roar Digital Pvt. Ltd*. Retrieved September 2016, from roar.lk: <http://roar.lk>

Keller, K. L. (2001). Building customer-based brand equity: A blueprint for creating strong brands. *Marketing Management*, 15-19.

Kodjamanis, A., & Angelopoulos, S. (2013). Consumer perception and attitude towards advertising on social networking sites: the case of Facebook. . . *Proceedings of International Conference on Communication, Media, Technology and Design*. Famagusta, North Cyprus.

May, K. (2012, June 6). Retrieved September 2016, from tnooz: <http://www.tnooz.com>

Neti, S. (2011). Social media and its role in marketing. *International Journal of Enterprise Computing and Business Systems*, 1(2).

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003, Oct). Common method biases in behavioural research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.

Parsons, A. (2013). Using social media to reach consumers: a content analysis of official Facebook pages. *Academy of Marketing Studies Journal*, 17, 27-36.

Schivinski, B., Christodoulides, G., & Dabrowski, D. (2016). Measuring consumers' engagement with brand-related social-media content. *Journal of Advertising Research*, 64-80.

Shojaee, S., & Azman, A. B. (2013). An evaluation of factors affecting brand awareness in the context of social media in Malaysia. *Asian Social Science*, 9(17), 72-78.

Thiagarajan, S. (2015, September 30). *The Economic Times*. Retrieved May 10, 2017, from The Economic Times Website: <http://economictimes.indiatimes.com>

Tsai, W. S., & Men, L. R. (2013). Motivations and antecedents of consumer engagement with brand pages on social networking sites. *Journal of Interactive Advertising*, 13(2), 76-87.

Vivek, S. D., Beatty, S. E., & Morgan, R. M. (2012). Customer engagement: exploring customer relationships beyond purchase. *Journal of Marketing Theory and Practice*, 20(2), 122-146.

Xie, K., & Lee, Y. (2015). Social media and brand purchase: quantifying the effects of exposures to earned and owned social media activities in a two-stage decision-making model. *Journal of Management Information Systems*, 32(2), 204–238.

Yang, T. (2012). The decision behaviour of Facebook users. *Journal of Computer Information Systems*, 52(3), 50-59.

Yasin, M. N., Noor, M. N., & Mohamad, O. (2007). Does image of country origin matter to brand equity. *Journal of product and brand management*, 16(1).

Yoo, B., & Donthu, N. (n.d.). Developing and validating a multidimensional consumer-based brand equity scale. *Journal of Business Research*.

Impact of social media usage on academic performance: Undergraduates in Sri Lanka

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Introduction

ICT, since the last few decades, has grown rapidly revolutionizing the entire globe. Technological advancement and new mediums are being introduced to connect global audiences. Social media as such technological mechanism of connecting people and communities across the globe have become an international trend. Social media are primarily internet based applications and tools to share information between people. Drury (2008) defined social media as "online resources that people use to share content: video, photos, images, text, ideas, insight, humour, opinion, gossip, news". Social media includes popular network websites like Facebook, Twitter, Instagram, WhatsApp, Qzone, Pinterest...etc.

The younger generation is unsurprisingly affluent to use social media. As cited by Gemmill and Peterson (2006), "Social networking sites and Facebook socializing via the Internet has become an increasingly important part of young adult life". As per the statistics of Statista (2017), youngsters especially who are in the age range of 16 – 24 years are heavily using social media. Usually, this denotes their time at high school or university. For many of them, social media is a trendy addiction they eager to adopt. Social media is often used by them to update status, share posts, keep in touch with friends and much more.

Social media usage of generation Z is found to link with their diurnal activities, critical decisions and measures of the performance. For instances, career decision making, matrimonial affairs, learning & development, entertainment, purchasing, and networking...etc (Valentine, 2018). Importantly, this age group apparently make many life-critical decisions such as earning academic /professional qualifications, selecting a job/career/company and/or selecting a partner...etc. The existing literature on this connection offers sufficient support to ascertain the impact of social media on the behaviour of the younger generation specifically in the realm of academic performance (Kolan&Dzandza, 2018). Academic performance is a result of the nexus of factors. As the massive use of social media by the students is concerned, one can rationally question how the use of social media influence the academic performances of them. Such literature appeared to hardly narrow to Sri Lankan context, resulting in a contextual gap in the knowledge

of social media usage. Again, the available scholarly outcomes of this nature limited by their generalizability across Sri Lankan university system.

The present study aimed at assessing the impact of social media usage on undergraduates' academic performances in the context of Sri Lankan state universities. Given the immense usage of social media by the undergraduates, the study alleged to offer the findings critical to steamrolling the use of social media for better academic achievements.

Literature review

Safko and Brake (2009) defined social media as activities, practices, and behaviours among communities of people who gather online to share information, knowledge, and opinions using conversational media. Conventional media are Web-based applications that make possible for one to create and easily transmit content in the form of words, pictures, videos, and audios. A social network represents relationships and flows between people, groups, organizations, animals, computers or other information and knowledge processing entities. Social network in other words is referred to as a social structure made up of individuals or organizations called "nodes", which are connected by one or more specific types of interdependency, such as friendship, kinship, common interest, financial exchange, dislike, sexual relationships or relationships of beliefs, knowledge or prestige." (Asemah and Edegoh, 2012). According to Boyd & Ellison (2008), "Social Networking Sites are web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, view and traverse their lists of connections and those made by others within the system". According to Sensis social media report (2017), around nine in ten users of social media see it as a way of keeping in touch with friends or family. There has been an increase in the use of social media for sharing photos or videos, which has risen to 57%. There was a big jump in the use of social media to play games (up from 18% to 34%), to meet new friends (up from 14% to 30%) and to find or connect with people sharing the same interests (up from 16% to 26%). Another relatively prominent use is to follow celebrities, bloggers or social media personalities, which was mentioned by 28%. Social media like Facebook, Twitter, Instagram, Youtube have attracted millions of internet users. Especially Social media becomes a major part of the youth's daily routine.

Academic excellence or achievement plays an important role in an individual placement, be it in the academic institutions or job placement. The role of academic achievement as one of the predictors of one's life success and also in the aspect of academic placement in schools to higher institutions as well as the level of employability in one's career is inevitable (Kyoshiba, 2009). Academic performance or achievement is the outcome of education, the extent to which a

student, teacher or institution has achieved their educational goals. Academic performance is commonly measured by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important, procedural knowledge such as skills or declarative knowledge such as facts (Annie, Howard & Mildred, 1996). Given the heavy use of social networks, young students' academic performance is reported to be greatly affected by the use of social media. Social platforms are mainly used by students for socializing activities rather than academic purpose (Oye, 2012). In addition, Oye (2012) stated that the majority of students feel that social platforms have a positive impact on academic growth. Michikyan, Subrahmanyam, & Dennis (2015) conducted research on the Facebook use and academic performance of college students where they found that students with lower GPAs are highly involved in Facebook activities than students with higher GPAs. On the other end, Facebook was reported as useful in maintaining social connections, leading students to spend more time using the site, which contributed to better social adjustment in college (Yang & Brown, 2015). As cited by Yang & Brown, (2015) students engaged in more Facebook interactions with on-campus friends, in turn, facilitated by social adjustment in college and satisfaction with college life (Yang & Brown, 2015). "Social network sites can help to address the relationship development and maintenance needs of young adults at a point in their lives where they are moving away from home and into the university. They face challenges in maintaining former connections while being open to potential friendships with a new set of peers encountered through classes, new living arrangements, and other college activities" (Steinfeld, Ellison, & Lampe, 2008). Moreover, Salvation et al (2014) have found that students prefer the use of Facebook and Twitter for their academic-related discussions over the conventional classroom learning process. As cited by Vijayakiruthik and Maheswaranathan (2016), Adam et al (2014) found a positive impact of the use of social networking sites on the academic performance of students. Enriquez (2010) reported that students who multi-task between social network and homework are likely to have twenty per cent (20%) lower grades than a student who does not have a social network in visual range. He believes that even running a social network in the background of a student's Personal Computer while studying or doing homework could lower a student's grade. A recent study by Kolan and Dzandza (2018) based on Ghana university system revealed that social media addiction is negatively affecting the academic performance of students. Vijayakiruthik and Maheswaranathan (2016) to test the same association in Sri Lankan context and reported a positive impact on social media on academic performance referring to a one state university in Sri Lanka. Several other studies do report the varied results on the impact of social media on academic performance.

The prevailing results in this connection are inconsistent and bound by the ambiguity leading to an associative dilemma. This study is meant to test the impact of social media on the academic performance of undergraduates and to establish the relationship between social media use and academic performance in the context of Sri Lanka state university system. Having considering the existing literature, researchers proposed a framework that illustrates the relationship between social media usage and academic performance here the behaviour of undergraduates 'academic performance was tested against their use of social media (Figure 1).

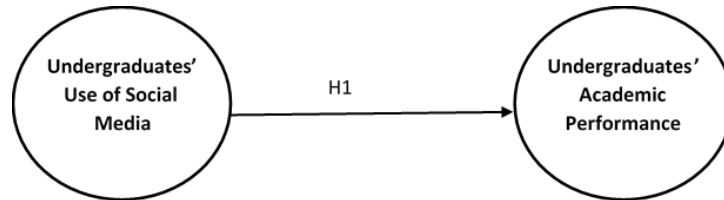


Figure. 1. Research Model

Accordingly, the study assumed that;

H₁ = Use of social media by undergraduates is significantly related to their academic performance.

Methodology

A cross-sectional, relational study was performed in which undergraduates' Academic Performance (AP) was operationalized using Grade Point Average (GPA); the standard measure used to summarize academic achievement (Kolan, & Dzandza, 2018). Use of Social media (SM) was measured by adopting three dimensions namely, *the frequency of access* (Villanti, et al., 2017), *time spent on social media* (Alwagait, Shahzad & Alim, 2014), and the *type of information shared, view & post* (Kolan, & Dzandza, 2018). The reliability scores ranging from 0.718 to 0.866 Cronbach Alpha values for all the variables.

A field survey of undergraduates in Sri Lankan state university system was carried out in gathering the data. Out of the fifteen state universities in Sri Lanka, five (the University of Wayamba, University of Colombo, University of Sri Jayewardenepura, Sabaragamuwa University of Sri Lanka and University of Kelaniya) were selected considering the accessibility of the sample which was drawn from level 3 students of Management faculties of the chosen universities. The researchers tried in controlling the influence of other variables on the academic performance by ensuring the homogeneity of the sample elements. This is achieved by selecting the sample from the third level of management degree programmes. The student population of all universities established under the Universities Act was 29 055 for 2015/2016 academic year (Sri Lanka University Statistics, 2016). A sample of 379 undergraduates was drawn based on the recommendations on

sample size by Krejcie and Morgan (1970). The response ratio was 84% resulting 318 responses. The collected data were analyzed using Pearson's product moments correlation analysis and multiple regression analysis. The interpretation of correlation coefficient was based on De Vaus's (2002) ranking of the correlation coefficients for Social Science researchers: i.e. 1.00= perfect; 0.99 to 0.90= near perfect; 0.89 to 0.80= very strong; 0.79 to 0.70= strong; 0.69 to 0.50= substantial; 0.49 to 0.30= moderate; 0.29 to 0.10= low; 0.09 to 0.00= trivial; while a negative result implies in a reverse correlation.

Results and Discussion

The results of Pearson's product moment correlation shows significant positive relationships between academic performance and social media usage (Table 01).

Table 1. Results of correlation analysis

	Frequency of access	Time spend on social media	Type of information	Academic performance
Pearson correlation coefficient	.381**	.423**	.307**	.481**
Significance value	.001	.000	.010	.000

** Correlation is significant at 0.001 significance level

As per the results of Pearson's correlation analysis, academic performance is related with the social media usage by undergraduates ($r = 0.481$, $p = 0.000 < 0.05$). According to the Vaus's (2002) interpretation of the correlation coefficient, this is a moderate to the substantial positive relationship. Again, the relationship is statistically significant too. Additionally, all the dimensions of social media usage are positively correlated with academic performance; frequency of access ($r = 0.381$, $p = 0.001$), time spend on social media ($r = 0.423$, $p = 0.000$) and type of information shared/posted ($r = 0.307$, $p = 0.000$). All of them are sharing a statistically significant, moderate to a substantial positive relationship with academic performance.

The findings are consistent with the many previous research outcomes in this connection while the same are inconstant with the results of some studies. The positive impact of social media usage and academic performance is supported by the findings of Oye (2012), Michikyan, Subrahmanyam, & Dennis (2015), Salvation et al (2014), Adam et al (2014). Importantly, Vijayakiruthik and Maheswaranathan (2016) who tested the same association in Sri Lankan context found that social media usage has a positive impact on academic performance. In contrast, Yang & Brown (2015) investigated the mixed effect of using Facebook on academic performance; lower GPA and greater social adjustment in college &

satisfaction with college life. Enriquez (2010) reported that students who multi-task between social network and homework are likely to have twenty per cent (20%) lower grades than a student who does not have a social network in visual range. In their recent study, Kolan&Dzandza (2018) revealed that social media addiction is negatively affecting the academic performance of students. The findings of the present study confirm the existing literature those confirm the positive impact of social media usage on academic performance.

Table 2. Results of multiple regression analysis

Variable	β Value	Significance value
Constant	11.072	0.035
Frequency of access	0.307	0.009
Time spend on social media	2.569	0.000
Type of information	0.229	0.002

Table 2 depicts the results of multiple regressions analysis. The dependent variable; academic performance with three predictors achieved a good model fit ($p > 0.05$). The coefficient of determination was 0.378 which implies that 37.8% of the academic performance variability is explained by the social media usage. The regression line could be developed as follows.

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_nX_n + \epsilon$$

$$\text{Academic Performance} = 11.072 + 0.307 \text{ Frequency of access} + 2.569 \text{ Time spend on social media} + 0.229 \text{ Type of information} + \epsilon$$

This tested regression equation can be used to predict the academic performance provided the use of social media.

Conclusion and Recommendations

The objective of this study was to ascertain how the use of social media influences the academic performance of the undergraduates in the context of Sri Lankan state universities. Resultantly, findings of the study verified that all determinants have an impact on academic performance and they have a moderately positive relationship between social media usage and academic performance.

The theoretical implications of the study hold the empirical evidence of the theorized association between academic performance and social media usage specifically in the context of Sri Lankan state universities. The practical implications indicate that a smart use of social networking results in better academic achievements. Social networks allow making connections with prospective colleges by following them on Twitter, Facebook, Google+ and other platforms. It's a great way to connect with current students, ask questions, and get

an overall feel for current studies. Students can create accounts or online events (like FB groups, Twitter chats and Google Hangouts) for their independent studies. And students can get instant feedback relating to the research with social media. Friends, family, and academic and professional experts can provide insights throughout the process, leading to a better, more refined end product which helps to boost GPA also.

While the present study holds the strengths of data collecting from a representative sample and conformity of the findings with existing literature, it has the problem of limited scope. Further, the observed variable was operationalized using only one dimension; GPA which represents an only quantitative appreciation of academic performance leaving behind the qualitative outcomes such as skill enhancement, personality development, & change of attitudes...etc. Researchers presume these limitations may open the door for further researches relating to the social media usage and academic performance.

References

Vijayakiruthik. S and Maheswaranathan. S 5th Annual International Research Conference- 2016 Faculty of Management and Commerce- SEUSL, The Impact of Social Media on Undergraduate's Academic Performance: With Special Reference to Eastern University, Sri Lanka

Adams, MJ, Miller, DAW, Muths, E, Corn, PS, & Grant, EHC 201, **Trends in Amphibian Occupancy in the United States**. PLoS ONE 8(5): e64347. doi:10.1371/journal.pone.0064347

Alwagait, E., Shahzad, B. and Alim, S. (2014) Impact of Social Media Usage on Students Academic Performance in Saudi Arabia. *Computers in Human Behavior*, 51, 1092-1097.

Annie Ward, Howard W. Stoker, Mildred Murray-Ward. *Educational Measurement: Theories and applications*. University Press of America, 1996 - Education - 380 pages

Asemah, E.S and Edegoh, L.O.N. (2012). Social media and insecurity in Nigeria: a critical appraisal. Being a paper presented at the 15th National Conference of African Council for Communication Education, which took place at the conference hall of Federal University of Technology, Minna, Nigeria

D. Boyd, & N. Ellison, Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication*, 13(1), 2008, Pp. 210-230. DOI: <https://doi.org/10.1136/tobaccocontrol-2016-053329>

Drury, G. (2008). Opinion piece: Social media: Should marketers engage and how can it be done effectively. *Journal of Direct, Data and Digital Marketing Practice*, 9, 274-277.

Enriquez, J. (2010). Facebook and Other Online Social Networking Sites Can Lower Grades, Study Says. Retrieved from <http://seerpress.com/facebook-and-other-online-social-networking-sites>

Gemmill, E., & Peterson, M. (2006). Technology use among college students: Implications for student affairs professionals. *NASPA Journal*, 43(2), 280-300. <https://www.statista.com/study/12393/social-networks-statista-dossier/>

Kolan, Bernard John and Dzandza, Patience Emefa, "Effect of Social Media on Academic Performance of Students in Ghanaian Universities: A Case Study of University of Ghana, Legon." (2018). *Library Philosophy and Practice (e-journal)*. 1637. <https://digitalcommons.unl.edu/libphilprac/1637>

Krejcie, R.V., & Morgan, D.W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30, 607-610

Kyoshiba M (2009). Factors affecting the academic performance of undergraduate students at Networking (IJVCSN), 2(1), 67-79.

Michikyan, M., Subrahmanyam, K. and Dennis, J. (2015) Facebook Use and Academic Performance among College Students: A Mixed-Methods Study with a Multi-Ethnic Sample. *Computers in Human Behavior*, 45, 265-272. <http://dx.doi.org/10.1016/j.chb.2014.12.033>

Olivia Valentine 2018 <https://blog.globalwebindex.com/chart-of-the-day/gen-z-now-spend-4-hours-daily-online-via-mobile/>

Oye, N. (2012). Students' perception of social networking sites' influence on academic performance. *International Journal of Social Networking and Virtual Communication* Vol.1

Safko, L. and Brake, D. K. (2009). *The social media bible: Tactics, tools, and strategies for business success*. John Wiley & Sons.

Salvation, M. & Adzharuddin, N.A. (2014). The Influence of Social Network Sites (SNS) upon Academic Performance of Malaysian Students. *International Journal of Humanities and Social Science*. 4 (1).

Sensis marketing group. (22/7/2017) Sensis social media report. Retrieved from www.sensis.com.au/socialmediareport

Sri Lanka University Statistics 2016, University Grant Commission of Sri Lanka. ISSN: 2279- 2104.

Steinfeld, C., Ellison, N.B., & Lampe, C. (2008). Social capital, self-esteem, and use of online social networking sites: A longitudinal analysis. *Journal of Applied Developmental Psychology*, 29, 434-445. The Impact of Social Media on Undergraduate's Academic Performance: With Special Reference to Eastern University, Sri Lanka

Vaus, D.D. (2002). *Analyzing social science data: 50 key problems in data*. Sage publications. London. ISBN 1446226107.

Vijayakiruthik. S 1 and Maheswaranathan. S2 1,2 Department of Economics, Eastern University of Sri Lanka.

Villanti, A.C., Mowery, P.D., Delnevo, C.D., Niaura, R.S., Abrams, D.B., Giovino, G.A. Changes in the prevalence and correlates of menthol cigarette use in the USA, 2004-2014. *Tob Control*. 2016;25:ii14–ii20

Yang, C.C., & Brown, B. (2015). Factors involved in associations between Facebook use and college adjustments: Social competence, perceived usefulness, and use patterns. *Computers in Human Behavior*, 46, 245-253.

Mobile Application for Online Shopping

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Introduction

In the present digital world of communication, mobile apps have become the major force driving growth in the E-commerce sector. The key attempt is to develop a mobile app which facilitates online shopping decision process by real-time decision making and identify the factors that motivate online customer's decision whether for buying online or not. Even though many online shopping sites have their own applications in the Google play store, there is no any application which amalgamates all the online shopping sites in a single place. Therefore, it is inconvenient that the buyers have to go through each and every online shopping applications to compare the product before purchasing and the unavailability of real-time reviewing facilities will let the consumer expectations down. There are no facilities where customers can chat about products through current online shopping applications.

Hence, the proposed application intends to amalgamate some popular online shopping sites in a single place. The proposed android application mainly focusses on visualizing products details under one roof for customers to perform prior decision before the shopping and sharing the buyer experience with friends who are willing to give suggestions about the product in real time. Further, the buyer can check the product in different online stores as well as the reviews on that product while facilitating the local market to publish items on the application.

Objectives

- To collaborate with multiple online shopping websites in one application.
- To share the ideas of recommenders and buyers on the products.
- To check the availability of the product in other sites at the same time and compare its specification then display it.
- Any user who wants to sell their items can publish them on our application where customers have to deal with the seller directly.

Literature Review

Mobile apps rely on the smartphone's native code, creating a self-contained user interface, whereas mobile websites rely on HTML (Charland and Leroux, 2011). Apps "move e-commerce off the Web and onto a more secure mobile Internet platform. They cut through the clutter of domain-name servers and uncalibrated information sources, taking the user straight to the content he or she already values" (Johnson, 2010). Compared to traditional mobile websites, mobile apps provide several advantages for marketers because mobile apps offer greater security features as well as allow consumers to bypass competitor's information and go directly to the marketer's self-contained environment. Among the marketplace leaders in smartphone operating systems – Apple's iOS and Google's Android. Based on device sales, the three most common operating systems are Apple's iOS for its iPhone, the Blackberry OS used on Blackberry devices and Google's Android OS, which is used on a variety of manufacturer's phones. Finally, it would be expected that as users engage in search-related behaviours then users would be more likely to complete the purchase because users would have received some feedback to assist the user in deciding to complete the purchase. There are some existing Android applications for online shopping. 'Amazon shopping' which allows the customers to shop millions of products from Amazon sites around the world. The customers can search and get the results according to the locations through 'Pro App for Craigslist' [8]. The 'eBay' provides a facility to the customers, not only order and buy the products but also 'market their products also [9]. 'Etsy is the marketplace of the handmade, vintage and creative goods [10]. 'Newegg' is the best shopping app for electronic products [11]. The proposed mobile application combines the search result of eBay and Walmart together and provides more reviewing facilities to the customers. In addition, the application also provides a marketplace to the customers to sell their products also.

Methodology

The proposed android mobile app mainly designed for sharing the buyer experience with friends who are willing to give suggestions about the product in real time and also the buyer can check about the product in different online stores as well as the reviews on that product while facilitating the local market to publish items on our android application where customers have to purchase those items directly from the seller. Therefore, the mobile app makes easily the customer purchase decision through the smartphones.

Technical factors used in the development of a mobile app

- Java
- JSON (JavaScript Object Notation)
- Walmart API
- eBay API
- YouTube API
- FIREBASE
- android platform version 2.3

Flow diagram of the proposed mobile app

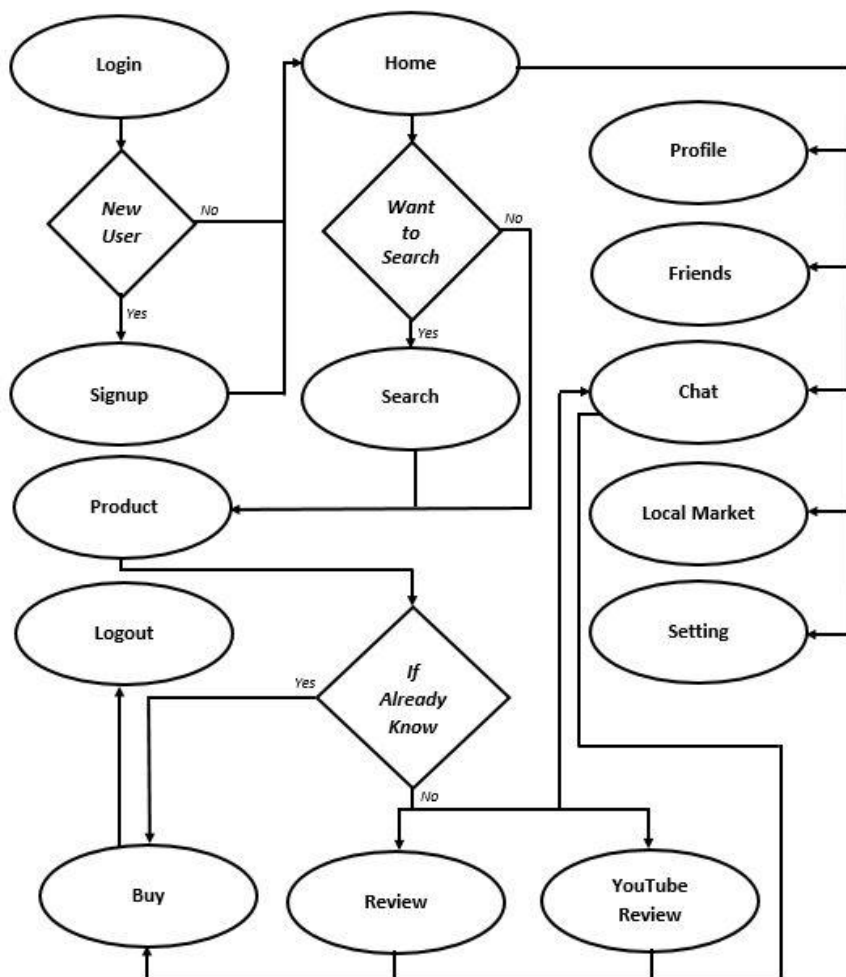


Fig3: Functionality of the Mobile App

Results and Discussion



Figure 4: Results view of Mobile App

A typical searching based on the keyword and price range result on the online shopping sites and local market given an in the above Figure 2. The search result window will mainly display the image of the product, product name, product brand, price range and ratings. On the top of the window, it will show all the online shopping sites in our application as tabs. It will only show Walmart, eBay and local market tabs for the time being. When we get to add the other online shopping sites to the application, they will be shown on the top of the window.

Benefits of the mobile application

1. Searching at multiple platforms at the same time
2. Comparing prices and reviews
3. Item availability in different platforms
4. View the customer reviews from non-related to online shopping platform (YouTube)
5. Customers can market their products to others

6. Comparing the local market price with other big online shopping platforms
7. This application does not store the user personal information details so the user detail is not going to be shared with anyone

Conclusion & Future Works

The application, which improves the trustworthiness of the action of purchasing goods or services from various merchants over internet with the facility to compare products specification with the other online stores at a single place and also this system enhances the effectiveness of the online shopping by allowing a single to take suggestions in real time or simultaneously from friends and many customers who already experienced the product. The users are provided with the product image, name, brand, price range and ratings where they can use them to compare products. Our application provides the opportunity to the users to chat about products with friends and also the application allows the user to review the products and check the reviews of other users on products. The users have been provided with a special facility of visual reviewing from YouTube about the selected product and also, it facilitates the local sellers to publish items through our android application where customers have to purchase those items directly from the seller. In the future, it is recommended that the creation of evaluation framework to test and compare the performance of the proposed mobile apps with the existing mobile apps in terms of performance factors and also customer behaviour patterns and purchasing patterns should be predicted by using machine learning techniques.

References

Sadafule, R., "Mobile app development for the Indian market", IEEE Software, 31(3), pp.17- 20, (2014).

G. Nagra, R. Gopal, "Study of Factors Affecting on Online Shopping Behavior of Consumer," International Journal of Scientific and Research Publications, ISSN: 2250-3153, Vol. 3, No. 6, June 2013.

Charland, A. and Leroux, B. (2011), "Mobile application development: web vs. native", Communications of the ACM, Vol. 54 No. 5, pp. 49-53.

Johnson, R. (2010), "Apps culture reinventing mobile internet", Electronic Engineering Times, No. 1588, pp. 24-30.

Adobe (2013), "Mobile shopping: retail app usage on the rise", Adobe Digital Publishing Blog, available at

<http://blogs.adobe.com/digitalpublishing/2013/01/mobile-shopping-retail-app-usage-on-the-rise.html> (accessed 21 July 2013).<https://developer.android.com/studio/write/index.html><https://firebase.google.com/docs><https://www.androidauthority.com/best-android-shopping-apps-544784>

LiranEinav, Jonathan Levin, Igor Popov, and Neel Sundaresan, “Growth, Adoption, and Use of Mobile E-Commerce”, *American Economic Review: Papers & Proceedings* 2014, 104(5): 489–494.<https://www.etsy.com/mobile>
<https://www.newegg.com/mobile>

Ontology-Based Question Answering System for Banking Domain

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Introduction

Bank Assistants help people providing answers to user queries in the banking domain. This study is to develop a digital assistant for banking domain as a chat application. Though it is trending in the world, the concept is still new to Sri Lankan Banking Sector. In call centres, card centres and enquiry desks of the bank, human intervention is insufficient. Furthermore, it takes a considerably longer period of time to process a single request. This results in a waste of time and ultimately makes customers unhappy. Hence, it tends to reduce the quality of the customer service (Kulkarni et al. 2007). The aim of the research is that the customer can interact with mentioning their queries in English and it can resolve their queries with an appropriate response in return.

This answer generation system is one of the major modules of a digital assistant designed to formulate answers for a set of Frequently Asked Questions (FAQs) and corresponding answers of the card centre of the bank. The system uses an ontology as the knowledge base to store the answers for FAQs. The digital Assistant extracts unique keywords out of the given user query and it's used to execute the ontology query to retrieve the answer. This answer generation system formulates a complete answer by defining a proper linguistic structure appending the ontology answer into it. The ontology answer is not a complete sentence but a fraction of a sentence and it should be added to create a grammatically complete sentence. As the research objectives, this system defines a suitable question pattern and match it with generic keywords to generate an appropriate answer to the given question. The answer template is created by defining an appropriate linguistic structure filling the gap with ontology query result.

Literature review

Natural language generation has played a vital role in Natural Language Processing and widely used for developing digital assistants (Reiter 1995). They are developed using technologies such as rule-based, pattern-based, AI and Machine Learning. New approaches usually need a large set of dataset whereas pattern-

based approaches allow handling limited dataset. Ontology-based answer generation with template-based approaches is not frequently found out. One way of getting the ontology result is, extracting all questions that have classes from the data set while checking the cosine similarity with user query (Kulkarni et al. 2007). The answer to the most similar question is chosen and respond to the user. There is no linguistic structure definition presented in this approach, rather retrieve the whole answer saved in the ontology.

Template-based systems are natural language generating systems that map non-linguistic input directly (i.e. without intermediate representations) to the linguistic input directly. It contains gaps; well-formed output results if the gaps are filled (Reiter and Robert 1997). More precisely when the gaps are replaced by linguistic structures that do not contain gaps.

For instance, a simple template-based system might start out from a semantic representation saying that the 306 train leaves Aberdeen at 10:00 am: Departure (train306, location and, time1000), and associate it directly with a template such as [train] *is leaving* [town] *now*, where the gaps represented by [train] and [town] are filled by looking up the relevant information in a table (Reiter 1995), (Reiter and Robert 1997). Some template-based systems use grammar to aid linguistic realization.

Regular Expression rewriting is another method that can be used in Question Answering Systems. Regular expression (RegEx) substitutions are a very succinct, efficient, maintainable, and scalable method to model many NL subtasks of the QA task. The basic text substrings, such as the target or named entities, are recognized using regular expressions and replaced with an angle-bracket-delimited expression. For example, the target is marked as <TARGET>. More commonly, a named entity *e* of type *t* is replaced with <t_es> (Keřseljand Cox 2004). Furthermore, this process involves in passage retrieval, target marketing, Question category marking and finally answer matching. Combining several features of some template-based approaches, an ontology-based answer generation is proposed.

Methodology

This research was based on the ontology-based application developed to generate an answer. The proposed system is designed to handle cases where the dataset is limited and it contains questions that frequently repeat the same question patterns. For instance, what is a web card, what is a set plus card, what is the joining fee for a web card, How to apply for a web card, How to apply for a credit card etc? Datasets with a small amount of data often find it difficult to be designed with the latest cutting-edge technologies. In practice, a good amount of data is needed to

train a model, in order to be sure of the model's ability to generalize. Therefore, it is very unlikely that a small dataset such as two hundred like datasets can be effectively used to train and get a valid response. In fact, Frequently Asked Questions (FAQs) do not contain millions of data. On the other hand, rather than just filling some values such as the gap to fill the ontology answer in a text, it is necessary to define a grammatically complete and sound sentence as the final output. Considering the facts, a solution is proposed by defining a proper linguistic structure to generate an answer using natural language processing (NLP) techniques. The proposed solution does not focus on formulating answers based on the semantics of the sentence but defining a syntactic structure of the sentence.

This section illustrates the proposed methodology. For each question in the dataset, a question pattern is created and matched it with an answer template in order to formulate an appropriate answer for a given user query. For every question in the dataset, a regular expression pattern is created. Patterns are matched with a preconfigured set of unique keywords. If the question is matched with predefined regular expression pattern, an answer is generated by following a specific linguistic structure. Figure 1 illustrates the overall process carried out by the answer generation system. In order to define regular expression patterns for each question in the dataset, the user query should be entered into the system. Then it's converted into a regular expression pattern so that it can be stored in a database and retrieve the pattern whenever necessary. If a user query is matched with a particular regex pattern, then it formulates an answer for a predefined linguistic structure by filling the gap with ontology answer and output it to the user.

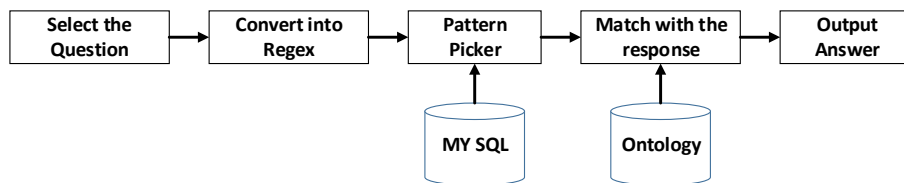


Figure 5: Process diagram of the system

The answer generation system has been designed to generate an answer for a given question in the dataset. It is necessary to go through the dataset and identify questions that follow a similar structure as they can be put into one category when creating regular expression patterns (Regex). Hence, it enables to reduce the number of regexes that should be created. Each and every question in the dataset has a defined regular expression pattern. Creating regular expression patterns involves several natural language processing techniques. Firstly, the question should be tokenized and get the lemma of the word by doing lemmatization. Then get the Part of Speech Tag (POS Tag) of each word and the outcome is used to create Regex. Regex Pattern is created in such a way that, it can be matched with

questions which follow the similar structure.

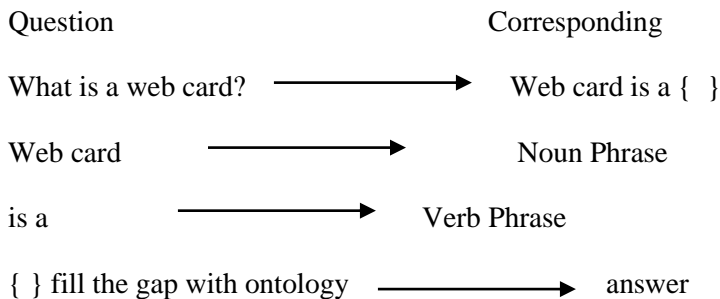
Depending on the question, the POS tag is varying. Figure 2 illustrates the meaning of each POS tag in the regular expression pattern created for the given scenario. Each question pattern must be identified correctly and create regex patterns accordingly as it can reduce the number of questions can be asked.

What is a web card? }
 What is Set Plus Card? } <WP><VB><DT>?<JJ>*<NN>+

WP	wh-pronoun	'what'
VB	Verb,	the base form of 'is', be
DT	determiner	'a'
JJ	adjective	'web'
NN	noun,	singular 'card'

Figure 6: POS Tagging Operation

In order to map the regex with appropriate user question, it is needed to assign a set of keywords with corresponding regex pattern. The answer template is created using the chunking method of NLP which defines a proper grammar for the Noun Phrase (NP) and the Verb Phrase (VP) collectively define a linguistic structure for a sentence. Whenever a particular set of keywords are matched with a regular expression pattern, it formulates an answer creating a noun phrase and a verb phrase by filling the gap with answer retrieved from the ontology.



This method is efficient for questions and answers which follows a common structure as mentioned above. Better results can be obtained for a limited dataset as it is easy to go through each and every question and find out similar patterns among them. It was developed using python with NLTK libraries. Better results can be obtained if the coverage of different user questions is higher. If the system does not identify the user query, it kindly asks to contact a human agent. Figure 3 depicts how the system generates ontology-based answers to its end users.

Digital Assistant Platform for Customer Service

Team Esperanza

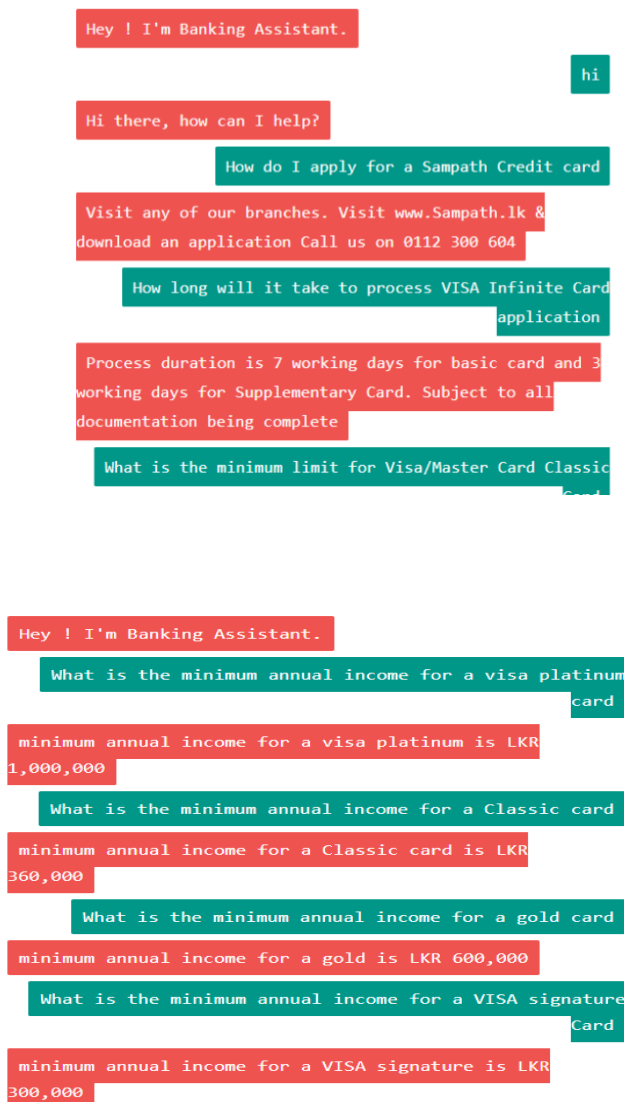


Figure 7: Chat Interfaces of the system

Results and Discussions

The dataset contains 150 questions and corresponding answers. For the evaluation purpose, we have used 20 different types of questions which contains different ways of defining the grammar for the expected answer. In other words, each question has a different linguistic structure defined for the answer template. When the question pattern changes, so do the answer pattern. Furthermore, if we cover the number of different types of what and how question templates, then their corresponding answer templates changes as well. There are different types of

questions related to banking products such as credit cards, corporate card, web card and other types of cards included as the test data. This allows us to see how accurately the system can provide answers to given user questions. Test data contains direct questions which the system is able to provide answers. In fact, it consists of question which the system can't provide answers. Those are the questions out of the data set. On the other hand, test data contains similar questions which can be asked in different ways. Such questions also provided with an answer. All three kinds of questions are fed to the system and see the output against the real dataset. It's visible that, if we enter the question as mentioned in the dataset, most of the time it provides the accurate answer. 9 out of 10 questions were able to provide an exact answer. Following figure 3 shows the tested questions and expected the level of accuracy.

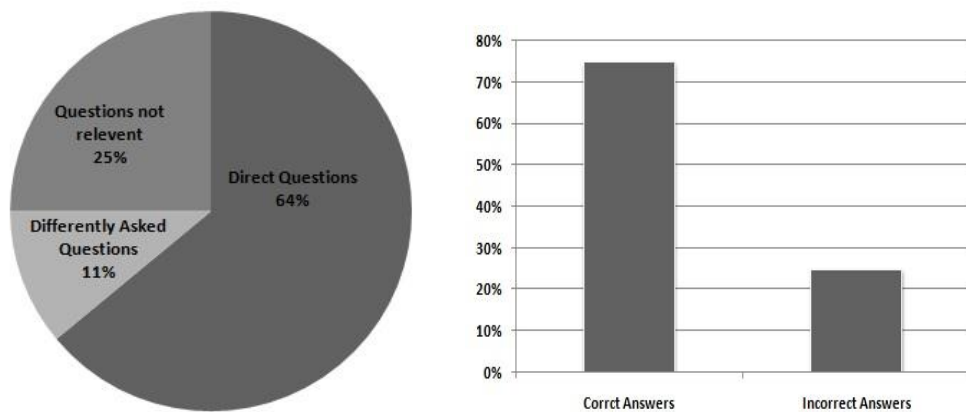


Figure 8: Tested Questions and expected level of accuracy

Questions out of the dataset are provided with the response as to contact a human agent. Similar question identification and unknown question result have a different level of accuracy. Out of 20 test data fed into the digital assistant, it could achieve 75% of overall accuracy level for the proposed answer generation system. It was visible that lengthy answers relatively process slowly than short answers. Yet, the response time is quite good as it does not interrupt the conversation.

Conclusions and Recommendations

This template-based answer generation approach is a subsystem of a digital assistant designed to handle Frequently Asked Questions (FAQs) for a banking domain. This research approach addresses the issue of a limited dataset using a template based method while trying to combine several features of existing methods in order to generate an answer for banking domain. The research was used regular expression pattern creation and define an appropriate linguistic structure to formulate an answer for the given query. A new question can be added to the

system manually by checking whether it matches with an existing regex or not. If it matches, answer generation can be done by defining a linguistic structure while mapping with generic keywords. It would be easy to feed new questions if the question is defined using a format defined in the dataset. So that it enables to reduce the time-consuming process of pattern creation and defining grammar.

References

Kulkarni, C.S., Bhavsar, A.U., Pingale, S.R., Kumbhar S.K. (2017) Bank chat bot – An Intelligent Assistant System Using NLP and Machine Learning | volume: 04|Issue: 05 | May -2017

Reiter, E and Robert, D., (1997) Building applied natural language generation systems. *Natural Language Engineering*, 3(1):57.87.

Ehud R., (1995) NLG vs. Templates. In Proc. 5th European Workshop on Natural Language Generation, pages 95.105, Netherlands.

Selj V., and Cox A., (2004) Question Answering using Regular Expression Rewriting, Dal TREC

The effectiveness of using technology in teaching English as a Second Language

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Introduction

With the spread and growth of English around the globe, it has become widely used as a second language (SL) in colonized countries like Sri Lanka (Punchihetti, 2008). In this modern information age, the use of technology has entered many areas of the academic field allowing the learners as well as the teachers to explore vast knowledge. This is particularly true in tertiary education where undergraduates and teachers have access to computer laboratories and the internet within the university. While there are different ways of facilitating learners to become proficient in English, technology is of critical importance because of the growing interest both from the public schools and universities across the country and because of the possibilities it offers compared to traditional teaching methods implemented for years in ESL classrooms (Gottlieb, 2006)⁴. Therefore, it is vital to conduct an in-depth analysis of the use of technology in the language classroom. In this light, attention has to be focused on different methods in language teaching which incorporate the use of technology in order to avoid the monotony and boredom of the curricula and activities provided in the traditional classroom. The primary aim of this study is to identify the effectiveness of the use of technology (multimedia projectors, videos, and PowerPoint presentations) in teaching English as a Second Language (ESL) for undergraduates studying at the Business Communication Unit, Faculty of Management Studies and Commerce of the University of Sri Jayewardenepura, Sri Lanka.

The Research problem

According to Irshad (2015), the University of Sri Jayewardenepura is the leading institute in Sri Lanka for Management studies but the level of English proficiency of the First year undergraduates is very low. This can be highlighted through the scores of the placement test which was conducted at the beginning of every academic year. Therefore, it is evident that undergraduates who enter government universities, especially those who enter Faculties of Humanities and Social Sciences and Management and Commerce, lack a sound knowledge of English. When considering all the above issues, management undergraduates low proficiency of English and teaching large ESL classes in the tertiary level have been identified as the research problem that needs to be addressed through the

current study. Thus, the primary aim of the current study is to examine the enhancement of English teaching and learning process through multimedia technology in the Faculty of Management Studies and Commerce, University of Sri Jayewardenepura.

Purpose of the study

The broad aim of this study is to investigate the extent to which multimedia technology can contribute to the enhancement of learners' proficiency in the English language. The researcher intends to explore whether the university students' proficiency in English can be enhanced by using multimedia technology in the ESL classroom. Overall the following aspects could be highlighted as objectives of this empirical study which examines the use of technological tools when compared to the traditional teacher-centred classroom.

- I. To identify the effectiveness of multimedia technology as an instructional tool on first-year students' proficiency in English.
- II. To identify the improvement of attitudes of students towards learning English through multimedia tools by comparing the responses of the students.

Along with these major objectives the researcher aimed to examine the participants' class attendance throughout the study. It was intended to identify the use of technological tools in teaching English as a Second Language could enhance the students' class attendance. These aims/objectives led to the following research questions.

Research Questions

Q1. To what extent does the use of multimedia technology play a role in improving students' English language skills?

Q2. What perceptions do students have regarding the use of technology in the language classroom?

Hypothesis

Null Hypothesis to RQ01: There are no significant differences in the scores of the proficiency test in English of the experimental group and the control group before and after treatment;

Alternate Hypothesis to RQ01: There are significant differences in the scores of the proficiency test in English of the experimental group and the control group before and after treatment;

Null Hypothesis to RQ02: There are no significant differences in the attitude of the experimental group and the controlled group before and after the treatment;

Alternate Hypothesis to RQ02: There are significant differences in the attitude of the experimental group and the controlled group before and after the treatment.

Literature Review

The Growth / historical background of ELT through Technology

Though there exists a significant body of theoretical and anecdotal literature on the potential benefits of utilizing technology in teaching and learning, few rigorous and systematic studies that investigate the effectiveness of such technologies in teaching and learning the English language have been identified by the researcher. According to Johnson (1996), the lack of research into the effectiveness of technology is due to an inappropriate focus on programmed instruction and poor research design and execution.

In the early stages, the most important tool was to use the blackboard which connects the teacher with learners and was known as “one-way transmission of information” (Warschauer, M., &Meskill, C. (2000). As a result of many researchers inclined to go beyond this one way of information transfer since the teachers used to rely heavily on the blackboard which ultimately resulted in archer-centred classrooms. According to Warschauer, M., &Meskill, C. (2000)“ the blackboard was later supplemented by the overhead projector, another excellent medium for the teacher-dominated classroom, as well as by early computer software programs which provided what were known as "drill-and-practice" (or, more pejoratively, "drill-and-kill") grammatical exercises”.

Gradually new methods came into play as shown by Warschauer (2000) “audio tape was the perfect medium for the audio-lingual method which emphasized learning through oral repetition”. Thus again during the 1970 and at the beginning of the 1980s teachers as well as learners have identified the drawbacks of language labs that use audio – tapes.

During the 1980s and 1990s, it is evident that there is a shift toward communicative language teaching, where linguists found out that learning a language is an individual psycholinguistic act which was broadly discussed under the cognitive approach to language learning. From this perspective, “language learners construct a mental model of a language system, based not on habit formation but rather on

innate cognitive knowledge in interaction with comprehensible, meaningful language” (Chomsky, 1986).

At the same time, linguists were able to identify the social cognitive theory which emphasized learning a language as a process of apprenticeship or socialization into particular discourse communities (Schieffelin & Ochs, 1986; Gee, 1996). With the advent of these two approaches computer as well as internet became intrinsic components in the language classroom since both these tools provided learners with “maximum opportunity for authentic social interaction, not only to provide comprehensible input but also to give students practice in the kinds of communication they will later engage in outside the classroom” (Warschauer, M., & Meskill, C. (2000). As a result, multimedia which incorporates text, audio, graphics, animations, or real video (Stemler, 1997) crept into English lessons. "The old text-based approach to learning is being superseded by an approach which combines audio and colour video in a much more exciting way" (Barker & Tucker, 1990).

Many scholars have expressed their views on utilizing this multimedia factor effectively in teaching.

“Interactive multimedia is one of the most promising technologies of the time and has the potential to revolutionize the way we work, learn and communicate” (Macromedia, 199; Staub & Wetherbe, 1989).

Research Design and Methodology

This experimental study consisted of pre-test and post-test that have been administered to the participants before and after the teaching sessions. Scores of both these tests were entered into SPSS and the mean value is calculated. At the same time, the researcher used a structured questionnaire to collect data from the participants. The data were generated from these questionnaires.

Moreover, Semi-structured interviews were used because they are flexible, interactive, allow for deeper understanding of second language learning issues, and a greater exploration of learners’ attitudes.

Sample

For this study 93 first-year undergraduates, out of a total of 1298 students, and five(05) lecturers from the Business Communication Unit of the Faculty of Management Studies and Commerce were chosen as the sample. These participants were selected based on the purposive sampling method. These students were following the Business Communication I (BCC 1340) compulsory credit course where they have to pass the course to complete their degree programme. For research purposes, these two classes were categorized as the Experiment Group – (Group A) and Control Group – English (Group B). The English Group

A received the treatment. They were given the maximum multimedia exposure by utilizing the language lab and videos. The English Group B was not exposed to language study in the language lab or to multimedia -enhanced instructions.

Test Instrument

The control group students were not given specific language laboratory exposure since they were taught in a traditional classroom set-up without videos and power-point presentations and were given the same series of pre and post -tests as the Experiment Group. A structured questionnaire was developed which consisted of both open-ended and close-ended questions. In the current study, students were surveyed in few areas: learners' demographic information, their use of modern technological tools, the frequency of using such instruments in relation to learning English and their exposure to multimedia enhanced teaching sessions. An attitude related questionnaire based on a Likert scale with 16 statements was used to analyze the undergraduates' opinions on the use of multimedia tools towards learning English.

Data Analysis & Discussion

Scores of the pre-test and post-tests of the Experiment Group and Control Group were compared after performing the Independent Sample Test. P-value of Pre- Test scores of Experiment(**26.55**) and Control Group (**27.56**) indicated that there was no statistically significant score difference. But the P-value of Post-test scores of Experiment Group (**33.02**) and Control Group (**29.46**). With regard to attitude of students there exists only a slight difference between the mean values of Experiment Group participants' and Control Group since at the end of the treatment both groups have shown a slight increase in mean value; Experiment Group $M = 4.2273$ – $M = 4.2743$ and Control Group $M = 3.8375$ and $M = 3.8681$. In addition, with regard to classroom attendance, In the Experimental Group, 45 students have attended more than 15 sessions out of the total number of 21 sessions. They have participated in more than 70 % of the classes held during the semester. Whereas, Control Group participants have displayed a low attendance rate where only 27 participants have attended more than 15 days (more than 70 %) out of the total number of 21 sessions. Importantly, 6 students have attended less than 10 sessions and among them, 5 students have attended less than 6 sessions.

Therefore, the above results highlight the fact that multimedia based language teaching can enhance students' English language proficiency and attitude towards learning English. Test scores show the improvement of students' performance when compared with traditional classroom teaching practice. At the same time, the

use of multimedia technology can improve students' positive attitudes towards learning English since it affects successful learning experience.

Conclusion and Recommendations

In summary, through the above results and literature, the researcher assumes that multimedia technology is more effective for the cognitive and attitude development of the students than when they learn through the traditional classroom teaching method. Finally, positive attitudes towards what they learn could affect the overall performance of the learners at proficiency tests. It was recommended that to conduct an in-depth study analyzing the four skills (Reading, Writing, Listening and Speaking skills) separately before and after the treatment. Further studies should be carried out with the participation of a larger population since the current study employed 93 subjects out of whom only 84 students remained towards the completion of the study.

References

Allwright, D., 1979. Abdication and responsibility in language teaching. *Studies in Second Language Acquisition*, 2(1), pp.105-121.

Bahanshal, A. (2013). *English Language Teaching*; Vol. 6, No. 11; 2013 ISSN 1916-4742 E- ISSN 1916-4750 Published by Canadian Center of Science and Education. URL: <http://dx.doi.org/10.5539/elt.v6n11p49> accessed on 12th January 2016.

De Lanerolle, K. (1991). A Place in the Sun for Sri Lanka. *Dana*, 16, 11 & 12,37.
Fang, Z., 2006. Using multimedia and network technology to reform college English teaching in the teaching of New Horizon College English. *CELEA Journal*, 29(3), pp.111-114.

Gottlieb, M. (2006). *Assessing English language learners: Bridges from language Proficiency in academic achievement*. Thousand Oaks, Calif: Corwin Press.

Gunsekera, M. (2005). *The post-colonial identity of Sri Lankan English*. Colombo: Katha Publishers.

Irshad, F. M. (2015). *Second Language Development Through the Lens of Dynamic Usage-based Approach*. The University of Groningen.

Karunaratna, M.(2003) Teaching English in urban Sri Lanka: Some pedagogical issues:9th International Conference on Sri Lanka Studies.

Mayer, R. (Ed.). (2005). *The Cambridge handbook of multimedia learning*. Cambridge university press.Retrieved from: [https://www.google.com/search?q=Mayer,+R.+E.+\(2001\).+Multimedia+learning.+Cambridge:+UK:+Cambridge+University+Press.&ie=utf-8&oe=utf-8&client=firefox-b&gfe_rd=cr&ei=u2McWbK8PJWFuATS7K-oAw](https://www.google.com/search?q=Mayer,+R.+E.+(2001).+Multimedia+learning.+Cambridge:+UK:+Cambridge+University+Press.&ie=utf-8&oe=utf-8&client=firefox-b&gfe_rd=cr&ei=u2McWbK8PJWFuATS7K-oAw)

Moore, D. (2011). Computer –Aided Learning. *Innovation in Education and Training International*, 37, (3), 218-228

Punchihetti, S. (2008). Role of English and Asian languages in globalized contexts: The Sri Lankan case. Retrieved from https://www.academia.edu/4912108/Role_of_English_in_Asian_contexts_the_Sri_Lankan_case.

Warschauer, M. and Meskill, C., 2000. Technology and second language teaching. *Handbook of undergraduate second language education*, 15, pp.303-318.

Winkle, P. &Goertler, S. (2008). Did we forget someone? Students' computer access and literacy for CALL. *CALICO Journal*, 25(3), 482-509.Retrieved from: https://archive.org/stream/ERIC_ED545461/ERIC_ED545461_djvu.txt

Xiao, X.& Jones, M. G. (1995). Computer animation for EFL learning environments. In: *Eyes on the Future: Converging Images, Ideas, and Instruction*. Selected Readings from the Annual Conference of the International Visual Literacy Association (27th, Chicago, IL, October 18-22, 1995); see IR 017 629.

*Knowledge & Human
Resource Management*

An Empirical Study on Level of Stress Amongst Administrative Staff of the State Universities in Sri Lanka

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Introduction

The study has expressed the relationship between job stress and job performance of Administrative Staff, who are serving in the State Universities in Sri Lanka.

The purpose of this study is to determine the level of stress of administrative staff. In this context, stress refers only to a stress with significant negative consequences. The stress situation, which prevails at the workplace, has an adverse effect on the output of the organization.

In Sri Lankan context no research was done on the scope area of this topic. Studies reveal that stress condition prevails in all public and private sector organizations in Sri Lanka. Here the researcher is interested to study the level of stress prevails in the State Universities in Sri Lanka.

In Sri Lanka, the State Universities are recognized and listed under the Association of Commonwealth Universities as higher educational institutes. In this context employees are privileged is working in the State Universities and they are paid better remuneration. It is observed that in the recent past Trade Union actions were staged by all the categories of employees of State Universities including Administrative staff members, and due to this reason, the educational activities of State Universities were paralyzed for a long period. Here the researcher's question is "Why Administrative Staff of State Universities are frustrated, provided that they are recognized, better paid and compensated, and working in the place of learning excellence?"

The performance of the organization may be below the agreed upon performance, due to increasing level of stress. The stress produces numerous physical and mental symptoms, which vary according to each individual situational factor. Therefore the study about the Job stress may help to improve the performance of the organization concerned.

Literature Review

Stress prevails at the workstations can be a serious problem for the organization as well as for its employees. Stress is recognized as a major challenge to employees' health, and the organization's healthiness. According to the International Labour Organization (ILO), conducive management and working environment can be the best practice to prevent stress from happening.

There are numerous definitions of stress just as there are numerous theories of stress. Stress in early definitions was stated in terms of a stimulus, response or the interaction between the two (Cooper, Dewe&O'Driscoll 2001). Workers under traditional management philosophy did not get enough attention as the prevalent view was tilted towards a more traditional economic view of workers.

But this image was changed under behaviourism factor, which has stressed on the importance of paying attention to the needs and wishes of the workers, and provides a suitable environment for them to work (Gary 1966).

New Management topic including the stress of work has emerged with the increased attention to the human elements (Thomas G. Cummings & Gary 1999).

Work stress can arise from multiple sources, the ambiguity of the role of competition, organizational and personal problems are leading to increasing work stresses (Beehr 1976).

One of the direct results from work stress is to create a state of imbalance between the individual abilities, needs and expectations on the one hand and between what is asked to do from the other hand.

Ganstor&Loghan, (2005) have pointed that key factors such as work environment, role conflict role ambiguity management support, workload etc. are factors that determine the level of stress at work, which can affect employees' physical and mental health.

Objectives of Study

The objectives of the research study are to find out the level of Job stress prevails amongst the Administrative Staff, to find out the level of the Job performance of the Administrative Staff, to identify the impact of Job stress on job performance and to suggest the techniques to manage the stress and reducing managerial problems.

The scope of the Study

The study was conducted on State Universities in Sri Lanka in order to determine the impact of stress on Administrative Officers.

Significance of Study

The proposed study will cover the effective strategies to reduce the level of stress among Administrative staff in the State Universities in Sri Lanka. The study will consider both the individual and organizational approaches to reduce stress. Stress is one of the pervasive problems of an organization. For an institution to prosper, it is prerequisite that employees work in a stress-free ambience. It leads to a decrease in employees' efficiency, increase in absenteeism and turn over. In Universities, especially, if the faculties work without any stress, they can deliver better to students and also engage themselves actively in University development. Therefore, it is important to study the relationship between stress and job performance.

Stress is one of the burning issues that organization have to deal so that employees can comfortably produce quality work. Stress causes an imbalance in one's life because it leads to depression and thus damages health, attitude and work behaviour. Causes of stress are called stressors, which can be workplace conflict, role conflict, role ambiguity and workload.

Stress is also linked with “Demands” and “Resources”. Demands are the expectations, situation, and circumstances in the organization whereas resources refer to the stuff used in meeting demands. The level of stress minimizes when resources are adequate to meet demand.

Research Methodology

The study was based on the review of the literature and a field of the survey in the State Universities in Sri Lanka to assess the level of stress of Administrative Officers and to assess the impact on the Job Performance.

Primary data was collected through structured questionnaires (Part I and II) with a Likert Scale Rating, which was filled by the respondents.

Secondary data were collected from books, journals, newspapers, magazines and research papers.

The random sampling method was used to obtain responses from the Administrative Staff members of the State Universities. Forty (40) numbers of responses were obtained from the Administrative Staff members of State Universities.

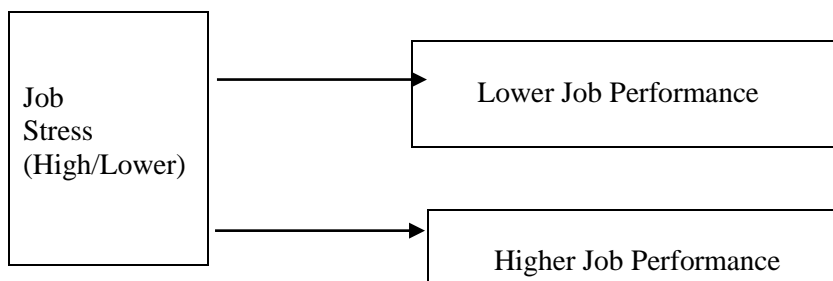
Hypotheses

Two hypotheses have been formulated in order to test the impact of the Job Stress of the Administrative Staff on the Job Performances.

H1: The higher the level of Job Stress the lower the Job Performances

H2: The lower the level of Job Stress the higher the Job Performances

Conceptual Frame Work



Data Presentation and Analysis

The data were entered into the Statistical Packages for Social Sciences (SPSS 25) for analyzing the data. The mean value, standard deviation, correlation and coefficients, regression analysis, and ANOVA test were done in this study.

Job Stress in the perspective of Administrative Officers

The level of job stress in the perspective of the sample Administrative Officers is measured by 19 statements in the Questionnaire (**Part 1**). The questionnaires have been used to measure this variable. The data summary of this aspect is given below in **Table 1**.

The mean score mentioned in the above **Table: 1** indicates the degree of Job stress. The data summary shows the mean value of 58.83 with a standard deviation of 10.55. The mean value as a percentage of the possible maximum score is 61.93%. Here it is considered that there is a moderate level of Job stress prevails amongst Administrative Staff in the State Universities in Sri Lanka.

Table 1: Descriptive Statistics

Variables	N	Mean	SD	Obtained		Possible	
				Max	Min	Max	Min
Job Stress	40	58.83	10.55	85.00	35.00	95	19.00
Job Performance	40	54.82	8.85	68.00	32.00	95	19.00

Source: Survey Data

Job performance in the perspective of Administrative Officers

The level of Job performance in the perspective of the sample Administrative Officers is measured by 19 statements in the Questionnaire (**Part 2**) has been used to measure this variable. The data summary of this aspect is given in **Table 1**.

The mean score mentioned in the above **Table: 1** indicates the degree of Job performance. The data summary shows the mean value of 54.82 with a standard deviation of 8.85. The mean value as a percentage of the possible maximum score is 57.7%. Here it is considered that level of Job performance in the State Universities in Sri Lanka is above average.

The simple correlation between job stress and job performance.

Simple correlation analysis carried out in this section in order to find the causal relationship between variables concerned. A causal relationship signifies that one variable is the cause of the other. The following **Table: 2** illustrates the simple correlation between the variables of the hypothesis.

Table: 2 Simple correlations between Job stress and Job performance.

	Job performance
Job stress	0.292
Significance (2-tailed)	0.000
	40

Correlation is significant at the 0.01 level.

Source: Survey Data

The above data summary shows a low case of negative correlation between job stress and job performance.

The impact of Job Stress on Job performance

Since the correlation coefficient is of limited use, the regression analysis was carried out to describe the statistical relationship between the variables so that one variable can be predicted from the other.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Str	40	35.00	85.00	58.825 0	10.54633
Jp	40	32.00	68.00	54.825 0	8.85463
Valid N (listwise)	40				

Correlations

		Str	Jp
Str	Pearson Correlation	1	.292
	Sig. (2-tailed)		.067
	N	40	40
Jp	Pearson Correlation	.292	1
	Sig. (2-tailed)	.067	
	N	40	40

Regression

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Str ^b	.	Enter

a. Dependent Variable: Jp

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted Square	R	Std. The error of the Estimate
1	.292 ^a	.085	.061		8.57920

a. Predictors: (Constant), Str

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	260.875	1	260.875	3.544	.067 ^b
	Residual	2796.900	38	73.603		
	Total	3057.775	39			

a. Dependent Variable: Jp

b. Predictors: (Constant), Str

a. Dependent Variable: Jp

From the above data variable, the following equation is formulated to find out the relationship between them and the significant effect of the independent variable on the dependent variable.

$$y = \beta_0 + \beta_2 x_2$$

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	40.399	7.782		5.192	.000
	Str	.245	.130	.292	1.883	.067

From the above Regression summary, one can find out the effect of the job stress on job performance. Thus the job stress of Administrative Staff contributes to job performance for a certain extent in the State Universities at 8.5%, and the remaining 91.5% can be attributed by the other factors.

The other factors may be co-operation among team members, salary, fringe benefits, the opportunity for growth, sabbatical leave entitlement, concessionary vehicle permit, the opportunity for growth, study leave entitlement, rule conflict etc. To examine the impact of job stress on job performance, the following equation is derived.

$$y = 40.4 - 0.245 x_2$$

According to the above equation job stress of Administrative Staff has a certain impact on job performance. The job performance is decreased at the rate of 0.245 in every unit of increase in job stress.

Though there is a low case of negative correlation between the independent variable, it should be checked whether the correlation is as a result of sampling error. In other words, prior to accepting or rejecting the hypotheses, it should be checked whether the correlation is significant or not. Here the analysis of variance (ANOVA) shows the model significance and reveals whether there is any variable.

In response to the model significance indicated in the table, both the parameters are not equal to zero. Hence there is no evidence to accept the null hypothesis (There is no relationship between the job stress and the job performance). It means there is a relationship between the independent variable and dependent variable.

Therefore, in conclusion, the null hypothesis has been rejected and alternate hypothesis, that is, the stated hypothesis: "**The higher the job stress the lower the employee's job performance**" has been accepted. In other words, the other stated hypothesis: "**The lower the job stress the higher the employee's job performance**" has also been accepted.

Conclusion and Recommendation

The conceptual models considered the job stress as the independent variable and the job performance as the dependent variable. In this model correlation, statistical relationship and significance between the variable were examined and the stated hypothesis was accepted. According to the study, the researcher submits the following findings.

The descriptive analysis reveals that a moderate level of job stress prevails amongst Administrative Officers in the State Universities in Sri Lanka is above average. Here the second objective of the study is achieved.

Further, the analysis of correlation shows that there is a low case of negative correlation prevails between job stress and job performance. Only 8.5% of job performance is attributed to the job stress and remaining 91.5% can be attributed by other factors. The other factor may be family relationship, finance, fears and anxieties about the future etc.

With the testing of **hypotheses, 01 and 02** one can understand that the job stress has a low case of impact on job performance. Here, the third objective of the study has been achieved.

Therefore, the finding emphasizes the importance of reducing the job stress prevails among the Administrative Staff of the State Universities, as it has a certain level of negative impact on job performance. In order to achieve the last objective of the study, the researcher suggests techniques to manage the stress and reduce managerial problems.

1. The most consciences efforts to improve working condition are unlikely to eliminate stress completely for all administrators. For this reason, a combination of organizational change and stress management is often the most useful approach for preventing stress at work.
2. Organizations can reduce the level of stress on employees by redesigning jobs so as to lower the workload and cut back role conflict.
3. Organizations should also provide counselling for employees to learn stress management techniques.
4. The employees should try to overcome employees stress through some exercises, yoga and meditation.
5. The employees can extend their support to the employees to get rid of the job stress.

6. Provide more opportunity for promotion to staff with equitable chances.
7. Preparation for each position in a clear and precise manner.
8. Increase the degree of coordination and corporation between departments and administrations.
10. Understanding family problems facing staff.
11. Adopting the principle & unity of command and directions at work.
12. Performing further studies on work stress and its impact on performance.

References

Ahmed RR, Parmar V. and Meenai Y.A. (2014). Comparison of key Economic Indicators of Pakistani Economy: Democratic Government (FY89-FY99) with Military Regime (FY00-FY05), *Research Sciences*, pp. 3(6), 46-49.

Beehr, T.A. (1976). Perceived situational moderators of the relationship between subjective role ambiguity and role strain. *Journal of applied psychology*, vol.61, pp. 35-40.

Cooper, C.L, Dewe, P., & O' Driscoll, M. (2001). *Organizational stress: A review and critique of theory, research, and application*. Thousand Oaks: Sage.

Certo S.C. (2003). *Supervision: Concepts and skill building*, New York: McGraw Hill.

Gary, J. (1996). *Organizational Behavior: Understanding and Managing life at work*. New York: Harper Collins Publisher Inc.

.Kahn R.L., Wolfe D.M., Quinn R.P, Snoek J.D and Rosenthal R.A. (1964). *Occupational stress in role conflict and ambiguity*, New York: Wiley.

Kolt G. (2003). Eustress, distress, and interpretation in occupational stress, *Journal of Managerial psychology*, pp. 18(7), 726-744.

Logan, Mary S & Ganster, D.C. (2005). An experimental evaluation of a control intervention to alleviate job-related stress. *Journal of Management*, pp. 31(1). 90-107.

Palmer, Stephen, Cary Cooper and Kate Thomas. (2004). A model of work stress, *counselling at work journal*, Winter, p.5.

Robbins S., Judge T. and Sanghi S. (2009). *Organization and Stress management*. New Delhi, India: Dorling Kindersley.

Selye H. (1987). *Stress without distress (pathway)*, New York.

Seena Abraham. (2013) *Quality of life Among Adolescent with Physical Disability Undergoing Integrated Education*. *Research Journal of Recent Sciences*, pp. 2(5), 1-5.

Thomas G.Cummings& Gary L.Cooper.(1999). *A Cybernetic Framework for studying occupational stress*. USA: *Human Relations Journal*.

White E. (2006). *Opportunity Knocks and it pays a lot better*, *The wall stress Journal*, November 13.

A Study of Conceptual Framework of Blind Recruitment in Current Business Scenario

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Abstract

This is a conceptual paper is to study the concept of Blind recruitment, usage of blind recruitment, forms of recruitment in the organization and the advantages and disadvantages of Blind recruitment. Recruitment is the method of searching and hiring the best- qualified aspirant from inside or outside of a business for a job opening, in a timely and cost-effective manner. It is absolutely crucial for businesses to hire the right people, with the right skills, the right knowledge, right attributes, at the right time, for the right job. The recruitment and selection process has become one of the key processes determining the success of an organization. At the present, the practice of issuing a vacant position and applying for a job via the website has increased massively but ensuring diversity among workplace still questionable in a major organization. Blind recruitment is the solution of removing all drawbacks what is in the current recruitment systems. One of the most innovative trends using by in a developed country that method called Blind recruitment. Researcher worked on this study/paper based on previous online sources, HR blogs, Journals and books. The main purpose of this paper is to broaden the research on the recruitment practices, with focus on Blind recruitment practices in addition with that this paper discusses the concept, nature, problems, benefits, methods, and trends and conditions for effective blind recruitment.

Key words-Recruitment and selection; Blind Recruitment; emerging trends of Recruitment.

Introduction

The world of recruitment is getting revolutionized and undergoing rapid transformation. All business sectors are adopted new tools and techniques for talent acquisition and management. Recruitment is the one of the major function in human resource management.in. The purpose of this study is to introduce an understanding of how Blind recruiting has evolved and the ramifications that Blind recruitment has on the recruitment process. Mass adoption of new tools and technologies has made the skilful or talent acquisition process data rich and workflow-friendly in blind recruitment. Blind recruitment is a latest or new phenomenon, so the author will try connecting the bind recruitment concept and

how that is evolved to the modern-day recruitment process using developed countries. Here the author idea is by using Blind recruitment method what are the benefits can have occurred and actually, that does mean Blind recruitment those ideas discussed in this paper.

Objectives

1. To study the role of Blind recruitment
2. Understanding the importance of Blind recruitment compare to other techniques.
3. To find out how the Blind recruitment process has an impact on Organization
4. To outline the criteria for effective Blind Recruitment.

Literature Review

An analysed conducted by Williams (2009) on recruitment showed declining recruitment spends focused on web-based recruitment at the expense of traditional methods. Online methods proved far more popular of the HR professionals surveyed said the jobs sector of their own company website was used as a recruitment instrument for many jobs. But the problem is we cannot expect more suitable candidate form those methods because Unconscious bias and stereotyped factors impact candidate selection process. The unconscious bias that means Implicit or unconscious bias happens by our brains making incredibly quick judgments and assessments of people and situations without us realising. (Brightowl,2016) Our biases are influenced by our **background, cultural environment** and **personal experiences**. We may not even be aware of these views and opinions or be aware of their full impact and implications(www.ecu.ac.uk). Your background, personal experiences, societal stereotypes and cultural context can have an impact on your decisions and actions without you realising. You might think you and your colleagues are open-minded and would never disqualify a candidate for anything but a lack of skills or experience. However, even the most accepting people can be influenced by thoughts and feelings they're not aware they have. blind recruitment at this point, you're probably wondering how you can put blind recruitment into action in your company. You're hiring solution and processes are meant to capture as much information about your candidates as possible so you can make informed hiring decisions. A simple way to create a blind recruitment practice is to assign a team member who is not involved in hiring to anonymize every candidate's information. Create a template that allows them to plug in each person's work experience, skills, degree and other pertinent information you've defined in the candidate profile. Don't worry about soft skills yet. You can evaluate your candidates for those when it comes time to interview them (Ideal Blog.2017).

Then have the person in charge of this process assign each candidate number. When the process is complete, you will be able to see that the candidate spent five years working for X company, has Y skill and earned a degree in Z. You can use this information to decide who moves onto the interview stage based on the factors that really matter so blind recruitment play a major role in ignoring unconscious bias.

Blind recruitment is the process of removing any and all identification details from your candidates' resumes and applications. It helps you and your hiring team evaluate people on their skills and experience instead of factors that can lead to biased decisions. Here are some common identification details that are blacked out when doing blind recruitment because they can cause unfair hiring practices (Fast company, 2016).

Using an online recruitment system many potentially save the employer time a usually they rate the candidate and several persons in HR independently review E-candidate the applicants send their resumes/CV via networking sites that help in the paperless recruitment process in human resource functions

Blind recruitment is the concept lead to ensure that approached by a few clients that they have been working with to engage in a blind-sifting process which involves searching for talent by removing unconscious bias (gender, place, appearance) from the hiring process.

The blind recruitment defines by (Think "The voice") that mean which is the process of hiring a right candidate by removing all personal and demographic information from hiring process in order to assess candidates based on ability. Actually, the blind recruitment concept derived from one of the foreign television show that is conducted by European that is called blind singing audition. The judges of the show they never see candidate appearance by hearing their voice they have selected best singer. Ultimately, they received efficiency output because that selection method ignored discrimination factors. Based on that experienced HR authors decided to conduct that as a recruitment method. Currently, a lot of developed countries trying this method to recruit the right person for their organization.

Here some reason why blind recruiting challenges we hear most often, and solutions to overcome them to make you're hiring more effective. Some industries have reputations for in-group hiring (often of the male, female, age, place variety.) Blind hiring can help companies hire for talent and skill, not just for cultural similarity (Mark Daniel 2017). The results of blind hiring are relatively untested. Bind recruitment ignores the gender, race or demographic information. If you're looking to mask gender or race, delete candidates' names from their resumes before

sending them over to hiring managers. Names, particularly names that are commonly associated with a certain gender or race, can trigger unconscious biases that can hurt candidates and companies alike. If you choose to obscure candidates' names, consider deleting other identifying information too, like the names of women's or historically black colleges.

For those who have never heard of blind recruitment, it's a process whereby all personally identifiable information is removed from a job seeker's CV, such as name, address, education, the length of time in each role and more. We have seen more and more companies start to implement blind recruitment in their employment strategy, at a time when diversity and inclusion have never been more central. However, with every new market trend, there are questions that arise.

- Can this combat recruitment discrimination?
- Will, it overcome unconscious bias?
- What role and level would benefit from this most?
- Is it going to be a time-consuming process, and will it make candidate/client experience worse or better?
- And more importantly, will it bring amazing results?

It has been recruiting senior HR roles for nearly two years now and I believe that anyone who has ever been involved in recruitment would agree that no process is ever the same. The blind recruitment process should be tailored to each individual organisation, and sometimes even to the vacancy itself. However, there are a few areas which should be considered before deciding which part of the CV will be blind.

- Is it a graduate recruitment role where university leavers are judged on the university they attended?
- Is it a private sector role where public-sector candidates might possibly be rejected?
- Might there be a prejudice towards minority groups?

Removing just a few identifiable details or even all of them would create a 'naked Curriculum vitae, but initially, produce a fairer playing field. Organisations could engage with 'blindly' selected candidates and invite them to do various psychometric testing. That might include personality tests, aptitude, numerical, verbal reasoning or even bespoke tests, designed specifically for a particular role. Ideally, at this point, the employer should have a shortlist of four or five candidates, invite them in for face-to-face interviews and one of them hopefully, will receive an offer (The New York Times,2016).

Blind recruitment has been designed to find the best person in the current market, one that is technically equipped to do the job. This approach creates a more diverse and balanced workforce which allows for different ideas from a host of backgrounds. It is a little bit like building foundations for a house. Just because they are not necessarily visible when the house is built, it doesn't mean they are not vitally important. A more diverse workforce mirrors the customer base more accurately and keeps employees engaged, and challenged, which improves productivity and employee retention (Fast company 2016)

Blind recruitment leads to make efficiency recruitment strategy.

- Ethnic background –No ethnical discrimination, most candidates do not share their ethnicity when applying for a job but a LinkedIn profile photo – or in some cases their name or the country they've worked or attended school in – provides plenty of hints. Racial prejudices, of course, differ from person-to-person but it would be naive to say ethnicity never influences hiring
- Gender – Gender discrimination not allowing this method. Research overwhelming shows that sexism and gender inequality persist in the workforce, across a variety of industries. And some people prefer to work with people of their own gender or believe certain jobs are meant for either a man or a woman
- Research also shows some HR of an organization willing to recruit candidate according to those who have an easy calling name. Some recruiters and hiring managers don't want to struggle to say someone's name or make unfair assumptions because of it, so they simply move onto the next applicant. Blind recruitment ignores this kind of discrimination factors. (Fast company.com)
- Education – Institution name or the academic reputation of a candidate's school can lead to speculation about their intelligence or work ethic. However, companies like Google they not practising based on their university names because they've found it doesn't equate to job success. (money.cnn.com)
- Age – You'll get some idea of a candidate's age from their years of experience. But you don't necessarily need to know the exact years they worked for particular companies (i.e. 2000 to 2004) or when they graduated from college. Blind recruitment does not consider exact days or months they recruiting the gap of age that means (2004-2008)
- Personal interests – Some people list their hobbies and interests on their resume but that information can also interfere with fair hiring. For example, hiring team members can make assumptions (i.e. "this person likes reading so they must be smart") or identify with a candidate who has shared interests. So blind recruiting ignoring this drawback.

Blind recruitment methods why important in the selection process. (Ideal blog,2018)

Not consider college degree (name of organization)

It can be ignoring to judge someone's qualification based on the university or college name. However, just because someone comes from a top university does not mean that they are the best fit for your job. By obscuring the education portion of a candidate's resume, you can let their experience speak for itself. It's best to pair this strategy with a skills assessment or assignment. They more concern about practical knowledge and skills aspects and Listing experience on a resume or curriculum vitae is only a snapshot of what a candidate is actually capable of. Disparity hobbies and interests Hiring for right rather than skill can allow biases to seep through. According to the New York Time analysis of blind hiring, the most common reasons for hiring someone were similar taste in hobbies, leisure activities, and other traits unrelated to job performance. Taking interests and hobbies into account can create an insular workplace culture, without room for employees to come in with new experiences to improve your company. More importantly, if the hobbies and interests of your workplace are homogenous and primarily reflect a certain demographic, achieving diversity will become significantly harder. To combat this, obscure mentions of irrelevant interests or experience.

Avoid or elimination social media and Pictures

Adding social media profiles to a candidate's application can often provide a fuller picture of what a candidate is like. You can see how they present themselves online through their Instagram LinkedIn and Facebook profiles. However, these profiles can provide photos and other information that you might not need to know. If you're committed to blind hiring efforts, it's best to err on the safe side and avoid digging into social media profiles during pre-screening. By seeing face appearance, they do not consider recruitment.

Use structured interviews

Though a face-to-face interview is hardly blind hiring, conducting the interview they ask the same question to all candidate but there is no chance to discuss with other candidates. Here they use pre-determined questions for the interview processing. interviewers can score and judge answers in a less biased and subjective eye way than they could with unstructured interviews.

The demerit of blind recruitment

Blind recruitment does come with some downsides. Here are few things to consider before implementing the process in your company (Michael goathouse, 2016)

- Could disrupt diversity goals – If your company is striving to increase gender balance or achieve other diversity goals among its staff, blind recruitment might not lead to the results you hoped.
- Extends the application screening stage – Requiring a team member to remove identification details from every application will lengthen the screening stage and is counterintuitive to having a hiring solution meant to increase efficiency.
- Prevents a candidate’s personality from coming across – Some candidate’s express themselves and their skills through their resume. For example, if you’re hiring a writer or designer, you should probably consider the quality of their resume.
- Doesn’t allow for culture fit – Anonymizing the details of your candidates could prevent you from hiring someone who meshes with your company culture. However, you could argue that this isn’t a bad thing since culture-fit can be an acceptable way of looking for people who look and sound like your current employees.

Anyhow blind recruitment, which in its purest sense involves being hired without your future employer knowing your name, age, gender, race, educational background or work experience. It is lead to increase diversity working culture.

Implementation of blind hiring

Hiding factor determination-The first step to implementing blind hiring tactics, as advised by organisations that went through the process, is to decide *which* data types should be hidden. In an ideal scenario, an organisation should aim to hide any data that is not necessary to evaluate whether a candidate has the skills and/or capabilities to perform the job. Defining how far the blind recruitment process can be taken is crucial as it will determine the shape of all of the processes and the type of technologies used in recruitment.

Processing-Secondly, processes around applications and Curriculum Vitae management should be established. To make sure anyone viewing the

applications cannot see the defined set of data, it's crucial to decide on how candidates' data will be processed and passed on to the right team members.

Calling -The remaining steps of the recruitment process can be agreed. These should be designed in a way that will allow the hiring manager to evaluate candidates based on specified criteria. Tools such as psychometric and ability tests can be used or candidates may be asked to share samples of their work. This part of the blind hiring process should be thought through in detail as it's the main source of information about the candidates.

Positive effects of blind hiring in the workplace

While it will take more time for the organizations to implement blind hiring programs at full-scale, the implementation of this strategy has already shown positive effects. Some of them deserve a mention here:

- It ensures workplace diversity: With the blind hiring, you can build a diversified workplace where people from different backgrounds can work together. Such a work environment breeds idea and gives more colour to your organization. So, you can get a non-linear work approach where different individuals use their ideas to contribute to the growth and progress of the organization.
- True talent finds its way into the organization: The traditional hiring process limits the access of real talent and prodigies to get a position in an organization. With the blind hiring, you can test out the real talent by setting unconventional assessment methods. For example, if you want to hire a genius web designer for your newly-launched start-up, you cannot do it with the traditional hiring method that requires a specific certification, degree, or experience since it is the core part of the recruiting and selection process. Instead, you can set a contest-based test where you can assign an intricate design project to several candidates. The one who creates the best design should be eligible for the job.
- Fewer occurrences of biased hiring: It is commonplace to see incompetent people working in a company who end up doing more bad to the organization than good. Such hires are a result of the biases that arise from the tradition hiring method. A conventional hiring method encourages the hiring manager to prefer one candidate over other based on his belief system, personal liking or social prejudice. With the blind hiring, the organizations make sure they hire only the fittest person based on his skill set and not because of his academic credentials, gender, or ethnic background.

- Companies can hire candidates who fit into their specific work culture: This can be particularly favourable for the companies that search for talent who can fit into their specific work culture. Let's say you run an advertising agency that thrives on highly creative people. So naturally, you will be interested to hire the people who can think outside the box. With blind hiring program, you can find those creative minds without the help of traditional hiring criterion which emphasizes on the academic qualification and professional experience.

Methodology

This study has adopted online sources, books, journals, online professional Blogs and article related to Human Resources. The author used the technique of previous studies to develop/study blind recruitment.

Limitation

This study is conceptual in nature only based on secondary data available from websites and scholarly articles. Considering the upcoming possibilities of increase in business and hence in increased recruitments, a more detailed study needs to take place in future with solid primarily database pan-industry because so far the proper focus has not been given recruitment issues. Blind recruitment still implemented only a few countries in the world so the implementation process still questionable. These issues could be addressed by further researchers in their focused primary study.

Finding

Sri Lanka consists multi-culture people so there is a chance to discrimination based on the culture, ethnicity, colour, place for that adopting Blind recruitment policy may reduce discrimination and ensure that right selection or qualified person for the suitable job. The important aspect is increased diversity among organization and leaning multi-culture respecting other values may increase. Here Researcher idea is practically implementing this concept is very effective in Sri Lanka. Blind recruitment is the only method of eliminating negative side in other all traditional and modern recruitment methods.

Recommendation

The future researcher needs to analyse how it will possibly implement in Sri Lanka and how to promote this strategy to all organization in Sri Lanka. Future researcher able work on the implementation process of Blind recruitment in Sri Lanka based on this article.

Conclusion

Blind hiring can be a game-changer for organizations who want to infuse diversity in the workplace. However, the organizations have to wait before they can benefit from its positive aspects. Since the concept of "blind hiring" is still in its formative stage, it might take some time for this idea to produce the result. Although blind hiring is the reality of the new era, it still has its set of demerits. At this time, blind hiring can only work as part of the hiring process and not as the only tool to find the talent. Regardless of all the pros and cons, the data speaks for itself - companies who initiate blind recruitment practices, eventually build a more diverse workforce. Diverse workforce resembles customer's database more accurately and allows for more varied ideas to be born based on experiences and knowledge coming from different backgrounds. Putting all these ingredients together translates into higher revenue. Most of them not aware of the concept of Blind Recruitment so implementation of this function is more suitable to Sri Lanka.

The practice of 'blind' recruitment is becoming more prevalent across industries as a way to reduce discrimination and improve workplace diversity. Sri Lanka most of the organization practising modern methods in recruitment anyhow our nation includes multi-culture people just in case lot of graduate lost their potential opportunity based on discrimination.

References

Alissa, P. (2018). What Is Blind Hiring and Should You Use It in Your Hiring Process?. Select perspectives blog. (Online) Available at: <http://www.selectinternational.com/blog/blind-hiring-should-you-use-it-in-your-hiring-process>.

Dave Anderson, A. (2018). Blind Recruitment: Remove Bias from Your Hiring Process. Recruiter box. (Online) available at: <https://recruiterbox.com/blog/blind-recruitment-remove-bias-from-your-hiring-process>.

Avinash, S. Kapse.V, Patil.S, Nikhil.V., (2012). International Journal of Engineering and Advanced Technology. (IJEAT) ISSN: 2249 – 8958, April 2012, p.1(4).

I-MIN, A. (2017). Blind Hiring: A How-To Guide to Reduce Bias & Increase Diversity. Ideal Blog. (Available at <https://ideal.com/blind-hiring/> (June 08, 2017)).

Justin, P. Smith-Walters, M. (2015). Who, What, why: What is name-blind recruitment. BBC NEWS. (Online)Available at: <https://www.bbc.com/news/magazine-34636464> (26 October 2015).

Hotwani, S. J. (n. STUDY PAPER ON E-RECRUITMENT. International Journal of Research in Science & Engineering, 275-281.

John, C. (2018). How blind CVs impact the recruitment process. People Blog. (Online)Available at:<https://www.peoplehr.com/blog/index.php/2018/06/06/how-blind-cvs-impact-the-recruitment-process>. June 6 2018.

Kaur, P. (2015). E-recruitment: A conceptual study, 78-82.

Michael, G. (2016). [How “Blind Recruitment” Works and Why You Should Consider It](#) The hiring practice could result in a more diverse workforce and a better bottom line. Fast company. (Online)Available at: <https://www.fastcompany.com/3057631/how-blind-recruitment-works-and-why-you-should-consider> March 14, 2016.

Mark, D. (2017)., Linked In. What is a blind CV? (Online)Available at: <https://www.linkedin.com/pulse/what-blind-cv-mark-daniel/> February 13, 2017 Morning Edition. (2016). NPR BLOD. (Online) Available at:<https://www.npr.org/2016/04/12/473912220/blind-hiring-while-well-meaning-may-create-unintended-consequences>. April 12, 2016.

Mark, S. Smart recruit blog. The Eight Biggest Challenges Facing Recruiters. (Online) Available at:<https://www.smartrecruitonline.com/the-eight-biggest-challenges-facing-recruiters/>.

Zazou, B. (2018). Bright Owl. (Online)Available at:<https://brightowl.pro/blogs/2018/01/recruiting-challenges-in-2018/>. January 22, 2018.

Stephanie, T. (2017). World Economic Forum. (Online)Available at, <https://www.weforum.org/agenda/2017/05/job-applications-resume-cv-name-discrimination/>.23 May 2017.

James Graham. (2016) The New York Times 2016, CLAIRE CAIN MILLER
Illustrations. (Online)Available at:
<https://www.nytimes.com/2016/02/28/magazine/is-blind-hiring-the-best-hiring.html>>

Knowledge Management Involvement in Improving Human Resource Management of Organizations

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Introduction

The primary focus of human resources management is to match the job profile with the skill set of the people, in order to achieve the organization's goals, whereas knowledge management at a primary level, aims at harnessing the existing knowledge in the organization through knowledge creation, acquisition, storage, sharing and implementation, to create a competitive advantage and at a more advanced level focuses on increasing organizational learning.

As described in (Danish et al, 2012) following issues have been identified as of the absence of proper knowledge management practices. Such as; Difficulties of managing changes within organization (death, retirement, transfer, promotion), Work repetition, Waste of time and money and inability to manage work, in the absence of expertise.

Similar to organizational HR functions to maintain best workforce for the company, poor knowledge management practices could make difficulties. In the absence of the subject expertise, other staff members are unable to perform a smooth maintenance within the department. Hence, all other employees could be dissatisfied and demotivated. If the subject expert had shared the knowledge with subordinates and stored that knowledge effectively, then the situation would be controllable for the department. Therefore, it is important to explore the knowledge management practices that could be integrated with the HR functions in order to perform an improved level of service towards the company and the employees.

Literature review

Knowledge Management

Knowledge Management is about developing, sharing and applying knowledge within the firm to gain and sustain a competitive advantage (Edvardsson, 2008). It is also defined as a conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that strive to improve organizational performance. (Girard, 2015)

Knowledge Management in Organizations

Knowledge in organizations takes many forms such as the competencies and capabilities of employees, the knowledge about its customers and suppliers, know-how of conducting certain processes, the systems used in the company for leveraging performance and intellectual properties owned by the company such as; copyrights, licenses, patents and so on. (North et al, 2014). Focusing on the question “Is knowledge management important for an organization?”, Omotayo suggests, “when you know better, you do better”. Therefore, in order to succeed in the corporate world and put your business on top, the company needs to possess the best management of knowledge. (Omotayo, 2015).

Role of Knowledge Management in Human Resource activities

KM theories exist which suppose KM practices such as knowledge acquisition, storage, creation, sharing and implementation play a critical role in achieving high level of human resource performance and finally improving sustainable competitive advantage (Gholami et al, 2013). In (Svetlik et al, 2007), if HRM is about managing people effectively and if people’s most valuable resource is knowledge, then HRM and KM are obviously interrelated.

Many activities are being shared between KM and HRM. For instance, Knowledge acquisition is about recruiting outstanding people and about helping them learn and grow as individuals and as professionals to perform their maximum to the company (Wenger et al., 2002).

KM is about capturing, distributing, and archiving intellectual capital in a way that encourages knowledge sharing and collaboration in the organization, which makes a world of difference to successfully training new hires (“How Better Knowledge Management Improves Training”, 2016). Focusing on knowledge creation for performance appraisals, experts can get together for brain storming sessions to customize performance evaluation methods for the organization, elaborating how knowledge creation could be used as a brainstorming session to improve performance management of the company (El Farr, 2011).

Problem Statement

As described in (Danish et al, 2012), following issues have been identified as a result of the absence of proper knowledge management practices. They are, difficulties of managing changes within organization (death, retirement, transfer, promotion), work repetition, waste of time and money and inability to manage work in the absence of expertise. Within the tenure of the employees, they make

quite a considerable amount of knowledge within themselves over the time with experience. At a time of sudden changes such as deaths, transfers, retirements and promotions, a particular position becomes vacant and the organization is unable to utilize the knowledge of that position any further. Consequently, it will cause the organization to work repetitions, waste of time and money as well as inability to manage the intended work load on time to satisfy orders and customers. This happens because the organization will have to train a new person to manage the change, and it would take a considerable time period for the new recruit to reach its learning curve and perform as similar to the previous employee.

Matching the above situation to organizational human resource management functions to maintain best workforce for the company, poor knowledge management practices could definitely make difficulties for human resource management department too. In an absence of the subject expertise, other staff members are unable to perform a smooth maintenance within the department. Hence, all other employees who wish to obtain services from the department could be dissatisfied and demotivated. If the subject expert had shared the knowledge with subordinates and stored that knowledge in an effective manner, then the situation would be controllable for the department. Even though many researches have been emerged in the fields of knowledge management and human resource management, how knowledge management functions could be utilized in human resource management for its improvements is rarely tested. Hence, this research attempts to examine how knowledge management practices could be involved in human resource management for its improvements along with the below described methodology and analysis.

Research Question and Hypothesis

Considering the problem, a research question was generated as; “Does knowledge management practices have an involvement to improve human resource management of organizations?” Knowledge management is identified as independent variable whereas HRM would be test for dependent variable. Hence, following hypotheses have been exemplified. Selection and Recruitment: (H1 – KM practices have an involvement with improving effectiveness of recruitment and selection). Performance Appraisal: (H2 – KM practices have a relationship with performance management). Training and Development: (H3 – KM practices have a relationship with improving effectiveness of training and development). Rewards and Compensation: (H4 – KM practices have a relationship with improving effectiveness of rewards and compensation).

Methodology

Based on the conceptual framework, a questionnaire was developed in order to execute a quantitative survey along with 44 questions under three sections to cover demographic data, second section to question how KM impacts on HRM under four key result areas and third section on five KM practices selected for the dependant variable. Pilot tests were carried out with the opinions obtained from three HR field experts and two doctoral personnel.

The statistical analysis was carried out via Statistical Package for the Social Sciences (SPSS Version 20.0). Reliability test was then implemented to test the relatedness using Cronbach's alpha, and then the questionnaire was distributed to gather data after examining an alpha greater than 0.7.

After obtaining data from 150 HR personnel in five organizations, correlation analysis and regression analysis were performed to examine relationship between independent and dependant variables.

Results and Discussions

Table 1 below highlights the relationship independent variables (KM functions) have with the dependent variable (HRM function) through analyzing the Pearson correlation coefficient. Accordingly, knowledge acquisition, knowledge storage, knowledge sharing and knowledge implementation show positive coefficients showing there is an association between those knowledge management practices and the HR functions of recruitment and selection, training and development, performance management and compensation management along with 0.541, 0.528, 0.457, 0.550 of highest coefficients respectively.

Table 1. Pearson Correlation Analysis

HRM	Knowledge creation	Knowledge acquisition	Knowledge storage	Knowledge sharing	Knowledge implement.
Recruitment & Selection	.413**	.388**	.541**	.374**	.333**
T & D	.466**	.520**	.498**	.363**	.520**
Performance mgt.	.467**	.451**	.457**	.407**	.437**
Rewards mgt.	.487**	.517**	.550**	.527**	.490**

** correlation is significant at the 0.01 level (2 – tailed)

Table 2. Regression Coefficient Analysis

Dependent variable: Recruitment and selection			Dependent variable: Training & Development		
Model	Standard Coefficients Beta	Sig.	Model	Standard Coefficients Beta	Sig.

(constant)		.001	(constant)		.003
Knowledge creation	.174	.040	Knowledge creation	.174	.031
Knowledge acquisition	.092	.334	Knowledge acquisition	.280	.002
Knowledge storage	.432	.000	Knowledge storage	.184	.036
Knowledge sharing	.101	.269	Knowledge sharing	-.086	.323
Knowledge implementation	-.124	.201	Knowledge implementation	.205	.028
Dependent variable: Compensation Management			Dependent variable: Performance Management		
Model	Standard Coefficients Beta	Sig.	Model	Standard Coefficients Beta	Sig.
(constant)		.538	(constant)		.013
Knowledge creation	.178	.022	Knowledge creation	.233	.006
Knowledge acquisition	.143	.105	Knowledge acquisition	.150	.120
Knowledge storage	.255	.003	Knowledge storage	.171	.065
Knowledge sharing	.215	.011	Knowledge sharing	.089	.337
Knowledge implementation	.043	.635	Knowledge implementation	.080	.417

According to Table 2, the regression coefficients beta values of all the independent variables are statistically significant. As the results of the regression analysis, the highest magnitude represents the knowledge storage variable having a coefficient beta value of 0.432 suggesting that there is a positive relationship between knowledge storage and recruitment management variables. As a consequence of this relationship, a unit change in the former variable would mean a corresponding change of 43% in the latter variable, validating the hypothesis H1. The next highest magnitude of 0.280, which is significant at 0.01 level, belongs to knowledge acquisition variable. The positive relationship between this independent variable and the dependent variable training and development indicate that a unitary increase or decrease in knowledge acquisition variable would lead to increase or decrease productivity by 28% respectively. This confirms the hypothesis H2. Knowledge creation variable on the other hand, accounts for a magnitude of 0.233 emphasizing a positive relationship, which would lead to mean 23% corresponding change in performance management as a result of a unitary change in the said variable, hence confirming the hypothesis H3. Signifying the lowest coefficient

beta of 0.215, spotlights that the positive relationship would result in 22% corresponding change in compensation management in case of a unitary change with regards to knowledge sharing. This relationship corroborates the hypothesis H4.

Conclusions and Recommendations

In simple terms, the knowledge adds value to the company and that knowledge is created by employees. Hence, the HR functions of a company could also be performed in an improved way, as of utilizing knowledge management and knowledge management practices. At this point, knowing that the knowledge is created by human and effective management of human is the responsibility of HRM department, utilizing best practices of KM to improve HR functions can enable a better workforce with better competencies for the company. Therefore, many KM techniques could be used along with HR functions under five aspects of KM; knowledge creation, acquisition, storage, sharing and implementing. Such as; brainstorming sessions to share knowledge, regular meetings inside the company, knowledge sharing sessions after training, maintain effective databases for each function, internal magazines and notices, cross functional teams. As of them, if turned into their involvement with HR functions, maintaining effective databases comes in the form of knowledge storage to facilitate many important facts related to HR functions. Meetings, cross functional teams and brainstorming sessions relate to knowledge creation, acquisition and sharing to come up with better ways of doing HR functions, share the existing best practices and pass that knowledge down through the line. In this context, following conclusions could be highlighted. (i) KM in HRM is becoming a popular research topic, (ii) organizations face difficulties due to lack of KM practices in HRM such as low reuse of knowledge, work duplication, difficulty of managing in the absence of expert and the costs. (iii) impact of knowledge creation, sharing, acquisition, storage and implementation on HR function are the reasons for using KM in HRM, (iv) explicit knowledge can make a greater involvement in improving HR functions due to availability and ease of accessing rather tacit knowledge which needs more time and effort in transferring knowledge (v) there is a considerable involvement between KM and HRM, (vi) KM best practices could be utilized in HR functions.

References

- Bloomfire Admin, 2016, How Better Knowledge Management Improves Training
- Danish, R. Q., Munir, Y., 2012 “Impact of Knowledge Management Practices on Organizational Performance; An Evidence From Pakistan,” International Journal of Scientific and Engineering Research
- Edvardsson, I.R, 2008 “HRM and knowledge management,” Employee Relations, Vol. 30 No. 5

El-Farr, H., 2011 Linking performance appraisal to knowledge management activities in the management consultancy sector in the UK, Research Gate

Gholami, M., Asli, H, Nazari Shirkouhi M. N., Noruzy, S. A., 2013 Investigating the Influence of Knowledge Management Practices on Organizational Performance, Acta Polytechnica Hungarica

Girard, J., 2015, Defining knowledge management: Toward an applied compendium, Online Journal of Applied Knowledge Management A Publication of the International Institute for Applied Knowledge Management, 3(1), 1-20

North, K., Kumta, G., 2014 "Knowledge Management - Value Creation Through Organizational Learning," Springer International Publishing Switzerland

Omotayo, F. O., 2015 "Knowledge Management as an important tool in Organizational Management: A Review of Literature," Library Philosophy and Practice (e-journal). Paper 1238

Svetlik, I., Stavrou-Costea, E., 2007 "Connecting human resources management and knowledge management", International Journal of Manpower, Vol. 28 Issue: 3/4, pp.197-206

Managing lives at work: Lessons from Bhagavad Gita

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Abstract

This review of literature critiques the insights manifested in Bhagavad Gita to be applied in modern organizations to effectively manage people at work. A narrative review of relevant articles known to the authors on Bhagavad Gita was conducted. Among the lessons of the Bhagavad Gita, it is found that empowering employees through 'Bakthi', 'Yukthi' and 'Mukthi' lays the foundation stone of effective Human Resource Management (HRM). Further, Bhagavad Gita supports the generally held belief of no one has the right to remain in the society without performing any work. Moreover, to be beneficial for both individual employees and organizations, it is recommended in Gita to nurture a divine work culture (*daivisampat*) which involves fearlessness, self-control, tolerance of scarification and assertiveness.

Keywords: Human Resource Management, Empowerment, Performance Management, Work Culture

Introduction

Bhagavad Gita means the '*divine song of the god*'. It teaches various paths to gain self-knowledge or inner peace. Indeed, it is a complete guide to practical life and provides all that is needed to raise the consciousness of man to the highest possible level. It includes the sermon given by God Sri Krishna to Prince Arjuna regarding the correct techniques of managing followers (Dharmaratnam 1987; as cited in Satpathy&Muniapan 2008). On one hand, the Bhagavad Gita is a spiritual text. On the other hand, it is a guidebook for practising managers and professionals to manage employees properly. The spiritual insights manifested in the Bhagavad Gita are universally applicable regardless of the time and the context.

Human Resource Management (HRM) is the people dimension of management. It is nothing but managing lives at work. Not like other professionals, HR Managers

have to manage lives; not files, records or systems. Hence, HR professionals have to be compassionate to employees at any cost. The numbers and figures of net profit, cash flow, assets, earning per share and etc. are the quantitative return of how employers treat employees at work. Further, it is said that, if the customer is a king; the employee is the king of the king. If the customer is a god; the employee is the god of the god. Indeed, without having satisfied employees it is impossible to create satisfied customers; without having loyal employees it is impossible to create loyal (*repeated*) customers. Thus, managing people at work properly is considered a key success factor for any business organization.

Rest of the current paper reviews and reports the insights manifested in Bhagavad Gita relating to managing people at work, performance management, empowering people at work and the establishment of a '*Daivi*' work culture in organizations.

HRM from Bhagavad Gita

Human Resource Management (HRM) is the process of managing the human resources within the organization efficiently and effectively. Today's HR managers and consultants can benefit from the philosophy of Bhagavad-Gita, which can serve as a guide in HRM. A mere reflection of western HRM approaches might not be appropriate especially in the Asian context due to differences in the cultural environment. Even though many of the recent HRM approaches continue to emerge, the Bhagavad Gita has remained and will remain to be applicable and continue to contribute to HRM for many centuries to come (Nanda 2016).

Lord Krishna preached in Bhagavad Gita that success and prosperity can be attained by:

"While we take care of the Devas (through the basic act of Yagna), Devas, in turn, take care of us. This sense of mutual dependency begets ultimate success and prosperity in the long-run".

From the Management perspective if we look at it, if the organization serves the employees well in material and in immaterial means it will result in employees to be motivated and work effectively and further, this will enhance the retention of the employees within the organization (Mahadevan 2009). This simply does highlights the notion of '*if the customer is a king, the employee is king of the king*' which is prevalent within the modern human resource management context.

Further, it is stated in the Bhagavad Gita that:

"He who shares the wealth generated only after serving the people, through work done as a sacrifice for them, is freed from all sins. On the contrary, those who earn wealth only for themselves, eat sins that lead to frustration and failure".

This does states how the subordinates or the employees have to be treated by a proper leader nor the organization. This attitude leads to a stage where the worker begins to feel the presence of the supreme intelligence guiding the embodied individual intelligence. Such de-personified intelligence is best suited for those who sincerely believe in the supremacy of organizational goals as compared to narrow personal success and achievements (Bhattathiri 2007). Simply, this does emphasize that more we treat employees in the right way they will tend to focus on the achievement of the organizational goals than their personal goals and be more committed towards the work. Indeed, employees' loyalty and the commitment are the outcomes earned for the organizational conduct towards them.

Further, Bhattathiri (2007) mentioned that the Bhagavad Gita is full of cause and effect theory, making the doer responsible for their own deeds. This is a significant insight to develop employees to be responsible and accountable for the own work.

Performance Management and Total Quality Management

Performance management is the continuous process of identifying, measuring, and developing the performance of individuals and teams and aligning their performance with the organization's goals (Desseler 2014). This is concerning in evaluating the performance of the employees to ensure that they were able to attain the goals and objectives assigned to them.

Total Quality Management (TQM) is a set of guiding principles that represent the foundation of a continually improving organization. It's an application of quantitative techniques (a hard aspect of TQM) and HR (a Soft aspect of TQM) to improve all the processes within an organization and exceed customer needs now and future.

A famous shloka in Bhagavad Gita illustrates:

“You have the right to work but never to the fruits of the action. Further, you do not have the right to the root cause of the fruits of action. You also do not have the right to remain in the society without performing any work”

This shloka does address the areas on how the work has to be performed. Mahadevan (2009) discussed the meaning of this shloka as follows. The last verse of the shloka of which indicates that not having the right of living the society without doing any work has been discussed earlier through the concept of 'karma'. The other verses do contain a deep meaning of which it does address the modern context of managerial activities.

These verses of shloka do address of working without considering the results of the action and the root cause of action. This can be mainly addressed by addressing the side consequences of the result oriented culture. For an example being result

oriented will make people tend to avoid risks and be risk-averse. Simply, this addresses the fact of taking off the preoccupation with the results and have a proper process orientation by setting up a proper basis of performance management. This is the basis of modern performance management and Total Quality Management theory. Further, people being more result oriented will make them get lost in work resulting in the motivation to be low and the innovation of the business to be low. These studies do broaden the perception of the people and made them think out of the box (Mahadevan 2009).

Empowering People at Work

Empowerment is the process of delegating authority and resources to do an activity, but not to perform them freely. This motivates the employees within the organization and enhances innovative ideas. This is practised widely within the organization since it does generate many innovative ideas and is a prominent practice in learning organizations. Also, empowerment is a training technique as well as it is a coaching technique in the modern commitment-based management.

Someswaranada (2005) mentioned in his book '*Business Management the Gita Way*', that the Indian wisdom offers theory P (P for Parent) where manager goes through the three steps of empowering the subordinates (as cited in Reddy 2009). The first step would be '*Bhakti*'; where the manager should establish effective relationships with employees. Effective relationships are not given-up at any cost. Secondly, it will be '*Yukti*'; where the manager should focus on the development of the intellect of the subordinates, and finally the '*Mukti*'; where the manager should give the freedom to employees at work. Also, this type of culture will be a work-family support culture in which employees are motivated to work and balance the rest of their lives as well. Hence, it does mirrors out again that the modern management practices which were practised nowadays within the industry have been elaborated in Bhagavad Gita long way back.

Nurturing a Divine Work Culture for People

Work culture is an important factor which will help to retain the current employees and to attract the potentials. A *compassionate work culture* will help the organization to the attainment of the goals of the organization successfully and in long run, it will help to develop a powerful *employer brand* within the job market.

According to the studies of Bhattathiri (1999), Sri Krishna has elaborated two types of work cultures. One is '*daivisampata*' which means a divine work culture. It advocates in '*daivisampatas*' that the right and true way of managing a business and its stakeholders. '*Daivi*' work culture involves fearlessness, self-control, sacrifice, straightforwardness. Another one is the '*Asuri*' work culture which

involves egoism, personal desires, and improper performance. Creating a 'daivisampat' work culture to become a global business to tap the potential avenues is strongly highlighted in the insights of the Bhagavad Gita. Hence, according to the Gita way, an effective work culture is about active and rigorous efforts in pursuit of given or chosen tasks. Further, it has been found that 'Daivi' work culture would be more required for the effective functioning of the organization and to attain the goals and objectives.

Conclusion

Human Resource is considered as the most important resource in any context. In the business context that is people at work. Ultimately, managing a business organization is nothing but managing its people. Having understood the significance of managing people at work in a compassionate manner, the current content analysis of extant literature pertaining to the teachings in Bhagavad Gita was conducted. As per the Gita way, treating employees as lives not as employees, empowering them through 'Bakthi', 'Yukthi' and 'Mukthi' and nurturing a divine work culture were found as basics for managing lives at work. Hence, this review concludes by recommending the Gita way to be followed in managing lives at work for modern practising managers and professionals in the field of HRM.

References

- Bhatt, R 2011, Importance of Bhagavad Gita in Management, *International Referred Research Journal*, 3(27).
- Bhattathiri, MP 1999, *Bhagavad Gita and Management*, Kerala.
- Chandekar, SB 2012, Principles of Management and the Bhagavad Gita, *Journal of Dharma*.
- Dessler, G 2014, *Human Resource Management* (13th ed.), Boston: Pearson.
- Jeste, DV & Vahia, IV 2008, Comparison of the conceptualization of wisdom in ancient Indian literature with modern views.
- Khan, H 2011, A Literature Review of Corporate Governance, *International Conference on E-business, Management and Economics*, 25, IACSIT Press, Singapore.
- Mahadevan, B 2009, Bhagwat Gita: Ideas for Modern Management, *Towards a New Paradigm of Business management – Alternative Perspectives from Ancient Indian Wisdom*, Bangalore, IIM.

Nanda, S 2016, Management Lessons From the Bhagavad Gita, *International Journal of Applied Research*.

Rao, SM 2014, Bhagavad Gita a key source for Management thoughts–An analysis, *Acme Intellects International Journal of Research in Management*.

Rao, M 2010, *Bhagavad Gita: A Translation of the Poem*, Autumn Hill Books.

Reddy, S 2009, *Business Principles from the Bhagavad Gita*, New Delhi, Macmillian India Limited.

Robbins, S & Coulter, M 2007, *Management*, Pearson.

Satpathy, B & Muniapan, B 2008, The Knowledge of 'Self' from the Bhagavad-Gita and Its Significance for Human Capital Development, *Asian Social Science*, 4.

Ubha, D 2007, *Corporate Governance: Solution Through Indian Spiritual System*.

Relationship Between Industrial Ergonomics and Employee Performances: Evidence from a Leading Garment Manufacturing Organization in Sri Lanka.

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Introduction

Today most of the business units in the apparel sector pay their greater attention to industrial ergonomics, and also it has received massive attention among academicians and practitioners in equal measures. In simply industrial ergonomics is a sub-branch of the science of ergonomics. The science that cares about the way of doing the human's work in the workplace is required. The elements of this science are human behaviour, abilities, situation, the condition of work and environment. Maximizing the comfort, safety and health of workers, productivity and the efficiency are the goals of application of this science (Osha, 2000). Ergonomics is a science, concerned with the fit 'between people and their work. It puts people first, taking account of their capabilities and limitations. Ergonomics aims to make sure that tasks, equipment, information and the environment fit each worker (Britain, 2014).

In apparel sector most of the injuries are the results of ergonomichazardsthat affect workers' physical health and ultimately his/her ability to perform well. As a labour intensive organization, the organizational success is affected by the quality and quantity of employees' performance. An employees' performance can also be described as a person's ability to perform also including the opportunity and willingness to perform as well. The meaning of willingness to perform means that the desire of the employees in putting as much effort towards their job (Eysenck, 2012). According to Borman (2004), some main application needs to be applied to improve employees' performance. Ergonomics shows a significant part of the prosperity of a worker and in the reduction of errors, especially in the design of office, its environment, and tools (Govindaraju, 2001). When considering the Slimline division in Pannala, their employees are currently standing in front of the machines for 8 hours. This is called static posture. Working with different type of sewing, moulding, cutting, bonding machines. And also Employees have to stay in the environment with noise, vibrating, lighting and some other different working conditions. The major problem regarding this is to identify whether those factors affect to the employee performances or not. Accordingly, this study was

done with the intention of identifying the relationship between industrial ergonomics and employee performance.

Principal components analysis of an industrial ergonomics inventory identified five broad variables of task repetition, static posture, better illumination, optimum noise level and dust free environment. Task repetition refers to performing a task or series of motions over and over again with little variation. Once a job or task goes beyond the worker's physical limitations, injuries will result. It's an important principle of ergonomics (Vasbinder, 1993). Such injuries often referred to as repetitive motion injuries or cumulative trauma disorders have a cumulative effect on the body. The human body was designed for movements. Simply static posture refers to the body parts aligned and maintained in the certain long period. Optimum noise level is the other element. Too much noise, such as sound from equipment, tools, and people's conversation, may prevent workers from concentrating on their jobs, consequently decreasing their productivity. According to Keeling and Kallaus (1996) people cannot achieve good performance in a silent environment, because, at some level, the sound may generate a healthy background and can also assist employees to accomplish their work. According to dust free environment, poor air quality can raise a negative impact on employee health in the form of respiratory problems, headaches, and, fatigue, which in the long periods will reduce employee performances. Exposure to different types of dust can result in fibrosis of the lung, allergic reactions and asthma attacks. Lighting intensity on human productivity and capacity is another factor. Energetic and high-quality lighting provides more adjustment between the person and its work environment. The intensity of light causes eyes strain, which affects the patterns of sleep (Byoce and Beckstead, 1997) and visual sensitivity significantly affect the performance (Noguchi an Sakaguchi, 1999). Light with respect to its intensity and shades, like yellow light or white light differently affect the eyes, the nervous system, and level of tiredness and activity of the brain (Irfan,2012). To build a comfortable workplace design, lightning plays a critical role. It can affect the performance of employees depending upon the condition (Liaqat and Misbah, 2017). A number of studies have shown that indoor climate impacts both the health and performance of employees, which in turn affect productivity. Employees can focus more when the high temperature is reduced by the use of air conditioning equipment. Some of the studies conducted by Lorsch and Abdou (1994), shows that when the air-conditioning system was introduced, employees feel that their workspace becomes more comfortable and the productivity tends to increase by 5-15 per cent because they can concentrate on their work (Vischer and Jacqueline,1989).

Methodology

There are approximately 3,284 employees available in the selected garment manufacturing organization. According to Krejcie & Morgan table (1970), 320 employees were selected based on purposive sampling method. Data were collected through primary sources using the questionnaire method and questions were arranged according to five-point Likert scale to gain the responses. 100% valid responses were gained. The conceptual model of the study can be presented as follows. Reliability of questionnaire has been measured by using Cronbach's alpha and value for the observed variables are 0.985 for Dust, 0.977 for Noise, 0.992 for Lightning, 0.974 for Task Responsibility and 0.990 for static posture where all the values are in the satisfactory level of reliability. In order to identify relationship correlation analysis have been performed at present research.

Development of Hypotheses

Hypothesis 01: There is a strong relationship between dust free environment and employee performance

Hypothesis 02: There is a strong relationship between optimum noise level and employee performances

Hypothesis 03: There is a strong relationship between proper lighting and employee performances

Hypothesis 04: There is a strong relationship between task repetition and employee performances

Hypothesis 05: There is a strong relationship between static postures and employee performances

Findings

The descriptive statistics of the variables have been presented in the Table-1..

As per the descriptive statistics, the mean values of each of the variables are closer to four and which depicts that the majority have agreed for the questions raised. Below table exhibits the results of correlation analysis.

The coefficient Summary statistics in the above-mentioned table shows the relationship of each independent variable with the dependent variable of employee performance. According to the table, all five independent variables were significant as the P values of those four variables were less than 0.05 significance

level and strong positive impact on the employee performances of the employees. Therefore, all hypotheses were accepted

Table 01. Descriptive Statistics

	Mean	Std. Deviation
	Statistic	Statistic
DUST	4.012	1.108
NOISE	4.095	.998
LIGHTING	4.004	1.095
TASK_REPETITION	3.925	1.171
STATIC_POSTURE	3.965	1.136
EMPLOYEE_PERFORMANCE	3.893	1.181
Valid N (listwise)	320	

Table 2: Results of Correlation Analysis

Variable	Correlation Coefficient	P value
Dust free environment	0.970	0.000
Optimum noise level	0.974	0.000
Proper illumination	0.980	0.000
Task repetition	0.988	0.000
Static posture	0.996	0.000

Conclusion

The study conducted has been mainly aimed at the identification if the industrial ergonomics that affect employee performance in the garment industry of Sri Lanka and accordingly, it has been identified the working environment and job tasks affect the employee performance as per literature analysis. Further, it has been indicated that all five ergonomic factors which are dust, noise, lighting, task repetition and static postures have a strong and a positive relationship among the employee performance. Therefore, the company can facilitate employees by introducing a disposal system to dispose of waste properly and provide safety materials to create a dust free and healthy environment. The company also has to take necessary action to minimize the noises and external disturbances as they may affect employee performances negatively. Sufficient level of lighting will also facilitate employees to run the operation smoothly and that will minimize the level of accidents in workplaces. MAS Holding company can implement job rotation strategy and variety of techniques to stimulate employees to perform willingly as the task reparation lead to demotivate

in some of the time. The company can also provide adjustable, movable and comfortable chairs as well as relaxing time to obtain the maximum output from the employees.

References

- Britain, G.2014. Ergonomics and human factors at work: a brief guide. UK: Health and Safety Executive
- Boyce, P.R., Beckstead, J.W., Eklund, N.H., Strobel, R.W. and Rea, M.S., 1997. Lighting the graveyard shift: The influence of a daylight-simulating skylight on the task performance and mood of night-shift workers. *International journal of lighting research and technology*, 29(3), pp.105-134.
- Eysenck, M.W., 2012. *Simply psychology*. Psychology Press.
- Govindaraju, M., Pennathur, A. and Mital, A., 2001. Quality improvement in manufacturing through human performance enhancement. *Integrated Manufacturing Systems*, 12(5), pp.360-367.
- Irfan, M.N., 2012. Analysis and optimization of software model inference algorithms. *Universita de Grenoble, Grenoble, France*.
- Keeling, B. L. and Kallaus, N. F., 1996. Administrative office management, *Ohio. International Thompson Publishing*.
- Krejcie, R.V. and Morgan, D.W., 1970. Determining sample size for research activities. *Educational and psychological measurement*, 30(3), pp.607-610.
- Liaqat, M., Chang, V., Gani, A., Ab Hamid, S.H., Toseef, M., Shoaib, U. and Ali, R.L., 2017. Federated cloud resource management: Review and discussion. *Journal of Network and Computer Applications*, 77, pp.87-105.
- Lorsch, H.G. and Abdou, O.A. (1994). The impact of the building indoor environment on occupant productivity – part 1: Recent studies, measures and costs. *ASHRAE Transactions*100(2)741749
- Noguchi, H. and Sakaguchi, T., 1999. Effect of illuminance and colour temperature on lowering of physiological activity. *Applied human science*, 18(4), pp.117-123.
- Vasbinder, D.M., 1993. Here's what you need to know about workstation adjustability and how to ensure your employees are properly suited to the equipment in their work environments. *Bobbin*, 35, pp.126-126.
- Vischer, J., 1989. *Environmental quality in offices*. John Wiley & Sons Inc.

The effects of green training and development practices on employee performance

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Introduction

Environmental change is a disorder of the environment. Human influences and natural ecological processes are the main drivers of environmental changes. According to the World Health Organization, climate change, ozone depletion, changes in ecosystems, changes in hydrological systems, and the provisions of freshwater, land degradation, urbanization, and stresses on food-producing systems are the global environmental hazards that effect to human health (WHO, 2018). On the other hand, global warming and depletion of natural resources cannot be neglected. The United Nations Environment Programme began to use the concept of “green economy” in the year 2009. Subsequently, the Global Green New Deal, and the Organization for Economic Cooperation and Development employed the phrase “green growth” (OECD, 2009 & PNUMA, 2009). However, in the year 2012, the World Bank had made the green concept official with “green and inclusive growth” (World Bank, 2012). A “green business” is another related concept and it is highlighted that an organization uses renewable resources and holds itself accountable for the human resource aspect of their activities (Slovik, 2013).

Today, it is essential to move towards sustainable business practices than ever before, because of the negative impacts experienced due to the environmental changes. According to the current context in Sri Lanka, most of the organizations are trying to adopt green practices. However, inappropriate green practices can be identified among organizations. On the other hand, limited agencies that are dedicated to improving green practices can be identified in Sri Lanka. With the innovations of the socio-economic environment, green practices will be an important phase of the Human Resource Management (HRM). Green Human Resource Management (GHRM) is a potential study area in emerging and developing countries. In the Sri Lankan context, studies regarding the green practices Vs. management are scarce. In addition to that, there is no proper way of collecting green practices related data in Sri Lanka. Therefore, studies regarding the green training are essential, and the findings of those studies will aid to make

policies as well as to make a system of their enterprise operating towards the environmental policy. Altogether, it will be a learning tool to build knowledge on the influences of the social responsibility of an organization towards the environment.

GHRM is the use of HRM strategies to encourage sustainable use of resources within business organizations. It promotes the cause of environmentalism. Green training and development practices on the employee attitude towards their performance can be seen as a missing aspect from the management of organizations. This research focuses on the problem of 'what is the perception of green training and development practices on employee performance among workers?'.

Based on this background, the general objective of this study was to identify perceptions about green training and development practices on employee performance among work

Literature Review

The leading challenge of the world today is how to balance the economic growth and development with sustainable development (Mezher, 2011). GHRM is a solution to this matter. GHRM permits better-quality employee consciousness and commits to the sustainability of the environment. Based on literature reviews, it shows that a broad process to frame reference for GHRM has yet to emerge. Providing environmental training to the organizational members to develop required skills and knowledge is an important function of GHRM. Also, providing environmental education that in a change of behaviour among managers and non-managerial employees is needed within the organizations (North, 1997). Development of both green dynamic capabilities and green transformational leadership is a useful preliminary point to improve green product development performance (Chen & Chang, 2013).

A study has shown that GHRM variables including green recruitment, green training and development and green learning on firm performance significantly affect the performance of the firm (Bhutto & Auranzeb, 2016). As a major polar of the subject, three key dimensions and eleven elements under the key dimensions have been identified as tools to develop an instrument to measure the concept of employee green performance of job (Arulrajah, Opatha & Nawaratne, 2016). Both employees' perception of own role in GHRM initiatives and organization role form a vital part of the organization overall culture (Rajput & Pachauri, 2018).

Methodology

A descriptive cross-sectional study was conducted in ABC (Pvt) Ltd. ABC the leading export-oriented apparel manufacturers in Sri Lanka. The simple random sampling method was used to select the sample. One hundred thirty-five employees were selected as the sample ($n=135$). Those who were not Sri Lankans or who were terminally ill were excluded from the study. A self-administered questionnaire was used to collect data. The questionnaire included two sections as Part (I) and Part (II). The Part (I) was included the questions related to green training and development practices and the Part (II) related perceptions towards employee performance. Employees were measured using 5 points Likert Scale. The reliability analysis revealed Cronbach's Alpha value and that was ranging in between 0.70 and 0.87. Data were analyzed through Spearman's correlation analysis in order to estimate the relationship between green training and development practices on employee performance. The dependent variable was Green training and development. Independent variable was employee performance.

Results and Discussions

The response rate was 94% for the study. Correlation coefficient of the study has been interpreted based on a range of values from +1 to -1 ($\pm 1 = r$ Perfect correlation, $\pm 0.99 < r < \pm 0.8$ Strong correlation, $\pm 0.8 < r < \pm 0.4$ Moderate correlation, $\pm 0.4 < r < \pm 0.1$ Weak correlation, $r = 0$ No relation) (Source: Journal of the Royal Statistical Society, series B). A regression model of the study can be presented as follows, based on the study results (Table-2)

$$Y_{EP} = 0.712 + 0.14X_{GTD} + e$$

Hypothesis 0: Green training and development practices have an impact on employee performance

Hypothesis 1: Green training and development practices have no impact on employee performance

As per the findings, there is a weak negative correlation ($r = -0.368$, $p < 0.05$) between green training and development practices on employee performance. Results of regression analysis show that there is a 0.18 ($\beta = 0.14$) unit decrease in employee performance with respect to the 1 unit increase in the green training and development practices. According to the results of the study, the null hypothesis was accepted. It is concluded that the green training and development practices have a very little negative impact on employee performance.

Table 1. Pearson Correlation coefficient

Variable	Employee	Significance	N
	performance	Value	
Green training and development	-0.368	0.000	127

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

Table 2. Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	.712	.411		1.542	.065
Green training and development	.180	.073	.398	4.222	.000

GHRM was found to influence employee workplace outcomes beyond outcomes directly related to green practices (Jie, Jenny & Xin, 2016). A recent study has shown that employees are concerned about his/her own role in the green initiatives and organizations role in implementing the green HRM policy in the organization (Rajput & Pachauri, 2018).

Typically, a little negative impact may be very important for organizations as it may spread within a short period of time if it is not addressed properly. Definitely, the managers should pay towards this negative impact when they proceed with the green training and development practices further. In the case of this company, they started to practice green training and development recently. Generally, changes at stage naturally because of some reasons such as their habit to resist to the changes or dislike to get new training and sufficient awareness by committing their time and effort or their inability to be capture new knowledge. In here the employees may have to perform additional duties with the new recycling business models.

Upcycling is the process of transforming, waste materials into new materials, or the process that makes the products of better quality, and make better environmental value. Downcycling involves converting materials and products into new materials of lesser quality. When there is such a sound recycling process, employees may not focus much on reducing wastage as they know that it has also become a valuable unit somewhere in the cyclical green production process. It may unconsciously reduce the productivity of the employees when creating the main product. The managers should always try to address these hidden issues strategically and they should try to enhance the green attitudes and the value of being a part of the green workforce of the employees when they offer training and

development programs in a wide platform. Training and development programs should be designed very systematically in collaboration with the ideas of top management, middle management, line management and the employees. Every employee is responsible for the environmental performance of an organization and the modern HR managers have been assigned with the additional responsibility of integrating the GHRM philosophy.

In fact, sometimes some organizations may have to experience unexpected negative results during the initial stages of the changes that occur within the organizations. Naturally, the majority of the employees need some time to get used to the changes. But, most of the time it generates positive results in the course of time. But, should be attentive to the of the employee every time. Because it is highly them deeply. In here, the managers should keep frequent records of employee performance and adjust the programs as necessary. A weak and negative relationship will be converted to a positive relationship with the time when employees understand the value of recycling business processes. Indeed, practising green training and development is not costly for organizations; it is an investment for the long-term survival. Organizations should try their level best to adopt green practices as this is effort ultimately leads to the better environmental performance of the organization by reducing the negative environmental impacts and improving the positive environmental impacts of the organization.

Conclusion and Recommendations

In summary, this study has presented new data on the impacts of green training and development practices on employee performance. the findings, development practices, it may negatively effect on employee performance. It requires longitudinal research to better understand the interrelationship of the situation and test the efficacy of green training interventions for the employees, organization and the external environment. Additionally, developing methods to assess green practices should be a priority in environment defence in Sri Lanka.

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References

Arulrajah, A.A., Opatha, H.H.D.N.P. &Nawaratne, N.N.J., (2016). *Employee green performance of job: a systematic attempt towards measurement. Sri Lankan Journal of Human Resource Management.* 6(1), pp.37–62. DOI:<http://doi.org/10.4038/sljhrm.v6i1.5631>[Accessed 17 Aug. 2018].

Bhutto S.A. and Auranzeb, (2016), Effects of Green Human Resource Management on Firm Performance: An Empirical Study on Pakistani Firms”, *European Journal of Business and Management*, No.16, Vol.8,pp.119- 125 Available at:<https://www.iiste.org/Journals/index.php/EJBM/article/view/30983>, [Accessed 17 Aug. 2018].

Chen, Y.S. and Chang, C.H. (2013). *Towards green trust: The influences of green perceived quality, green perceived risk, and green satisfaction*. *Management Decision*, 51(1), 63-82. <http://dx.doi.org/10.1108/00251741311291319>[Accessed 17 Aug. 2018].

Jie S, Jenny D & Xin D. (2016). *Employees perceptions of green HRM and non-green employee work outcomes: the social identity and stakeholder perspectives'* *Group & organization management*, [pdf] the University of South Australia, Available at:<http://search.ror.unisa.edu.au/record/9916084008401831/media/digital/open/9916084008401831/12145031340001831/13145031330001831/pdf> [Accessed 15 Aug. 2018].

Mezher T, (2011). *Building future sustainable cities: the need for a new mindset*, *Construction Innovation*, Vol. 11 Issue: 2, pp.136-141, Available at <https://doi.org/10.1108/1471417111124121>[Accessed 17 Aug. 2018].

North K. (1997), *Environmental Business Management – An Introduction*, 2nd ed, International Labour Office: Geneva

OECD, (2009), Declaration on Green Growth Adopted at the Meeting of the Council at Ministerial Level on 25, C/MIN(2009)5/ADD1/FINAL.

PNUMA, (2009), Nuevo Acuerdo Verde Global: Informe de Política, March

Rajput S, Pachauri V, (2018). A study of employees' perception towards green HRM initiatives. *International Journal of Academic Research and Development*, [online] Volume 3; Issue 2; Page No. 807-810. Available at: [file:///C:/Users/DTC/Downloads/3-2-188-549%20\(1\).pdf](file:///C:/Users/DTC/Downloads/3-2-188-549%20(1).pdf) [Accessed 15 Aug. 2018].

Slovik, K. (2013). Nine Steps to Greening Your Business, Available at <http://www.startupnation.com/steps/93/>, [Accessed 17 Aug. 2018].

World Bank, (2012), *Inclusive Green Growth: The Pathway to Sustainable Development*. Washington D.C., The World Bank.

WHO, (2018). *Climate change and human health* (online) Available at <http://www.who.int/globalchange/environment/en/>[Accessed 13 Aug. 2018].

The Effect of Counselling Interventions on Work Stress of Operational Level Employees in Apparel Industry

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Abstract

The current study was initiated to assess the effect of organizational counselling interventions on work stress of operational level employees in apparel, with the aim of bridging the gap in the context with empirical knowledge. Hence, this was conducted as a cross-sectional, quantitative field study among a sample of 87 operational level employees randomly selected from three (03) apparel manufacturing organizations in Sri Lanka. Primary data was collected via a standard questionnaire which met the acceptable level of validity and reliability. Descriptive statistics, Pearson correlation coefficient and simple regression were employed to analyze data. It is found that there is a significant negative, but the weak relationship ($r = -0.233$) between two constructs, and a significant, but the smaller impact of organizational counselling interventions on work stress of employees ($r^2 = 5.4\%$) in the apparel industry. Findings of the current study support the empirically justified conception that operational level workers are more 'financial sensitive' and much more focus on physiological needs than psychological needs. Hence, it is recommended for practising managers in apparel to pay much attention to the factors other than organizational counselling, which could probably manipulate the unexplained variation of work stress of operational level employees.

Keywords: Organizational counselling, Organizational counselling interventions, Work stress, apparel industry

Introduction

Work stress has been becoming a major issue which is faced by employees in modern organizations regardless of the industry that they involve in. Indeed, work stress and workplace counselling go hand in hand in one's work today. Even though researchers found plenty of research studies done to examine the association (and

the impact) between (of) counselling interventions and work stress, yet it remains as two burning issues among social researches.

Stress is a non-specific response of the body to an excess demand. Also, the stress which can damage to worker's health and organizational performance is a result of a mismatch between demand and pressure in the person, and their knowledge and abilities. A worker who is stressed is more likely to be unhealthy, poorly motivated, and less safe at work (Leka, Griffith & Cox 2003). When employees do not satisfied with their outcome that cause to the way they treat and communicate with customers might leave a negative impact on the organization itself. As a result, in the long run, organizations are less likely to be successful in their competitive market (Ahsan, Abdullah, Fie, & Alam 2009).

Employees experiencing work stress have been shown unstable blood pressure, increase cholesterol levels, muscles tension, diabetes, hypertension, headache, substances abuse, and depression. Further, studies denoted that employee's capacity to concentrate and retain information becomes a problem. Unfavourable consequences of that were absenteeism, increased turnover, productivity reduction, and the deteriorated creativity (Higgins 2005).

Hence, counselling to mitigate the work stress is a must factor to achieve good working condition, and reduce the stress which is potential to cause in the future as well. Decisions and actions of different kinds within the operation must be accompanied by consideration of their effect on the working environment. Further, planning to conduct and monitoring activities in such a way that stress hazards can be assessed, and it also means taking steps to ensure that stress will not impair the employee's health (Higgins 2005).

Therefore, the prime purpose of this study was to assess the effect of organizational counselling interventions on work stress of employees; especially, operational level employees in the apparel industry.

Rest of the paper provides the literature pertaining to organizational counselling interventions and work stress, hypotheses advanced based on the empirical evidence, and the methodology adopted in conducting the current study. The latter part of the paper presents the findings and the conclusion of the present study.

Literature Review

Work stress is a psychological and physical state that results when the resources of the individual are not sufficient to cope with the demands and pressures of the situation (Michie 2002). Thus, stress is more likely in some situations than others and in some individuals than others. Stress can undermine the achievement of goals, both for individuals and for organizations. Further, stress results not only

from excessive demands but also from the lack of stimulus entailed, for example, by excessive monotony in the workplace. Stress is not always negative. Stress can have positive consequences as well. The positive side of the work stress is termed as 'eustress' which increase the performance of employees up to a certain extent. But, the negative side of the stress termed as 'distress' is harmful, and probably deteriorate the level of performance. In extant literature, many researchers have studied the effects of stress on performance. McGrath (1976) as cited in Kapoor and Khanka (2013) reported that a moderate amount of stress empowers people to perform better. Improved performance can be due to enhanced arousal. But if the stress is far greater, it will result in decreased performance and concerning health issues as well.

Counselling is the application of mental health, psychological or human development principles through cognitive, affective, behavioural or systematic intervention, strategies that address wellness, personal growth and the career development (Sheppard 2004). According to McLeod and McLeod (2001), organizational counselling is a generally effective intervention which helps to improve employee's psychological health as well as contributing positively to organizational success. The aim of the organizational counselling is to assist both the employer and the employee by intervening with an active problem-solving approach to tackling the problem at hand. Explore and find the key sources of difficulty, review the individual's current strategies and styles of coping, implement methods of dealing with the perceived problem, thereby alleviating the issue and evaluate the effectiveness of chosen strategies are another specific aims of personal psychological counselling at work (Padmasiri & Jayathilaka 2014).

Sheppard (2004) revealed that workplace counselling is the one strategy for coping with the adverse effect of stress. Accordingly, anxiety, depression, a panic attack can be overcome, and enhance the work performance, work attitude and working relationship counselling have made a positive platform. Further, McLeod and McLeod (2001) found that well-designed counselling interventions at work are a reactive action rather than a proactive measure. However, many of the researchers and scholars reported that there is an association among the aforesaid two constructs (eg: Sheppard 2014; Padmasiri & Jayathilaka 2014; Kapoor & Khanka 2013).

Having considered the empirical evidence and theoretical discussions reported above in this article, the following two hypotheses were advanced to be tested.

H_{1a}: There is a *significant relationship* between organizational counselling interventions and work stress of operational employees in the apparel industry.

H_{1b}: There is a *significant impact* of organizational counselling interventions on work stress of operational employees in the apparel industry.

The conceptual framework of the current study is depicted in fig. 1. Organizational counselling interventions are considered as the independent variable while work stress is taken as the problem (dependent) variable. The hypothesized relationships among the constructs also shown in the same figure.

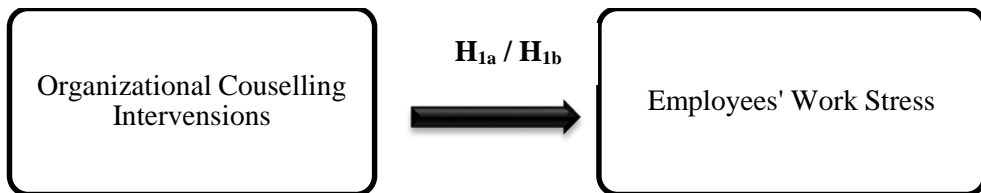


Fig. 1. Conceptual Framework

Methods and Materials

The study is a more basic research in which researchers attempted to answer a problem that is concerned in filling the contextual gap with empirical knowledge. The deductive approach was predominantly applied, and the study is mainly explanatory.

This was carried as a cross-sectional field study in which the researchers' interference was minimum. Primary data was collected through a self-administered standard questionnaire (adapted from McLeod & McLeod 2001) from a sample of 87 machine operators / operational level employees randomly selected from three leading apparel manufacturing companies in Sri Lanka. Hence, the unit of analysis of the current study was at the individual level; a machine operator in apparel. The collected data was analyzed with the aid of the Statistical Package for Social Sciences (SPSS) and Excel, by employing descriptive statistics, correlation analysis and simple regression analysis.

Analysis and Results

Total of 47 out of 87 Machine operators responded, were males and the remaining 40 were females. 53 of the respondents were married and the remaining 34 in the sample were single. Majority of the respondents (28.7%) were in the age group of below 24 years, while 22 of respondents have more than 10 years of working experience. With regard to the monthly income; 31 respondents (35.6%) belong to the income category of more than Rs.40,000. 47.1% of the respondents experience a moderate level of stress, while 29.9% of them experience a high level of stress in the selected sample. 62.1% of the respondents reported that *the extent of counselling interventions in the apparel industry is moderate*.

Moreover, the Pearson correlation coefficient was computed between employee work stress and workplace counselling interventions to assess the strength of the association. As depicted in table 1, the Pearson correlation is -0.233, which shows that there is a negative moderate relationship between two variables. As the significant value is 0.030 (2-tailed) which is less than the level of significance (0.05) at 95% confidential level, the found correlation coefficient (-0.233) is statistically significant. Therefore, there is statistical evidence to accept H_{1a}, that there is a significant relationship between employee stress and organizational counselling interventions.

Table 1. Correlation

		Work Stress	Level of organizational counselling interventions
Stress	Pearson Correlation	1	-.233*
	Sig. (2-tailed)		.030
	N	87	87

Furthermore, the simple regression analysis was employed to assess the impact and consider the coefficient of determination. The R Square value of the computed research model is given in table 2.

Table 2. Regression results

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.233 ^a	.054	.043	.63237

According to the model summary given in table 2; the R Square value is 0.054. It means 5.4% of the variation independent variable (employee work stress) is explained by the fitted regression model. This means organizational counselling interventions has an impact of 5.4% on the mitigation work stress of operational level employees in the apparel industry.

Table 3. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.943	1	1.943	4.859	.030
	Residual	33.991	85	.400		
	Total	35.935	86			

a. Dependent Variable: Work Stress

b. Predictors: (Constant), Organizational Counseling Interventions

According to table 3; the fitted regression model is significant as Sig value is 0.030 which is less than 0.05., and according to the residual analysis done. Hence, H_{1b} also accepted, and it could be claimed that the impact of organizational counselling interventions on work stress of operational level employees is statistically significant at the confidence level of 95%.

Findings of the current study align with Kapoor and Khanka (2013); Higgins (2005); Sheppard (2004) and Weerasinghe & Batagoda (2011) in which it was found that operational level employees in any industry are lesser sensitive to counselling facilities at work. Even though the employer provides counselling facilities, as found in the extant literature, lower level employees are reluctant to participate in counselling. The most common way of resolving grievances at work in apparel is through the immediate superior or the welfare officers, not with the psychological counsellor. Similarly, operational level workers are financially sensitive. So that, findings of the current study support the empirically proven notion that operational level workers are more financial sense and much more focus on physiological needs than psychological needs (Weerasinghe & Batagoda 2011).

Conclusion

Even though the organizational counselling interventions have received a wide acceptance in mitigating the work stress of employees, featuring the unique attributes of the operational level employees in the apparel industry, it is found that only a 5.4% of an impact come from organizational counselling affecting work stress of employees. However, the found impact is significant, and cannot be ignored. Hence, this study concludes by declaring that the organizational counselling interventions have a lesser ability to mitigate the work stress of operational level employees in the apparel industry in Sri Lanka. So that, building on the context, a serious attention to other factors including; financial rewards, supervision and working environment is recommended for operational level workers in the apparel industry.

References

- Adogdu, F & UZEL, E 2010, The understanding workplace counselling, *International Journal of Business and Management Studies*, 02.
- Ahsan, N, Abdullah, Z, Fie, DY & Alam, S 2009, A Study of Job Stress on Job Satisfaction among University Staff in Malaysia: Empirical Study, *European Journal of Social Sciences*, 8.
- Arnold, HJ & Feldman, S 1986, *Organizational Behavior*, New York: McGraw Hill.

Coetzee, M & Villiers, M 2010, Sources of job stress, work engagement and career orientations of employees in a South African Financial Institution, *South African Business Review*, 14.

Cole, GA 2000, *Personnel Management Theories and Practice*, Bucuresti: Ediura Codecs.

George, JM & Jones, GR 2012, *Understanding and Managing Organizational Behavior* (6th ed.), New Jersey: Prentice Hall.

Kushwaha, S 2014, Stress Management At Workplace, *Global Journal of Finance and Management*, 6(5), 469-472, Retrieved from <http://www.ripublication.com>.

Luthans, F 2011, *Organizational Behavior* (12th ed.), New York, America: McGraw-Hill/Irwin.

Marchington, J & Cooper, C 1998, An assessment of employee assistance and workplace counselling programme, *Health and Safety Executive*.

McGrath, JE 1976, *Stress and behaviour in organizations: In Handbook of Industrial and Organizational Psychology*, Chicago: Rand McNally College Publishing.

Pickerell, R 2011, Career engagement: bridging careers, *Journal of Employment Counselling*, 185-189.

Pignata, S, Boyd, C, Winfield, A & Provis, C 2017, Interventions: Employees' Perceptions of What Reduces Stress, *Hindawi BioMed Research International*.

Seyle, H 1974, *The Stress of Life*, New York: Mc Graq - Hill.

Weiss, M 1982, *Effect of work stress and social support on information system managers*, National Association of Schools of Public Affairs and Administration.

Williams, JC & Huber, GP 1986, *Human Behavior in Organizations*, Cincinnati: South-Western Publishing.

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Project Management*

Customers' characteristics of behaviour to use tech-marketing in banks: Propositions for future research

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Introduction

Customers play a vital role in the marketing world. Without customers, marketers cannot continue to exist in the marketplace. Technological application into marketing activities increases the global access for customers to identify all the details of different products and services. Marketers needed to embrace the applications of technologies into their business or marketing activities. The Internet is the biggest medium to contact and provide direct information to the customers which reduce transaction cost for marketers. Information superhighway and electronic devices in the home create more and more "market choice box" for the customers. In Sri Lanka, still, there are few technology-based marketing approaches in private owned licensed commercial banks in an effective manner. Especially, Northern Province private owned commercial banks want to develop more on technical aspects. Before that, marketers want to give more concern on technology applications into the overall marketing activities by way of understanding the key part of customers' characteristics. There are customers by means of different cultural groups and also various religious groups with different characters of consumption behaviours. Many researchers have done their research works on the subject of consumer behaviour (Bellman, Lohse and Johnson, 1999). While marketers understand or study consumer behaviour, they want to know about customer characteristics. But, most of the researchers have neglected the area of customer characteristics in a deep manner. Especially, behaviour to use tech-marketing related to customer characteristics research studies have not been conducted in Sri Lanka. This is the big "knowledge gap" in this study. This research study mainly focuses on analyzing the past studies to prepare the future research on customer characteristics with behaviour to use tech-marketing. It's very much appropriate to develop propositions and propose a new model for this current phenomenon of technology marketing. In this contemporary situation, this research contribution is to give the massive significances to private owned licensed commercial banks.

Literature review

Nowadays, there is a huge amount of interest from academic researchers in worldwide on the subject of technology and marketing. For examples: The practice of marketing under the pressure of continuously updating the marketing capabilities platform (Purcarea, 2016), Understanding digital marketing: marketing strategies for engaging the digital generation (Ryan, 2016), Information and communication technologies in tourism 2017 (Schegg et al, 2017) and so many other studies are in every field. Many previous studies showed that “technology marketing” is diversely depending on the user. Because of dynamic technological changes, researchers have revealed in two different views of marketing. The first meaning is marketing has the term selling, influencing and persuading and other one is that marketing is seen as a huge and increasingly dangerous technology, making it possible to sell persons on buying things, propositions, and causes they either do not want or which are bad for them.

In 2015, Jason Heller, a global leader of McKinsey Digital Marketing Operations clearly stated that "Putting in place effective marketing technology really all starts with understanding how the consumer is changing and which channels are experiencing growth and why. Companies need to develop their strategies and objectives based on clear insights about both of these areas. Then they need to create the organizational structures and build capabilities to support them. The last decision is what channels and technology are there to use". At the same time, Scott Brinker, co-founder and CTO, ion interactive (2015), revealed that there are two dimensions for the challenges of making marketing tech effective. One is the technical challenge of selecting, integrating, and operating all these systems and their data through the lens of traditional IT management. That's a nontrivial challenge itself. The second bigger challenge is transforming the way marketing uses these tools. In the marketing organization, the richness of information exchange information, the volume of information, information in systematic language involves more beneficial for supply chain management (Moharana, Murty, Senapati and Khuntia, 2011). On the other hand, after the technology adoption, there are new business entries into existing markets with new and advance offering that attract the customers after the technology adoption. The development of a direct marketing context is being boosted through digital technology application. Especially, mobile marketing application induces better communication with customers and brings the speed responses. Mobile digital technology gives the greater advantage of direct marketers to succeed in the marketplace. Direct marketers are needed to enhance their capabilities in the e-marketing and m-marketing digital environment (Mort and Drennan, 2002).

Summary of the variables of customers' characteristics and antecedents of behaviour to use tech-marketing in banks have been shown in the following table (Table 1.). From first to last, researchers tried to summarize all the referential sources of the current research topic of customer characteristics on behaviour to use tech-marketing.

Table 1. Selected studies under customer characteristics on behaviour to use tech-marketing

Customers' characteristics variables and dimensions	Antecedents of behaviour to use tech-marketing	Study
Cultural: Culture, Social class	Adoption of personal internet banking services, banker-customer interaction, mobile multi-media services and e-service quality	Jaruwachirathanakul and Fink, 2005, Constantiou, Papazafeiropoulou and Vendelø, 2009; Lee, McGoldrick, Keeling and Doherty, 2003, Howcroft, Hewer and Durkin, 2003
Social: Reference groups, Family, Roles and status	Adoption and use of personal internet banking services, wireless computing system, factors underlying adoption, adoption of technology and acceptance of technology	Prompattanapakdee, 2009, Elliott and Phillips, 2004, Brown, Venkatesh and Bala, 2006, Al-Gahtani and King, 1999; Rao and Troshani, 2007, Mansumittrchai and Chiu, 2012
Personal: Lifestyle, Age, Life-cycle stage, Occupation, Personality	Adoption of internet banking, acceptance of innovations, mobile banking adoption, consumer lifestyles, online buying behaviour, purchased over the internet, customer relationship management, customer demand and man-machine interaction	Mauro et al, 2007, O'cass and Fenech, 2003, al Afeef et al, 2012, Bellman, Lohse and Johnson, 1999; Pagani, 2004; Teo and Pok, 2003, Phau and Meng Poon, 2000; Hernández, Jiménez and José Martín, 2011, Kamakura, Mela, Ansari, Bodapati, Fader, Iyengar, Naik, Neslin, Sun, Verhoef and Wedel, 2005, Morganosky and Cude, 2002, Onditi, 2013;

			Horzyk, Magierski and Miklaszewski, 2009, Kim et al, 2000
Psychological:	Attitudes, Motivation, Perception, Learning, Beliefs	Behavioural intention to use Internet banking services, perceived usefulness and perceived ease of use, internet-banking services, web experience, adoption of internet banking, connections to the internet and household tech-adoption	Zolait, 2010, Davis, 1989; Taylor and Todd, 1995; Yu et al.,2005; Teo and Pok, 2003, Safeena, Date and Kammani, 2011, Jun and Cai, 2001; Lee and Lin, 2005, Stanton, 2004, Fillion and Le Dinh, 2007, Constantinides, 2004, Akinci et al, 2004

Methodology

Previous literature provides us with a flush foundation on which a research framework for the study of customer characteristics on behaviour to use tech-marketing to be built. Well-built theoretical and conceptual frameworks can be developed via an incorporation of constructs from different research traditions and disciplines (Douglas et al.,1994). In this study, we review the past literature of customer characteristics associated with behaviour to use tech-marketing and analysis the theories and underpinning aspects. In the study of analyzing the past to prepare for the future: writing a literature review, Webster and Watson (2002) stated that an effective review facilitates theory development, closes areas where a plethora of research exists, and uncovers areas where research is needed. They strongly recommended a systematic and structured approach in search and review in writing sound IS literature reviews.

In this study, we conducted an exhaustive and systematic electronic search using bibliographic sources with keywords such as "Customer characteristics in online banking", "Customer characteristics in e-banking", "Customer characteristics in technology adoptions" and "Customer characteristics in technology usages" in our literature search and analysis. A total of 150 electronic copies of articles in the area of customer characteristics on behaviour to use tech-marketing in banks were identified from 1962 to 2018 from digital libraries and online databases. But, approximately 30 research articles in the area of customers' socio-cultural,

personal and psychological characteristics of behaviour to use tech-marketing in banks were concerned in this study.

Results and Discussions

Technology is not only the facilitator to the marketing activities but also the creator of new business and marketing models. Through the internet, marketers can expand their activities into new markets. Organizations are in the highly competitive environment because of the changes in economy, society and politics which are made by powerful technologies (Apulu and Latham, 2011). According to Nicosia (1966), the black box model shows the interaction of stimuli, consumer characteristics, and decision process and consumer responses. Most of the psychological theories are supported by signs of gender differences, denoting that males and females have different gender-based perceptions. Different perceptions lead to influence customers' preferences and decisions during shopping (Chavosh, Halimi, Namdar, Choshalyc and Abbaspour, 2011). Choon, Kai and Matthew (2009) have done a study on the titled "web strategies to promote internet shopping: is cultural-customization needed?" and identified culture characteristics gaps. As per past technology acceptance model (TAM) studies of personal internet banking (PIB), personal relationships and peer Influence directly effect on attitude and intention as external subjective norm variables (Prompattanapakdee, 2009). Nevertheless, according to the study by Jaruwachirathanakul and Fink (2005) in Thailand, characteristics of culture do not emerge as important determinants of the adoption of PIB.

According to the past relevant studies on adoption of internet banking (IB), the past research models consist a few individual characteristics such as having home PC, age, income, education, gender. Therefore, researchers have ensured that young male PC owners who have a degree and higher income are willing to adopt IB (Mauro, Hernandez and AfonsoMazzon, 2007). Hogarth, Kolodinsky and Gabor (2008) have done a study about the Consumer payment choices: paper, plastic, or electrons and used the data from the Surveys of Consumers. They have examined the portfolio of payment choices that different groups of consumers use and identify the socio-economic, demographic, and attitudinal characteristics of groups of consumers that fall within those choice sets. The study of "The influence of demographic factors and user interface on mobile banking adoption: a review" has covered the past studies which have analyzed the influence of demographic factors and user interfaces on the adoption the financial solutions (Internet Banking and Mobile Banking) (alAfeef et al, 2012). Laforet and Li (2005) have done a study on Consumers' attitudes towards online and mobile banking in China and they indicated that consumer attitude and adoption of internet banking pointed up that there are several factors

predetermining the consumer's attitude towards online banking. For example a person's demography, motivation and behaviour towards different banking technologies and individual acceptance of new technology. Therefore, there is a situation that the marketers want to increase customers' trust and keep customers with them. In addition, they want to boost web-based selling activities by using technology aspects (Pavlou, 2003). There is a stronger influence of personal awareness of security on both attitudes and online purchase intentions (Chiu, Lin and Tang, 2005).

According to Alavi and Joachimsthaier (1992), the factors such as; user's situational variables, personality, and demographics which assist the acceptance of innovation. Other than demographics factors, significant in the context of TAM and WEB retailing may be influenced by personality, comparable experiences and one's shopping orientation (O'cass and Fenech, 2003). There was a study on the relationship between customer personality, service features and customer loyalty in the banking sector: a survey of banks in Homabay County, Kenya done by Onditi(2013). That study suggested that bank product managers should continuously modify their product offerings to go well with their customers' personality. The study of "An examination of the factors influencing Yemeni Bank users' behavioural intention to use Internet banking services" has analyzed the body of knowledge by focusing on a new integrated approach of user's readiness which mostly have concerned on investigating the user's informational and psychological readiness to use technology (Zolait, 2010). Gilaninia, Fattahi and Mousavian (2011) have analyzed that perceived convenience, perceived usefulness and perceived safety are the independent variables of the study and dependent variable of the study is the use of internet banking services by customers that the theory of rationality including both individual attitudes and behaviour.

All the ways through marketers are needed to recognize more about the consumer characteristics factors with technology applications. Acceptance of technologies and innovation also depend on consumer attitudes and motivation. Sometimes acceptance of high technology and innovation are affected by the economic situation of the consumer and some other barriers (Faiers and Neame, 2006). From the above discussions, the following propositions were developed:

Proposition 1: There is a significant relationship between cultural characteristics and behaviour to use tech-marketing of private owned licensed commercial banks' customers.

Proposition 2: *There is a significant relationship between social characteristics and behaviour to use tech-marketing of private owned licensed commercial banks' customers.*

Proposition 3: *There is a significant relationship between personal characteristics and behaviour to use tech-marketing of private owned licensed commercial banks' customers.*

Proposition 4: *There is a significant relationship between psychological characteristics and behaviour to use tech-marketing of private owned licensed commercial banks' customers.*

Therefore, the proposed model is presented here below:

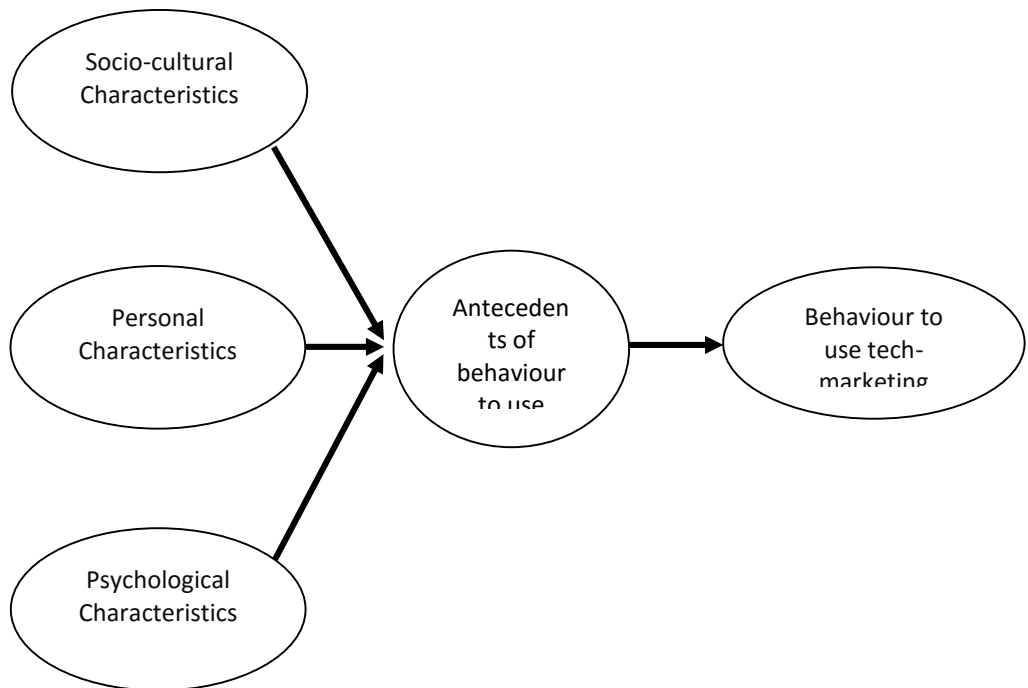


Fig.1. The relationship between customers' characteristics and behaviour to use tech-marketing

Conclusions and Recommendations

According to the literature, four propositions have been taken to test. A stronger empirical foundation of association of customer characteristics on behaviour to use tech-marketing can be gained and may answer the propositions summarized in the paper, which therefore contribute to better understanding of customers' behaviour to use tech-marketing. The research framework is treated as one of the very first studies which incorporate direct variables from the literature on customer

characteristics and behaviour to use tech-marketing. The researchers have carefully identified and analyzed the dimensions of the key drivers. Certainly, this integrative framework improves technology marketing of research in the banking. Furthermore, this study recommended that the customers' characteristics can be combined into one framework, therefore, the understanding and prediction of customers' characteristics with behaviour to use tech-marketing is far more systematically grounded than by using only one line of customers behaviour or character in marketing research. This can stimulate us towards a more wide-ranging understanding of customers' socio-cultural, personal and psychological characteristics with customers' behaviour to use tech-marketing. As a conclusion, an integration of existing research and a springboard for future systematic research in the area of customers' behaviour to use tech-marketing will be provided by these future propositions. Then, the researchers prefer that an empirical testing is to be used to validate the proposed research model and to test the relative importance of dimensions and antecedents. The relative importance of dimensions of customers' characteristics with behaviour to use tech-marketing is the very curious part for more analysis. The technology is transforming the way of performing marketing and it plays as an important tool for marketers to survive in the market position. So, it's more helpful with managerial implication and valuable recommendation for private owned licensed commercial banks which are using technology in their banking activities around the Northern part of Sri Lanka after the post-war era to recognize the significance of consumers' characteristics.

References

- Akinci, S., Aksoy, Ş. and Atilgan, E., 2004. Adoption of internet banking among sophisticated consumer segments in an advanced developing country. *International journal of bank marketing*, 22(3), pp.212-232.
- al Afeef, M., Singh, D. and Ahmad, K., 2012. The Influence of Demographic Factors and User Interface on Mobile Banking Adoption: A Review. *Journal of applied sciences*, 12(20), pp.2082-2095.
- Alavi, M. and Joachimsthaler, E.A., 1992. Revisiting DSS implementation research: A meta-analysis of the literature and suggestions for researchers. *Mis Quarterly*, pp.95-116.
- Al-Gahtani, S.S. and King, M., 1999. Attitudes, satisfaction and usage: factors contributing to each in the acceptance of information technology. *Behaviour & Information Technology*, 18(4), pp.277-297.
- Bellman, S., Lohse, G.L. and Johnson, E.J., 1999. Predictors of online buying behaviour. *Communications of the ACM*, 42(12), pp.32-38.

Brown, S.A., Venkatesh, V. and Bala, H., 2006. Household technology use: Integrating household life cycle and the model of adoption of technology in households. *The Information Society*, 22(4), pp.205-218.

Constantinides, E., 2004. Influencing the online consumer's behaviour: the Web experience. *Internet research*, 14(2), pp.111-126.

Constantiou, I.D., Papazafeiropoulou, A. and Vendelø, M.T., 2009. Does culture affect the adoption of advanced mobile services?: a comparative study of young adults' perceptions in Denmark and the UK. *ACM SIGMIS Database: the DATABASE for Advances in Information Systems*, 40(4), pp.132-147.

Davis, F.D., 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, pp.319-340.

Elliott, G. and Phillips, N., 2004. *Mobile commerce and wireless computing systems*. Harlow: Pearson/Addison Wesley.

Fillion, G. and Le Dinh, T., 2007, July. An extended model of adoption of technology in households: A model test on people using a mobile phone. In *the Allied Academies International Conference. Academy of Management Information and Decision Sciences. Proceedings* (Vol. 11, No. 2, p. 7). Jordan Whitney Enterprises, Inc.

Gilaninia, S., Fattahi, A. and Mousavian, S.J., 2011. Behavioural factors tend to use the Internet banking services case study: system (SABA), the Melli Bank, Iran, Ardabil. *International Journal of Business Administration*, 2(3), p.173.

Hernández, B., Jiménez, J. and José Martín, M., 2011. Age, gender and income: do they really moderate online shopping behaviour?. *Online information review*, 35(1), pp.113-133.

Hogarth, J.M., Kolodinsky, J. and Gabor, T., 2008. Consumer payment choices: Paper, plastic, or electrons?. *International Journal of Electronic Banking*, 1(1), pp.16-35.

Horzyk, A., Magierski, S. and Miklaszewski, G., 2009. An Intelligent Internet Shop-Assistant Recognizing a Customer Personality for Improving Man-Machine Interactions. *Recent Advances in intelligent information systems*, pp.13-26.

Howcroft, B., Hewer, P. and Durkin, M., 2003. Banker-customer interactions in financial services. *Journal of Marketing Management*, 19(9-10), pp.1001-1020.

Jaruwachirathanakul, B. and Fink, D., 2005. Internet banking adoption strategies for a developing country: the case of Thailand. *Internet research*, 15(3), pp.295-311.

Jun, M. and Cai, S., 2001. The key determinants of internet banking service quality: a content analysis. *International journal of bank marketing*, 19(7), pp.276-291.

Kamakura, W., Mela, C.F., Ansari, A., Bodapati, A., Fader, P., Iyengar, R., Naik, P., Neslin, S., Sun, B., Verhoef, P.C. and Wedel, M., 2005. Choice models and customer relationship management. *Marketing Letters*, 16(3-4), pp.279-291.

Kim, D.J., Cho, B. and Rao, H.R., 2000, December. Effects of consumer lifestyles on purchasing behaviour on the internet: a conceptual framework and empirical validation. In *Proceedings of the twenty-first international conference on Information systems* (pp. 688-695). Association for Information Systems.

Laforet, S. and Li, X., 2005. Consumers' attitudes towards online and mobile banking in China. *International journal of bank marketing*, 23(5), pp.362-380.

Lee, G.G. and Lin, H.F., 2005. Customer perceptions of e-service quality in online shopping. *International Journal of Retail & Distribution Management*, 33(2), pp.161-176

Lee, M.S., McGoldrick, P.J., Keeling, K.A. and Doherty, J., 2003. Using ZMET to explore barriers to the adoption of 3G mobile banking services. *International Journal of Retail & Distribution Management*, 31(6), pp.340-348

Mansumittrchai, S. and Chiu, C., 2012. Adaptation of internet banking in UAE: factors underlying adoption characteristics. *IJMMR*, p.103.

Mauro C. Hernandez, J. and Afonso Mazzon, J., 2007. Adoption of internet banking: proposition and implementation of an integrated methodology approach. *International journal of bank marketing*, 25(2), pp.72-88.

Morganosky, M.A. and Cude, B.J., 2002. Consumer demand for online food retailing: is it really a supply-side issue?. *International Journal of Retail & Distribution Management*, 30(10), pp.451-458.

O'cass, A. and Fenech, T., 2003. Web retailing adoption: exploring the nature of internet users Web retailing behaviour. *Journal of Retailing and Consumer Services*, 10(2), pp.81-94.

Onditi, A.A., 2013. The relationship between customer personality, service features and customer loyalty in the banking sector: A survey of banks in Homabay County, Kenya. *International Journal of Business and Social Science*, 4(15).

Pagani, M., 2004. Determinants of adoption of third generation mobile multimedia services. *Journal of interactive marketing*, 18(3), pp.46-59.

Phau, I. and Meng Poon, S., 2000. Factors influencing the types of products and services purchased over the Internet. *Internet Research*, 10(2), pp.102-113.

Promptanapakdee, S., 2009. The adoption and use of personal internet banking services in Thailand. *The Electronic Journal of Information Systems in Developing Countries*, 37(1), pp.1-30.

Rao, S. and Troshani, I., 2007. A conceptual framework and propositions for the acceptance of mobile services. *Journal of Theoretical and Applied Electronic Commerce Research*, 2(2).

Safeena, R., Date, H. and Kammani, A., 2011. Internet Banking Adoption in an Emerging Economy: Indian Consumer's Perspective. *Int. Arab J. e-Technol.*, 2(1), pp.56-64.

Sia, C.L., Lim, K.H., Leung, K., Lee, M.K., Huang, W.W. and Benbasat, I., 2009. Web strategies to promote internet shopping: is cultural-customization needed?. *Mis Quarterly*, pp.491-512.

Stanton, L.J., 2004, January. Factors influencing the adoption of residential broadband connections to the internet. In *System Sciences, 2004. Proceedings of the 37th Annual Hawaii International Conference on* (pp. 10-pp). IEEE.

Teo, T.S. and Pok, S.H., 2003. Adoption of WAP-enabled mobile phones among Internet users. *Omega*, 31(6), pp.483-498.

Webster, J. and Watson, R.T., 2002. Analyzing the past to prepare for the future: Writing a literature review. *MIS quarterly*, pp.xiii-xxiii.

Zolait, A.H.S., 2010. An examination of the factors influencing Yemeni Bank users' behavioural intention to use Internet banking services. *Journal of Financial Services Marketing*, 15(1), pp.76-94.

Community Park Development Project: A Case Study of Back Bay Water Front Area, Trincomalee

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Introduction

Parks are perceptible reflection of the quality of life in a community which provide identity for citizens which is the primary factor for the city development. The waterfront parks serve as a favorite gathering spot with markets, parks, tourist boats, and ocean liners and walkway in many areas. Trincomalee Town is recognized as a region that has lot of potential sites and home to the famous temple and other historical monuments. This area closes to the Archeological site, Historical site and Dutch bay beach in Trincomalee. Hence its essential should be preserved, and there is a need to protect the cultural Heritage character of this area and also to maximum utilize the land use in more sensitive way.

Beach along the Trincomalee town, 5.6 Acer land is available which is famous Back Bay and for leisure activities within Trincomalee District. This land is polluted and underutilized in the city limit which is the only available land for open space development. At present many unauthorized buildings were constructed and occupied by fishermen. If this land use pattern continues as it is in future, it will reduce the city image. If we change this area into modern leisure activities, this place will be changed as a central attraction, and favorite marketplace in Trinco area and this site will attract more visitors, tourists, and residents to the fort and surrounding area including the beach belt as environmentally pleasing zone. Therefore, it is necessary to protect this area as a community park with cultural Heritage character to make more sensitive and vicinity of the city. Therefore, this research was conducted in the Trincomalee at Back Bay Water Front with the objectives to assess the present situation of the area. It is to analysis the site suitability with identified factors, to propose strategic project and provide a detail design for a new community park project with comparison of the world sites based on the best practices to change proposed site in a better way.

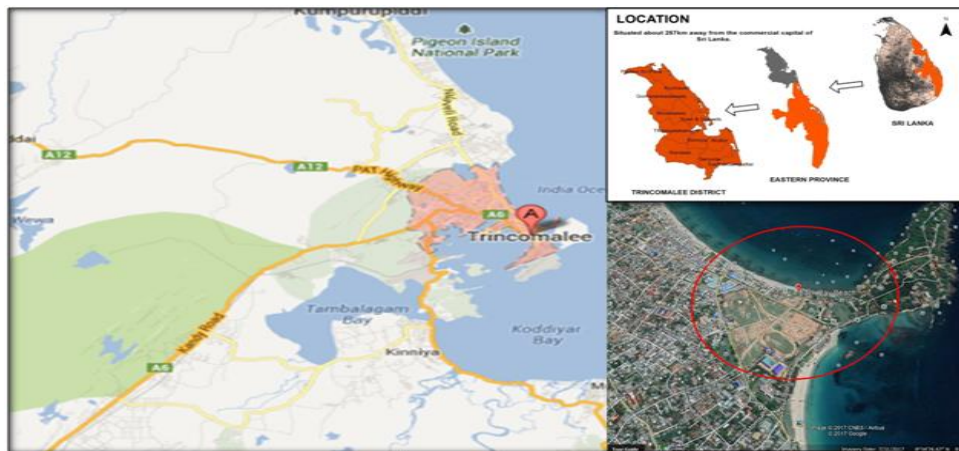


Figure 01, location of the proposed site

Source: Compiled by Authors, (2018)

The location of the site, Back Bay beachfront is in Manayavali G.N Division in Trincomalee Urban Council area in Eastern Province, Sri Lanka with the cultural Heritage background. This site is covers in North by sea, East by Archaeological site and Heritage site, south by RDA Road and West by Wholesale Fish Market. Proposed Site is shown in Figure: 01

Literature Review

The findings of a significant literature review are mentioned relating to parks and its benefits to a city. The review considers material from sources that include peer-reviewed literature, library, and internet. Urban green spaces supply to cities with ecosystem services ranging from maintenance of biodiversity to the regulation of urban climate. Comparing with rural areas, differences in solar input, rainfall pattern and temperature are usual in urban areas. Solar radiation, air temperature, wind speed, and relative humidity vary significantly due to the built environment in cities (Heidt, Neef, pp7 -16). Green spaces that feature good connectivity and act as “wildlife corridors” or function as “urban forests,” can maintain viable populations of species that would otherwise disappear from built environments (Byrne, Sipe, pp.96-98). Community parks can reduce air pollutants directly when dust and smoke particles are trapped by vegetation. Research has shown that in average, 85% of air pollution in a park can be filtered (Bolund, Sven, 147-155). Urban green parks serve as places of identity, memory, and belonging, enrich human life with meaning and emotions which is a critical component of sustainability. (Mathivathany.V, Sasitharan.P pp.69)

There are some researchers have been done by researchers related Economic Benefits of urban greeneries like Energy Savings, water management, and Property Value. Plants improve air circulation, provide shade, and they provides a cooling effect and help to lower air temperatures. A park of 1.2 km by 1.0 km can produce an air temperature between the park and the surrounding city that is detectable up to 4 km away (Heidt, Neef, pp7 -16). Community parks have been viewed as an essential part of community development rather than just as settings for recreation and leisure. Community parks have been suggested to facilitate social cohesion by creating space for social interactions (Coley, Van Herzele, Wiedemann, pp.1-31). A study conducted in Helsinki, Finland, indicated that nearly all (97%) city residents participate in some outdoor recreation during the year. Urban green spaces serve as a handy resource for relaxation; provide emotional warmth (Heidt, Neef, pp7 -16). Urban parks can play an essential role in attracting tourists to urban areas, e.g., by enhancing the attractiveness of cities and as harmonize to other urban attractions (Majumdar, pp. 343–345).

As per discussed above, there are many literatures on how to design the community parks and how places are used as a place to improve the beachfront community park, but decidedly less research works are on in Eastern Province. Especially, quite some studies carried out in related eco-tourism and parks. There are no researches about Community parks analysis in Trincomalee. This is the Knowledge gap of this research.

Methodology

To achieve above objectives primary and secondary data were collected from variety of sources. Socioeconomic data, tourism potentials data were collected through field observation, structured interview, Questionnaire survey, and discussion with the officers of Urban development authority, District secretariat and people who residing in the surrounding areas, tourists, commuters and report of Metro Trinco Development plan. The collected data were analyzed using primary descriptive statistical analysis. Nonprobability sampling method (120 samples) was used, and SWOT analysis, Site Suitability analysis, Stakeholder perception analysis, and Highest and best use analysis were used for the result. Stakeholder perception analysis.-Demand Survey was conducted with Local public, Commuters, Vendors, Tourist, and Pedestrians.

Results and Discussions

Present situation of the study area has different land use pattern like commercial use, residential, recreational use, economic use, and environmental use. Part of the site is occupied by fishermen who settle during the war period for security reasons

because army camp is located in the fort area and unauthorized building were constructed.



Source- Captures by Authors using Google image

The unauthorized housing is the relocatable aspect in the proposed area. There are 120 families should be relocated to other places which are 15 Semi-Permanent Shelter and 105 Temporary Shelter. After Tsunami, new building were constructed and relocated these people at 7 km away from the site. However, they were captured this particular location again because of their employment while they have enough and suitable location for fishing activities.

Legal permissibility and real possibility were conducted using Highest and best use analysis of Community Park. The Highest and best use analysis is shown in table 01.

SWOT analysis for Community Park at Back Bay Water Front area is indicating the strengths, opportunities, weaknesses, and threats for the proposed area.

Table:01, Highest and best use analysis Community Park

Legal permissibility	Physical possibility
<ul style="list-style-type: none"> ❖ Permissible uses under Metro-Trincomalee Dev. Plan one of the permitted use is under Sports & Recreational zone. ❖ 400 yard was declared as the buffer zone. ❖ Public Outdoor Recreation Space (PORS) <p>Availability of Open space = 22 He</p> <p>Public Outdoor Recreation Space (PORS) = 1.4ha $\frac{1}{1000} * 54,000 = 75.6 - 22$ ha</p> <p>Need open space = 53.6 ha</p>	<ul style="list-style-type: none"> ❖ In authors view, it has infrastructure availability with water supply, electricity, and problems of having improper drainage system. ❖ This site has not any vulnerability of inundation due to the unavailability of water body in surrounding. ❖ High integration of the Koneswarakovil road give access to the site and proposed multi-modal transport center also give connectivity to other area while upcoming bus terminal and loop connection.

Socially acceptable	Environment-friendly	Maximally productive
Community recreation improves human condition Provides Recreational Experiences Promotes health and wellness Increases cultural unity	Maintenance of natural ecosystems and site production. Parks provide vital green space	Revenue in 1st year= Rs 1,080,000 Recovery period= 4 years & 6 Month.

Source: Urban Development Authority, Trincomalee, 2018 & Field Visits

Table:02, SWOT Analysis of proposed site

Strengths	Weaknesses
<ul style="list-style-type: none"> ✓ - The proposed site is located very close to the Trincomalee Town transportation hub ✓ Infrastructure availability with water supply, electricity ✓ Proposed ongoing projects ✓ Local, Regional and National Linkages ✓ Compatibles surrounding land uses – Market, Hotels, and Bus Stand Parks and playground, integration of resident and commercial. ✓ This area located next to the very famous for Fredric and Dutch bay beach ✓ Land belongs to state 	<ul style="list-style-type: none"> ✓ Underutilized land use ✓ Encouragement by the unauthorized squatters ✓ Weak tourist infrastructure with critical touristic opportunities
Opportunities	Threats
<ul style="list-style-type: none"> ✓ - Enhancing the Historical Core and the relation with the fort will keep character of the area ✓ Proposed site coming under the Sports and Recreational zone according to the metro-Trincomalee Development Plan (Gazette notification No:1534/8) ✓ More tourism attractions for Sea and heritage sites of Trincomalee ✓ linkages other tourist areas ✓ Development organizations’ interest to develop the tourism sectors 	<ul style="list-style-type: none"> ✓ Sea erosions ✓ Tsunami affected area ✓ Political situation in the country ✓ New development policies ✓ instability of the local government bodies ✓ lack of powers of the local government bodies

Stakeholder Perception survey for the future development project provides the community park project at the proposed place which is 78% demand while 32% demand shows for Tourism Information Centre, Fisheries center and other

development show in respectively 7% and 3% demand. The detail of this Stakeholder Perception shows in figure 03.

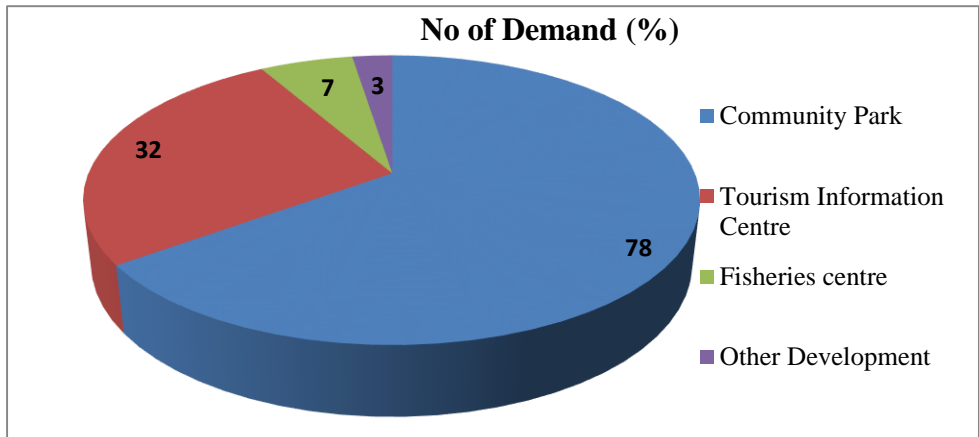


Figure: 03, Stakeholder Perception for the future development project
 Source: Questionnaire survey, 2018



Figure 04- Proposed land use characters of the area
 Source: Prepared by authors using Google Image, 2018

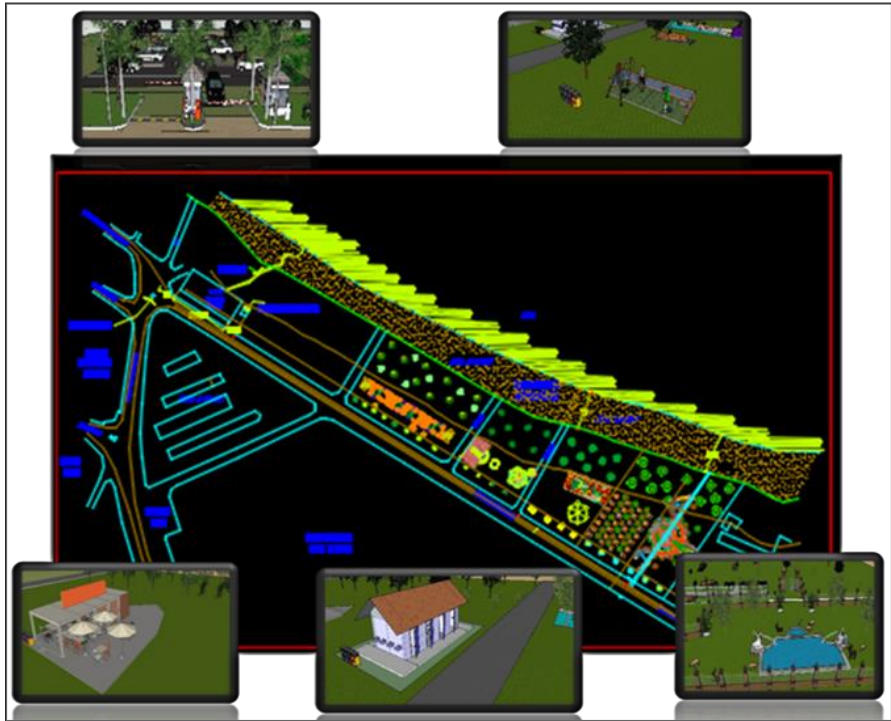


Figure 05- Proposed Detail Design of the selected area
 Source- Prepared by authors using Auto Cad, 2018



Figure:06, Community Park Project
 Source- Prepared by authors using Auto Cad, 2018



Figure:07, Open Restaurant with Public Toilet Facilities



Figure: 08, Sitting area project with Greeneries and Children Playing Equipments

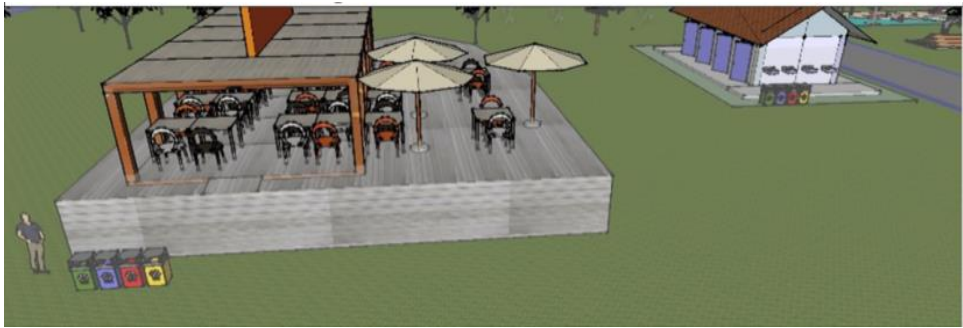


Figure:-09, Deer Park Project at proposed location

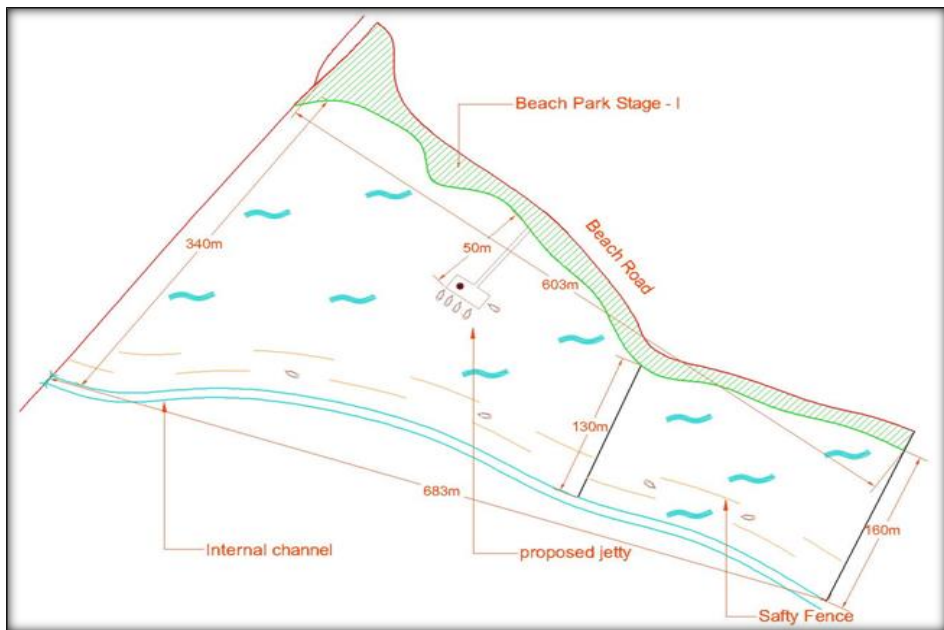


Figure:10, Proposed Paddle Board Service Area

Conclusion and Recommendations

The finding of this research reveals that unavailability of recreational park within existing boundary which is derived with limitations of less community interaction and attraction of the people. The location of the site is very much close with cultural heritage and tourism potential site. So, upcoming proposed development projects can attract lot of people to this site. Tourist and other community people should need recreational place for their relaxing environment. The location of the site is adjoining the beach area possible to attract the people by recreational activity. Site is a calm and quiet environment rather than the heavy traffic flow at the present, and this site is located proximal to Trincomalee town center. The area will be urbanized by these upcoming projects. At the middle of the busiest environment, people will preferred to have some relaxing and quite greenery environment. The environment side also this surrounding area has rich biological species and native animals. Through this proposal can preserve valuable assets at this area. The developing place by upcoming projects as the community recreational park will give unique identity to that place. Park facilities should be provided by the respective authorities to control incompatible uses and encroachments around the beach. Some works such as sound system, car parking, lighting, footpath, tree planting, turfing, waste collection system, common public place, food, and beverage retail and shops and open gym are needs to be carried out in order to complete the balance work of development of Community Park to change the attractive, functional leisure place. As a result and in consideration, the local population should be given the opportunity to have alternative sources of income. Nationwide, eco-tourism and its related services are one of the most important alternative sources of income and employment opportunities for people living near this proposed park.

Reference

- Bolund, Sven, (2010). "Urban greening to cool towns and cities: A systematic review of the empirical evidence." *Landscape and Urban Planning* 97, pp.147-155.
- Byrne J, Sipe N. (2010). "Green and open space planning for urban consolidation – A review of the literature and best practice," *Urban Research Program*, ISBN 978-1-921291, pp.96-98.
- Coley, Van Herzele, Wiedemann, (2001). "The impact of parks on property values: a review of the empirical evidence." *Journal of Leisure Research* 33(1), pp.1-31.
- Heidt, Neef, (2009). "Integrated Management of Urban Green Space: The Case in Guangzhou China," 45th ISOCARP Congress, pp7 -16.

Mathivathany.V, Sasitharan.P, (2016), “The Role of Urban Parks in the Sustainability the Jaffna Town as a City,” 2nd International Conference of the Faculty of Humanities and Social Sciences, University of Ruhuna, pp 69.

Majumdar.C,(2004). “Preservation of indigenous vegetation in urban areas, an introduction.” *Landscape. Urban Planning*, 68, pp. 343–345.

Mathivathany.V, (2016), “A Systematic Review of the Urban Green Spaces for the City Sustainability and Attractiveness: A case study of Jaffna City in Northern Province of Sri Lanka,” 3rd International Conference on Contemporary Management Studies and Commerce, University of Jaffna, pp 961-976.

Divisional Secretariat Division, (2017),“Statistical information”, “Resource Profile”, Trincomalee District

Metro Trinco Development Plan-2012, Urban Development Authority, Trincomalee.

Factors Affecting Career Advancement of Top Level Women in Local Banks in Colombo District

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Introduction

In recent years, women career has to turn into a major area of concern and during the last two decades, there has been an increase in the proportion of women at entry and middle-level management positions. According to the Central Bank report in 2017, there was a decline in the female and youth unemployment rates during 2017. The female unemployment rate declined from 7% in 2016 to 6.5% in 2017 and due to the declined in the unemployment rate, the labour force participation rate among females has increased from 35.9% in 2016 to 36.6% in 2017. This kind of development shows that women made a significant contribution to the business and industry, however, gender inequality still exists in the labour force around the world. Nevertheless, the women's position in the labour market is much more disadvantageous than that of men and also women have smaller chances to be employed, starts a business or advancing in their career ladder advancement. However, women play a prominent role in today world because they carry a variety of roles in the family, community and society levels in worldwide especially including in Sri Lanka. In Sri Lanka, the majority of the women are working in financial sectors like banks and they are in the good position in management level. In this background, this study aims to identify the factors influencing the career advancement of top-level women who are working in local banks in Colombo district. For this purpose, it is focused on selected 12 commercial banks of out of 24 which are functioning locally and from each bank, 10 women workers selected randomly in 2017. A semi-structured questionnaire was issued to the total sample of 120 respondents to collect the relevant data related to women career advancement which is categorized into 3 levels and it is considered as an ordinal dependent variable. Other data related to four variables such as organizational factors, personal factors, family factors, and cultural factors also collected and they were used as explanatory variables in the study. The collected data were analyzed using econometrics techniques such as ordered probit model and marginal effects.

The objectives of the study are,

- ❖ To evaluate the impact of organizational factors, personal factors, family factors, and cultural factors on career advancement of top-level women in local banks in Colombo.
- ❖ To examine which factor is the most important determinant of the career advancement of top-level women in local banks in Colombo.

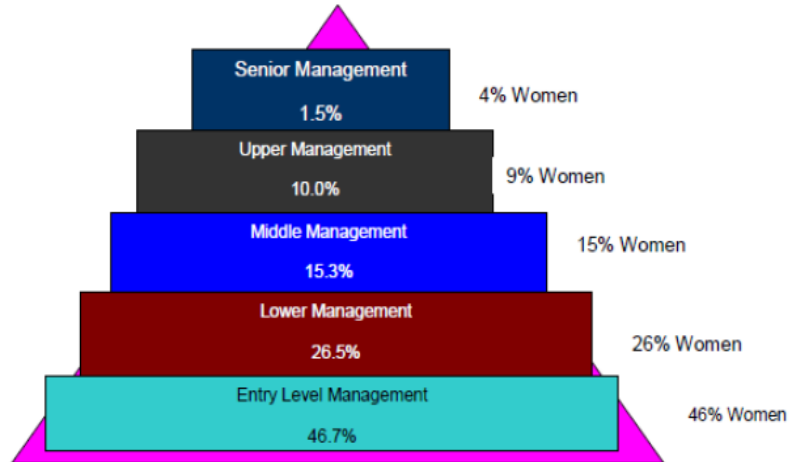
Literature review

According to the (Izraeli, 1994) noted that a male-dominated organizational culture is an obstacle to women's success. The situational factors are usually discussed under two categories (Tharenou, 1994): the work situation (e.g. organizational culture and practices), and the home situation (e.g. spousal support and family responsibilities). The organization structure perspective is based on the premise that organization structures shape women's behaviour on the job (Fagenson, 1990, 1993). According to Kanter (1977), there are 'advantageous' and 'disadvantageous' job situations. Advantageous positions, which offer job incumbents power and opportunities, are held by individuals whose gender is in the majority (that is, males). Disadvantageous positions, on the other hand, offer job occupants little power and fewer opportunities and are held by individuals whose social category is few in number (that is, females). Kanter (1977) argued that it is because women are traditionally placed in low-level positions in organizational hierarchies that feminine traits shape their behaviour. Informal power and opportunity structures in organizations serve to exclude women. The organization-structure perspective, its primary focus on organization structure overlooks the saliency of other important organizational factors including norms and culture, policies, training systems, promotion, and reward systems (Fagenson, 1990).

According to (Chea, 2015), has examined factors affecting women's career advancement in Malaysia and the factors such as character, lack of support, treatment and family issues in their study has a significant impact on the respondents' perception in the country. Another study was done by Francis (Afande, 2015), factors affecting women career advancement in the banking industry in Kenya: A Case of Kenya Commercial Bank Branches in Nairobi County, Kenya. From his analysis, he found that, individual's age was first ranked, women's lack of self-confidence and their tendency to be more self-critical than men hinder their career advancement was second-ranked, an individual's level of education was third-ranked, the gender issue was fourth-ranked, and the least ranked was the individual's skills, tenure, hard work, reputation and performance in determines the women career advancement in Kenya. According to (Molebatsi, 2006) stated that the glass ceiling phenomenon in Lesotho, he illustrated it as part

of a management pyramid, which showed the number of women representation in management positions at each level.

Research Questions



- ❖ Are organizational factors, personal factors, family factors, and cultural factors on career advancement of top-level women in local banks in Colombo?
- ❖ Which factor is a most important determinant of the career advancement of top-level women in local banks in Colombo?

Methodology

The primary data were collected using structured questionnaires from the respondents who are working in local banks in Colombo, Sri Lanka. Out of 24 local banks, 12 banks were selected randomly and from each bank 10 women were used in the study. Data were collected related to organizational factors (OF), personal factors (PF), family factors (FF) and cultural factors (CF) which were treated as independent variables and career advancement considered as a dependent variable in the study. Career advancement of top-level women was categorized into 3 levels where it was coded as 1 for moderate, 2 for large and 3 for very large in the analysis. Because of the nature of the ordered dependent variable, an ordered probit model is more applicable than other models and hence this model was applied in analyzing the data. To identify the impact of the above four independent variables on the career advancement among top-level women, the following ordered probit model was used and it can be written as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

Y = Women career advancement (WCA) and it coded as an ordered outcome as,
 = 3 for very large
 = 2 for large
 = 1 for moderate

β_0 = Constant value

$\beta_1, \beta_2, \beta_3$ and β_4 = Co-efficient of each independent variable

X₁ = Organizational factors

X₂ = Personal factors

X₃ = Family factors

X₄ = Cultural factors

ε = Error term

Results and Discussions

The table illustrates the effect of each factor on career advancement among top-level women workers working in local banks in Colombo.

Table 1: Estimated results of the ordered probit model for State Banks

Career advancement	Coefficient	Standard Error	z	P>z
Organizational factors	0.557	0.330	1.69	0.092*
Personal factors	-1.577	0.582	-2.71	0.007***
Family factors	-0.022	0.050	0.45	0.656
Cultural factors	-0.481	0.195	-2.46	0.014**

Source: Calculated by authors, 2017

*, ** and *** indicates the significance level at 10%, 5% and 1% respectively

In the above table shows that all variables are statistically significant except for family factors and out of three significant variables, only organizational factors have positive sign while the other two have a negative sign. It refers that top-level women have more likely or probability to gain career advancement when the organization policy and management styles are a support to them. In other words, it reveals that organizational policies and management styles that are adopted by the state banks have supported to get more career advancement for the top level women workers in a favourable manner. The coefficient of organizational factors is 0.557 with a positive sign and also statistically significant at 0.1 levels (10%) refers that, if the organizational factors improve more, then there is a possibility to raise the women career advancement level from moderate to very large level.

In case of most popular banks, only organizational factors and cultural factors have a significant effect on career advancement of top-level women, but organizational

factors have negatively while cultural factors have a positive impact on their career advancement in the banking sector in Colombo.

Table 2: Estimated results of the ordered probit model for most popular Banks

Career advancement	Coefficient	Standard Error	z	P>z
Organizational factors	-0.045	0.055	-0.83	0.040**
Personal factors	0.021	0.378	1.06	0.955
Family factors	-0.034	0.030	-1.14	0.255
Cultural factors	0.025	0.062	2.4	0.068*

Source: Calculated by authors, 2017

*, and ** indicates the significance level at 10%, and 5% respectively

The negative sign of the organizational factors indicates that organizational policies and management styles that are adopted by the most popular banks have not supported to get more career advancement for the top level women workers in a favourable manner. A positive sign of the personal factors shows that it has a positive effect on career focused for the women from moderate level to a very large level, but it is insignificant. In case of cultural factors which has a positive sign (0.025) with significant reveals that as the women workers do not much believe their culture it will courage their career advancement in the way which leads to them become from moderate level to very large one. Also, it is statistically significant at the 10% level.

Table 3: Estimated results of the ordered probit model for popular Banks

Career advancement	Coefficient	Standard Error	z	P>z
Organizational factors	0.092	0.057	1.59	0.081*
Personal factors	-0.02	0.096	-0.21	0.832
Family factors	-0.008	0.030	-0.27	0.785
Cultural factors	-0.1	0.042	-2.37	0.018**

Source: Calculated by authors, 2017

*, and ** indicates the significance level of 10%, and 5% respectively

The above results are the opposite of the results in most popular banks where organizational factors have a positive sign and cultural factors have a negative sign in popular banks. This means that organizational policies and management styles that are adopted by the popular banks have supported to get more career advancement for the top level women workers in a favourable manner which helps them to raise their career from moderate level to very large level. But cultural factors have a negative sign (-0.100) which is an opposite sign of the most popular banks shows that, as the women workers much believe their culture it will discourage their career advancement in the opposite way which leads to them become from very large level to moderate one. Also, it is statistically significant

at the 5% level. The marginal effects were estimated after the ordered probit model in terms of probability and for state banks if organizational factors are supported to women workers they will have 21% of more probability to become very large level and will have 14% of less probability to become large level while 6.5% less probability to become moderate level in their career advancement. For most popular banks if organizational factors are supported to women workers they will have 1.8% of less probability to become very large level and they have 1.0% of more probability to become large level while 0.7% of more probability to become moderate level in their career advancement. In popular banks, if organizational factors are supported to women workers they will have 3.6% more likely to become very large level and they have 1.7% and 1.9% of less probability to become large and moderate levels in their advancement respectively.

Conclusion

The above study concluded that organizational factors, personal factors and cultural factors have an impact on women career advancement on top-level women in local banks even though the family factors not significant effect on women career advancement in any banks. Organizational and cultural factors significantly affect women career advancement and at the same time, personal factors significantly affect career advancement only in state banks. Similarly, results of marginal effect results summarized that organization factors, personal factors, and cultural factors have more supported to women workers who are work in state banks while family factors have more supported to women workers who are work in most popular banks. Finally, of the four variables, personal factors are the most important determinant while organizational and cultural factors are the most determinant in career advancement among top-level women in the local banks respectively.

Recommendation

According to research findings among the factors most influenced factors are personal factors only for state banks and it found that personal factors have negatively affected on women career advancement for the top level women because of they have risk rather than the other banks they have less of confidence and positive attitudes. Hence female workers must work to avoid the individual barriers such, lack of self-confidence, being too emotional when working matters of workers by developing the self-confidence and positive thinking as such building can do perception. As an example, one of the popular banks in Sri Lanka Amana bank has the cultural conditions for their women workers. Also to enable women who are in employment to advance their careers organization could support the provision of training and other developmental mechanisms that will also affect

to change their attitudes regarding the organization to a positive side like culture is not a barrier to women. But they have to obey their culture and achieve the advancement of their career path. Female workers who identified having difficulties balancing work and family indicated that they had too many works and family responsibilities and sometimes they did not have time to accomplish everything effectively. And women workers can share their household choruses' activities with their spouse. To them, time management was the biggest challenge. To avoid the family barriers organization can help with the female workers by offering day care centres, leave them in the weekends, giving some flexible office hours and home office. Some can argue that leaving the females on weekends will affect the organization performance but to get the fullest contribution of the creative, talented organization must give something and expect something from them. Another factor is that our society has been built to bear the family responsibilities to women hence that must be a fair reason to give little bit freedom to them.

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References

Afande, F. O. (2015). Factors Affecting Women Career Advancement in the Banking Industry in Kenya.

Afande, F. O. (2015). Factors Affecting Women Career Advancement in the Banking Industry in Kenya.

Chea, C. C. (2015). Factors Affecting Women' s Career Advancement. *Open and Distance Learners' Perspective*.

Fagenson, E. (1990). At the Heart of Women and Management Research: *Business Ethics*, 267- 74.

Izraeli, A. a. (1994). Women Managers in a Global Economy. *Cambridge, Mass: Blackwell*.

Molebatsi, H. (2006). Glass Ceiling: Reaching Full Potential. *Moeletsi Oa Basotho*.

Tharenou, P. L. S. a. C. D., 1994. How Do You Make it to the Top: *Academy of Management Journal*, 37(4), pp. 899-931.

Factors of perceived organizational support: A conceptual study

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Introduction

Perceived organizational support is an important construct in today's competitive world with established organizational benefits. Such a way it becomes more important to identify the factors of perceived organizational support (Eisenberger & Stinglhamber, 2011). Therefore this article makes an attempt to trace the factors of perceived organizational support and add some value to the present study literature by conducting a systematic review of the existing literature. The purpose of this article is to provide a comprehensive overview of the factors of perceived organizational support. A structured literature review is carried out to identify the critical factors of perceived organizational support. Finally Identified factors of perceived organizational support from previous studies have been summarized to explain the current state of the concept.

Understanding the way employees perceive their relationship with their organization has emerged as a major concern for organizational behaviour scholars during the last decades (Rhoades & Eisenberger, 2002). Therefore this literature review survey reviewed journal articles relevant to perceived organizational support. More specifically after the literature review on factors of perceived organizational support, we can identify the different factors on perceived organizational support. Even though in addition to these variables there are some other factors would have an influence on perceived organizational support. So that there is a need for future research to concentrate on these factors of perceived organizational support in Sri Lankan context.

Methodology

A structured literature review was done to identify the critical factors of perceived organizational support. For summarizing the literature around the concept literature review method was adopted as it is an accepted strategy to review concept (Chermack and passmore, 2005). The articles were sourced from an electronic database.

Factors of perceived organizational support

Perceived organizational support has received a lot of research attention since it was introduced in 1986. Researchers have investigated the factors that lead to the perceived organizational support among the employees in the western context.

Earlier Wayne et al. (1997) found perceived organizational support and Leader-member exchange has a mutual influence on each other, they concluded that Leader-Member exchange plays an important role in affecting employees' perceptions of organizational support. In addition, they indicated the exchange relationship both with the organization and immediate supervisors. With that, the research has preceded the social exchange relationship and pattern of reciprocity at the workplace.

The research conducted by Mulvey and others in 2000 using the technique of structural equation analysis of data from two different field studies showed that satisfaction with pay system does not pay levels to lead to greater perceived organizational support. They have examined the pay level satisfaction and pay system satisfaction. Consistent with this they found a positive relationship between pay satisfaction and perceived organizational support.

Rhoades et al. (2001) article are titled "Affective commitment to the organization: the contribution of perceived organizational support" also provided evidence that supervisor support is predictive of Perceived organizational support. The results of this study suggest that favourable outcomes of working conditions through perceived organizational support enhance the affective commitment.

In addition, Rhoades et al (2001) argued that being recognized and rewarded fairly would seem to signal that an organization cares about the well-being of the employee and is willing to invest in them and found that perceptions of organizational rewards and procedural justice predicted POS.

According to Rhoades and Eisenberger (2002), the Perceived organizational support includes the different dimensions of beneficial treatments received by the employees such as fairness, supervisor support, and organizational rewards and favourable job conditions which lead to employee loyalty towards the organization. In addition to this, the authors also suggested that providing potential career opportunities such as training and promotions may increase the high level of concern for employees and the recognition of their commitment.

Allen et al. (2003) studied the antecedents of perceived organizational support and the role of perceived organizational support. The results were revealed and tested in two samples via structural equation modelling. Final outcomes suggest that perceptions of supportive human resources practices (participation in decision

making, the fairness of rewards, and growth opportunities) contribute to the development of perceived organizational support.

Ambrose and Schminke (2003) studied the role of interactional justice climate and moderated a mediation model how workgroup structure can enhance fair treatment in an organization.

In addition, this trickle-down research demonstrates the relationship between supervisors' perceptions and subordinates' responses. Further, they revealed that interactional justice is positively related to organizational citizenship behaviour and guide to perceived organizational support.

Weiliu (2004) this study connects the human resource management and organizational behaviour literature and provides guidance on how organizations can foster high levels of perceived support via implementation of appropriate HR practices.

The result of a study by Lisa Silbert (2005) revealed how different properties of tangible rewards can lead to an employee perception of organizational support. The analysis found that when employees have positive sight towards a reward and recall it frequently, they have increased levels of perceived organizational support.

According to Eisenberger & Stinglhamber, (2011) Organizations might enhance POS by means of a variety of human resources practices and policies such as by assuring employees that their jobs are secure, by offering valuable training or developmental programs that promote employees' personal growth, and/or by eliminating continual work overloads.

Beheshtifar et al (2012) study found a number of factors strongly associated with perceived organizational support. Results showed that there is a meaningful relationship between the perceived organizational support (and all its dimensions: supervisor support, justice, organizational rewards, and working conditions) with employees' work positive attitudes.

Yan Zhang et al (2012) Taking an inductive approach, Authors of this article identified organizational antecedents of Perceived organizational support in the People's Republic of China (PRC). The results of their research showed that the major antecedents of Perceived organizational support in the PRC included some common factors (e.g. procedural justice and supervisor support) as well as cultural-specific factors (e.g. care for disadvantaged employees and care for employees' family).

Wijewantha and Sangarandeniya (2014) proposed and tested a model connects perceived work-life benefits with organizational citizenship behaviour mediated

by perceived organizational support based on the social exchange theory. The study is done among 212 female teachers of the international school located in the western province of Sri Lanka. The results of this study revealed that the perceived usefulness of work-life benefits would promote the extra effort of workers in return for extra useful benefits.

Cheng Lee., et al (2017) this study examined the relationship between organizational justice and organizational commitment with perceived organizational support. Findings showed that all four dimensions of organizational justice except procedural justice were associated with perceived organizational support.

Table 1. key studies in perceived organizational support

FACTORS	CITATION
Leader-Member exchange	Wayne et al. (1997)
Satisfaction with the pay system	Mulvey et al (2000)
Working conditions	Rhoades et al. (2001)
supervisor support, organizational rewards and procedural justice	Rhoades et al. (2001)
Career opportunities, fairness, supervisor support, and organizational rewards and favourable job conditions	Rhoades and Eisenberger (2002)
participation in decision making, the fairness of rewards, and growth opportunities	Allen et al. (2003)
Interactive justice	Ambrose and Schminke (2003)
Appropriate HR practices.	Weiliu (2004)
Tangible Rewards	Silbert, L., 2005.
procedural justice and supervisor support	Yan Zhang et al (2012)
Supervisor support, justice, organizational rewards, and working conditions.	Beheshtifar,et al(2012)
Perceived benefit usefulness	Wijewantha&Sangarandeniya (2014)
Organizational support	Cheng Lee., et al (2017)

Discussion and conclusion

This article tried to explore and trace the factors of perceived organizational support. This review of the article highlights the factors from different authors. The organization should work at these factors of perceived organizational support. Along with this notion, Organizations are investing huge amounts in the provision of such support, but the outcomes of such investments are still questionable.

Therefore identify the critical factors on perceived organizational support and clarify why these critical factors are more suitable for Sri Lankan context through the exploratory research methods is needful for future researches. Additionally, most of these studies were primarily conducted in the western. However, Sri Lanka has a great difference in culture, political, and economic systems. These differences offer some relative distinctions from the western countries. Under this context, we can explore what critical factors of POS could be generalized to Sri Lankan context.

References

Allen, D.G., Shore, L.M. and Griffeth, R.W., 2003. The role of perceived organizational support and supportive human resource practices in the turnover process. *Journal of management*, 29(1), pp.99-118.

Ambrose, M. L., & Schminke, M. (2003). Organization structure as a moderator of the relationship between procedural justice, interactional justice, perceived organizational support, and supervisory trust. *Journal of applied psychology*, 88(2), 295.

Beheshtifar, M., Ali-Nezhad, H. and Nekoie-Moghadam, M., 2012. Investigation of perceived organizational support on employees' positive attitudes toward work. *Interdisciplinary journal of contemporary research in business*, 4(8), pp.432-442.

Chermack, T.J. and Passmore, D.L., 2005. Using journals and databases in research. *Research in organizations: Foundations and methods of inquiry*, pp.401-418.

Eisenberger, R. and Stinglhamber, F., 2011. *Perceived organizational support: Fostering enthusiastic and productive employees*. American Psychological Association.

Lee, O.C., Yusof, A., Geok, S.K. and Omar, Z., 2017. Volunteerism, Organizational Justice and Organizational Commitment: The Case of Sports Coaches in Malaysian Schools. *International Journal of Academic Research in Business and Social Sciences*, 7(7), pp.387-401.

Liu, W., 2004. *Perceived organizational support: Linking human resource management practices with important work outcomes* (Doctoral dissertation).

Miceli, M.P. and Mulvey, P.W., 2000. Consequences of satisfaction with pay systems: Two field studies. *Industrial Relations: A Journal of Economy and Society*, 39(1), pp.62-87.

Rhoades, L. and Eisenberger, R., 2002. Perceived organizational support: a review of the literature. *Journal of applied psychology*, 87(4), p.698.

Rhoades, L., Eisenberger, R. and Armeli, S., 2001. Affective commitment to the organization: The contribution of perceived organizational support. *Journal of applied psychology*, 86(5), p.825.

Silbert, L., 2005. *The effect of tangible rewards on the perceived organizational support* (Master's thesis, University of Waterloo).

Wayne, S.J., Shore, L.M. and Liden, R.C., 1997. Perceived organizational support and leader-member exchange: A social exchange perspective. *Academy of Management Journal*, 40(1), pp.82-111.

Wijewantha, P. and Sangarandeniya, Y.M.S.W.V., 2014. Impact of Perceived Work-Life Benefit Usefulness on Organizational Citizenship Behavior (OCB) the Mediating Role of Perceived Organizational Support (POS).

Zhang, Y., Farh, J.L. and Wang, H., 2012. Organizational antecedents of employee perceived organizational support in China: a grounded investigation. *The International Journal of Human Resource Management*, 23(2), pp.422-446.

Influence of Leadership Styles on Employee Performance: Study of Divisional Secretariats in Jaffna District

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Introduction

The adopted styles of leadership, considered by many researchers, have a significant effect on employees' job-related outcomes in organizations. Although the transformational-transactional leadership paradigm has received increased attention from the research community over the past few decades, the nonprofit sector has been largely neglected. Several types of research indicate that there are strong interconnections between leadership and employee outcomes, while in Sri Lanka, especially in the Jaffna District, the work on this subject is unfortunately very limited in its scope.

The objective of The Study

The main objective of the study is to determine the impact of transformational and transactional leadership styles as perceived by the employees on their job performance in the Divisional Secretariats in Jaffna District.

Research Gap

There is evidence of few studies on the subject of leadership in Sri Lanka in a few sectors; remarkably, studies on the impact of transformational and transactional leadership styles on various outcomes such as knowledge creation in Sri Lankan Software Industry (Athukorala, Perera, & Meedeniya, 2016), employee' performance in banking industry (Chamika&Gunasekara, 2016), Union and Organizational Commitment in public sector organizations in Sri Lanka (Dhammika, Ahmad, & Sam, 2013), employees' trust and their organizational commitment for non-teaching staff of the Sri Lankan Universities (Mathotaarachchi, 2013), etc. However, it is very rare to come across studies which have been conducted on the impact of leadership style on

employees' outcomes, particularly, in the Jaffna District. Therefore there is a need for investigating how far the leadership styles influence employee performance in Jaffna context.

Research Question

This research has been designed to address the following question. **“What is the influence of perceived transformational and transactional leadership on employees' performance in the Divisional Secretariats in Jaffna District?”**

The significance of The Research

The findings of this research will be useful for future researchers, students and academicians digesting the effects and importance of different leadership styles on employee performance. After determining the impact of leadership styles on employee performance through the present study, the Administrators of Divisional Secretariats will be able to use the findings of this research to develop leadership programmes that will help the leaders acquire relevant leadership skills for effective management and organizational performance.

Review of The Literature

Leadership

Cole (2005) defines Leadership as a dynamic process whereby one man influences other to contribute voluntarily to the realization and attainment of the goals objectives; aspiration of values of the group that is representing the essence of Leadership is to help a group or an Organisation to attain sustainable development and growth. Leadership has been studied extensively in the past century in the management field (Bass & Avolio, 1997). Current leadership theories indicate that leadership behaviours can be categorized into two main styles: transformational leadership and transactional leadership (Bass & Avolio, 1997; 2000).

Transformational and Transactional Leadership

Transformational style of Leadership comprises of the components of idealized influence, inspiration, intellectual stimulation and individualized consideration and has been suggested widely as the optimum style for managing change. Bass, Waldman, Avolio, and Bebb (1987) discovered that leaders scoring higher on Transformational Leadership factors have followers who display greater levels of transformational behaviours.

Transactional leadership is an exchange process. It is a matter of contingent reinforcement of employees based on performance. It motivates subordinates by

appealing to their personal desires, based on instrumental economic transactions. Bass (1985) and his associates (Avolio et al., 1999; Bass & Avolio, 1990; Hater & Bass, 1988) hypothesized three behaviour dimensions that underlie transactional leadership. They are a Contingent reward, Management by exception- active and Management by exception- passive.

Employee Performance

Employee performance is said to be a multidimensional construct (Befort&Hattrup, 2003). This has induced both practitioners and researchers to identify the dimensions of employee performance with the aim of managing employee performance in organizations. A widely accepted method of conceptualization of employee performance is the role-based model of performance (Welbourne, Johnson, &Erez, 1998).

Effect of Transformational and Transactional leadership on employee performance

The significant positive relationship between both transformational and transactional leadership styles and employee performance is reported in Pradeep and Prabhu (2011), Kehinde and Banjo (2014), Tsigu and Rao (2012) and Gimuguni et al. (2014). Rassol et al. (2015) found that the impact of transactional leadership was not much stronger as compared to transformational leadership on job performance. Andreani and Petrik (2016) showed that there is a positive and significant impact of transformational leadership on employee performance. The same findings have been reported in several studies (Jiang, Lu, & Le, 2016; Sparkling, Mollaoglu, &Kirca, 2016; Andreani& Petrik, 2016; Yammarino, & Dubinsky, 1994; Spangler, &Braiotta, 1990). According to Pradeep and Prabhu (2011), leadership is positively linked with employee performance for both transformational leadership behaviours and transactional contingent reward leadership behaviours. Based on the review of the literature the following hypotheses were formulated in the present study.

H1: Transformational leadership has a significant positive impact on the perceived performance of employees.

H2: Transactional leadership has a significant positive impact on the perceived performance of employees.

Methodology

To determine the answers to the research questions and test the proposed model, a quantitative survey method was used in the present study. The full range leadership model suggested by Avolio and Bass (2000) consists of three main styles: transformational, transactional and laissez-faire. However, for this research, only the transformational and transactional leadership styles were considered.

Table 1-a: Model Summary for Transformational Leadership and Performance

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.552 ^a	.305	.303	11.82697

a. Predictors: (Constant), Transformational leadership

Table 1-b: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17500.671	1	17500.671	125.115	.000 ^b
	Residual	39865.008	285	139.877		
	Total	57365.679	286			

a. Dependent Variable: Performance

b. Predictors: (Constant), Transformational leadership

Table 1-c: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.610	4.072		5.798	.000
	Transformational leadership	.585	.052	.552	11.185	.000

a. Dependent Variable: Performance

A sample of 287 employees was selected from the Divisional Secretariats operating in the Jaffna District. Transformational and Transactional Leadership styles were measured using the Multifactor Leadership Questionnaire (MLQ) Form 5X - rater form, developed by Bass and Avolio (2000). Employee Performance was measured using the Five Factor Performance Scale developed by Welbourne, Johnson and Erez (1998). The instruments were pretested before administering.

Data Analysis

Data analysis was conducted using SPSS 20.0 for Windows. The instruments used in the study were reliable and thus the researcher decided to proceed with the analysis.

The Table 1-a, 1-band 1-c depict the results of regression analysis. According to the regression analysis, transformational leadership has a significant positive impact on employee performance ($B=0.585$) and the relationship is significant at 0.01 level ($p<0.01$). The R-square value of 0.305 denotes that 30.5% of the variation in employee performance could be accounted for the variation in transformational leadership style.

Based on the results of the study, the hypotheses **H1 "Transformational leadership has a significant positive impact on the performance of employees"** is supported.

Table 2-a: Model Summary for Transactional Leadership and Performance

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.399 ^a	.159	.156	13.01030

a. Predictors: (Constant), Transactional leadership

The Table 2-a, 2-band 2-c depict the results of regression analysis for identifying the impact of transactional leadership on employee performance. According to the regression analysis, transactional leadership has a significant positive impact on employee performance ($B=1.115$) and the relationship is significant at 0.01 level ($p < .01$). The R-square value of 0.159 denotes that 15.9% of the variation in employee performance could be accounted for the variation in the transactional leadership style

Based on the results of the study, the hypothesis **H2: "Transactional leadership has a significant positive impact on Performance of employees"** is supported.

Table 2-b: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9124.310	1	9124.310	53.905	.000 ^b
	Residual	48241.369	285	169.268		
	Total	57365.679	286			

a. Dependent Variable: Performance,

b. Predictors: (Constant), Transactional leadership

Table 2-c : Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	25.334	5.927		4.274	.000
	Transactional leadership	1.115	.152	.399	7.342	.000

a. Dependent Variable: Performance

Discussion of Findings

This study revealed that both transformational and transactional leadership styles have a positive impact on employee performance. The results of the present study are consistent with the previous research findings. Thus, the significant positive impact of both leadership styles on employee performance was reported in Pradeep and Prabhu (2011), Kehinde and Banjo (2014), Tsigu and Rao (2012) and Gimuguni et al. (2014). Rassol et al. (2015) found that the impact of transactional leadership was not much stronger as compared to transformational leadership on job performance. Thus, the leader and the follower are in an agreement on what the follower would receive upon achieving the negotiated level of performance. The success of such leadership depends on the level of satisfaction the leader and followers have in following this system of performance-based appraisals.

Conclusion

This study provides a guideline to help managers better understand the need for adopting both transformational and transactional leadership styles to increase employee performance. Future researchers may expand the study to other districts and other public sector organizations to generalize the findings to the public sector in Sri Lanka.

References

- Andreani, F., & Petrik, A. (2016). Employee Performance as the Impact of Transformational Leadership and Job Satisfaction in Pt AnugerahBaru Denpasar. *Journal of Management and JMK*, 18(1), 25–32. DOI: 10.9744/jmk.18.1.25–32
- Athukorala, C., Perera, I., & Meedeniya, D. (2016). The impact of transformational and transactional leadership styles on knowledge creation in Sri Lankan software industry. In *Moratuwa Engineering Research Conference (MERCon), 2016*, 309-314. IEEE.
- Bass, B. M. (1998). *Transformational leadership: Industry, military, and educational impact*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Bass, B. M. (1999). Two decades of research and development in transformational leadership. *European Journal of Work and Organizational Psychology*, 8, 9–32
- Bass, B. M., & Avolio, B. J. (1997). *Full range leadership development: Manual for multifactor leadership questionnaire*. California: Mind Garden, Inc.
- Bass, B. M., & Avolio, B. J. (2000). *MLQ Multifactor Leadership Questionnaire sample set: Technical report, leaders form, rater form, and scoring key for MLQ From 5x-Short*. (2nd ed). Redwood City, CA: Mind Garden.
- Bass, B.M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.
- Bass, B.M. (1997). Does the transactional-transformational leadership paradigm transcend organisational and national boundaries? *American Psychologist*, 52 (2), 30-139
- Bass, B. M., Waldman, D. A., Avolio, B. J., & Bebb, M. (1987). Biography and the assessment of transformational leadership at the world-class level. *Journal of Management*, 13, 7–19.
- Befort, N., & Hatrup, K. (2003). Valuing task and contextual performance: Experience, job roles, and ratings of the importance of job behaviours. *Applied HRM Research*, 8(1), 17-32.
- Bennett, T. M. (2009). A study of the management leadership style preferred by IT subordinates. *Journal of Organizational Culture, Communications and Conflict*, 13(2), 1-26.
- Butler Jr, J. K., Cantrell, R. S., & Flick, R. J. (1999). Transformation leadership behaviours, upward trust, and satisfaction in self-managed work teams. *Organization Development Journal*, 17(1), 13-16
- Chamika, M.W., & Gunasekara, U.L.T.P. (2016). The Impact of Leadership Styles on Employee Performance. In *Proceedings of the Research Conference - 2016*, Department of Accountancy, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka. Retrieved from :https://www.researchgate.net/publication/303688190_The_impact_of_transformational_and_transactional_lead

ership_styles_on_knowledge_creation_in_Sri_Lankan_software_industry

[accessed Aug 7, 2017]

Cole, G.A. (2005) Personnel and Human Resource Management. London: ELST Publishers.

Dhammika, K.A.S., Ahmad, F.B., & Sam, T.L. (2013). Transactional, Transformational, Union and Organizational Commitment: An Examination of the Effect Flaws. *International Journal of Business and Social Science*, 4 (6), 103 - 111

Elgelala, K.S.K., &Noermijatib, (2014). The Influences of Transformational Leadership on Employees Performance (A Study of the Economics and Business Faculty Employee at University of Muhammadiyah Malang). *Asia-Pacific Management and Business Application*, 3 (1), 48-66

Gimuguni, L., Nandutu, J., &Magolo, A. (2014). Effect of leadership styles on the performance of local governments in Uganda, A case of Mbale District.

Hater, J.J., Bass, B.M. (1988). Superiors' evaluations and subordinates' perceptions of transformational and transactional leadership. *Journal of Applied Psychology*, 73 (4) 695-702

Kehinde, O.A., & Banjo, H.A. (2014). A test of the impact of leadership styles on employee performance: A study of the department of petroleum resources. *International Journal of Management Sciences*, 2(3), 149-160.

Mathotaarachchi, K.P. (2013). The impact of transformational and transactional leadership behaviours on employees' trust and their organizational commitment for the non-teaching staff of the Sri Lankan Universities. *The Macrotheme Review: A multidisciplinary journal of global macro trends*, 2(1), 56-92

Pradeep, D. D., &Prabhu, N. R. V. (2011). The relationship between effective leadership and employee performance. *Journal of Advancements in Information Technology*, 20, 198-207.

Rasool, H. F., Arfeen, I. U., Mothi, W., & Aslam, U. (2015). Leadership styles and its impact on employee's performance in the health sector of Pakistan. *City University Research Journal*, 5(1), 97-109.

Spangler, W.D.; Braiotta, L. (1990). Leadership and corporate audit committee effectiveness. *Group and Organization Studies*, 15, 134–157.

Sparkling, A.E.; Mollaoglu, S.; Kirca. A. (2016,) Research synthesis connecting trends in architecture, engineering, and construction project partnering. *Journal of Management & Engineering*, 33, 04016033.

Stacks, D. W. (2010). *Primer of public relations research*. (2nd ed), New York: Guildford

Tsigu, G. T., & Rao, D. P. (2015). Leadership styles: their impact on job outcomes in the Ethiopian banking industry. *ZENITH International Journal of Business Economics & Management Research*, 5(2), 41-52.

Welbourne, T. M., Johnson, D. E., & Erez, A. (1998). The role-based performance scale: validity analysis of a theory-based measure. *Academy of Management Journal*, *41*(5), 540-555.

Yammarino, F.J.; Dubinsky, A.J. (1994) Transformational leadership theory: using levels of analysis to determine boundary conditions. *Pers. Psychol.* *47*, 787–811.

Social Network Use and Personality- a Special reference to Colombo District, Sri Lanka.

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Introduction

Background of the Study

The Internet has had a major impact on social life (Bargh& McKenna, 2004). Hamburger and Ben-Artzi (2000) suggested that Internet use is related to personality. According to Amichai-Hamburger (2002), personality is a leading factor in understanding why people behave the way they do on the Internet. Since the net, by its very nature, is powered by human interaction, it follows that we cannot understand the workings of the Internet without understanding the personalities of those who surf it (Amichai-Hamburger, 2005). This link between personality and Internet use has been demonstrated using a number of different personality theories, Assessment of personality over the past two decades has revealed that personality can be characterized by a series of five dimensions (McCrae, 1992). This has resulted in a Five-Factor Model (FFM) of personality. It is also known as "Big Five model" of personality. They are Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. The Five-Factor Model (FFM) divides personality into a series of five-dimensional traits (McCrae, 1997).

On the other hand as usage of the Social networks are regularly engaged in by many individuals in all walks of life, it is a logical area to investigate from a personality perspective, particularly since level of usage is often discretionary rather than mandated, and thus more likely to reflect personal motives, needs, values, preferences and other personality attributes. Facebook, Myspace, Twitter and Friendster, Youtube are successful examples for social network sites. Facebook can support a wide range of social activities. That represents different users come to Facebook for different reasons and that these reasons may be associated with different types of use, such as connecting with strategies or interacting only with close friends (Andrew Smock, 2011). Facebook is a computer-mediated Social Networking System that has become one of the most popular means of communication.

In the current study, the researcher seeks to investigate, the role of personality traits in the uses of Social Network Sites based on Facebook. Specifically, the study examines how the personality traits (Neuroticism, Extraversion, Openness-to-

Experience, Agreeableness and Conscientiousness) relate to the use of the world largest Social Network Site as Facebook. Moreover few researches are conducted in South Asian countries based on the personality traits and uses of social network sites.

Research question

Is there any impact of personality traits on uses of social network sites in Colombo District, Sri Lanka?

The objective of the study

To examine the impact of personality traits on uses of social network sites in Colombo District, Sri Lanka.

Literature review

Personality Trait

Numerous theories and models have been developed over the years to better understand aspects of human personality. As the researches on internet use grew, several researchers examined the affection of personality traits on internet uses by utilizing the five-factor model (FFM).

Big five model

The FFM is a model of personality that representing personality traits at a broad level: neuroticism, extraversion, Openness to experiences, agreeableness, and conscientiousness (Ehrenberg, Juckes, White, & Walsh, 2008). This model suggests that the majority of individual differences in personality can be classified into these five broad domains. The “Big Five” model of personality dimensions has emerged as one of the well-researched and well-regarded measures of personality structure in recent years.

Neuroticism

Neuroticism is associated with several outcomes relating to belongingness needs. Neurotic individuals are less satisfied with G. Seidman / Personality and Individual Differences 54 (2013) 402–407 403 romantic partners (White et al., 2004) and more sensitive to rejection (Downey & Feldman (1996) and thus may seek acceptance and social contact through Facebook.

Extraversion

Extraversion is related to several belongingness-related constructs. Extraverts have more friends, higher quality friendships (Asendorpf&Wilpers, 1998) and more satisfying romantic relationships than introverts (White, Hendrick, & Hendrick,

2004). Thus, it is unsurprising that extraversion is associated with greater Facebook use (Gosling, 2011; Wilson, Fornasier, & White, 2010).

Openness

Openness to experience is defined in terms of curiosity and the tendency for seeking and appreciating new experiences and novel ideas. It represents an individual's curiosity, open-mindedness, and their willingness to explore new ideas (Moore K. & McElroy, 2012).

Agreeableness

Agreeableness is one's interpersonal orientation, ranging from soft-hearted, good-natured, trusting, and gullible at one extreme to cynical, rude, suspicious, and manipulative at the other. Agreeable persons represent the tendency to be sympathetic, courteous, flexible, kind, trusting and forgiving (Wehrli, et al., 2008).

Conscientiousness

It indicates the individual's degree of organization, persistence, and motivation in goal-directed behaviour. Conscientiousness represents the tendency to be reliable, responsible, organized and self-disciplined.

Uses Gratifications and Social Network Use

Previous studies about the usage of Facebook explain the different motivations that predict general use of the site and, in the case of (Joinson, 2008), predict the number of time users spends on the site. Another applied this approach to the World Wide Web and found that motives for use significantly predicted specific types of use (Ferguson & Perse, 2000). These findings provide the evidence that the main reasons for utilizing Facebook are socially derived, and that despite recent changes to some of the features of Facebook, users' motivations for creating and maintaining a Facebook page stay the same.

The impact of personality traits on the uses of social network sites

Most research regarding Facebook relates to identity presentation and privacy concerns (K.Moore&J.C.McElroy, 2012). The Five Factor Model of personality has been used extensively in the management and psychology fields to predict attitudes and behaviours. The FFM has received considerable empirical support and is now considered the standard personality trait measure (Wehrli, et al., 2008). The Five-Factor Model (FFM) is a broad classification of personality traits. The model separates the human personality into a series of five-dimensional traits (McCrae & Costa, 1999). Those five factors are neuroticism, Extraversion, openness to experience, Agreeableness and conscientiousness.

Personality as a predictor of the Internet and social media use

As the pool of research on Internet use grew, several scholars examined the influence of personality traits on Internet uses by utilizing the Five-Factor Model (McCrae & Costa, 1997). This model suggests that the majority of individual differences in personality can be classified into these five broad domains (Gosling, Rentfrow, & Swann, 2003). The line of research that has examined personality and Internet uses determined extraversion and neuroticism were significantly related to online activities (i.e. Amichai-Hamburger, 2002; Amichai-Hamburger & Ben-Artzi, 2003; Amichai-Hamburger, Wainapel, & Fox, 2002). Early studies of individuals' online activities found those high in extraversion and low in neuroticism were not as heavy Internet users as their more introverted, more neurotic counterparts (Amichai-Hamburger et al., 2002). They hypothesized that the anonymity of the Internet attracted people who were less comfortable with themselves and who otherwise had trouble making connections with others. Gender differences in early studies of the Internet were also evident – introversion and neuroticism were higher among women who turned to the Internet for its social services, such as online chats and discussion groups (Hamburger & Ben-Artzi, 2000). Neuroticism, which can be manifested as loneliness, was again linked to women's Internet use in a 2003 study that posited that lonely women were drawn to the Internet perhaps as a means to reduce their loneliness (Amichai-Hamburger & Ben-Artzi, 2003).

Conceptual Framework

Based on the above literature the following conceptual model is developed.

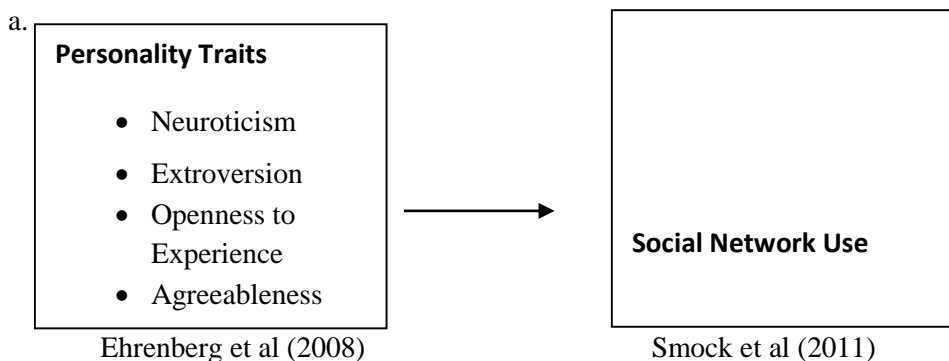


Fig.1. (a) Conceptual Model

Hypothesis

H1: There is an impact of Personality traits on the uses of Social Network Sites in Colombo district, Sri Lanka.

Methodology

The quantitative methodology has been applied and a questionnaire was used to collect the data. The researcher was concerned about the uses of social network sites based on Facebook in Colombo district. In that way, 120 school leavers were selected based on the convenience sampling method. Before the final data collection pilot study was undertaken. Prior to data analysis, data purification process was conducted to ensure the suitability of measures (Churchill, 1979). For ensuring the reliability of scale, Cronbach's alpha is computed. According to Nunnally (1978), the alpha of a scale should be greater than 0.70. Results of the study show that the scales are sufficiently reliable for the present study context. Finally, multiple regression analysis is used to analyze the data and test the hypothesis.

Results and Discussions

Table 1

Hypothesis	Independent variable	Dependent variable	β	Sig.	Adjusted R ²
Ha	Constant Neuroticism	SNU	0.805	0.000	0.711
Hb	Constant Extroversion	SNU	0.780	0.000	0.679
Hc	Constant Openness to Experience	SNU	0.620	0.000	0.522
Hd	Constant Agreeableness	SNU	0.372	0.002	0.271
He	Constant Conscientiousness	SNU	0.215	0.000	0.117
H1	Constant Neuroticism Extroversion Openness to Experience Agreeableness Conscientiousness	SNU	0.779 0.707 0.529 0.192 0.110	0.000 0.000 0.000 0.000 0.000	0.773

Source: Survey data

According to the above table, there is a positive impact of personality traits on the uses of Social Network Sites in Colombo district -, the fitted model encountered that personality traits have strong positive effects on Social Network Site usage. That means personality traits elements have 77.3% of the impact on Social Network Sites. These predictions had been significant at the P-value of less than

5% ($p < 0.05$) and the regressed model satisfactorily fits the data and the predictability power of the fitted model was high and residuals also followed a normal distribution.

Conclusions and Recommendations

The ultimate objective of the research is to examine the impact of personality traits on the uses of Social Network Sites in the Colombo district. The regression result shows that there is a strong positive impact of personality traits on the uses of Social Network Sites. It means that personality traits elements have strong positive effects on the uses of Social Network Sites in Sri Lanka and 77.3% of the changes in personality traits elements are explained by the uses of Social Network Sites in Sri Lanka. These findings are in the line with Joinson, (2008), Ferguson & Perse, (2000), Fornasier, & White (2010). Their findings provide the evidence that the main reasons for utilizing Facebook are socially derived, and that despite recent changes to some of the features of Facebook, users' motivations for creating and maintaining a Facebook page stay the same. Based on that, the hypothesis (H1) has been accepted.

During this study, the researcher encountered the following recommendations. This research has only been confined to the school leavers. Therefore, the same research can be extended to others such as university students, workforce etc. Moreover, other personal and interpersonal characteristics that may have a strong relationship to SNS usage. So in the future, these factors also can be studied. Further this study only using the quantitative data. Qualitative data also can be taken into account.

References

- Amichai-Hamburger, Y. (2002). Internet and personality. *Computers in Human Behavior*, 18, 1–10.
- Asendorpf, J. B., & Wilpers, S. (1998). Personality effects on social relationships. *Journal of Personality and Social Psychology*, 74, 1531–1544.
- Bargh, J. A., & McKenna, K. Y. A. (2004). The internet and social life. *Annual Review of Psychology*, 55, 573–590.
- Churchill, G.A. (1979). A paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research*, 16(1), 64-73.
- Downey, G., & Feldman, S. I. (1996). Implications of rejection sensitivity for intimate relationships. *Journal of Personality and Social Psychology*, 70, 1327–1343. [http:// dx.doi.org/10.1037/0022-3514.70.6.1327](http://dx.doi.org/10.1037/0022-3514.70.6.1327).

Gosling, S. D., Augustine, A. A., Vazire, S., Holtzman, N., & Gaddis, S. (2011). Facebook-related behaviours and observable profile information. *Cyberpsychology, Behavior, and Social Networking*, 14, 483–488.

Hamburger, Y. A., & Ben-Artzi, E. (2000). The relationship between extraversion and neuroticism and the different uses of the Internet. *Computers in Human Behavior*, 16, 441–449.

McCrae, R. R., & Costa, P. T. Jr., (1997). Personality trait structure as a human universal. *American Psychologist*, 52, 509–516.

Moore, K., & McElroy, J. C. (2012). The influence of personality on Facebook usage, wall postings, and regret. *Computers in Human Behavior*, 28(1), 267–274.

Nunnally, J.C. (1978), *Psychometric Theory*, 2nd ed., McGraw-Hill, New York, NY.

White, J. K., Hendrick, S. S., & Hendrick, C. (2004). Big Five personality variables and related constructs. *Personality and Individual Differences*, 37(7), 1519–1530.

Wilson, R. E., Gosling, S. D., & Graham, L. T. (2012). A review of Facebook research in the social sciences. *Perspectives on Psychological Science*, 7, 203–220.

The Application of Space Syntax Analysis in Project Identification: A Special Reference to the Moratuwa

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Introduction

Project success is decided on best project identification which provides guidance regarding setting project objectives to solve a given development problem or to use the opportunity for the development of a particular aspect (Westland, 2006). Project identification involves a review of alternative approaches or options for addressing a set of development problems and opportunities. Prior research found that the project identification can be handled by software technologies which are modern techniques to identify the projects (GTZ, 1996). The “Space Syntax Analysis” is a science-based Geographical Information System (GIS) and human-focused analysis, a plug-in for spatial network and statistical analysis. This provides a front-end for the depth map software within GIS, offering user-friendly space syntax analysis workflows in a GIS environment. In practice, the space syntax provides a fundamental project planning information including patterns of movement, density, land use and land value, urban growth and societal differentiation, safety as well as crime distribution, which can be used for generation and evaluation of project ideas.

The research objective is to identify the usage of space syntax technology in the project identification. Moratuwa, which is a large suburb of Colombo city on the southwestern coast of Sri Lanka, was selected to investigate the relationships between spatial layout and project identification with a range of social, environmental, technical and economic aspects. This study supports the space syntax methodology and enhances with GIS data analysis and visualization features to raise fundamental research question which is how space syntax analysis create the project ideas and help to project identification that is fed back from

practice. New development project ideas are generated using the space syntax analysis and GIS software. The result of this study helps to exchange knowledge for stimulates innovation, facilitates practice and ultimately benefits our surroundings and regions for sustainable development.

Literature Review

Project identification is important to assess the outset situation for establishing a system of objectives. **GTZ (1996) categorized project cycle into three phases such as** identification phase, concept phase (establish project concept, prepare decisions to implement the project) and implementation phase (operationalize planning, implement, adjust and update planning, and terminate project). Westland's (2006) project life cycle consists of four phases including project initiation, concept, implementation, and monitoring. During the project initiation phase, a business problem or opportunity is identified and defined in a business case that provides various solution options. Next, a feasibility study is conducted to investigate whether each option addresses the business problem and a final recommended solution is then put forward. After the solution is defined, a project is formed, and a project team is appointed to build and deliver the solution to the customer. According to Manual on Project Cycle Management (2009), the project concept should be relevant to priority local needs and consistent with policy priorities. In the project identification stage, project ideas are developed using different technologies and assessed the relevance as well as the feasibility. This is important to determine the scope of further work required during the formulation stage for individual projects.

Space syntax is used for a construction) project identification practices worldwide, for urban design, building design and design education professional. Space syntax was pioneered in the 1970s by Prof. Bill Hillier, Prof. Julienne Hanson and colleagues at The Bartlett, University College London. Built on quantitative analysis and geospatial computer technology, space syntax provides a set of theories and methods for the analysis of spatial configurations of all kinds and at all scales. The space syntax approach has since grown around the world in a variety of research areas and practical project applications including archaeology, criminology, information technology, urban and human geography, anthropology, and cognitive science. Dursun (2007) discussed the roles of space syntax in design through case studies in real design projects as follows. First, space syntax serves as a language for thinking and talking about space in the dialogue between architect and designed space. Second, it merges science-based knowledge into the design process, which constitutes the core of "evidence-based design" (Hanson 2001). Third, space syntax provides tools for architects to explore their ideas, to

understand the possible effect of the design, and to let them evaluate their design beforehand. Fourth, space syntax gives a chance for architects to evaluate the designs as living organism experienced by inhabitants.

Space syntax provides a configurative description of both urban structure and architectural space and attempts to explain human behaviours and social activities from a spatial point of view. Most space syntax studies concern issues related to urban patterns, but the method is also relevant for studies on the scale of urban and architectural design. Space syntax can produce a kind of knowledge which supports architects to find out how well their designs might work; what kinds of properties their design solution has, and so on. In practice, urban planners and designers can predict pedestrians' movement flows before the actual development of real urban systems and buildings by analyzing the morphological structure of the design plan using space syntax. It makes the deployment of non-discursive intuition more rational and therefore more discursive (Hillier and Hanson 1997). Space Syntax seems to offer a natural platform for such methods (Jiang, 2002), with its ability to handle geographic and geometric data associated with attribute information, to easily perform spatial, mathematical and statistical calculations, and to visualize the results. These previous researches and its findings and ideas were very helpful for this research.

Methodology

This research is based on the secondary data. Further, field study and observation of the city formation and existing functions of the area were used to get primary data. The application of this technique initially involves the graphic representation of the Moratuwa urban street network based on the cartographic information of the area. Segment map was built in the axial map which segments allowing the analysis of street segments. Then the integration index (topological accessibility or permeability) was used for the analysis.

After the construction of axial and segment maps of these systems, Geographical Information System and Depth map software were used for the calculation of the connectivity matrix and configurationally measures and to identify their configurationally features according to the variables from space Syntax studies. Analyses always consider a 2D layout model. All of them start from the subjective process of separating elements of spatial configuration. The subjective step involves considering all the visibility obstacles. The result is an estimated model where open public space is bordered and painted in contrasting colours (like black and white). The next step is to draw the possible smallest number of the longest lines of movement (lines of sight) in space. The whole space should be covered with them to show all the possibilities for movement. It represents the relationships of accessibility between all axial spaces of a layout model. Axial lines which

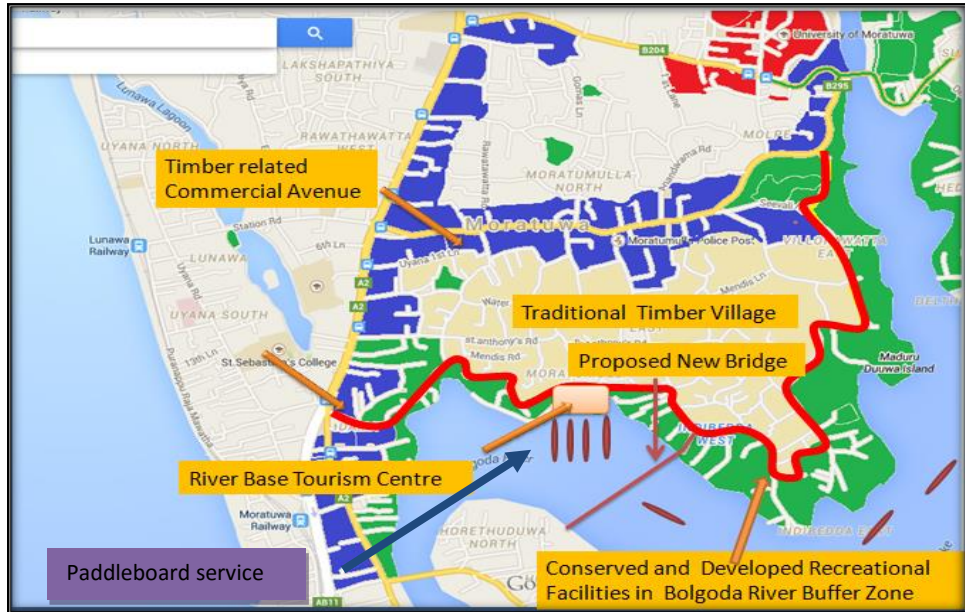
represent spaces are presented as circles (nodes) which are linked by lines showing intersections with subsequent axes. Nodes are numbered according to the numbers on the axes. The number of immediate neighbours that are directly connected to a node is a local measure of connectivity. The algorithm described below serves to examine axial maps and count all four syntactic measures. The result of axial map calculations, a spatial accessibility map, or spatial integration maps are obtained, where lines representing the most accessible spaces are marked red, and the least available blue. The algorithm used to calculate the shortest paths from one topologically specified point to any other point on the map. Such an operation is performed for each segment of the map. It turns out that the obtained results are almost always the same as the ones from studies where users are counted empirically.

There are four syntactic measures calculated such as connectivity, depth, control value and local and regional integration. Connectivity measures the number of neighbour axes directly connected to space. Depth or degree of depth was counted in a graph and is determined by parameter k. Parameter connectivity considers immediate neighbours and depth considers the neighbours of the k-th degree. Connectivity and depth measures can be written as a sum:

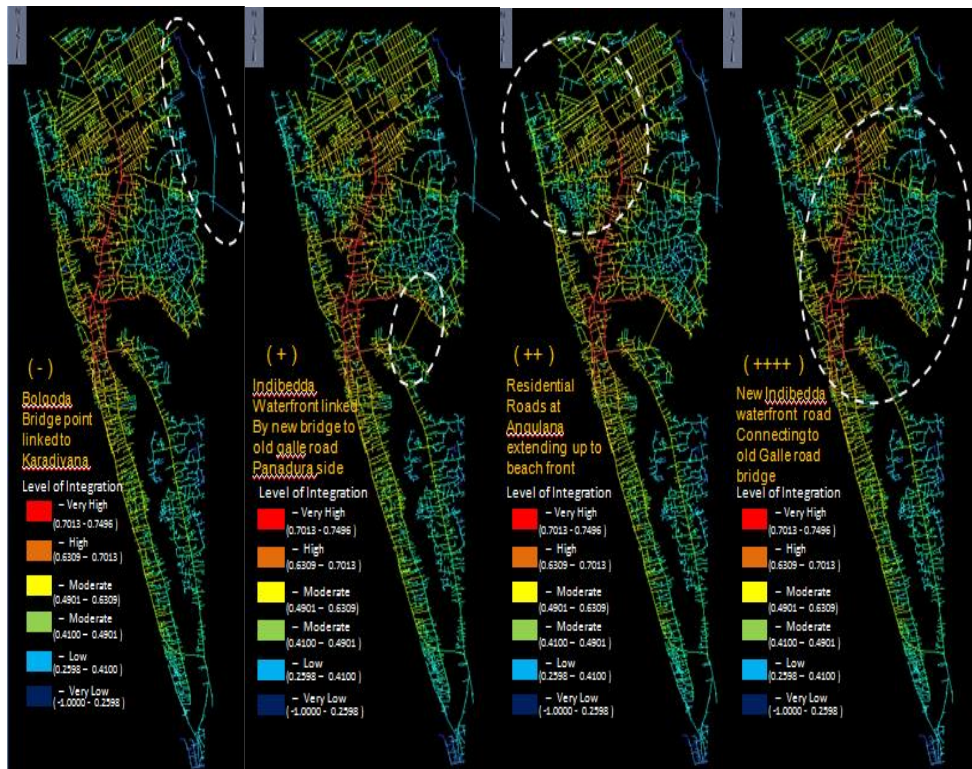
$S = \sum_{d=1}^m s \times N_s$	<p style="text-align: center;">Connectivity iff $m = 1$</p> <p style="text-align: center;">Local depth iff $m = k \quad 1 < k < l/\text{local}$</p> <p style="text-align: center;">Regional depth if $m = l$</p>
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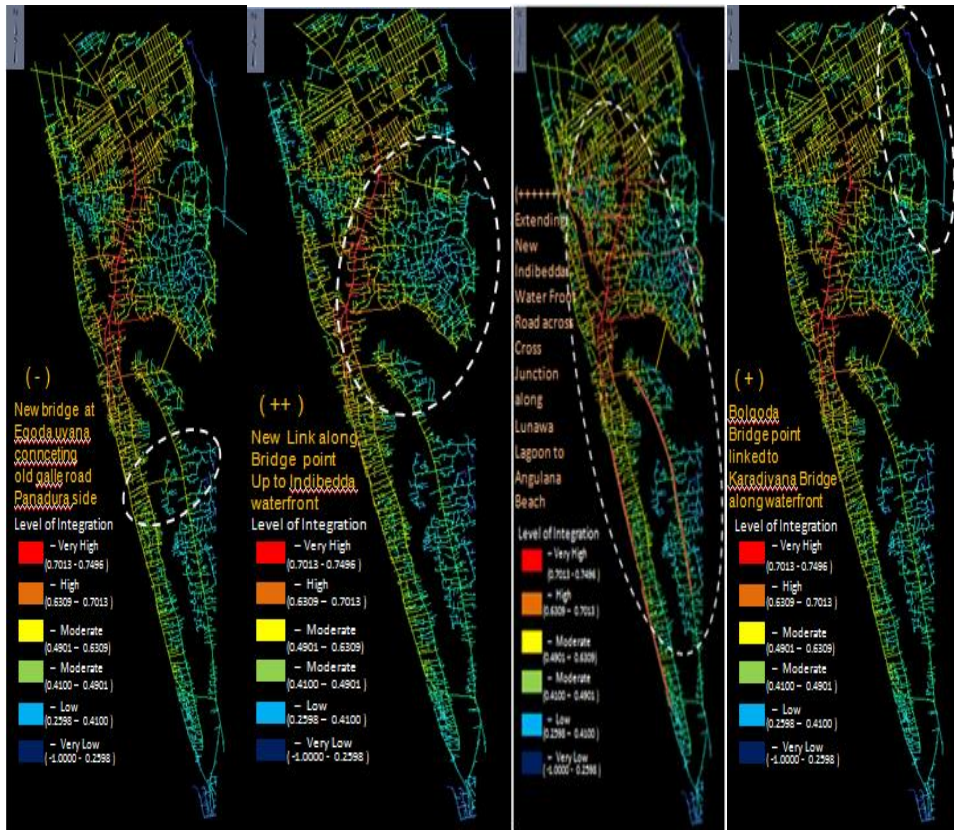
Where, k – Parameter, s – operator (s is an integer), l – the shortest distance, N_s – the number of nodes with the shortest distances. Where $1 < k < l$, usually three steps are adopted for the calculation of local depth, i.e. k is equal to 3 (this means that we consider lines within three steps from an axial line). We can also note that connectivity is equivalent to local depth if $k = 1$.

The control value is the sum of the inverse values of the parameter connectivity of all neighbours from the selected axial line. It measures the degree to which a given space controls access to all immediate neighbours of the axis line. It takes into account all alternative connections. This is a dynamic local measure. Integration also called availability is a variable that refers to how space is connected to other spaces in its surroundings. This is the key parameter leading to the understanding of the relationships that exist between users and the urban space and it is a global measure. It can be used to predict the potential of meetings in the space because it is directly linked to the presence of people in a given location. The greater integration of the space, the more people will appear in it. For this reason,



Map:4, Identified Future Development Projects





Map:5, New Simulation space syntax maps

Projects and ideas were identified based on the prepared polycentric spatial map and given an indication of future developments through this research using space syntax technology. (Map: 03). The potential of the most viable concepts has been overlooked at the identification phase. Those are new road project (Extending New Indibedda Water Front Road across Cross Junction along Lunawa Lagoon to Angulana Beach), formation of Traditional Timber Village and Timber related commercial avenue, Recreational Zone project (300m Buffer Zone along the Bolgoda River), River based Tourism Centre project and Paddleboard service project.

At the project identification stage, ideas came up with project solutions that can have a positive contribution to the environment. If not positive the projects should be at least neutral in the pace of their impact on the environment. One of the main reasons for the failure of projects either at an early stage of the implementation or not being sustainable after getting into operation stages is low attention given at the project identification and selection stage.

Recommendation

The project identification stage is important to the sustainability of the project. Different scientific software chooses projects from many alternative ideas or schemes that balance between local demands, strategic priorities and research or baseline studies. Project identification should be both demand and supply driven. It should not only be focused on the needs of the local entities but should also look at the overall strategy of the government in particular and donor agencies in general. The needs to consult the country's strategy from the allocation of scarce resources spatially. The local needs are enormous, particularly in any projects. It is difficult to meet all these local needs with the vast area. Therefore, there is a need to prioritize through a different strategy. The pre-feasibility studies at project identification stages should seriously look at the criteria of selection in order to filter those projects that have versatile effects on the overall economy of the country. Lack of paying attention to this stage or phase of the project cycle can lead to the identification of projects that can lead to failure in meeting the envisaged objectives and goals.

References

Turner, A., (2007). 'UCL Depth map 7: From Isovist Analysis to Generic Spatial Network Analysis', In Turner, A. (Ed.), *New Developments in Space Syntax Software*. Presented at the 6th International Space Syntax Symposium, Istanbul Technical University, Istanbul, p.43–51.

Varoudis T., (2012), 'depthmapX Multi-Platform Spatial Network Analysis Software', Version 0.30 Open Source. Available at: <http://varoudis.github.io/depthmapX/>

Gil, J., Stutz, C., Chiaradia, A., (2007). 'Confeego: Tool Set for Spatial Configuration Studies', In Turner, A. (Ed.), *New Developments in Space Syntax Software*. Presented at the 6th International Space Syntax Symposium, Istanbul Technical University, Istanbul, p.15–22.

Mathivathany.V, (2016), *The Application of Space Syntax Analysis in Urban Planning with existing Practice: Case Study of Jaffna Municipal Council Area*, Presented at the South Eastern University Arts Research Session, Sri Lanka, pp.7-15.

Westland, (2006): *The Project Management Life Cycle a complete step-by-step methodology for initiating, planning, executing & closing a project successfully*, (<http://www.netLibrary.com>)

RPRLGSP, May 2009: MANUAL on PROJECT CYCLE MANAGEMENT: Guidelines on Identification, Design and Implementation of Successful Local Authority Projects: <http://www.rprlgsp.go.ke>

Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH (1996) : Project Cycle Management (PCM) and Objectives-Oriented Project Planning (ZOPP): Guidelines