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**Faculty of Management and Finance**

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## **MESSAGE FROM THE VICE CHANCELLOR**

It gives me immense pleasure to convey my compliments on the 13<sup>th</sup> International Research Conference on Management and Finance (IRCMF - 2018) of the Faculty of Management & Finance, University of Colombo. Proceeding with the International Conference for thirteen consecutive years together with continuous advancement by the Faculty is certainly admirable.

The Conference serves as an annual event that brings together like-minded researchers to one platform which offers valuable opportunities for academia and practitioners engaged in various research endeavors to present their work and engage in productive research discussions. The Doctoral Colloquium which forms a part of IRCMF is an added value to the event providing enormous opportunities for current and prospective PhD candidates to share their research ideas and obtain expert opinions for further improvements. .

The exemplary efforts of the Faculty in promoting the collaboration of academia with the industry has resulted the Industry Dialogue, which is being yet another momentous constituent of IRCMF. I strongly believe the theme of the Industry Dialogue 2018, 'Calibrating businesses for ethical and professional conduct', would be a well-timed matter of interest for academics and practitioners alike. This forum would definitely create a great platform for both parties to build up a scientific conversation on the contemporary issues in today's business milieu. Within the current corporate context, I am happy to see the Faculty taking an initiative to evoke and calibrate sense of ethical and professional conduct.

By and large, a Conference of this nature assists academia and other participants to foresee critical concerns and new developments within the fields of Management and Business and helps them to produce ground-breaking research. I am indeed contented about the current research direction of the Faculty.

I extend my best wishes to the Organizing Committee of the 13th International Research Conference on Management and Finance and all the other contributors who have rendered their support to make this event a success.

**Senior Professor Lakshman Dissanayake**

Vice Chancellor

University of Colombo

Sri Lanka

### **MASSEAGE FROM THE DEAN**

I am delighted to send this message for the 13<sup>th</sup> Annual International Research Conference on Management and Finance (IRCMF 2018) of the Faculty of Management and Finance of the University of Colombo.

The IRCMF 2018 is coupled with two salient events viz. the Doctorial Colloquium and Industry Dialogue. The Doctorial Colloquium presents a fertile ground for potential doctorate candidates to share their research ideas and thoughts with renowned academics and obtain treasured options for further improvements. In the similar vein, the Industry Dialogue creates a forum for various stakeholders such as industry practitioners, policy makers, academics and research students to debate and discuss on the theme of “*Calibrating business for ethical and professional conducts.*” Quintessentially, this forum epitomises our commitment, dedication, and dedication to working hand in hand with the industry in Sri Lanka.

A growing body of research is vital for management practices and for improving organisational outcomes. Certainly, this type of conference not only brings all the researchers to one platform, but it also inculcates the research culture among the fraternity, thereby, contributing to the development of the nation. In this light, IRCMF strives to create a research culture among academia and it is a platform for academics to discuss and debate scholarly dilemma from different theoretical, methodological and practical lenses by bringing different ideologies under one roof to provide opportunities to exchange ideas face to face and to establish research relations. The articles submitted here are fitted with the overarching objective of our research conference and had a peer reviewed process to maintain the quality of the articles.

I am sure that the conference of this type will inculcate the much needed research culture among the academics and trigger interactions among researchers to exchange the ideas of recent advances in the area of management. I take this opportunity to thank conference co-chairs, track coordinators, reviewers, organising committee, conference secretariat, and more specifically authors, for their contribution in successfully organising and managing this conference.

I wish the Annual International Research Conference on Management and Finance (IRCMF) 2018 a grand success.

**Dr. M P P Dharmadasa**

Dean, Faculty of Management & Finance  
University of Colombo  
Sri Lanka

## MESSEGE FROM CO-CHAIRS OF THE CONFERENCE

It is our great pleasure to welcome you to the 13<sup>th</sup> International Research Conference on Management and Finance (IRCMF) 2018. We are indeed privileged to be the Co-chairs of this prestigious International Conference in year 2018. Upon the trust retained on us, we are dedicated to share all high quality research work at this event, with the support of both local and international scholars.

The IRCMF 2018 comprises full paper-driven parallel sessions presenting the latest research in different fields of Management including a plenary session to inspire discussions as well as educational exchanges among numerous stakeholders. The Doctoral Colloquium adjoined to the IRCMF offers the opportunity to prospective PhD candidates to showcase their research ideas and to gather important insights from a distinguished panel of academics. Moreover, the Industry Dialogue brings together the academics and practitioners to debate and discuss the timely theme of; *'calibrating businesses for ethical and professional conduct'*.

The success of our Conference is exclusively depending on the aptitudes and the dedication of the staff of the Faculty of Management & Finance. Being the co-chairs of this event, we are delighted to acknowledge and admire all hardships borne by the organizing committee who have made this event a great success. We would also like to offer our special tribute to conference secretaries, track chairs and track coordinators, session chairs, panel of reviewers, editors, members of the organizing committee, the industry dialogue and doctoral colloquium organizers, and plenary speakers for their immense contributions. Further, the friends outside the university and the conference sponsors are also profoundly valued. The extraordinary support of the Dean of the Faculty and the unwavering energies received from the Vice Chancellor to inculcate a research culture in the University of Colombo have definitely kept us making this event a great attainment. Notably, the utmost gratitude goes to the participants of the Conference, who have principally made this event a success.

We are honored to have Professor Jason D. Shaw of Nanyang Technological University, Singapore as our keynote speaker and renowned panelists representing various industries for the Industry Dialogue.

While congratulating the authors for being a part of IRCMF 2018, we hope you all will enjoy the conference!

IRCMF 2018 – Conference Co-chairs

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## PROFILE OF THE KEYNOTE SPEAKER

Professor Shaw is the Shaw Foundation Chair in Business in the Nanyang Business School at Nanyang Technological University, Singapore. He studies employment relationships, financial incentives, employee turnover, and social networks. He is currently the Editor-in-Chief of the *Academy of Management Journal*, the leading empirical journal in the field of management.

He has published papers in the *Academy of Management Journal*, *Academy of Management Review*, *Strategic Management Journal*, *Journal of Applied Psychology*, *Organization Science*, *Personnel Psychology*, and *Organizational Behavior and Human Decision Processes*, among other outlets. His work also appears in practitioner-oriented publications such as *Harvard Business Review*, *Compensation and Benefits Review*, and *World-at-Work Journal*. His 2017 co-authored paper on social capital development and entrepreneurship in rural villages in India recent won the “best paper” award for the *Academy of Management Journal*.

Professor Shaw has given and scheduled to give more than 130 invited talks on 6 continents. Prior joining NTU, Professor Shaw was Yeung Kin Man Professor in Business Administration at the Hong Kong Polytechnic University, the Curtis L. Carlson School-wide Professor at the University of Minnesota, the Clark Material Handling Company Professor of Management at the University of Kentucky, and an Assistant Professor at Drexel University. Prior to his academic career, he was an analyst for the Boeing Company.

### Abstract of the Keynote Speech: Some reflections on publishing

Professor Shaw will offer an extensive commentary on publishing in top-tier journals in Management discipline. His speech will highlight some of the key factors required in order to be succeeded in the journey of publishing. Specifically, the keynote speech would address on the importance of the ‘one-sentence’ contribution statement; the value of starting with theory and outline the factors which differentiate rejected papers from those that receive revision decisions. Furthermore, Professor Shaw will speak on the notion of ‘academic craftsmanship’ and its ultimate goal in authoring and publishing individuals’ own academic masterpieces.

## DOCTORAL COLLOQUIUM – 2018

The Doctoral Colloquium has become a key constituent of IRCMF since year 2015. This event was introduced by the Faculty with the prime aim of creating a platform for MPhil/ PhD students in the field of Management and Finance to present their work-in-progress to an academic panel and obtain comments for future improvements.

In addition to work-in-progress presentations, this year's colloquium also includes research proposal presentation, which provides an opportunity for doctoral students who are at the initial stage of the study to present their research proposals and a round table discussion, where prospective doctoral candidates are able to present their broader research ideas to experts in the area. Other highlights of this year's colloquium will be an insightful guest speech on getting published in top journals as well as an experience sharing session on managing the PhD journey.

In this year's colloquium there will be 11 participants for round- table discussions, 08 presenters for research proposal presentations and 03 presenters for work-in-progress presentations ranging across the fields of Accounting, Finance Human Resource Management, General Management and Marketing Management.

This colloquium would be an opportunity for research students to network with renowned academics and peers in their fields of study through interactive and intellectual discussions. We hope that the presenters would get the much needed confidence and constructive comments to further improve their postgraduate research.

Co-chairs of Doctoral Colloquium- 2018:

**Dr. Kumudinei Dissanayake**

Senior Lecturer

Department of Management and

Organizational Studies

Faculty of Management & Finance

University of Colombo

Sri Lanka

**Dr. Tharusha N. Gooneratne**

Senior Lecturer/ Head

Department of Accounting

Faculty of Management & Finance

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Sri Lanka

## INDUSTRY DIALOGUE: A GLIMPSE

In an era where questions about what is right and wrong seems to be taking centre stage, where questions of integrity – be it in the conduct of politics or business – seems to be omnipresent, it is the need of the hour to have an insightful conversation about ethics in business. Calibrating the industry and its professionals with good business practices is essential if Sri Lankan businesses are to compete in the global market. Practicing ethically driven good business practices are not just good for business, but it is also good for the individual as well as the country and the society in which we live.

In this backdrop, the Industry Dialogue of the 13<sup>th</sup> International Research Conference on Management and Finance (IRCMF) is devoted to the theme of “*Calibrating Businesses for Professional and Business Ethics*”. For this discussion, the Faculty of Management and Finance of the University of Colombo has invited a panel of experts with knowledge as well as industry experience in dealing with professional and business ethics. The panel members of this year’s Industry Dialogue are:

Mr. Ariyaseela Wickramanayake – Chairman  
Pelwatte Dairy Industries Ltd.

Mr. Kulathunga Rajapakshe – Managing Director  
DSI Samson Group (Pvt) Ltd

Mr. Lakshman Silva – Director/Chief Executive Officer  
DFCC Bank

Mr. Thasira Gunathilake – Attorney-at-Law/ Visiting Lecturer  
University of Colombo

We believe that this dialogue will provide rich insights for industry professionals in crafting their business practice, and for academics in their teaching and future research.

### **Dr. Seuwandhi B. Ranasinghe**

Moderator of the Industry Dialogue – IRCMF 2018

Senior Lecturer

Department of Management & Organization Studies

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Track Chair : Dr. A.A. Azeez

Track Coordinator : Mr. A.M.C.P. Atapattu

### **Management, Organization Studies and Management of Technology**

Track Chair : Dr. T.R. Perera

Track Coordinator : Ms. Jayani Attapattu

### **Entrepreneurship and Small Business Management**

Track Chair : Dr. G.A.T.R. Perera

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## **Accounting and Management Information Systems**



## Appearance, Disappearance and Reappearance of Activity Based Costing: A Case Study From A Sri Lankan Manufacturing Firm

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### Abstract

The purpose of this paper is to identify why some activity based costing (ABC) implementations do not continue in certain organisations despite their early interest, but later regains importance. Accordingly, the paper explores the reasons for the appearance, disappearance and reappearance of ABC in a Sri Lankan porcelain manufacturing firm, which we call Gamma, using the qualitative case study approach. Guided by the theoretical ideas of Actor-Network Theory (ANT), we follow organizational (human) actors and their interactions with non-human actors within the particular context of Gamma, during the various phases of the ABC project. Our findings suggest that appearance, disappearance and reappearance of ABC have been shaped by a network of actors comprising of both humans and non-humans, and that the implementation and continuation of ABC is constrained by the interests of these human and non-human actors both inside and outside of the firm. While most prior research has focused on either the success or the failure of ABC, this study brings out its reappearance, hence a useful addition to prior literature. The findings of this study also have important implications for practitioners striving to revive ABC projects in organisations.

**Keywords.** Activity Based Costing, Reappearance, Actor-Network Theory, Case Study, Sri Lanka

### 1. Introduction

Traditional management accounting systems have been highly criticized in the 1980's by both practitioners and academics. Questions have thus been raised on the relevance of traditional management accounting systems to contemporary business firms in providing useful information keeping pace with the dynamics in the environment (Johnson & Kaplan, 1987). A number of new management accounting techniques have thus been developed to bring back the lost relevance of management accounting. Activity based costing (ABC) is such a tool introduced by Cooper and Kaplan in 1988 as a means to overcome the weaknesses of traditional costing.

ABC has gained prominence in the area of accounting research as a technique that employs multiple cost drivers to allocate overhead costs, in contrast to traditional costing systems (Innes & Mitchell, 1997). ABC, first assigns costs into activities and then these costs are allocated based on identified cost drivers of each activity. An ABC system enhances the accuracy of product costing (Innes & Mitchell, 1997), and information produced by ABC improves decision making in organizations (Major & Hopper, 2005), helps in identifying non-value adding activities and serves as a better tool for pricing (Lere, 2000).

The technique of ABC has been successfully diffused to various countries in the world (Bjornenak, 1997; Joshi, 2001), and there are numerous stories on success of ABC in the prior literature (Kurumeweide, 1998; Shields, 1995). Despite its advantages, the technique has been subjected to criticisms as well. Some claim that ABC merely redefines conventional overhead costing (Armstrong, 2002). Innes, Mitchell, and Sinclair (2000) as well as Major and Hopper (2005) found that managers resist ABC adoption in their organizations due to high costs and complexities. Therefore, not all ABC implementations sustain, and some firms even move back to traditional costing after unsuccessful ABC episodes.

Literature highlights behavioral, operational and implementation issues which have led to unsuccessful ABC experiences in organizations (Malmi, 1997; Major & Hopper, 2005). Researchers call for more studies on ABC claiming that in some organizational settings it is unlikely to sustain no matter how skillfully the implementation is managed (Malmi, 1997; Anderson, Hesford Young, 2002). Furthermore some organizations move back to ABC reviving their earlier unsuccessful ABC projects. Although important, currently little is known on the reasons behind such changing fates of ABC, thus the focus of this study. We shed light on the ABC experience of a porcelain manufacturing firm, Gamma, tracing the changing fate in its ABC project from successful appearance in 2004 to its discontinuation in 2006 and reappearance in 2016.

More particularly, this paper provides evidence on the reappearance of ABC; an area which prior studies have laid limited emphasis. We demonstrate that the appearance, disappearance and reappearance of ABC in Gamma are shaped by a network of human and non-human actors both inside and outside the organization. Findings of this study makes a significant addition to the existing body of literature, and provides valuable insights to practicing managers on reviving, once discontinued management accounting techniques, such as ABC. The research questions of the study are: what motivated ABC implementation in the case organization?; why did ABC not continue; and why did it later reappear in the case organization?

The rest of the paper is organized as follows. Section two reviews past literature on ABC, and section three presents the research context, methodology and theoretical lens of the study. Section four offers the findings of the research, followed by a discussion of findings and conclusions in section five.

## 2. Literature Review

There is an extensive body of literature on various facets of ABC (Innes & Mitchell, 1997; Bjornenak, 1997; Cardes & Gooneratne, 2016; Jones & Dugdale, 2002; Shield, 1995; Malmi, 1997; Major & Hopper, 2005). According to Innes and Mitchell (1997) ABC is a technique that employs multiple cost drivers to allocate overhead costs. ABC is also claimed to be an information system that assists decision making (Swenson, 1995). Further, Cooper and Kaplan (1988) claim ABC technique as a map of the company's costs and profitability based on business operations of the company. Studies by Major and Hopper (2005) as well as Innes et al. (2000) have concluded that after the adoption of ABC the costs of organizations become more accurate and controlled. Assigning overhead costs of activities for orders, customers and products based on actual resource consumption as done through ABC provides organizations with new insights to products, customers and competitors (Innes et al., 2000), and can be used to enhance product pricing (Lere, 2000).

Despite these theoretical merits, authors have raised concerns regarding the technical efficiency of ABC, as an allocation system. Friedman and Lyne (1995) as cited in Gossellin (2007) argue that given the nature of allocations being arbitrary, decisions based on allocated costs will also be doubtful, as possibilities exist for more than one way of allocation, with equally valid rationales. Major and Hopper (2005) also points out that ABC gives rise to conflicts among professional groups due to shift of power within the organizations. Furthermore, problems in identifying cost drivers and direct allocation methods make it difficult for organizations to adopt and maintain ABC (Major & Hopper, 2005; Malmi, 1997; Innes et al., 2000).

Regardless of these weaknesses, many organizations which have implemented ABC have often gained productive results by successfully managing technical, organizational and behavioral factors (Innes et al., 2000; Shield, 1995). Shields (1995) found that ABC success is more linked to behavioral and organizational factors, such as top management support, integration with competitive strategy initiatives, such as total quality management (TQM) and just-in-time (JIT), performance evaluation and compensation, non-accounting ownership of the ABC project, training provided in design, implementation and use of ABC and the provision of adequate resources. Shedding light on this debate, Krumwiede (1998) suggested that the critical success factors change at different stages of implementation. While weaknesses of traditional cost system, large size of the organization and IT infrastructure facilities were important at early stage of adoption of ABC, top management support, non-accounting ownership and training were critical for the success during the final stages of the implementation. In addition, the need for strategic planning, continuous improvement, high competition and sophisticated technology helps ABC success (Baird, Harrison, & Reeve, 2004; Drury, 2000).

Notwithstanding the above, Gosselin (2007) states that many organizations have still not considered adoption of ABC and that some firms that have implemented have also abandoned the technique. This is further confirmed through the findings of survey study of Innes et al. (2000), on adoption of ABC among UK's largest companies in 1994 and a follow up study in 1999 to identify the levels of success of ABC. They concluded that some companies while implemented ABC subsequently abandoned it; some investigated and rejected it; while certain others rejected ABC and never investigated its possible use. Given its theoretical merits and such differing levels of successes, failures and revivals of ABC projects in practice, ABC is a topic worthy of inquiry. However, most researches to date have been factor studies, which identify critical factors that lead to the failure of ABC. Accordingly, resistance of managers due to high cost and complexity, lack of top management support, problems related to efficacy of ABC, difficulties in selecting cost drivers and identifying cost activities, resistance of employees are found to be the major factors that leads to its failure (Innes & Mitchell, 1997; Innes et al., 2000; Malmi, 1997; Jones & Dugdale, 2002; Major & Hopper, 2005). Malmi (1997) claims that although factor studies of ABC failures are promising in early stages, more empirical studies seeking alternative and complementary explanations relating to problems and successes are required. Focusing on this point, this study extends prior literature by addressing the research issue of why some ABC projects do not continue in some organizations despite their early interest and implementation, however later gets re-introduced. This to date has reserved limited research attention. Moreover, through the review of prior literature, it was evident that studies on ABC often focus on one stage of implementation, such as the adoption stage, design stage, implementation stage or discontinuation stage. Revival of the technique following its discontinuation in an organizational setting has been scantily focused. The current study fills this gap in prior literature by providing empirical evidence on the changing fates of ABC in terms of the appearance, disappearance and reappearance in the context of a manufacturing firm in Sri Lanka over a period of time (2004-2017).

### **3. Research Context, Methodology and Theoretical Lens**

#### **3.1 Research context**

The case site, which we refer to as Gamma due to confidentiality reasons was established about thirty years ago as a fully owned subsidiary of Sri Lankan government entity. After few years it was privatized. It has a highly skilled and experienced workforce of over 1,000 employees. Gamma specializes in producing exclusive tableware to a niche export market. It is renowned for high quality in its designs and decorations, and has won numerous awards over the years in the areas of exports, productivity and quality.

The organization has a manufacturing capacity of about 1.6 million pieces per month and about 85% of its products are exported to Europe, USA, Japan, Spain, Germany, India,



Pakistan and Egypt. The products are sold under the company's brand names, co-branded with regular agents, wholesalers and retailers or sold under reputed brand names. Local sales are carried out through their own show-rooms and agents.

ABC was introduced to Gamma in year 2004 and has been implemented successfully until 2005. In 2006 it discontinued ABC and moved back to traditional costing, while in 2016 ABC has been re-introduced in the firm.

### **3.2 Methodology**

Keeping with similar research leaning on actor-network theory (ANT) (Alcouffe, Berland, & Levant, 2008; Briers & Chua, 2001; Justesen & Mouritsen, 2011; Lowe, 2001a) to capture the actor-network relationships in the changing fate of ABC in the particular organisational context of Gamma, this paper adopts the qualitative methodology and single-site case study approach (Silverman, 2000, 2006; Yin, 2009). Qualitative method was followed as the nature of this research questions required exploration (Denzin & Lincoln, 2000). The case study style was followed as it appeared that this strategy is useful for answering 'how' and 'why' questions (Yin, 2009), and this study focuses on exploring research questions, such as, what motivates ABC implementation in the case organization; why it did not continue, and why was it later re-introduced?

In collecting data for the study, initially, the company website, annual reports, newspaper articles as well as industry capability reports of ceramic industry in Sri Lanka were referred to gain an understanding of the research context. A number of telephone interviews that span between 10 to 15 minutes were also held with AGM-Finance of Gamma to get an overview about the ABC project before conducting the pilot study.

The pilot study was conducted in March to April 2017 in the factory location of Gamma. Initially, to obtain a general understanding of the ABC project, a 40 minute interview was conducted with AGM-Finance, who was the head of the steering committee that led the ABC implementation in the organization. Thereafter, key actors involved in the implementation were identified for further investigation in the main study.

The main study was conducted through in-depth interviews with seven members of different hierarchical levels in the organization and with one consultant to the ABC project in Gamma. Interviews spanned between 15 minutes to one hour. Table 1 presents designation of the interviewees along with the duration of the interviews.

Table 1

*Interview details*

Designation of the Interviewee	Duration of the Interview
AGM- Finance	Three hours (3 interviews)
Previous Cost Accountant	Thirty Minutes – telephone interview
Assistant Cost Accountant	Thirty Minutes
White ware Supervisor	Twenty Minutes
Production Manager	Twenty Minutes
Marketing Manager	Fifteen Minutes
Corporate Sales manager	Thirty Minutes
Local Consultant to the project	Two Hours

Source: Authors' construction

All interviews were conducted in the native language (Sinhala) for the ease of communication as the interviewees appeared more comfortable in doing so. Interviews were later translated to English. Five of the interviews were tape recorded and detailed notes were taken during other three interviews. ABC related documents in Gamma, including cost calculation sheets and documents of the local consultant to the ABC implementation project were also collected for analysis during the main study. Further, interview data was triangulated with data obtained through documentary review to ensure quality of the study. All transcripts of interviews, detailed notes of the interviews and collected documents of Gamma were analyzed in isolation and taken together as a whole. Then main themes were identified, and these themes were further analyzed in-depth in relation to the identified theoretical lens, ANT.

### **3.3 Theoretical lens**

This paper uses ANT as the theoretical lens (see Callon, 1986a, 1986b; Latour, 1987, 1999, 2005) to illuminate the changing fate of ABC in a Sri Lankan organisational setting. This theory can be used to explore how an innovation is diffused and becomes rooted in a setting. While the pioneers of the innovation employ allies to promote and develop the innovation, various other actors make alliances with them to achieve their own interests (Lowe, 2001a). Thus, connections are made with different actors. Finally, these connections form “actor networks” made of both human and non-human actors.

One of the key characteristic of ANT is the symmetrical treatment on human and non-human actors (Lowe, 2001a). Latour (2005) describes that there are both people and objects in the society, and that people interact with objects and technology; ultimately it is this interrelation among people, objects and technology that creates the society. Therefore, Latour (2005) claims that neither objects nor the people are “more or less ‘realistic’, ‘concrete’, ‘abstract’, or ‘artificial’ than the other.” Therefore, there is no difference in the humans, technology and other non-humans to act in a network (Latour, 2005). Networks become stronger as they attract more and more human and non-human allies. Finally, the process becomes successful when the innovation acquired some solid appearance or becomes a ‘black box’ (Latour & Woolgar, 1979 as cited in Alucoff et al., 2008). Therefore, according to ANT, success of an innovation depends on many actors other than its pioneers, such as users of the innovation and their expectations, their interests and problems faced by them (Lowe, 2001b).

ANT has been widely used as a theoretical lens in management accounting research, ranging from studies on inter-organizational relationships (Chua & Mahama, 2007) and intra-organizational relationships (Sandhu, Baxter, & Emsley, 2008; Ushio & Kazusa, 2013; Endenich et al., 2017). ANT has also provided theoretical support in understanding the implementation of new tools such as ABC (Briers & Chua, 2001; Alcouffe et al., 2008; Carders & Gooneratne, 2016); localization of balanced scorecard (Sandhu et al., 2008), management accounting control and integration (Dechow & Mouritsen, 2005), accounting change (Justesen & Mouritsen, 2011).

Notwithstanding these research endeavours, in the current body of literature there is limited understanding on the changing fates of ABC within a particular organisational setting overtime. Drawing upon the theoretical ideas of ANT, this research addresses this void. In this paper we also draw on the concept of translation under ANT. Translation implies the means by which an actor enrolls others as the creation of an actor-network, entailing attempts by innovators to form a central forum (network), in which all actors agree that the network is worth building and defending. Problematization, interessement enrolment and mobilization are viewed as the four moments of the translation process (Callon, 1986a, 1986b). Problematization is actors’ efforts to show the merits of the views/systems espoused by them, and interessement refers to the actions of getting other actors interested and convincing them towards the system. Enrolment is creating alliance with other actors, while mobilization is where actors in the network accept (become aligned to) and act collectively. The translation process has been subjected to inquiry by prior researchers, such as in the areas of successes and failures in the diffusion processes (Alcouffe et al., 2008), business process change failure (Sarker, Sarker, & Sidorova, 2006) etc. In this paper we draw on the translation process to explore the changing fate of ABC in Gamma.

#### 4. Findings

The interview evidence revealed that over two decades from its inception, until 2003 the case organization “Gamma” used traditional costing techniques in producing cost information in the preparation of financial reports, for taxation purposes and for internal management purposes. ABC has been introduced to the firm in 2004 under the guidance of two consultants; it was however discontinued at the end of 2005. ABC nevertheless reappeared in the organization in year 2016.

Table 2  
*Phases of ABC*

Phase of ABC	Period	Costing system	Human / Non-human actors
Appearance of ABC	2004-2005	Activity Based Costing	<ul style="list-style-type: none"> <li>• CEO</li> <li>• AGM-Finance</li> <li>• Limitations of traditional costing system</li> </ul>
Disappearance of ABC	2006-2015	Traditional Costing	<ul style="list-style-type: none"> <li>• Retirement of the earlier CEO</li> <li>• Statutory constraint</li> </ul>
Reappearance of ABC	2016 onwards	ABC and Traditional Costing	<ul style="list-style-type: none"> <li>• ERP system</li> </ul>

Source: Authors’ construction based on interview data

The sub-sections to follow present the findings of the study in terms of phases of ABC implementation in the organization along with the key human and non-human actors in each phase.

#### **4.1 Phase 1: Appearance of ABC**

##### **4.1.1 Forming an ABC network**

Interview evidence revealed that appearance of ABC in Gamma was led by a network of human actors within the organisation, such as the CEO at that time, AGM-Finance and other middle level managers.

The CEO at time that played an important role; he brought in the idea of ABC to Gamma and enrolled allies to support his idea. As AGM- Finance commented:

“our CEO took the initiative, actually it was his idea. We implemented it because it was the need of the time as we also had identified some of the weaknesses in our traditional costing..... we also had the need for cost management and to know accurate costs of the products.”

The Cost Accountant at that time held the same view:

“it was CEO’s idea. Mr..... (name). After that we (finance department) introduced it to the organization, a cross functional team was also appointed”.

Assistant Cost Accountant who was a trainee in the Finance department at the time of introduction added:

“we had the need to know the exact costs of the products and to implement a proper cost management system. One of the main reasons (for the implementation of ABC) was that CEO also had the same idea. There’s no use if a lower level person wanted to implement this, because then the CEO has different goals. This was easy because it came from CEO.”

The fact that this was CEO’s project became a significant consideration for the implementation of ABC in the organization, and this also resulted in employees to become enthusiastic about it.

Then CEO of the organization had been appointed to the position in year 2001. He was a mechanical engineering graduate from a leading local university, and an expert in the field of strategic management and marketing, holding a master’s degree in Marketing. He had five years’ experience as an executive director and five years’ experience as a General Manager by the time he took the CEO position in Gamma. Further, he had guided some major expansion projects that took place in Gamma, during the years 2001-2003 such as expansion of factory capacity and implementation of a new production strategy.

According to interviewees the CEO has carefully taken steps to first convince the senior management to implement ABC in the organisation. AGM-Finance added:

“until 2000, our production strategy was to get the design specifications from our international clients and to produce them accordingly, and we marketed them under their labels. But, in 2003 we started to market under our own brand name. So, we came out with number of new items. Coming to the market under our brand name is very different from producing for reputed clients; it requires lot of information to survive in the market. So, it can also be taken as one reason for the introduction of ABC.”

After, several rounds of discussion with managers, a cross-functional steering committee headed by the AGM-Finance was appointed to assist the implementation. AGM-Finance has joined Gamma in 1991 and serves the organization to date, and has witnessed all three phases of ABC in Gamma.

AGM-Finance is also was a key actor who facilitated the ABC implementation in Gamma, by being the project leader of the new implementation and attracting more allies to implement ABC in the organisation. Under his guidance managers were sent to workshops on ABC and an introductory presentation was also conducted for middle level managers with the help of an Indian Chartered Accountant, who was later recruited as a consultant to the project.

Subsequent to a number of discussions, ABC was started in 2004 under the guidance of two consultants, an Indian Chartered Accountant and a local consultant. According to AGM-Finance and then Cost Accountant, all the divisions of the organization showed no resistance for the implementation of ABC. Rather, they were also expecting to gain benefits by implementing it in their divisions.

According to the Cost Accountant of Gamma:

“we introduced ABC because we wanted to know the actual costs of the products and in our departments.... we felt the limitations of the traditional systems.”

He further elaborated certain weaknesses that lead to inaccurate cost information in the organization. As he pointed out:

“For example, those days we used to allocate machine maintenance cost, based on the book value of the machines, which is so incorrect. So, the new machines which had a higher book value were allocated with lot of maintenance cost, whereas those new machines don’t incur such a cost compared to old ones.”

According to the Corporate Sales Manager, ABC was implemented to facilitate accurate product pricing. He added:

“we implemented it because, when we do pricing we needed to go for accurate product pricing, also to identify segment wise and customer wise profitability.”

Those who were in the production area were more interested in ABC as it facilitated implementation of Kaizen in Gamma. A Production Manager commented:

“after we identified activities throughout the organization, in the base level of this (ABC) we actually implemented kaizen parallel to this. We didn’t stop identifying activities only at ABC level; we further divided one activity into series of activities, to micro activities to manage costs as a kaizen exercise.”

AGM- Finance further added how along with the ABC system Kaizen was also implemented:

“Here, we list every activity for cost controlling purposes in departments. That means not only the activities that we chose for product costing, but we identify every activity in every movement in each department so, because of that, we could easily implement kaizen as well.”

Based on interview data it was evident that interests and expectations of many human actors in Gamma paved the way for the appearance of ABC in the organisation. For instance, the CEO of Gamma brought ABC to the organization and formed allies to support the technique and eventually a network was formed through the interactions of these allies. Top management gave their blessings to the implementation and ensured that the necessary information was provided. The actors who serve as allies for the new technique also supported ABC with the expectation of using it for their own interest. AGM-Finance, previous cost accountant and other members in the finance department favored the technique with the aspirations of increasing the accuracy of costing and cost control in the organization. Marketing managers lend support to ABC, for in their mind it would help to obtain accurate information for product pricing and customer profitability analysis, while the focus of production managers was on how ABC could facilitate process improvements. Therefore, appearance of ABC in Gamma was motivated by an array of human actors backed by their own interests.

#### **4.1.2 ABC system of Gamma: An overview**

Direct costs of Gamma included direct materials, direct labor, fuel and power costs, as well as costs for packing materials. All other costs were regarded as overheads. As our interviewees explained, first these overhead costs were allocated to the 12 broad processes identified in the organization based on the actual resource consumption of the particular process. See Table 3.

Table 3

##### *Broad processes in Gamma*

- 
1. Market Development- Local
  2. Market Development- Foreign
  3. Product Development
  4. Procurement and Storage
  5. Selling
  6. Production- White ware
  7. Decoration
  8. Decal Printing
  9. Maintenance
  10. Quality Assurance
  11. Production Planning
  12. Corporate level Activities
- 

Source: Records of the local consultant

Thereafter, out of these 12 processes service centers were reallocated to production processes. Accordingly, Procurement and Storage, Maintenance, Quality Assurance and Production Planning were considered service centers. It was further explained that the costs of these service centers were reallocated to production centers. Thereafter other production centre costs were allocated for mainly identified cost pools or centers within the broad process. The AGM – Finance elaborated how the allocation of overhead costs of these production processes were done using one production process, Production-White ware as an example. As he noted, Production-White ware is a production center, and the total overhead cost of this process is divided into four identified cost pools as Forming, Biscuit firing, Glazing and White ware firing.

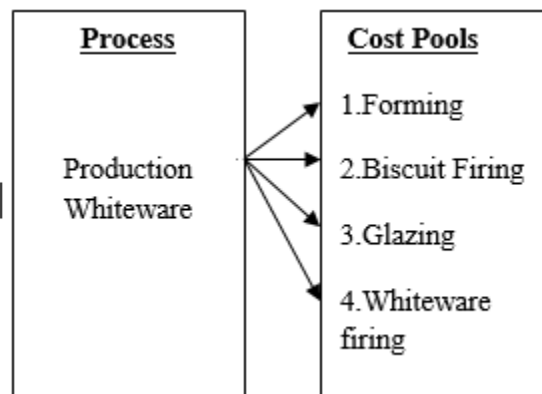


Figure 1. Allocation of Processes to Cost Pools

Thereafter, the costs in each of these pools are allocated to activities within each cost pool. For example, overhead costs allocated for Forming cost pool, is then allocated for 4 activities identified within the cost pool, such as Slice Cutting and Batting, Forming, Finishing and Inspection based on the actual resource consumption by each of these activities.

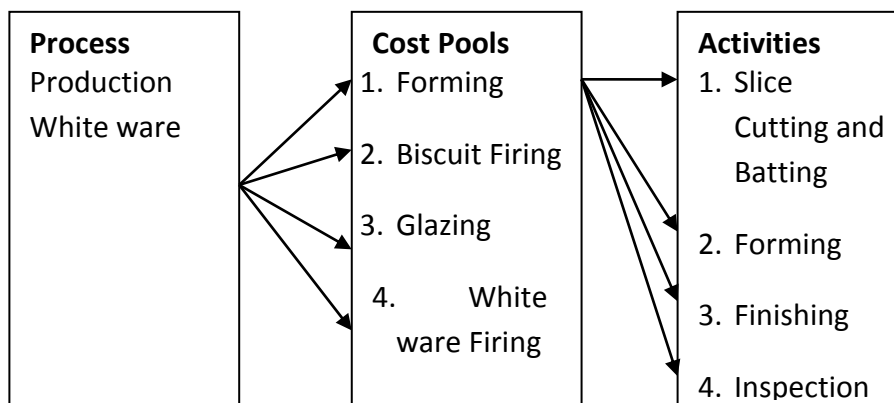


Figure 2. Allocation of cost pools to activities

Finally, costs of these activities are allocated to products based on the identified cost drivers. According to above example, Slice Cutting and Batting cost are allocated to products



based on the number of pieces, Forming costs based on machine hours, Finishing costs based on labor hours and Inspection costs based on the number of pieces. The total cost of a product is calculated in this manner, by allocating all the overhead costs in production centers. Thereafter adjustments are made for damages.

#### **4.1.3 ABC system of Gamma: Advantages**

All the interviewees were satisfied with the implemented new ABC system. They commented on the advantages which the new tool brought into the firm in terms of better information for managerial decision making. For instance, this new costing system helped managers to allocate production costs in a more accurate manner. As explained by then Cost Accountant:

“now, say there is a certain amount of cost incurred for forming. If we look how this forming cost is consumed by each product, it is basically through machine hours. But the time (machine hours) consumed by a dinner plate is different from a salad plate. In the traditional method we charge a 26% flat rate (overhead costs) for all the products. This is a weakness in that system. But in ABC method we charge a different rate for each product based on the resource consumption. So, the real profit and loss came out.”

Reinforcing the above, the local consultant to the project explained:

“Now what we do is if one consumes only 18% then we charge only 18. If another consumes 10 then only 10%, so, cost is allocated only according to the consumption by each of these segments. So, we can find what are really profitable segments and what are loss making.”

AGM-Finance further explained how the technique helped cost management in the organization.

“we get a thorough understanding of cost elements and behavior. Why? Because we do a detailed analysis, we analyze to minor details. You might have seen we analyze this into 2 layers and to 12 processes. So, we can find how much we spent for selling process, how much for product development.”

As these interview quotes suggest ABC has facilitated in computing accurate product costs and has been providing useful information for cost management.

As assistant cost accountant commented, Gamma had identified significant differences between the cost information provided by the traditional system and the ABC system.

“Yes, we saw a difference in the information in the new system. Because our gold and platinum products became costly and B2B became profitable than before”

During interviews the Marketing Manager and the Corporate Sales Manager shared similar views regarding better accuracy of product costing under ABC. Furthermore, the Corporate Sales Manager confirmed that the ABC system had provided new insights, as he stated, “Corporate sales became very profitable. So, we focused on expanding that area”. He further stated that some marketing segments of the organisation became loss making and the top management decided to discontinue such segments.

The Marketing Manager went on to explain how the new technique facilitated in identifying profitability of various market segments. He added:

“we could identify segment wise profitability from ABC. In our P & L account, marketing overheads comes in various ways, like market development, foreign trips, product development etc. but, earlier, nobody was concerned as to which segment used up these costs. In ABC, it is possible to see if cost was incurred by the local market, then which segment in the local market? Whether it is dealers? Showrooms or B2B?’, actually after we calculated our cost from this technique B2B became profitable than earlier.”

With these comments of the members of the marketing department it is evident that the technique has helped the managers to direct their marketing efforts in a way more beneficial to the long terms wellbeing of the firm. The Production manager also explained how the technique was helpful in the firm’s attempts on cost reduction.

“Platinum pieces are one of our profitable products, but our margin reduced as the product became very costly after we did calculations in ABC, we could identify some loss-making products as well. We couldn’t discontinue loss making products. But, however after identifying those areas we could cut some costs. We asked our people to make the gold line thin, to reduce the high cost of gold decorated items.”

The Corporate Sales Manager as well as the Marketing Manager also made similar comments. Further the White ware Inspection Supervisor commented:

“We also get an idea about costing when we do such a thing (collecting information needed for ABC), so then we also can tell the employees the proper procedures in doing things. Everybody understands it better when we show something from numbers.”

The Inspection Supervisors in the factory were given the responsibility of collecting cost data needed for the implementation of ABC. What the interviewee meant was that when collecting such data, they also get a better understanding about the cost behavior in their departments. This understanding in turn helps them to suggest cost reduction methods.

With these comments it was evident that ABC system of Gamma has facilitated accurate product costing and cost control in the organization as expected by the senior management. Apart from that, production manager of the firm pointed out that the technique also led to increase efficiency in the production process. He added: “since this method analyzes the activities in depth, it helps to identify non-value adding activities.” He further explained through examples how identification of non-value adding activities in production process benefits the organization.

“in this method we use two concepts called value adding activities and non-value adding activities. So after we analyze and find every activity of the organization we can identify non-value adding activities and eliminate them. Now, let’s think something like transport, never adds any value to the product. So, we can eliminate this by, may be putting a convey belt, or maybe we can take steps to reduce distance between departments, so likewise we could have use some of these concepts to increase efficiency in the department.”

Therefore, it was evident from the words of the Production Manager that ABC has facilitated increasing production efficiency in the firm. Despite such advantages, the ABC system was discontinued after a year from its introduction, as elaborated next.

#### **4.2 Phase two: Disappearance of ABC**

Although ABC was introduced to Gamma with much interest and enthusiasm, interview evidence revealed that ABC had been discontinued after one year from its implementation. Therefore from 2006 onwards, Gamma has moved back to the traditional costing system.

A key constraint for the continuation of ABC in Gamma was the regulatory restrictions of Inland Revenue Department, which can be considered as a non-human actor. According to AGM- Finance,

“when we traditionally present stock valuation to the Inland Revenue Department, we take direct costs. So, the stock valuation is done based on the direct costs and other production costs of the organization. But when we divided this into processes, it includes some of the administration and selling costs also. When this happens, auditors cannot accept our stock valuation. That is the main reason for discontinuation.”

This was further pointed out by then Cost Accountant, 'this (ABC) reclassifies our traditional profit and loss account so then auditors have a problem in accepting it.' He further explained,

"there is direct cost. First direct materials, direct labor, direct energy then factory overheads. Now we only base our stock valuation on these factory costs in the traditional systems we currently use. But when we take processes, the administration cost, selling and distribution and finance cost, all that comes under this. In P&L also all those comes for the processes. So then when we allocate costs in those processes to products, some part of this administration and finance costs also come to the stock valuation."

Assistant Cost Accountant commented:

"ABC is good. But it didn't comply with IFRS and tax regulations. So, because of that we couldn't continue it though we started to implement."

Other interviewees, including the Corporate Sales Manager pointed out the same reason for the discontinuation of ABC.

"mainly, they (auditors) told us to run two systems. There's this requirement from Inland Revenue Department that we need to follow a certain procedure for costing. In production floor, we must take line items and do the normal costing to P&L. ABC goes based on processes. So we had a resource limitation to do both at the same time."

While Gamma was not in a position to maintain two systems due to resource constraints, they went back to the traditional system which was in line with fulfillment of statutory requirements. During interviews it was also evident that by this time the CEO, who was much enthusiastic about ABC had also retired from the organization. This too became a significant reason behind the discontinuation of ABC. AGM-Finance added,

"when we implement such a system, we need the commitment of every employee from the CEO. It should become a part of organizational culture. It should be used and managed by the system. Without that, if we only use this to calculate costs, the interest of employees will be lost. When we only introduce this as a costing system it becomes useless for the person who gives the information, because they can't use it for the management of their own departments. So, this could have continued if we used ABC for management and budgeting as well. But if CEO asks for monthly ABC cost reports from each department we could have sustained this. Actually, top management didn't ask for any department wise report. If we did that, this could have become a part of the organizational culture."

Then Cost Accountant and the Assistant Cost Accountant also shared similar views. They too emphasized that ABC was merely a costing system, and that it was not developed to a more useful management system in the way of activity based management (ABM) and activity based budgeting (ABB).

After the retirement of CEO in 2003, then Chairman of the organization was appointed as the new CEO in July 2005. He was a Chartered Engineer as well as a Management Accountant, holding a master's degree in management. He was receptive towards new techniques and pioneered the introduction of various Japanese manufacturing techniques in the firm, such as Quality circles, TQM and 5S. Therefore by 2006 although Gamma had discontinued ABC and it had moved back to the traditional costing system, Kaizen and other Japanese techniques continued in the firm.

#### ***4.3 Phase three: Reappearance of ABC***

A new CEO was appointed to Gamma in year 2014, and in 2015, he took the initiative to implement an enterprise resource planning (ERP) system in the organization, which was considered to be a long felt need in the firm according to interviewees. For instance, the AGM- Finance noted:

“Three years back we acquired ..... (subsidiary). With that, our operations further increased. Since then it was the idea of the top management to implement an ERP system. However, it required a lot of resources. In 2013, 2014 we didn't have enough resources because we had already done a huge investment in this new subsidiary. So in 2015 we decided to implement this.”

In 2016 IFS applications were introduced for manufacturing, supply chain, finance, human resources and business intelligence. The solution was implemented in the company's main operation locations connecting the four main stores in the island. The ERP system was installed in the organization as a pilot run in 2016, and it was used for operations of the organization from mid-2017(Annual Report Gamma, 2016, 2017).

With the introduction of the ERP system, ABC reappeared in the firm in 2016. As AGM-Finance commented, “when we installed the new system, we had to put those activities and the cost drivers at the beginning. It was not our priority to implement ABC this time. But when we implemented the ERP system, we were also given the facility to use ABC for our calculations.” He further added:

“This new ABC is bit different from what we used to have in 2005, but still we can get cost reports by assigning overheads to cost activities. Problem we had last time is that we had to implement two systems because of Inland Revenue requirements,

so our manager didn't have enough time for two systems because we did it manually. We used 'excel' for analysis but they have to collect information and insert them manually, analysis and everything was done manually with the experience. But now we have already inserted the cost activities and drivers when we installed the system, so all they have to do is to extract the report, there is some work to do, but what I mean is, it is not that difficult to analyze because of the system."

Seen in this manner the ERP system has in fact brought back the once discontinued ABC to Gamma.

## **5. Discussion and Conclusion**

Drawing upon the theoretical ideas of ANT, this paper highlights how the changing fate of the ABC project in Gamma has been shaped by the influence and interactions of a network of human and non-human actors. It explores what motivated the firm to implement ABC, why ABC did not continue, and why it later re-appeared in the case organization.

The field study data shows that the appearance of ABC in the case organization in 2004 was due to an influential human actor, the CEO during that time period. Following his interest, the CEO problematized the need for ABC, and was able to enroll other key actors in accounting and finance, such as AGM-Finance, then Cost Accountant as well as other functional managers, such as Marketing Managers and Production Managers, who were already aware of the limitations of the traditional costing system. The subsequent disappearance of ABC in Gamma in 2006 and its moved back to traditional accounting system was mainly due to the influence of a non-human actor, a regulatory barrier placed by the Inland Revenue Department of Sri Lanka as well as the retirement of the key actor, the CEO. The implementation of an ERP system, a non-human actor (in ANT terms) has made way for ABC to reappear in Gamma. While ERP is common in many corporate entities today, for several years the firm was considering the decision to implement ERP, and finally did so in 2016. The ERP implementation was vital in bringing back the once discontinued ABC and in mobilizing it in the firm. For, a key reason why the ABC was earlier discontinued was the inability to maintain two accounting systems, i.e. to satisfy statutory reporting to Inland Revenue Department (via the traditional costing system) and to provide costing information for internal decision making (via the ABC system). The ERP system implemented in 2016 addressed this issue and enabled Gamma to extract and analyze information to satisfy both these needs.

Keeping with Alucoffe et al. (2008) we concur that the fate of a new technique, such as ABC is fragile, and depends on the strength of the network constructed and the actors attached to it. Our findings are also par with that of the work by Sandhu et al. (2008) which note the

need to accept, accommodate and manage diverse human and non-human elements in introducing innovative management techniques like ABC and BSC. This paper also endorses the findings of Sandhu et al. (2008) who note that a network is shaped by long ties outside the organization, such as government policies and market forces. In this study government policies, such as regulations of Inland Revenue Department and reasons linked to market forces, such as introduction of a new ERP system was significant with regard to the changing fate and the shaping of ABC network in Gamma, in terms of its discontinuation at one point and reintroduction at another point. Our findings suggest that appearance, disappearance and reappearance of ABC have been shaped by a network of actors comprising of both humans and non-humans, and that the implementation and continuation of ABC is constrained by the interests of these human and non-human actors inside and outside the firm.

The adoption of ABC in Gamma is linked to increased accuracy of product costs. This is in line with studies of Innes et al. (2000) and Major and Hopper (2005). The study by Innes et al. (2000) based on U.K firms found that many organizations which have adopted ABC have done so to increase the accuracy of costing, while Major and Hopper (2005) has revealed that after the adoption of ABC, accuracy of costing has been increased in a Portuguese telecommunication company. Differing from other ABC failure studies, such as Malmi (1999) and Major and Hopper (2005), this study reveals how ABC was discontinued in the firm to keep up with the regulatory requirement of a government body. This study also emphasizes the power of information systems, such as ERP in today's firms. In an earlier study Cardes and Gooneratne (2016) note how the implementation of ABC in a Sri Lankan conglomerate was due to the decision taken by the parent company to implement a SAP ERP system. However, focus of Cardes and Gooneratne has been on the institutionalization of ABC, whereas this paper is centered on the changing fates of ABC in a single firm from appearance, disappearance and reappearance, including how the ERP system became a key reason for the reappearance.

This study makes an important contribution to the current management accounting literature on ABC and to ANT based management accounting research, by presenting an in-depth analysis of actors influencing the appearance, disappearance and reappearance of ABC in a firm. Most prior ABC studies have focused on either its success or failure. Changing fates of ABC and its reappearance after discontinuation, although important has not been the focus of past researchers. This study also provides important insights to practicing managers regarding successfully shaping actor networks and reviving discontinued innovative techniques like ABC.

Like any other research, this study also has some limitations. The appearance and disappearance of ABC in Gamma was in year 2004 and 2006 respectively. Thus the data collected on them are based on the interviewees' recollection of their experiences, and it

may be that the interviewees have not been able to recollect their memory to provide a clear view on these two aspects. Further, although interviews were conducted with then Cost Accountant and the local consultant to the project, some other key personnel relating to the ABC system were not in the organisation at the time of this study and it was not possible to obtain their insights due to practical reasons. To minimize any negativity arising from the above, interview data was triangulated with documentary review where possible.

The paper suggests following directions for future research. Since this study is based on a manufacturing firm's experiences with an ABC project, considering the differing nature of operations and accounting practices, future studies can be conducted in service sector organizations. In addition, further research on reappearance of ABC and other management accounting techniques in organizations can be a topic of interest for future researchers, as although research attention has been directed on ABC successes and discontinuation, organizational efforts in reviving the technique has not been the focus.

## References

- Alcouffe, S., Berland, N., & Levant, Y. (2008). Actor-network and the diffusion of management accounting innovations: A comparative study. *Management Accounting Research*, 19, 1-17.
- Anderson, S. W., Hesford, J. W., & Young, S. M. (2002). Factors influencing the performance of activity-based costing teams: a field study of ABC model development time in the automobile industry. *Accounting, Organizations and Society*, 27, 195–211
- Annual Report Gamma (2016, 2017). Sri Lanka: Gamma.
- Armstrong, P. (2002). The costs of activity-based management. *Accounting, Organizations and Society*, 27, 99–120.
- Baird, K., Harrison, G., & Reeve, R. (2004). Adoption of Activity Management Practices: A Note on the Extent of Adoption and the Influence of Organizational and Cultural Factors. *Management Accounting Research*, 15, 383-9
- Bjornenak, T. (1997). Diffusion and accounting: The case of ABC in Norway. *Management Accounting Research*, 8, 3-17.
- Briers, M., & Chua, W.F. (2001). The role of actor-networks and boundary objects in management accounting change: A field study of implementation of activity-based costing. *Accounting, Organizations and Society*, 26(3), 237-69.
- Callon, M. (1986a). Some elements of a sociology of translation: Domestication of the scallops and the fishermen of St Brieuc Bay. In Law, J. (Ed.), *Power, action and belief*. (pp. 196-233). London: Routledge.
- Callon, M. (1986b). The Sociology of an Actor-Network: The Case of the Electric Vehicle. In M. Callon, J. Law, and A. Rip. (Eds.), *Mapping the dynamics of science and technology: Sociology of science in the real world*. (pp. 19-34). London: Macmillan Press.



- Cardes, S., & Gooneratne, T. N. (2016). Institutionalization of Activity Based Costing in a Sri Lankan Manufacturing Firm: A Case Study. *Colombo Business Journal*, 7, 37-51.
- Cooper, R., & Kaplan, R.S. (1988). Measure Costs Right; Make the Right Decisions. *Harvard Business Review*, 96-103.
- Chua, W. F., & Mahama, H. (2007). The effect of network ties on accounting controls in a supply alliance: Field study evidence. *Contemporary Accounting Research*, 24(1), 47-86.
- Dechow, N., & Mouritsen, J. (2005). Enterprise resource planning systems, management control and the quest for integration. *Accounting, Organizations and Society*, 30(7/8), 691-733.
- Denzin, N. K., & Lincoln, Y. S. (2000). *The Sage Handbook Of Qualitative Research* (2nd ed). Thousand Oaks, USA: SAGE Publications.
- Drury C. (2000). *Management and cost accounting*, London: Thomson Learning.
- Gosselin, M. (2007). A Review of Activity Based Costing: Technique, Implementation and Consequences. *Handbook of Management Accounting Research*, 641-672.
- Innes, J., & Mitchell, F. (1997). The adoption of activity-based costing in the United Kingdom's largest financial institutions. *The Service Industries Journal*, 17(1), 190-203.
- Innes, J., Mitchell, F., & Sinclair, D (2000). Activity-Based Costing in the U.K.'s Largest Companies: A Comparison of 1994 and 1999 Survey Results. *Management Accounting Research*, 11, 349-62.
- Johnson, H. T., & Kaplan R.S. (1987). *Relevance Lost: Rise and Fall of Management Accounting*. Boston: Harvard Business School Press.
- Jones, T.C., & Dugdale, D. (2002). The ABC bandwagon and the juggernaut of modernity. *Accounting Organisations and Society*, 27, 121-163
- Joshi, P. (2001). The international diffusion of new management accounting practices: The case of India. *Journal of International Accounting, Auditing & Taxation*, 10, 85-109.
- Justesen, L. & Mouritsen, J. (2011). Effects of actor-network theory in accounting research. *Accounting, Auditing & Accountability Journal*, 24(2), 161-93.
- Krumwiede, K. (1998). The implementation stages of activity-based costing and the impact of contextual and organizational factors. *Journal of Management Accounting Research*, 10, 239-277.
- Latour, B. (1987). *Science in action: How to follow scientists and engineers through society*, Harvard University Press, London.
- Latour, B. (1999). *Pandora's hope: Essay on the reality of Science studies*, Harvard University Press, London.
- Latour B. (2005). *Reassembling the Social. An introduction to Actor-Network-Theory*: Oxford University Press.
- Lere, J. (2000). Activity-based costing: a powerful tool for pricing. *Journal of Business & Industrial Marketing*, 15, 22-33.
- Lowe, A. (2001a). After ANT-An illustrative discussion of the implications for qualitative accounting case research. *Accounting, Auditing & Accountability Journal*, 14, 327-351.

- Lowe, A. (2001b). Accounting Information systems as knowledge objects: some effects of objectualization. *Management Accounting Research*, 12, 75-100.
- Major, M., & Hopper, T. (2005). Managers divided: Implementing ABC in a Portuguese telecommunications company. *Management Accounting Research*, 16, 205-229.
- Malmi, T. (1997). Towards explaining activity-based costing failure: Accounting and control in a decentralized organization. *Management Accounting Research*, 8, 459-480.
- Sandhu, R., Baxter, J., & Emsley, D. (2008) Initiating the localisation of a Balanced Scorecard in a Singaporean Firm. *Singapore Management Review*, 25-41.
- Sarker, S., Sarker, S., & Sidorova, A. (2006). Understanding Business Process Change Failure: An Actor Network Perspective. *Journal of Management Information Systems*, (23)1, 51-86.
- Shields, M. (1995). An empirical analysis of firm's implementation experiences with activity-based costing. *Journal of Management Accounting Research*, 7, 148-166.
- Silverman, D. (2000). *Doing qualitative research*, Sage Publications: London.
- Silverman, D. (2006). *Interpreting qualitative data: Methods for analyzing talk, text and interaction* (3rd ed.). Sage: London.
- Swenson, D. (1995). The benefits of activity-based cost management to the manufacturing industry. *Journal of Management Accounting Research*, 7(4), 167-180.
- Yin, R. (2009). *Case study research design and methods* (4th ed.). USA: Sage Publications.

## Integrated Thinking for Economic Value Creation

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### Abstract

Accounting initiatives supporting the sustainability management move are still under discussion. Accounting for Sustainability (A4S), Global Reporting Initiatives (GRIs) and International Integrated Reporting Council (IIRC) are leading among them. The latest is the IIRC established in 2010 and issued its integrated reporting (<IR>) guidelines in 2013. The purpose of guidelines on integrated reporting is to promote integrated thinking in business firms so that sustainable management could be promoted. However, criticisms are mounted against the potential of <IR> framework to create integrated thinking. Mainly, the sustainability concern faces the challenge of making managers deviate from traditional economic value creation for investors. Stakeholder theories provide a sound rationale for maintaining organisational sustainability. Accordingly, economic value creation and value creation for sustainability are complementary. <IR> framework is criticised to be lacking in clarity in passing this message. This paper is motivated to understand the extent to which, <IR> guidelines communicate sustainability thinking to managers. Stakeholder theory and stakeholder-agency theory are used to form the theoretical framework. The theoretical framework traces a criterion for assessing the <IR> guidelines to this effect. The paper concludes that the <IR> framework fails to communicate the message of integrated thinking and the complementary nature of economic value creation and value creation for sustainability.

**Keywords.** Integrated Thinking, Integrated Reporting, Sustainability Accounting, Value Creation, Sustainable Development

### 1. Introduction

The dichotomy between economic value creation and value creation for social and environmental sustainability is obvious in discussions of sustainability in literature. To the theory of firm, economic value creation for shareholders is needed for a firm to exist. Accounting initiatives towards sustainability emphasise that instead of focusing on economic value creation a firm requires a balance to be maintained among economic, social and environmental dimensions. Aim of this paper is to illuminate that the value creation for social and environmental sustainability is complementary rather than contradictory to economic value creation.

Accounting initiatives aimed at sustainability, such as Global Reporting Initiative, 2000) and Accounting for Sustainability, 2004), emerged subsequent to the emphasis by United Nations in 1992, to consider 'sustainability management' in policy initiatives. The GRI, A4S and two other accounting bodies were involved in establishing International Integrated Reporting Council (IIRC) in 2010 to formulate a set of reporting guidelines. The IIRC, first

issued its guidelines, <IR>, in 2013 and which recognize six capitals to be maintained by any business enterprise for its organisational sustainability.

GRI focuses on three dimensions of sustainability disclosures: Economic, Environmental and Social. The A4S, further advancing the attention, emphasises on adopting economic, environmental and social concerns in the decision-making process. <IR> advances the focus onto managing inputs, as capitals, of a business for managing sustainability. Thus, <IR> influences the thinking process involved in the business. "A key feature of the IIRC's IR concept is that the reporting process is meant to create wider changes in business practice, rather than simply changing reporting mechanisms themselves" (Feng, Cummings, & Tweedie, 2017, p. 333). The sustainability focused thinking process involved in business management process is known as integrated thinking. To IIRC, <IR> guidelines not only lead to but also are embedded in integrated thinking. Hence, IR cannot be separated from integrated thinking.

Nevertheless, to responses of practitioners, <IR> has not made any change in the business management practice towards sustainability. CFO of a leading public liability Company pioneering in integrated reporting in Sri Lanka mentioned this at a conference. To studies such as Flower (2015) and Adams (2015) the potential of <IR> in creating integrated thinking is still questionable. Feng et al. (2017) find that integrated reporting is still an underdeveloped reporting mechanism and needs to be further refined in order to guide practitioner and stakeholder understanding. Adams (2015), Milne and Gray (2013) and Riccardo et al. (2016) argue that IR guidelines are sometimes dysfunctional in organizational contexts and not effective in sustainability management.

Flower (2015) criticises the <IR> guidelines as a failure caused by their 'managerial focus', where economic value creation for shareholders is prioritised. Adams (2015) moderates Flower's criticism pointing out that it is a natural reason for maintaining interests of shareholders to the business. To Adams (2015), the value creation merely for the society would not happen when the economic value creation for shareholders is neglected. However, Adams concurs with Flower for the failure of <IR> framework in creating integrated thinking in firms. Thus, both Flower (2015) and Adams (2015) concur with the observation that failure in <IR> framework is its focus on the economic value creation for shareholders. Identification of sustainability concern into economic, social and environmental dimensions by GRI (2000) separates economic value creation from other two dimensions. We in this paper, benefitting from stakeholder theory (Freeman, 1984; 2001) and Stakeholder-agency theory (Hill & Jones, 1992), show that economic value creation and social and environmental concerns can be brought together as complementary dimensions, removing the dichotomy.

Rest of the paper is structured as follows. The immediate section illuminates that IIRC and its <IR> guidelines emerged as an accounting initiative to support the sustainable development move. Having established this, the paper provides a short account of the prior studies of integrated reporting and integrated thinking. Then a theoretical discussion on organisational sustainability is presented and the theoretical framework for the study is constructed. Having done that, the paper assesses IIRC's <IR> guidelines against the theoretical framework to understand the extent to which they support integrated thinking.

Finally, conclusions are drawn to convince that integrated thinking is a need for economic value creation but IIRC's <IR> guidelines are not adequately supporting it.

## 2. IIRC and <IR> for Sustainable Development

IIRC emerged to provide accounting contribution to sustainable development (Dumay, Bernadi, Guthrie, & Demartini, 2016; Rowbottom & Loke, 2015) and therefore <IR> framework has this inescapable foundation. The report of World Commission on Environment and Development (1987) states that it was appointed by the United Nations General Assembly to 'formulate a global agenda for change' responding to some major disastrous observations such as 'a warming globe, threats to the Earth's ozone layer and deserts consuming agricultural land' connected with development process (Chairman's Forward, Brundtland Commission, 1987). After this report, the United Nations Conference on Environment and Development held in 1992 announced that while consuming resources for the current developments, to preserve the planet for the future generations, emphasis on 'sustainable development' is required as a policy consideration. With this move, accounting developments started emerging to focus on the provision of non-financial accounting information to support sustainable development.

The attention on non-financial performance began in 1994 with South Africa's first 'King I' Code of Governance (Adams, 2015). The 'King I' report was developed in South Africa as the country "was embarking on the path to real democracy, the private sector saw that it, too, needed a new system of governance" (Stewart, 2010 as cited in Dumay et al., 2016, p. 167). In 1997 a US financial investor group brought about the idea of Global GRI (Beck, Dumay, & Frost, 2017). GRI disclosures focus on disclosing information on economic, social and environmental impact of business operations. 'The GRI had launched its original framework in 2000. In 2006, the GRI launched its G3 guidelines, which boosted its international recognition as the main non-financial reporting framework' (Beck et al., 2017, p. 192) by 2013.

GRI launched its latest iteration, the G4 guidelines. Realizing the need of re-writing the King I report after the earth summit in 2002, the King II report came in introducing 'integrated sustainability reporting' (Gleeson-White, 2014). The current version of IR came in with the introduction of King III 2009 report (Dumay et al., 2016).

By 2004 HRH Prince of Wales initiated Accounting for Sustainability (A4S) project to ensure that we are not 'battling to meet 21st century challenges with, at best, 20th Century decision making and reporting systems'. To prince's statement, environmental and social issues cause 21st Century challenges.

The International Integrated Reporting Council (IIRC) was founded with the involvement of mainly the GRI and the Prince's A4S project in August 2010. It issued the first draft in 2011 and the final version of directions for preparing integrated report in 2013. According to the IIRC, <IR> framework aims to provide a more holistic and concise depiction of how a company creates and sustains value. Eccles and Krzus (2010) describe integrated reporting as linking financial and non-financial information to communicate to stakeholders (as cited in Feng et al., 2017, p. 332). IIRC's mandate to contribute to the sustainable development can be seen in the joint press release issued by GRI and A4S for the IIRC on 02.08.2010:

*“The world has never faced greater challenges: over-consumption of finite natural resources, climate change, and the need to provide clean water, food and a better standard of living for a growing global population. Decisions taken in tackling these issues need to be based on clear and comprehensive information; but, as the Prince of Wales has said, we are at present “battling to meet 21st century challenges with, at best, 20th century decision making and reporting systems”. The IIRC’s remit is to create a globally accepted framework for accounting for sustainability. . . . The intention is to help with the development of more comprehensive and comprehensible information about an organization’s total performance, prospective as well as retrospective, to meet the needs of the emerging, more sustainable, global economic model” (Flower, 2015:2).*

The IIRC’s first draft explains how an organization sustains with the foundation of multi-stakeholder resources and relationships:

*“All organizations depend on a variety of resources and relationships for their success. The extent to which organizations are running them down or building them up has an important impact on the availability of the resources and the strength of the relationships that support the long-term viability of those organizations. These resources and relationships can be conceived as different forms of “capital” (IIRC, 2011, p. 11).*

Recognition of capitals by IIRC is a step ahead compared to two main accounting initiatives namely, GRI and A4S. The GRI focuses on disclosures relating to outcomes of organisational operations as economic, social and environmental impact. Its disclosure requirements do not directly influence or guide business strategies and operations. The A4S shows advancement over GRI and accordingly, the attention is drawn on business process with guidance on business strategies and operations to consider social and environmental impact in addition to economic. However, IIRC moves further ahead with the identification of economic, social and environmental impact into capitals and thereby taking them as inputs to business strategic, governance and operational aspects. In doing so, <IR> becomes a guide to the value creation process of an organization. This influences integrated thinking by an organisation.

### **3. <IR> and Integrated Thinking**

To South Africa Institute of Chartered Accountants (SAICA) (2015), it is obvious that organisations cannot prepare a credible integrated report unless the conditions and processes that prevail within the organisation are conducive to that effect. Such conditions are described as integrated thinking. “The IIRC’s long-term vision is a world in which integrated thinking is embedded within mainstream business practice in the public and private sectors, facilitated by Integrated Reporting (<IR>) as the corporate reporting norm” (IIRC, 2013, p. 2). The notion of integrated thinking is to avoid traditional forms of silo thinking in their performance measurement and reporting efforts (Giovannoni & Fabietti, 2013). Martin and Austen (1999) first introduced the concept of ‘integrative thinking’ as part of a decision-making model seeking to enable managers to solve the tension between two (conflicting) choices namely, profit maximization and social and environmental

sustainability. Thus, organizations are required to disclose information pertaining to indicators of sustainability and performance drivers in achieving strategic objectives (Figge, Hahn, 2002; Schaltegger, & Wagner, 2001). A key feature of the IIRC's IR concept is that the reporting process is meant to create wider changes in business practice, rather than simply changing reporting mechanisms themselves (Feng et al., 2017, p. 333).

To IIRC (2013, p.34) integrated Reporting is a 'process founded on integrated thinking that results in a periodic integrated report by an organisation about value creation over time and related communications regarding aspects of value creation'. To Lodhia and Martin (2014) sustainability reporting enhances internal and external understanding of corporate performance on economic, social and environmental issues. The internal effect of IR is integrated thinking. IIRC (2013) explains how integrated thinking is supposed to be involved in producing integrated reports:

*"It is anticipated that, over time, <IR> will become the corporate reporting norm. No longer will an organization produce numerous, disconnected and static communications. This will be delivered by the process of integrated thinking, and the application of principles such as connectivity of information" (IIRC, 2013, p. XX).*

IIRC further envisages how <IR> guidelines could create integrated thinking in firms:

*"The more that integrated thinking is embedded into an organization's activities, the more naturally will the connectivity of information flow into management reporting, analysis and decision-making. It also leads to better integration of the information systems that support internal and external reporting and communication, including preparation of the integrated report" (IIRC, 2013. P. XX).*

Some studies show how <IR> can enhance integrated thinking in organizations. For instance, integrating corporate sustainability indicators help the reporting corporation to better manage its sustainability (Doub, 2007; Rocca & Searcy, 2012; Riccardo et al., 2016) and informing stakeholders (Lodhia & Martin, 2014). How closely interconnected the integrated reporting and integrated thinking is that when sustainability is embedded in organizational thinking it can result in preparing 'one report' as integrated report (Eccles & Krzus, 2010).

However, some studies question the potential of IR in creating integrated thinking in organisations. Riccardo et al. (2016) question whether <IR> guidelines favour the integrative management by disclosing un-manipulated sustainability information. Some argue that sustainability could be a mere communication strategy, designed to repair organizational legitimacy (Deegan, 2007; Adams, 2013; Beck et al., 2017) or to confirm with institutionalized norms (Larrinaga-Gonzales, 2007). To Hopwood (2009) sustainability could be used to veil to protect actual performance of the organization from external world (Hopwood, 2009; O'Dwyer, 2003) and as a symbolic use to advance the corporate image in the absence of corresponding engagement (Neu, Warsame, & Pedwell, 1998). Riccardo et al. (2016) claim that IR is not a condition for enhancing corporate sustainability. They find, in their study, that disclosures by IR adopters appear inadequate to report on actual commitment for managing sustainability. Referring to Milne and Gray (2013) they raise concern on the ability of <IR> to overcome limitations in other sustainability initiatives and encourage genuine engagement in sustainability.

Some other studies question the practice of integrated thinking. Feng et al. (2017) finds that there is no well-developed concept of, or consensus on, what integrated thinking means at the conceptual level. In the absence of a solid conceptual foundation, stakeholders have chosen to self-interpret what integrated thinking means in the light of their own experience and context. Consequently, different – and not necessarily consistent – interpretations of integrated thinking are emerging through organizational discourses and practices. Dumay et al. (2016) find that although IIRC, through integrated thinking, aims at breaking down ‘silo’ thinking in organizations, in their study some practitioners directly challenged that ‘silos have a role to play’ in managing organizations. Hence, although IIRC envisages IR and integrated thinking to contribute to sustainable development, it seems still to be a ‘vague’ practice among practitioners and academics.

Two studies, Flower (2015) and Adams (2015), question the potential of IIRC’s <IR> guidelines (2013) in achieving its intended outcomes. Flower’s (2015) criticism charges the guidelines to carry a managerial focus leading to their failure. ‘Managerial focus’ implies managers’ attachment to investors. To him, this is mainly due to the biasness in the involvement mainly by preparers (realists) of corporate reports rather than academics and independent analysts (idealists). Adams (2015), while concurring with Flower about the failure of <IR> framework, has broadly a favorable response. To her, it is somewhat more than the Anglo-American model of reporting, which focuses on value creation by way of profit for investors. <IR> framework has the potential to shift thinking of corporate management to better align traditional profit maximization with wellbeing of the society and the environment. However, to Adams, the need of value creation for others is not clearly reflected in the framework. On the other hand, she admits difficulties of managers to deviate from the priority on profit maximization: “the potential of integrated reporting (or any other driver) to effect change depends on the extent to which it creates a source of dissonance significant enough to change the way managers think within the constraints imposed on managers to maximise profit” (Adams & Whelan, 2009), as cited in Adams, 2015, p. 23). Thus, the <IR> framework carries guidelines having a managerial focus but still have the potential to create a change in managing and reporting. However, these guidelines are unable to guide managers in creating value for others to maintain sustainability. Adams (2015), although admits the need of economic value creation, is silent on the how managers can deal with the dichotomy between the need for economic value creation for shareholders and environmental and social value creation for others.

#### **4. Methodology**

Falling within interpretive paradigm, this research is designed as a desk research based on content analysis of <IR> guidelines. The evaluation criteria is traced from the theoretical framework constructed benefitting from Stakeholder Theory and Stakeholder-agency theory. The purpose is to understand why <IR> guidelines are failing to create integrated thinking in firms. The research is designed not to assess all guidelines in the <IR> framework but to seek the extent to which the theoretical elements are satisfied by <IR> guidelines.

#### **5. The Theoretical Framework**

Explanations of accounting’s contribution to the organizational sustainability could be traced from three theoretical perspectives: stakeholder theory (Freeman, 1984; 2001) and



stakeholder-agency theory (Hill & Jones, 1992) and instrumental stakeholder theory (Jones, 1995).

Freeman (2001) in his Stakeholder theory challenges managerial capitalism, which pursues that sole responsibility of managers of a firm is to serve the interests of investors, pointing out their obligations towards other parties apart from investors. To him, today the law provides for protecting rights of investors while, managerial capitalism challenged by defending managers from investor influences. To the corporate law, it is accepted that a corporation exists to serve interests and its managers have fiduciary obligations to carry out operations in a way its investors' interests are satisfied and preserved. For instance, Companies Act specifies (i) rights of investors to appoint directors, (ii) directors' duties towards shareholders and (iii) directors' responsibility on preparation of financial statements for the benefit of shareholders. On the other hand, the 'legal personality' of a corporation created by law defends managers from investor influences. Moreover, rights of other stakeholders other than investors and managers of a business enterprise are protected by legal contemplations such as product and service law, consumer protection law, employment law and environment protection laws. Freeman argues that these legal protections provide more rights to these other parties. From an economic point of view, managerial intentions to maximize shareholder interest on an economic basis, internalizing all benefits and externalizing all hazardous outcome such as air pollution, and morale hazards through monopoly and oligopoly are controlled and regulated by external forces of the society. Thus, managerial capitalism finds a limited space, which is getting reduced, gradually with intellectual and cultural developments in the society. Hence, instead of merely focusing on shareholder satisfaction, managers are compelled to have a stakeholder perspective in conducting business affairs. Narrow definition of stakeholders (Freeman & Reed, 1983) identifies investors, managers, employees, customers, suppliers and local community as stakeholders.

Freeman (2001) identifies interconnections between stakeholders and the firm. Shareholders provide funds to the firm with hopes of a sufficient financial return. Managers discharge their fiduciary obligation on behalf of shareholders with hopes of financial benefits, social status and other non-financial benefits. Employees bring skills to the firm with hopes of reasonable wages and job security etc. Customers provide financial resources to the firm for goods and services they purchase from the firm and the firm needs these funds for its continuity. Suppliers provide materials hoping reasonable prices and timely payments in turn. Local community provides location and local infrastructure and perhaps favorable tax treatments (such as tax incentives) in exchange of corporate citizenship behavior and high level of life standards from the firm. General public provide national infrastructure and in exchange of corporate citizenship behavior and enhancement of quality of life not causing damages.

Freeman (2001) identifies that although, a firm is a nexus of interactions among diverse stakeholder groups, managers bear a special relationship with its shareholders and in consequence, naturally they tend to prioritize satisfaction of shareholders' interests. However, in this context, each group of stakeholders have the right not to be treated as means to some ends but participating in decisions pertaining to the future direction of the firm, where they have a stake. Knowledge of this compels managers to maintain a balance among interests of other stakeholders. Thus, the balance of relationships among

stakeholders is contingent upon the managers' knowledge of stakeholder involvements in a firm. When these relationships become imbalanced, the survival of the firm is in jeopardy (Freeman 2001, p. 44). For instance, if employees are not satisfied it is a threat to the firm with efficiency issues. Dissatisfaction among customers affects the market and continuity of operations. Dissatisfaction among suppliers causes changes in supplies affecting consistency of quality of the product finally affecting the market growth. Dissatisfaction among local community could involve protests against the firm and perhaps regulatory action from the government interrupting firm's operations. This illuminates that to seek sustainability of a firm, the managers have obligation to serve interests of all stakeholders.

Hill and Jones (2001) further the Stakeholder theory recognizing a firm as a nexus of contracts among resource holders (stakeholders) and that the favorable interconnections are vital to maintain these contracts for sustainability. To them, managers are in the nexus of these contracts. Thus, only managers can enter into contractual agreements with other stakeholders and are having controlling powers over business operations. Legal personality of a company creates an agency between managers of the firm and its other stakeholder groups. Issues of general agency (Jensen & Meckling, 1976; Ross, 1973) apply to stakeholder-agency theory. For example, divergence of interest between principle and agent results in costs to both parties: for principles to employ monitoring mechanisms and for managers to provide assurances and warranties such as depositing some money as a bond. Warranties given by managers to customers on products are also *ex ante* bonds towards customers. These agency costs are supposed to bring some convergence in interest to the agency contract. Moreover, relationship between managers and investors is different from that between managers and other stakeholders. Investors can hire managers to the firm but no other stakeholders can do the same. Nevertheless, contract between managers and all stakeholders have the issue of divergence of interests requiring enforcement and governance mechanisms in minimizing the divergence of interests.

Each stakeholder has a capital invested in the firm in the form of critical resources and in exchange they expect their interests to be satisfied (March & Simson, 1958). Accordingly, Hill and Jones (1992) claim that different stakeholder groups have different sizes of stake in firms. Following Williamson (1984; 1985) Hill and Jones explain that the exchange relationship is an investment in the firm and value of the investment could be assessed as the costs to be incurred when such an investment is deployed for an alternative purpose. For example, if a normally skilled worker exits the firm its agency cost is less and therefore investment value is less because it may not cause a significant cost either to the worker or to the firm. In contrast, when any specially trained and skilled employee is lost it becomes costly and as such investment value is high. Thus, different stakeholders carry different values of investments in the firm.

Combination of the stakeholder theory and stakeholder-agency theory illuminates what conditions are needed for creating integrated thinking in a firm. To stakeholder-agency theory, managers are agents of all stakeholders and therefore are the pivot element of a firm in creating integrated thinking for sustainability. Accordingly, the first requirement is that managers of a firm need to know that a firm operates with investments made by its diverse stakeholder groups. Then they must identify their fiduciary obligation to financial investors and for that they need to manage the other stakeholders' investments. The purpose of managing other stakeholders' investments is to increase the value of

investments, which means the engagement of each stakeholder group in the firm's business. In taking action to increase stakeholder investment or engagement, managers need to identify and value their investments and to quantify the change of the value that has occurred during a period. An increase of the investment indicates a better stakeholder engagement during the period. Such a favourable outcomes of business operations can enhance the value for investor's financial capital. This is the situation wherein integrated thinking is active. This theoretical framework identified is shown in Figure 1.

Table 1

*The theoretical framework for integrated thinking*

Stakeholder Theory	Stakeholder-agency theory	Theoretical Framework for creating integrated thinking of a firm
A firm is nexus of relationships between firm and stakeholders	A firm is nexus of contracts between managers of a firm and its stakeholders	Managers are responsible for creating integrated thinking in a firm to have better relationships and improved capitals. This requires their understanding that:
		↓
A firm can sustain only when stakeholder relationships are well maintained	A firm can sustain only when convergence of interest is maintained	1. A firm operates with investment made by diverse stakeholder groups in the firm
		↓
		2. Fiduciary obligation to investors on managing other stakeholders' investments
		↓
	Each stakeholder has critical resources invested in the firm Value of the investment varies with the extent of stakeholder engagement	3. Value of the investment by each stakeholder group
		↓
Managers need to maintain the balanced relationship	Managers need to maintain the investment by stakeholders	4. Need of creating value for stakeholder investment
		↓
		5. Feedback on value change of each investment
		↓
		<b>Integrated thinking in a firm</b>

The theoretical framework identified in Table 1, combines stakeholder theory and stakeholder-agency theory, emphasising that the prime requirement for creating integrated thinking is the managers' understanding of the conditions required for the purpose. The theoretical framework identifies 5 messages communicated to managers of firms in order them to understand the need of integrated thinking.

## 6. Content analysis: the Support of <IR> for Managers' Understanding

The <IR> framework issued by IIRC in 2013 is supposed to guide firms' integrated reporting. As explained before, integrated reporting is embedded in integrated thinking. To IIRC (2013, p.2) integrated reporting and integrated thinking are in a cyclical flow:

*"The cycle of integrated thinking and reporting, resulting in efficient and productive capital allocation, will act as a force for financial stability and sustainability".*

Using the five messages identified in the theoretical framework, the <IR> guidelines are assessed for their potential to create integrated thinking. If <IR> framework is able to convey all five messages, and managers understand them, they are able to create integrated thinking.

First managers need to understand the meaning of integrated thinking. To test this, the definition of integrated thinking given in the <IR> framework is assessed. To <IR> framework (2013):

*"Integrated thinking is the active consideration by an organization of the relationships between its various operating and functional units and the capitals that the organization uses or affects. Integrated thinking leads to integrated decision-making and actions that consider the creation of value over the short, medium and long term" (IIRC, 2013, p.2).*

To this definition, integrated thinking emphasizes on the 'relationships between various functional units and the capitals'. Page 4 of the framework identifies the meaning of capital as "resources and relationships used and affected by an organization". No meaning is produced for integrated thinking, when capital is recognized as the relationship and integrated thinking is defined as the relationship between such relationships (capitals) and operational units.

Then the five messages traced in the theoretical framework are matched with <IR> guidelines to understand the potential of the latter to make managers knowledgeable of integrated thinking in firms.

**Message 1: A firm operates with investments made by diverse stakeholder groups in the firm:**

To the message 1 of the theoretical framework, for integrated thinking, it is fundamental for managers to understand that a firm operates with investment by diverse groups of stakeholders. This message is not well supported in the <IR> guidelines.

In Page 4, the definition to capitals recognizes only the "resources and relationships". However, no stakeholders corresponding to each category of capital are mentioned. This

hinders the managers' understanding of the necessity of co-existence with stakeholders for sustainability of the firm.

Introduction to the <IR> guidelines limits their use for the benefit of providers of financial capital ignoring other stakeholders. According to the introduction to guidelines (IIRC, 2013, p.2) its aim is to *"improve the quality of information available to providers of financial capital to enable a more efficient and productive allocation of capital"*. Further, the page 4 states, *"the primary purpose of an integrated report is to explain to providers of financial capital how an organization creates value over time"* (IIRC, 2013, p.4). Thus, the purpose of <IR> guidelines does not recognize the need of co-existence with stakeholders for the sustainability of the firm.

The distinguishing characteristic of <IR> framework (2013) is the identification of four capitals on which the value creation needs to be reported. Page 4 of <IR> framework (2013) identifies the meaning of capital as *"resources and relationships used and affected by an organization"* and its classification into six, namely *"financial, manufactured, intellectual, human, social and relationship, and natural capital"* (IIRC, 2013, p.4). Accordingly, the capitals recognize the meaning of stakeholder investments, with which a firm operates. However, the model is silent too on explaining the respective stakeholders corresponding to the capitals. To stakeholder theory, stakeholder groups to a firm are identified as shareholders (investors), managers, customers, suppliers, employees, government and other parties, local community and general public. These stakeholder groups can be identified in the six capitals identified in the <IR> guidelines as shown in Table 1.

Table 1

*Capitals, relevant stakeholder groups and their relationships*

Capital	Interested Category	Stakeholder	Relationship to the firm
Financial	Investors		Investment of finances
Manufactured	Investors		Use of invested finances
Intellectual	Managers		Investment of intellectual capacity
Human	Employees		Investment of skills and commitment
Social and relationship	Customers, government parties	suppliers, and other	Investment of opportunities, funds and facilities
Natural	Local community and general public		Consumption of public and natural resources

Table 1 shows that each category of capital recognized in <IR> guidelines can be attributed to one or more relevant stakeholder groups identified in the stakeholder theory. Hence, although the <IR> framework identifies the investments in a firm, it does not identify the stakeholders. This does not convey the understanding to the managers that a firm operates because of the relationships with stakeholders.

**Message 2: Fiduciary obligation to investors on managing other stakeholders' investments**

This identifies that in order to create integrated thinking within firms, the managers need to be convinced that value for providers of financial capital could be created only when other stakeholders' investments are well managed. This concurs with the comment of Adams (2015) mentioned before. However, the <IR> guidelines do not provide clear guidance to that effect.

The guidelines show the need of identifying interactions, activities and relationships with other stakeholders only when they are material for the value creation for providers of financial capital. It passes a message that the need of managing other stakeholder investments is unimportant. To Section 2.7,

*"When these interactions, activities, and relationships are material to the organization's ability to create value for itself, they are included in the integrated report. This includes taking account of the extent to which effects on the capitals have been externalized (i.e., the costs or other effects on capitals that are not owned by the organization)" (IIRC, 2013, p.10).*

Ignoring respective stakeholders, the guidelines identify the capitals as mere 'stocks of values' that are available for creating value to providers of financial capital. Although, it recognizes changes in other values of capital such as human capital through training to workers, it is not enough to pass a message on integrated thinking. To sec. 2.11,

*"The capitals are stocks of value that are increased, decreased or transformed through the activities and outputs of the organization. For example, an organization's financial capital is increased when it makes a profit, and the quality of its human capital is improved when employees become better trained" (IIRC, 2013, p.11).*

On the other hand, emphasizing the capitals as stocks of values, the guidelines ignore the need of 'stakeholder engagement', which is theoretically (Hill & Jones, 1992) recognized as capital. This hinders the impression that other stakeholders have their investments, by way of engagement in the business firm.

Instead of managers' fiduciary obligation, the guidelines identify managers' stewardship responsibility towards stakeholders, where it implies that the organization needs to identify the legal stewardship or ethical stewardship guided by stakeholder expectations.

*"When the capitals are owned by others or not owned at all, stewardship responsibilities may be imposed by law or regulation (e.g., through a contract with the owners, or through labour laws or environmental protection regulations). When there is no legal stewardship responsibility, the organization may have an ethical responsibility to accept, or choose to accept stewardship responsibilities and be guided in doing so by stakeholder expectations" (IIRC, 2013, p.18).*

When stewardship responsibility of managers is explained, it confirms the meaning of 'stock of values' rather than 'engagement'. Nevertheless, the framework guides on stakeholder engagement with a different meaning.

*“Engagement with stakeholders occurs regularly in the ordinary course of business (e.g., day-to-day liaison with customers and suppliers or broader ongoing engagement as part of strategic planning and risk assessment). It might also be undertaken for a particular purpose (e.g., engagement with a local community when planning a factory extension). The more integrated thinking is embedded in the business, the more likely it is that a fuller consideration of key stakeholders’ legitimate needs and interests is incorporated as an ordinary part of conducting business” (IIRD, 2013, p.18).*

This implies that ‘stakeholder engagement’ is a formal event to be organized by the management. Such an idea is away from creating integrated thinking. Further, it implicitly separates stakeholder relationship and engagement from operations of the business firm. However, to the theoretical framework, relationship and engagement mean the stakeholder investment and most precisely, stakeholder engagement is embedded in the relationship between the management and stakeholders. This is furthered by the <IR> guidelines’ instructions on how to take account of stakeholders’ ‘legitimate rights’.

*“An integrated report should provide insight into the nature and quality of the organization’s relationships with its key stakeholders, including how and to what extent the organization understands, takes into account and responds to their legitimate needs and interests” (IIRC, 2013, p. 17).*

Thus, the analysis of the <IR> guidelines to the effect of creating a message to managers that a business firm operates together with financial as well as other stakeholders’ investments by way of their engagement is not conveyed.

### **Message 3: Value of the investment by each stakeholder group**

The stakeholder-agency theory defines the value of stakeholders’ investment as the effect when the stakeholder deploys the investment for an alternative purpose. This implies that change of stakeholder investment value is the change of their relationship with the firm. However, the <IR> guidelines produce an impression of a ‘financial value’ to the stakeholders’ investments. Sections 2.12 to 2.17 in the page 11 describe the value of capitals.

To Section 2.12

*“The overall stock of capitals is not fixed over time. There is a constant flow between and within the capitals as they are increased, decreased or transformed. For example, when an organization improves its human capital through employee training, the related training costs reduce its financial capital. The effect is that financial capital has been transformed into human capital. Although this example is simple and presented only from the organization’s perspective, it demonstrates the continuous interaction and transformation between the capitals, albeit with varying rates and outcomes” (IIRC, 2013, p. 11).*

Although, <IR> framework recognizes the change of capitals by way of transformations, no idea of value of the investment is presented. When changes of capitals are reported as

transformations, it implies the value change in financial terms. Thus, the <IR> framework does not present a clear idea about the value of stakeholders' investments from a sustainability perspective.

#### Message 4: **Need of creating value for stakeholder investment**

Stakeholder theory illuminates the importance of reporting the value created for all stakeholders in order to retain invested capital to maintain sustainability. The <IR> guidelines seem inconsistent in explaining the purpose of value creation. At the beginning, it stresses that the value needs to be created for investors but at latter stages, it explains that value creation should be a collective effort.

In its page 10, the <IR> framework, consistently with its definition of capital as the 'stock of values', implies that the value means financial value and the value created for providers of financial capital needs separately to be disclosed from others.

*"Value created by an organization over time manifests itself in increases, decreases or transformations of the capitals caused by the organization's business activities and outputs. That value has two interrelated aspects – value created for The organization itself, which enables financial returns to the providers of financial capital, -Others (i.e., stakeholders and society at large)" (IIRC, 2013, p.10).*

Moreover, it indicates that the value created for others is disclosed only when it materially affects the value created for the organization.

*"Providers of financial capital are interested in the value an organization creates for itself. They are also interested in the value an organization creates for others when it affects the ability of the organization to create value for itself, or relates to a stated objective of the organization (e.g., an explicit social purpose) that affects their assessments" (IIRC, 2013, p.10).*

However, when it comes to page 17, the framework turns to take the perspective of collective value creation. Accordingly, *"value is not created by or within an organization alone, but is created through relationships with others"* (P. 17). Again, it states that for the longer-term sustainability, a business organization needs to concentrate on creating value for all stakeholders:

*"The maximization of financial capital (e.g., profit) at the expense of human capital (e.g., through inappropriate human resource policies and practices) is unlikely to maximize value for the organization in the longer term" (IIRC, 2013, p. 11).*

Being inconsistent with its previous standpoint, this seems confusing integrated reporting prepares rather than helping to form integrated thinking.

Value creation model is the distinguishing element offered by <IR> framework as shown in its page 13. It has three main elements namely, input, business process and outcomes. Inputs are six capitals; business process includes activities and outputs and outcomes



include value creation for each capital. All capitals are inputs and all outcomes of the business are to enhance value of capitals and finally the enhanced capital value becomes input to the next cycle. In other words, this implies that outcomes of business operations have implications on stakeholder engagement.

However, in further explanations of outcomes, the guidelines confuse the reader illuminating the priority of value creation for the investors. Accordingly, outcomes are explained as *“the internal and external consequences (positive and negative) for the capitals as a result of an organization’s business activities and outputs”* (IIRC, 2013, p.14). Internal outcomes are implications on internal operations of the business organization such as *“employee morale, organizational reputation, revenue and cash flows”* (IIRC, 2013, p.16). External outcomes are implications to the outside world such as *“customer satisfaction, tax payments, brand loyalty, and social and environmental effects”* (p. 16). By separating outcomes as internal and external, the framework separates value creation for customers and other outside parties from internal parties such as employees.

Thus, the <IR> guidelines do not pass a clear and consistent meaning of value creation and need of creating value for stakeholder investments.

#### Message 5: **Feedback on value change of each investment**

To explanations of stakeholder-agency theory, it is important for managers to know and report how they have created value for investors and other stakeholders. For this the value creation need to be measured. However, the <IR> guidelines in its page 7, under Section 1.10, indicates that it has no intention to specify how to measure the value creation.

*“This Framework does not prescribe specific key performance indicators (KPIs), measurement methods or the disclosure of individual matters. Those responsible for the preparation and presentation of the integrated report therefore need to exercise judgement, given the specific circumstances of the organization....”* (IIRC, 2013, P. 7):.

Hence, the <IR> framework does not pass any message on providing feedback on the change of stakeholder investment.

## 7. Conclusion

Integrated reporting emerged as an accounting initiative to support the need of sustainable management emphasised by United Nations in 1992. The IIRC, established in 2010, has produced its first set of guidelines, <IR> in 2013 on integrated reporting. The purpose of this framework is to make firms be engaged in integrated thinking in its planning, governance and reporting.

However, criticisms are mounted against the role of the <IR> framework in creating integrated thinking in firms. Flower (2015) criticises the <IR> guidelines to have the focus on managerial capitalism, which maintains the sole purpose of a business firm is value creation for its shareholders. Adams (2015) responds to Flower (2015) and argue that naturally, shareholder value creation needs to be prioritized in order to take the owners’ support for a business firm for its continuity to exist. Nevertheless, Adams concurs with Flower that <IR>

guidelines have lack of support to create integrated thinking in firms. Feng et al. (2017) also criticise <IR> framework for its immaturity to create integrated thinking.

Responses of practitioners reveal that the impact of <IR> in creating integrated thinking and a change in the business climate to support sustainable management is less. Hence, this paper was motivated to further understand why the <IR> framework has failed in creating integrated thinking. Integrated thinking depends on managers' knowledge of its need for firm's sustainability. Adams and Whelan (2009) claim that in order managers, who are under the pressure of profit maximization, to be engaged in integrated reporting there should be a source of dissonance. Hence, the research was designed to understand the potential of <IR> framework to provide this knowledge to the manager. For this a theoretical framework was constructed benefitting from stakeholder theory (Freeman, 1984; 2001) and stakeholder agency theory (Hill & Jones, 1992). Through the theoretical framework, five messages were traced that are needed to make managers knowledgeable to be engaged in integrated thinking. Then, <IR> guidelines were assessed referring to their potential to serve these five messages.

It was found that <IR> guidelines fail in communicating the messages to the managers to create integrated thinking in firms for sustainability. The <IR> framework (2013) does not clearly communicate at least a single message out of five traced in the theoretical framework. Hence, this finding is an addition to Flower (2015) that although some the managerial capitalism is seen <IR> guidelines, still sustainability guidelines are contained. This paper concurs with Flower (2015) that <IR> guidelines do not support inculcation of integrated thinking in firms. This paper also concurs with Adams (2015) that a priority on shareholder value creation needs to be maintained in order to continue with sustainability initiatives among firms. The common idea between Flower (2015) and Adams (2015) is that value creation for shareholders and other stakeholders is opposing. Flower (2015) has the standing that it is not acceptable to focus on shareholder value creation but Adams (2015) argues that such a focus is needed to continue to create value for others. However, this paper contributes to the current knowledge with the idea that value creation for shareholders and other stakeholders are not two opposing processes. Instead value creation for other stakeholder is complementary to value creation for shareholders. If this message is passed onto managers of firms, that would remove the contradiction between shareholder value creation and stakeholder value creation bringing the convergence of both and promoting integrated thinking. This finding would be important for practitioners and regulators of integrated reporting.

## References

- Adams, C.A. (2013). Sustainability reporting and performance management in Universities: challenges and benefits, *Sustainability Accounting, Management and Policy Journal*, 4(3), 384-391
- Adams, C.A. (2015). The International Integrated Reporting Council: A call to action. *Critical Perspectives on Accounting*, 27, 23–28.
- Adams, C.A. & Whelan, G. (2009). Conceptualising future change in corporate sustainability reporting. *Accounting, Auditing & Accountability Journal*, 22(1), 118-143.

- Beck, C., Dumay, J., & Frost, G. (2017). In pursuit of a 'single source of truth': From threatened legitimacy to integrated reporting. *Journal of Business Ethics*, 141, 191-205.
- Daub, C.H. (2007). Assessing the quality of sustainability reporting: An alternative methodological approach. *Journal of Cleaner Production*, 15, 75-85.
- Deegan, C. (2007). Organizational legitimacy as a motive for sustainability reporting. In J. Unerman, J. Bebbington, B. O'Dwyer, (Eds.), *Sustainability Accounting and Accountability* (127-149). London: Routledge.
- Dumay, J., Bernadi, C., Guthrie, J., & Demartini, P. (2016). Integrated reporting: A structured literature review. *Accounting Forum*, 40, 166-185.
- Eccles, R.G., & Krzus, M.P. (2010). *One Report: Integrated Reporting for a Sustainable Strategy*. New York: John Wiley & Sons.
- Feng, T., Cummings, L., & Tweedie, D. (2017). Exploring integrated thinking in integrated reporting – an exploratory study in Australia. *Journal of Intellectual Capital*, 18 (2), 330-353.
- Figge, F., Hahn, T., Schaltegger, S., & Wagner, M. (2002). The sustainability balanced scorecard-linking sustainability management to business strategy. *Business Strategy and the Environment*. 11, 269-284.
- Flower, J. (2015). The International Integrated Reporting Council: A story of failure. *Critical Perspectives of Accounting*, 27, 1-17.
- Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Boston: Pitman.
- Freeman, R. E. (2001). Stakeholder theory of the modern corporation. *General Issues in Business Ethics*. 40-48. available in [www. Academic.udayaton.edu](http://www.Academic.udayaton.edu) accessed on September 20, 2017)
- Freeman, R & Reed, DL., (1983). Stockholders and Stakeholders: A New Perspective on Corporate Governance. *California Management Review*. 25 (3)
- Giovannoni, E., & Fabietti, G. (2013). What is sustainability? A review of the concept and its applications. In C. Busco, M. L. Frigo, A. Riccaboni, & P. Quattrone (Eds.), *Integrated Reporting. Concepts and Cases that Redefine Corporate Accountability* (21-40). Location: Springer.
- Gleeson-White, J. (2014). *Six Capitals: Or Can Accountants Save the planet? Rethinking Capitalism for the 21<sup>st</sup> Century*. Sydney: Allen & Unwin.
- Gray, R. (2010). Is accounting for sustainability actually accounting for sustainability. . . and how would we know?. *Accounting Organizations and Society*, 35 (1), 47–62.
- Hill, C. W. L., & Jones, T. M. (1992). Stakeholder-agency theory. *Journal of Management Studies*, 29, 131-154.
- Hopwood, A.G. (2009). Accounting and the environment. *Accounting Organizations and Society*, 34, 433-439.
- Institute of Directors Southern Africa. (1994). *King Report (I) on Governance for South Africa*. Retrieved from
- Institute of Directors Southern Africa. (2002). *King Report (II) on Governance for South Africa*. Retrieved from
- Institute of Directors Southern Africa. (2009). *King Report (III) on Governance for South Africa*. Retrieved from
- International Integrated Reporting Council. (2013). *The International (IR) Framework*. Retrieved from [www.iirc.org](http://www.iirc.org) (

- Jensen, M.C., & Meckling, W.H. (1976). Theory of the firm: Managerial behavior, agency cost and ownership structure. *Journal of Financial Economics*, 3, 305-360.
- Jones, T. (1995). Instrumental stakeholder theory: a synthesis of ethics and economics. *Academy of Management Review*, 20(2), 404-437.
- Larrinaga-gonzalez, C. (2007). Sustainability Reporting: Insights from Neo-Institutional Theory. *Sustainability Accounting and Accountability*. p. 150-167
- Lodhia, S. & Martin, N. (2014). Corporate Sustainability Indicators: An Australian Mining Perspective, *Journal of Cleaner Production*, 84,107-115 .
- March, J.G., & Simon, H.A. (1958). *Organizations*. New York: Wiley
- Martin, R., & Austen, H. (1999). *The art of integrative thinking*. Location: Rotman Management.
- Milne, J., & Gray, R.(2013). W(h)ither ecology? The triple bottom line, the Global Reporting Initiative, and the corporate sustainability reporting. *Journal of Business Ethics*, 118(1), 13-29.
- Neu, D., Warsame, H., & Pedwell, K. (1998). Managing public impressions: environmental disclosures in annual reports. *Accounting Organizations and Society*, 23, 265-282.
- O'Dwyer, B. (2003). Conceptions of corporate social responsibility: The nature of managerial capture. *Accounting Auditing and Accountability Journal*, 16, 523-557.
- Report of the World Commission on Environment and Development: Our Common Future, Available at [www. UN Documents](http://www.un.org/documents)
- Riccardo, S., Gaia, Melloni., Alessandro, L. (2016). Sustainability management and reporting: The role of integrated reporting for communicating corporate sustainability management. *Journal of Cleaner Production*, 136, 102-110
- Roca, L.C., & Searcy, C. (2012). An analysis of indicators disclosed in corporate sustainability reports. *Journal of Cleaner Production*, 20, 103-118.
- Ross, S. (1973). The economic theory of agency: The principle's problem. *American Economic Review*, 63, 134-199.
- Rowbottom, N., & Locke, J. (2016). The emergence of <IR>. *Accounting and Business Research*, 46(1), 83-115.
- The South Africa Institute of Chartered Accountants. (2015). *Integrated thinking: An exploratory survey*. Retrieved from [www. saica.co.za](http://www.saica.co.za)
- Williamson, O.E. (1984) Corporate Governance. *Yale Law Review*, 93, 1197-1230.
- Williamson, O.E. (1985). *The Economic Institutions of Capitalism*. New York: Free Press.

## **Business Economics and Finance**

## Effect of Sources of Information on Online Trading Decisions in Sri Lanka

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### Abstract

The way of conducting financial transactions especially the stock market transactions during the last decade, have been transformed by Information Technology. Internet trading helps to reduce both fixed and marginal cost; hence small companies are in a position to adapt this service. However, this is still an emerging area for Sri Lankan stock market though Sri Lanka's average internet usage has increased gradually during the last decade. Moreover, Sri Lankan stock market investors are reluctant to use online trading; hence it is vital to study the behavior of online traders in Sri Lanka. Therefore, the objective of this study are twofold. Firstly, to identify the key information sources of online investors in Sri Lanka. Secondly, to examine the relationship between information sources and online trading decisions that operationalized through trading frequencies. The research was conducted based on deductive approach under the positivism research paradigm. Data was collected through a structured questionnaire from 70 online investors in Colombo district electronically and the sample of the study was selected based on convenience sampling technique. Both primary and secondary data was analyzed through descriptive and inferential analysis using SPSS software. The findings of this study showed that the word of mouth communication is the key information source for the Sri Lankan online investors. Specialized media and communication via word of mouth also has an impact on Sri Lankan online investor decisions. These findings help both industry and policy makers to take their future decisions relevant to efficient stock market in Sri Lanka.

**Keywords.** Sri Lankan Stock Market, Key Information Sources, Online Trading Decision

### 1. Background

The internet usage in Sri Lanka is dramatically increasing over the past decades and there were more than six million internet users in Sri Lanka in 2016 (<http://www.internetlivestats.com/internet-users/sri-lanka>). This is more than 29% of the total population. The internet penetration in Sri Lanka in 2016 has marked a remarkable growth due to mobile broadband connections. The country is making a digital hub with the

growth of e-commerce industry in Sri Lanka as the exceptional growth of fixed internet connection. The easiness of access to smartphones, tabs and other technological devices has enriched and improved the usage of internet nowadays. The lifestyle of overall Sri Lankans has changed in recent decades by the growth of such internet astuteness and it plays a vital role in everyday life by facilitating online shopping, mobile banking and bill payment facilities (internet live stats, 2016).

Many online businesses were implemented by internet commerce, as it was able to reduce fixed cost and marginal cost. Businesses can also use these exchanges by providing financial advice, research tools and financial information (Barber & Odean, 2001). Consequently, the stock market has also been changed by the internet revolution in the same way as other financial services. The substance for the stock market has been fundamentally transformed by the internet. In the past, brokers were the most essential intermediary of individual investors and the market. Online trading now connects the investor directly to the stock market by providing faster and cheaper services. The internet can provide every investor with a wealth of information and trading tools, previously available only to professional traders. In addition, investors were allowed to gather in electronic communities and discuss stocks directly with each other and share information (Barber & Odean, 2001).

Further, online trading has become the dominant form of stock trading market at the present time. The latest report of ASX retail investor revealed that an online broker has been used 80% by the Australian investors who trade online (ASX, 2012). In Hong Kong also similar online investment implementations are followed, where online trading is 70% of all investors and from that 70% trade exclusively online (HKEX, 2011). Moreover, Commonwealth Securities, Australia's largest online brokerage, is just over a million customers (Webb, 2007). The researcher has undergone a preliminary study to find an active number of online investors in Sri Lanka. To do a study the researcher selected two leading stock broker companies in Colombo Stock Exchange. According to the statistics of company (A), they have 66000 CDS accounts, from that 3730 are online accounts and it is a percentage of 5.65%. But from that 150 accounts are only operating daily. It is a percentage of 0.227% from total company (A) CDS accounts. Further, as per the statistics of company (B) online accounts is a percentage of 5% and daily operating accounts is a percentage of 2.5% from total company (B) CDS accounts. Therefore, it is evident in Sri Lankan context that online investing is still an emerging area in stock market investment.

Exclusively, OhaJerry, Terry and Walterb (2007) investigates the trading behaviour and performance of online equity investors in comparison to non-online equity investors in Korea. While online trading has become more prevalent in financial markets, the effect of sources of information on online trading decisions and the role of online investors has attracted little empirical scrutiny. The sources of information, the trading activity of foreign investors, local institutions and individual traders between 2001 and 2005 were studied and compared their performance. The main finding is that in aggregate, online investors perform poorly in comparison to non-online investors and less sources of information on online

trading decisions. Individual investors provide liquidity to other investor-types, particularly when trading online. On balance, the main implication of the findings is that the disadvantage suffered by individual investors is mainly explained by their online trades and sources of information on online trading decisions.

A traditional view of investment theory is that investors are rational beings who always attempt to maximize expected returns based on their expectations of future risks. By opposing this standpoint, as per Anuradha and Anju (2015) which examined the investor savings and investment behavior proved that investors are irrational in investment decision making. They have identified various factors, including investors' behavioral factors, which influence their decisions to save and invest. Similarly, the research also suggested that demographic factors, market factors, lifestyle characteristics, investor appetite for risk are the dependent factors for behavior of individual investment decisions (Ambrose & Vincent, 2014; Chakraborty, 2014; Chandra & Kumar, 2011; Robert & Robert, 1994).

On the other hand, the rational and behavioral approaches to investment solutions, the additional information provided by investors, leads to greater trade (Abreu & Mendes, 2012). One plausible explanation is that more sophisticated investors get more signals or detect these signals more accurately. Investor information acquisition costs are offset by investments in risky assets and thus investors expect higher returns. Investors with more knowledge and riskier investments will adjust their portfolios more often and negotiate more with results (Peress, 2004). According to several researchers, investors use different information retrieval strategies that enable them to make business decisions. Most of these information retrieval strategies are generally based on the search for specific information, the number of sources used by investors to collect market data and number of contacts by phone or visits. The starting point is that the quality of the data source has an impact on the commercial behavior of investors, since data from a trusted source can produce more transactions than less reliable transactions (Epstein & Schneider, 2008).

As per literature, Sri Lanka has good infrastructure to promote online trading because the people are having time and the availability of internet facility. Moreover, the internet availability would be a better platform to do online trading transactions, as they would be much connected via different modes. The way of Sri Lankans work, play and buy as a population have been changed by the ability to connect with each other and having access to information at fingertip. This is a very good sign to promote online trading in Sri Lanka, by providing the awareness of online trading to the Sri Lankan people. Therefore, it is worth to study the relationship between information sources and Sri Lankan investor decision behavior in this emerging area of online trading. Hence, the objective of this study was twofold. Firstly, to identify the key information sources of online investors in Sri Lanka. Secondly, to examine the relationship between information sources and online trading decisions of Sri Lankan investors.



The scope of the study was limited to the online investors who are based on Colombo District. As the majority of investors are from Colombo district. This could be considered as a limitation of the study. Further, focusing only on individual investors due to the convenience of approaching and ignoring the size of the investment may lead for limitations of the study. Business cycle of the economy and other macro-economic variables were not considered though it may influence very much on investment decision making. However, these limitations could pave the path for further researches. The remains of the paper are organized as follows. Firstly, it discusses the literature leading to hypothesis development and conceptual model, secondly it presents the research methods adopted in the study and thirdly it discusses the findings and implications. Finally, it presents conclusions and areas for future research.

## **2. Literature Review**

E-commerce has become the easiest tool at this time and it has come to the success of online business organizations all over the world. Buyers make their purchasing decisions based on many factors and choose different purchasing habits based on their own preferences, needs and feelings. Mainly eBay, Amozon, Alibaba, Etsy, Rakuten, Newegg, Bonanza and eBid are important online trading sites. In the same way, the online trading of stock markets is devoted to all banking, trading and money forums. In fact, the stock market has developed tremendously as it has never happened before. Further, Barber and Odean (2001) discuss how technological developments in the internet can affect investors and financial markets. Their argument is that investors in general and network investors make decisions in a very different environment than investors in the past. They usually work without personal intermediaries, demand more information and do perform more extensive research and comparisons on a wide range of criteria. Moreover, Laveena et al. (2015) discuss the future of the stock market through online trading, role of the stock market and social networking sites in the online store. The researcher points out that internet channel is a convenient way for the public to make online transactions even faster than ever. Rahim (2013) investigates major hurdles for the growth of online stock trading as computer illiteracy, poor infrastructure and risk adverse attitude of investors. Chua (2014) estimates the usage of e-commerce portals in Philippines and he reveals that portal users are mostly men, young professionals and Citisec Online (COL) customers who have little experience in online shopping. Moreover, Abdul et al (2017) found that online trust and usability are the factors influence people to buy the product via e-commerce.

According to Epstein and Schneider (2008), if investors can use reliable sources of information, they often become stock market traders by changing their portfolios according to the available information. This is because the investor can rely on reliable information to examine the current situation and to predict the future reliably. This leads to take rational decisions by investors (Fischer & Gerhardt, 2007). Expertise's financial advices are always one of the investors' sources of information in the context of investment decisions. Karabulut (2013) says that investors can seek counsellors when they are less advanced.

However, these results are contrary to Bhattacharya et al. (2012). According to his study, investors are always economically well developed and therefore they can have a good picture of financial advice and seek more confidence in a financial circumstance. However, professional advisors and their specialized knowledge generate high credibility based on their expertise, knowledge and in-depth analysis which assist to grow investors' self-assurance, self-confidence and eventually investors' frequent engage in stock market by changing their portfolio (Abreu & Mendes, 2012).

The word of mouth is another source of information of investors. It is comparatively inexpensive and budget-friendly than counselling (Ivkovic & Weisbenner, 2007). Further, Hong et al. (2004) confirmed that the social interaction could touch the commitment of equity markets. While illuminating the situation, they argue that investors reflect the stock markets to be more attractive when their peers are involved in the same stock market. In the Chinese market, Ng and Wu's (2010) survey exhibited that stockholders in the same branch of the intermediary country have made similar commercial investment choices. Nevertheless, many investors relate their tangible experience as a source of information. They might have felt that their experience was better than any statistical model that is being presented in their respective environment (Kaustia & Knupfer, 2012). In addition, the researcher pointed out that the return of the neighborhood raises the participation of a stock market, which grows in the same geographical area. According to Li (2014) as family members get together, communicate with each other, share their valuable ideas with other members and support to invest in the same stock market at the same time. Finally, investors are probably involving actively in the investment in the future.

According to Fama (1970), market efficiency is one of the important factors which depend on how past returns determine the future returns, the extent to which public announcements are shown from security prices and to which extent private information is reflected in market prices. Moreover, Fama and French (1989) realized that expected returns have variations in common and there are systematic patterns in the variation of expected returns throughout the time.

Importantly, Kahneman and Tversky (1979) emphasized a critique of expected utility theory as a descriptive model of decision making under risk and develops an alternative model, called prospect theory. Choices among risky prospects exhibit several pervasive effects that are inconsistent with the basic tenets of utility theory. In particular, people underweight outcomes that are merely probable in comparison with outcomes that are obtained with certainty. This tendency, called the certainty effect, contributes to risk aversion in choices involving sure gains and to risk seeking in choices involving sure losses. In addition, people generally discard components that are shared by all prospects under consideration. This tendency, called the isolation effect, leads to inconsistent preferences when the same choice is presented in different forms.

Participation with a specific social group is another experimentation of many scholars' lately as a source of information. Changwony et al. (2014) has found out a straight rapport between the social group and their stock market engagement. Besides, these conclusions are reliable with Feng and Seasholes (2004). According to the scholars, word of mouth has no effect on the stock market participation and people make joint decisions through the information that are available publicly in a way that everyone can access. Strengthening this argument, Abreu and Mendes (2012) have found that social interaction is a result of a decline in the number of transactions in the stock market, especially when markets are facing a financial crisis or when the market is showing a low situation and not a bull market. Align with that, Strahilevitz et al. (2011) have come out with a different viewing platform and stressed that investors always depend on their earlier investment experiences. According to the researcher, investors are always eager to sell shares with a gain, compared to the shares sold at a loss. Correspondingly, Hoffmann and Post (2013) point out that historical experience can support and encourage facing the future benefits and risks.

### 3. Methodology

#### 3.1 Conceptual Framework

This research examined the relationship between sources of information and online investor decisions. Sources of information were identified as independent variable and its dimensions are financial advice, word-of-mouth communication and specialized media (Muhammad, 2016). The dependent variable of this research was trading decisions of online investors in Colombo Stock Exchange (CSE) and its dimension was trading frequency (Caroline et al, 2016).

#### Sources of Information

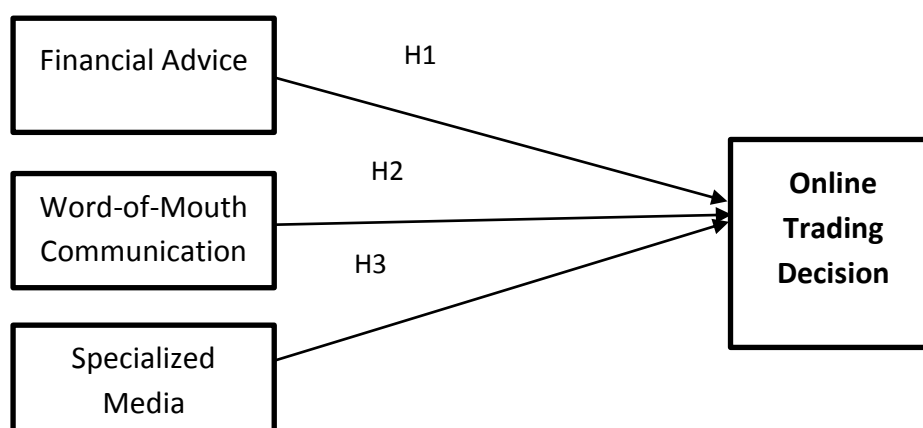


Figure 1. Conceptual Framework

Source : Researcher developed based on Literature

### **3.2 Hypothesis of the study**

According to Epstein and Schneider (2008), if investors can use reliable sources of information, they often become stock market traders by changing their portfolios according to the available information. This is because the investor can rely on reliable information to analyze the current situation and to predict the future reliably. This has led to rational decisions by investors (Fischer & Gerhardt, 2007). Financial advice from expert consultants is a source of information that an investor can have. Researchers, however, say that investors can seek counsellors when they are less advanced (Karabulut, 2013). The word of mouth is another source of information. This method is cheaper than counselling (Ivkovic & Weisbenner, 2007). For example, employees rely more on another employee to seek a pension plan (Duflo & Saez, 2002; Duflo & Saez, 2003). Further to that, Izah and Chandler (2005) examined the perception of timeliness, the usefulness of quarterly reports and the annual reports of Malaysian commercial investors. They find that annual reports are more useful than quarterly reports, but the quarterly reports are intended to provide timely financial information. Similarly, Hodge (2003) stated that accounting information is more important in making investment decisions.

### **3.3 Operationalization**

As per the literature, the sources of information were operationalizing through financial advice (Muhammad et al., 2016; Abreu & Mendes, 2012), word of mouth (Muhammad et al., 2016, Ivković & Weisbenner, 2007), Specialized media (Muhammad et al., 2016; Epstein & Schneider, 2008). The dependent variable, investor decision was operationalized through trading frequencies (Abreu & Mendes, 2012; Muhammad et al., 2016) and length of time to hold stock (Caroline et al., 2016).

### **3.4 Methodology**

Based on the Positivistic Research Paradigm, this study mainly produced a quantitative study while following the deductive research strategy. In this research, the population is the online investors in Colombo district who have registered in Colombo Stock Exchange. In order to fulfil the research objectives in this study, the researcher selected 70 online investors using the convenient sampling method. A questionnaire survey was adapted to collect the data which was validated thorough a pilot study. Moreover, the questionnaires were distributed through e-mails. All indicators in the independent variable were measured on five point Likert scale 5-Strongly agree, 4 -Agree, 3-Neither agree nor disagree, 2-Disagree and 1-Strongly disagree.

The first objective of this research is to identify the key information sources of online investors in Sri Lanka. To achieve this objective, the primary data was gathered via the questionnaire survey and descriptive analysis was used to analyse the data. Second objective of this study is to examine the relationship between information sources and

online trading decisions. To achieve this objective, the primary data was gathered through the questionnaire survey.

The dependent variable was the trading decisions of online investors in CSE and it was operationalized through the trading frequency. Further, the dependent variable is a categorical variable, which had five levels (Once per month, 2-3 times per month, Once per week, 2-3 times per week and Daily). In literature, it is recommended that when the independent variable is measured as interval or ratio, while the dependent variable is measured as the nominal categorical variable with more than two levels, Multinomial Regression Analysis would be appropriate to measure the relationship between the independent variable and the dependent variable.

#### **4. Data analysis and Presentation**

##### ***4.1 Characteristics of the sample***

Descriptive statistics were used to explain the characteristics of the research sample where some graphical representation of data along with mean and standard deviation was mainly used.

The gender distribution of the sample showed that 78.6% respondents are male while 21.4% are female respondents. Further, the age distribution of the sample showed that 64.3% of the sample represented by the respondents from the age between 25 to 40 years. 15.7% respondents are from the age between 40 to 55 years, while the age group between 55 to 70 years represented by the 17.1% of the respondents. The education level of the sample showed that 40% of the respondents had education up to GCE A/L, while 35.7% had Bachelor's Degree. 15.7% had a Master's Degree and 2.9% are above Master's Degree.

Preferred word of mouth communication of the respondents have shown that, 60% preferred word of mouth communication, 27.1% preferred specialized media and 12.9% preferred financial advice.

##### ***4.2 Reliability and Validity Test***

The reliability test was conducted to check whether the questions had been asked in order to measure whether the variables are uni- directional if Cronbach's Alpha is greater than 0.7 (Sekaran, 2008). According to the independent variable, it satisfied the condition of 0.7. Factor analysis results have shown that factor loadings are greater than 0.5 for all elements. Hence, the constructs were considered as valid measures (Churchill, 1979). Further, it was reasonable to assume that all variables have face validity and construct validity as they were adapted from well-established measures in literature (Sekaran, 2006).

Table 1  
*Descriptive Statistics of Independent Variables*

	N	Minimum	Maximum	Mean	Std. Deviation
FA	70	2.00	4.50	3.1071	.76088
WOM	70	1.67	4.67	3.1333	.75587
SM	70	2.00	4.67	3.5333	.75800

Source : Researcher developed based on analysis

Table 1 shows the descriptive statistics of independent variables. Based on the scale (1 – strongly disagree to 5- strongly agree) and the descriptive statistics, independent variable “Specialized Media” shows the highest mean value of 3.5333 and a standard deviation of 0.75800. This implies that the most of the responses are within  $3.5333 \pm 0.75800$  (2.7753 - 4.2913 of the Likert scale). The lowest mean value of 3.1071 has shown for the “Financial Advice” where standard deviation was 0.76088. This indicates that the most of the responses are within  $3.1071 \pm 0.76088$  (2.34622 – 3.86798 of the Likert scale). The independent variable “Word of Mouth” shows the mean value 3.1333 and a standard deviation of 0.75587. This implies that the most of the responses are within  $3.1333 \pm 0.75587$  (2.37743 - 3.88917 of the Likert scale).

#### **4.3 Inferential Statistical Analysis**

By using inferential statistics, it is trying to reach conclusions that extend beyond the immediate data alone. There are various inferential statistical techniques to make conclusions on the data depending on the findings from the descriptive analysis. In this study, the hypothesis were tested with multinomial regression analysis. Multinomial Logistic Regression is the linear regression analysis to conduct when the dependent variable is nominal with more than two levels. Like all linear regressions, the multinomial regression is a predictive analysis. Multinomial regression is used to describe data and to explain the relationship between one dependent nominal variable and one or more continuous-level (interval or ratio scale) independent variables. Morrison et al (2002) conduct a study of Comparison and Contrast of Push and Pull Motivational Effects on Trip Behavior: An Application of a Multinomial Logistic Regression Model.

#### 4.3.1 Multinomial Regression Analysis

##### The relationship of Financial Advice and Investor Decision

Table 2

*Goodness of fit of Financial Advice and Investor Decision*

	Chi-Square	df	Sig.
Pearson	56.682	16	.000
Deviance	53.511	16	.000

Source: Researcher developed based on analysis

According to the table 2, "Pearson" presents the Pearson chi-square statistic. Large chi-square values indicate a poor fit for the model. A statistically significant result ( $p < .05$ ) indicates that the model fit the data well. According to the above table the P value is 0.000, therefore, based on this measure, the model does not fit the data well.

Table 3

*Model-Fitting Information of Financial Advice and Investor Decision*

Model	Model Fitting Criteria		Likelihood Tests		Ratio
	-2 Likelihood	Log	Chi-Square	df	Sig.
Intercept Only	79.764				
Final	75.335		4.429	4	.351

Source: Researcher developed based on analysis

Table 3 shows the model fitting information of financial advice and investor decision. This represents information on whether all the coefficients of the model are zero (i.e., whether any of the coefficients are statistically significant). Another way to consider this result is whether the variables are added statistically significantly to improve the model compared to the intercept alone (i.e., with no variables added). According to the table 3, p value 0.351, which means that the full model statistically significantly predicts the dependent variable better than the intercept-only model alone.

Table 4

*Pseudo R-Square of Financial Advice and Investor Decision*

Cox and Snell	.061
Nagelkerke	.068
McFadden	.027

Source: Researcher developed based on analysis

Pseudo R-Square measure, which is the proportion of variance that can be explained by the model. According to the Table 4, this value is 0.061 and it means 6.1% of variance of the Investor Decision is explained from the Financial Advice.

Table 5

*Likelihood Ratio Test of Financial Advice and Investor Decision*

Effect	Model	Fitting	Likelihood Ratio Tests		
	Criteria				
	-2 Log Likelihood of Reduced Model		Chi-Square	df	Sig.
Intercept	81.489		6.155	4	.188
FA	79.764		4.429	4	.351

Source: Researcher developed based on analysis

Table 5 shows that which of the independent variables are statistically significant. Financial Advice is not statistically significant because  $p = 0.351$  (the "Sig." column). This table is mostly useful for nominal independent variables. Because it is the only table that considers the overall effect of a nominal variable.

**H1:- Financial advice directly impacts to the investor decision**

According to table 3, the p value is 0.351, which is  $p > 0.05$  therefore the relationship of financial advice to the investor decision is insignificance at 95% significance level and it means that there is no significant impact to the investor decision from the financial advice.



**The relationship of Word of Mouth Communication and Investor Decision**

Table 6

*Goodness of fit of Word of Mouth Communication and Investor Decision*

	Chi-Square	df	Sig.
Pearson	36.906	32	.252
Deviance	34.001	32	.371

Source: Researcher developed based on analysis

According to the table 6, "Pearson" presents the Pearson chi-square statistic. Large chi-square values indicate a poor fit for the model. A statistically significant result (i.e.,  $p < .05$ ) indicates that the model does not fit the data well. According to the above table, the P value is 0.252, therefore, based on this measure, the model fits the data well.

Table 7

*Model Fitting Information of Word of Mouth Communication and Investor Decision*

Model	Model Fitting Criteria		Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.	
Intercept Only	86.431				
Final	63.123	23.308	4	.000	

Source: Researcher developed based on analysis

This represents information on whether all the coefficients of the model are zero (i.e., whether any of the coefficients are statistically significant). Another way to consider this result is whether the variables are added statistically significantly to improve the model compared to the intercept alone (i.e., with no variables added). According to the table 7,  $p = 0.000$ , which means that the full model statistically significantly predicts the dependent variable better than the intercept-only model alone.

Table 8

*Pseudo R-Square of Word of Mouth Communication and Investor Decision*

Cox and Snell	.283
Nagelkerke	.313
McFadden	.141

Source: Researcher developed based on analysis

Pseudo R-Square measures the proportion of variance that can be explained by the model. According to the Table 8, this value is 0.283 and it means that 28.3% of variance of the Investor Decision explained from the Word of Mouth Communication.

Table 9

*Likelihood Ratio Test of Word of Mouth Communication and Investor Decision*

Effect	Model Fitting Criteria		Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model		Chi-Square	df	Sig.
Intercept	88.410		25.287	4	.000
WOM	86.431		23.308	4	.000

Source: Researcher developed based on analysis

Table 9 shows which of the independent variables are statistically significant. Word of Mouth Communication is statistically significant because  $p = 0.000$  (the "Sig." column). This table is mostly useful for nominal independent variables as it is the only table that considers the overall effect of a nominal variable.

## **H2:- Word of mouth communication directly impacts to the investor decision**

According to table 9, the p value is 0.000 and  $p < 0.05$ . Therefore the relationship of word of mouth communication to the investor decision is significance at 95% significance level and it means that there is a significant impact to the investor decision from the word of mouth communication.

**The relationship of Specialized Media and Investor Decision**

Table 10

*Goodness of fit of Specialized Media and Investor Decision*

	Chi-Square	df	Sig.
Pearson	30.982	28	.318
Deviance	34.191	28	.195

Source: Researcher developed based on analysis

According to the table 10, "Pearson" presents the Pearson chi-square statistic. Large chi-square values indicate a poor fit for the model. A statistically significant result (i.e.,  $p < .05$ ) indicates that the model does not fit the data well. According to the above table, the P value is 0.318 and therefore, the variable is statistically significant. Based on this measure, the model fits the data well.

Table 11

*Model-Fitting Information of Specialized Media and Investor Decision*

Model	Model Fitting Criteria		Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	Df	Sig.	
Intercept Only	75.492				
Final	63.928	11.564	4	.021	

Source: Researcher developed based on analysis

This represents information on whether all the coefficients of the model are zero (i.e., whether any of the coefficients are statistically significant). Another way to consider this result is whether the variables are added statistically significantly to improve the model compared to the intercept alone (i.e., with no variables added). According to the table 11,  $p = 0.021$ , which means that the full model is statistically significantly predicts the dependent variable better than the intercept-only model alone.

Table 12

*Pseudo R-Square of Specialized Media and Investor Decision*

Cox and Snell	.152
Nagelkerke	.168
McFadden	.070

Source: Researcher developed based on analysis

Pseudo R-Square measures, the proportion of variance that can be explained by the model. According to the Table 12, this value is 0.15, it means 15.2% of variance of the Investor Decision explained from the Specialized Media.

Table 13

*Likelihood Ratio Test of Specialized Media and Investor Decision*

Effect	Model Fitting Criteria		Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.	
Intercept	79.193	15.26	4	.004	
SM	75.492	11.56	4	.021	

Source: Researcher developed based on analysis

Table 13 shows which of the independent variables are statistically significant. Specialized Media is statistically significant because  $p = 0.021$  (the "Sig." column). This table is mostly useful for nominal independent variables, as it is the only table that considers the overall effect of a nominal variable.

**H3:- Specialized media directly impact to the investor decision**

According to table 13, the p value is 0.021 and  $p < 0.05$ . Therefore the relationship of specialized media to the investor decision is significance at 95% significance level and it means that there is a significant impact to the investor decision from the specialized media.

### **5. Discussion of Findings**

In order to identify the information sources and investment decision of Sri Lankan online investors, this study was carried out using 70 investors. The first objective of this research was to identify the key information sources of online investors in Sri Lanka. To achieve this objective, gathering the data about the preferred information sources of online investors was essential. Accordingly, expertise's financial advices, word-of-mouth communication and specialized media can be identified as investors' sources of information in the context of investment decisions. Professional advisors and their specialized knowledge generate less attraction in the context of the sources of information, though it generates high credibility based on their expertise, knowledge and in-depth analysis.

According to the findings of study, the word of mouth communication is the main source of information in this sample. This is a less costly method when compared to advisory service (Ivkovic & Weisbenner, 2007). Similarly, model proposed by Hong et al. (2004) showed that social interaction might fairly influence the engagements in stock market. They discuss that social investors feel the stock market as a more beautiful place to invest when their peers are also engaged in the stock market. As well as Brown et al. (2008) shows that the investors who live in specific area may rely on the average stock holding of investors in same area. This shows that the impact of word of mouth communication to stock market trading. Therefore, it can conclude that word of mouth communication is highly utilized by online investors.

Second objective of this study was to examine the relationship between information sources and online trading decision. To achieve this objective, data about the information sources that investors using and information about their trading decisions by trading frequencies needed to be gathered. According to the findings of study results, it is proven that there is a strong significant impact from Word of Mouth Communication and Specialized Media to the Investor Decision in Sri Lankan Stock Market. Similarly, Epstein and Schneider (2008) shows that if investors can access to reliable sources information, they have become frequent traders. This is because, investor can analyze the present situation and hence forecast the future reliably with the reliable information. This lead to more balanced investor decisions (Fischer & Gerhardt, 2007). As per Li (2014), it would be a great help for the family members to invest in stock market when other family members share their valuable ideas. Abreu and Mendes (2011) shows that investor's trade more frequently when they collect information directly using specialized sources. The conclusion of the objective shows that there is a strong significant impact from Word of Mouth Communication and Specialized Media to the Investor Decision in Sri Lankan Stock Market.

## **6. Conclusion and Contributions**

The main objective of this research is to measure the relationship between information sources and online trading decisions of Sri Lankan Stock market. The outcome of this research helps to promote online trading among Sri Lankan stock investors and to understand the key areas that the current online investors are using to take their trading decisions. Quantitative research approach with survey has been used to achieve the set objectives at the beginning of the research. The summary of the findings based on the data analysis are highlighted in this section. The first objective of the study is set to identify the main information sources that are used to take their trading decisions by the online investors in Sri Lanka. According to the findings, it can be concluded that the word of mouth communication is the main information source of this sample. The second objective of the research is set to recognize the relationship between information sources and online trading decisions operationalized through trading frequencies of online investors in Sri Lanka. According to the findings there is a strong significant impact from Word - of - Mouth Communication and Specialized Media to the online investor decisions in Sri Lankan Stock Market.

## **7. Practical Implications**

The findings of this research may be helpful for the companies who offers online trading platform to make decisions when implementing online trading platforms. The industry can promote specialized media and word of mouth communication to promote the online trading. This study suggests that, to improve the practical value of social impact, the companies aim the marketing efforts to design and such messages that could trigger word of mouth communication. And the companies can use brand ambassador to promote the word of mouth communication. For investor who prefer to obtain information from specialized sources, companies should incorporate relevant information associated with financial products in those communication mediums and make these sources user friendly to access for potential online investors.

To improve the effectiveness of information utilization, policy makers should understand the ability of potential investors to process information obtained from specialized sources. As well as policy makers can use specialized media to educate about the corruption in this sector. This is very useful because they can distribute that information through media such as Facebook, and they can make social groups through this kind of media to educate the investors.

As another implication of this study, the government can include studies on online trading to the education system then they can increase the awareness of online trading from the beginning. As well as the government can provide some facilities to the online investors to promote this industry using specialized media. The government can grant financial facilities to the university students to encourage online trading.

### 7.1 Suggestions for Future Research Areas

The findings can be diluted as the context of this study is Sri Lankan stock market and hence, further studies can be done for the stock market in other countries. Perceived risk can be a good moderating variable, therefore further research will provide good results when adding the above variable. The dependent variables, the trading decisions of online investors in CSE were operationalized through the trading frequency. But there are other factors which can affect the decisions of online investors. Therefore, such limitation of this research can pave the path the future researches. Further, more variables can be added to the framework in future researches. As examples overconfidence, financial knowledge and portfolio, information search strategies, trading amount and trading value. The response of an investors might be change according to the current market status hence the result can be change in another market status even in the same country therefore this is also another area for future research.

### References

- Abreu, M., & Mendes, V. (2012). Information, overconfidence and trading: Do the sources of information matter?. *Journal of Economic Psychology*, 33(4), 868-881.
- Ackert, L. F. (2014). Traditional and behavioral finance. *Investor Behavior: The Psychology of Financial Planning and Investing*, 25-41.
- Alvares, C. A., Stape, J. L., Sentelhas, P. C., de Moraes, G., Leonardo, J., & Sparovek, G. (2013). Köppen's climate classification map for Brazil. *Meteorologische Zeitschrift*, 22(6), 711-728.
- Ambrose, J., & Vincent, S. (2014). A Survey of the Factors Influencing Investment Decisions: The Case of Individual Investors at the NSE. *International Journal of Humanities and Social Science*.
- Andrikopoulos, P. (2007). Modern finance vs behavioural finance: an overview of key concepts and major arguments.
- Anuradha, P. S., & ANJU, M. K. (2015). Saving and Investment Behaviour–Review and an agenda for future research. *Contemporary Commerce Review*, 4, 43-73.
- Bae, S. C., Min, J. H., & Jung, S. (2011). Trading behavior, performance, and stock preference of foreigners, local institutions, and individual investors: Evidence from the Korean stock market. *Asia-Pacific Journal of Financial Studies*, 40(2), 199-239.
- Baker, H. K., & Nofsinger, J. R. (2002). Psychological biases of investors. *Financial services review*, 11(2), 97.
- Baker, H. K., & Haslem, J. A. (1973). Information needs of individual investors. *Journal of accountancy*, 136(5), 64-69.
- Barber, B. M., & Odean, T. (2001). The Internet and the Investor. *Journal of Economic Perspectives*.
- Barber, B. M., & Odean, T. (2001). The internet and the investor. *Journal of Economic Perspectives*, 15(1), 41-54.
- Bhattacharya, U., Hackethal, A., Kaesler, S., Loos, B., & Meyer, S. (2012). Is unbiased

- financial advice to retail investors sufficient? Answers from a large field study. *The Review of Financial Studies*, 25(4), 975-1032.
- Brown, J. R., Ivković, Z., Smith, P. A., & Weisbenner, S. (2008). Neighbors matter: Causal community effects and stock market participation. *The Journal of Finance*, 63(3), 1509-1531.
- Kimeu, C. N. (2016). Behavioural Factors Influencing Investment Decisions Among Individual Investors In Nairobi Securities Exchange. *Strategic Journal of Business & Change Management*, 3(4).
- Chandra, A., & Kumar, R. (2011). Factors influencing Indian individual investor behaviour: survey evidence.
- Campbell, K., Tabner, I. T., & Changwony, F. K. (2015). Social Engagement and Stock Market Participation\*. *Review of Finance*, 19(1).
- Chua, C. C. (2014). Assessment on the use of online trading portal of some investors in the Philippines. *Journal of Industrial and Intelligent Information Vol*, 2(3).
- Costa, P. T., & McCrea, R. R. (1992). *Revised neo personality inventory (neo pi-r) and neo five-factor inventory (neo-ffi)*. Psychological Assessment Resources.
- Costa, P. T., & McCrae, R. R. (1987). *The NEO-PI/NEO-FFI Manual Supplement*. Psychological Assessment Resources, Odessa FL.
- Crowther, D., & Lancaster, G. (2012). *Research methods*. Routledge.
- Davies, R., & Cunningham, S. (2012). A Review of Online Trading and User Perceptions of Usability and Trust. *Journal of Advanced Internet of Things*.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.
- DeBondt, W., Forbes, W., Hamalainen, P., & Muradoglu, Y. G. (2010). What can behavioural finance teach us about finance? *Emerald Group Publishing Limited*.
- Dissabandara, D. B. P. H. (2012). "The road ahead for Sri-Lankan capital markets", viewed 25 September 2015. <https://www.ft.lk>
- Duflo, E., & Saez, E. (2003). The role of information and social interactions in retirement plan decisions: Evidence from a randomized experiment. *The Quarterly journal of economics*, 118(3), 815-842.
- Duflo, E., & Saez, E. (2002). Participation and investment decisions in a retirement plan: The influence of colleagues' choices. *Journal of public Economics*, 85(1), 121-148.
- Durand, R. B., Newby, R., & Sanghani, J. (2008). An intimate portrait of the individual investor. *The Journal of Behavioral Finance*, 9(4), 193-208.
- Durodolu, O. O. (2016). Technology acceptance model as a predictor of using information system'to acquire information literacy skills. *Library Philosophy and Practice*.
- Economides, N. (2001). The impact of the Internet on financial markets. *Journal of Financial Transformation*, 1(1), 8-13.
- Epstein, L. G., & Schneider, M. (2008). Ambiguity, information quality, and asset pricing. *The Journal of Finance*, 63(1), 197-228.



- Malkiel, B. G., & Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance*, 25(2), 383-417.
- Fama, E. F., & French, K. R. (1989). Business conditions and expected returns on stocks and bonds. *Journal of financial economics*, 25(1), 23-49.
- Feng, L., & Seasholes, M. S. (2004). Correlated trading and location. *The Journal of Finance*, 59(5), 2117-2144.
- Fenton-O'Creevy, M., Nicholson, N., Soane, E., & Willman, P. (2005). *Traders: Risks, decisions, and management in financial markets*. Oxford University Press on Demand.
- Fischer, R., & Gerhardt, R. (2007, April). The missing link between investors and portfolios: Introducing financial advice. In URL: <http://ssrn.com/abstract> (Vol. 967374).
- Gerring, J. (2001). *Social science methodology: A criterial framework*. Cambridge University Press.
- Guiso, L., & Jappelli, T. (2006). Information acquisition and portfolio performance.
- Gunathilaka, C. (2014). Financial Distress Prediction: A Comparative Study of Solvency Test and Z-Score Models with Reference to Sri Lanka. *IUP Journal of Financial Risk Management*, 11(3).
- Heimer, R. Z. (2014). Friends do let friends buy stocks actively. *Journal of Economic Behavior & Organization*, 107, 527-540.
- Heinström, J. (2003). Five personality dimensions and their influence on information behaviour. *Information research*, 9(1), 9-1.
- Henderson, V. R., Hennessy, M., Barrett, D. W., Martin, S., & Fishbein, M. (2006). Tell me more: Sensation seeking and information seeking in evaluating romantic partners. *Journal of Research in Personality*, 40(5), 611-630.
- Hirshleifer, D. (2001). Investor psychology and asset pricing. *The Journal of Finance*, 56(4), 1533-1597.
- Hodge, F. D. (2003). Investors' perceptions of earnings quality, auditor independence, and the usefulness of audited financial information. *Accounting Horizons*, 17, 37-48.
- Hoffmann, A. O., Post, T., & Pennings, J. M. (2013). Individual investor perceptions and behavior during the financial crisis. *Journal of Banking & Finance*, 37(1), 60-74.
- Hong, H., Kubik, J. D., & Stein, J. C. (2004). Social interaction and stock-market participation. *The journal of finance*, 59(1), 137-163
- Hunter, K., & Kemp, S. (2004). The personality of e-commerce investors. *Journal of Economic Psychology*, 25(4), 529-537.
- Ishida, H. (2005). College students' perfectionism and task-strategy inefficiency: Why their efforts go unrewarded. *Japanese Journal of Social Psychology*, 20(3), 208-215.
- Ivković, Z., & Weisbenner, S. (2007). Information diffusion effects in individual investors' common stock purchases: Covet thy neighbors' investment choices. *The Review of Financial Studies*, 20(4), 1327-1357.
- Ismail, K. N. I. K., & Chandler, R. (2005). Perceptions of professional investors in Malaysia on the usefulness of quarterly financial reports. *Jurnal Pengurusan (UKM Journal of Management)*, 24.

- John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. *Handbook of personality: Theory and research*, 2(1999), 102-138.
- Ross, S. A., Westerfield, R., & Jordan, B. D. (2008). *Fundamentals of corporate finance*. Tata McGraw-Hill Education.
- Karabulut, Y. (2013). Financial Advice: An Improvement for Worse?
- Kaustia, M., & Knüpfer, S. (2012). Peer performance and stock market entry. *Journal of Financial Economics*, 104(2), 321-338.
- Kengatharan, L., & Kengatharan, N. (2014). The influence of behavioral factors in making investment decisions and performance: Study on investors of Colombo Stock Exchange, Sri Lanka. *Asian Journal of Finance & Accounting*, 6(1), 1-23.
- Kernan, J. B., & Mojena, R. (1973). Information utilization and personality. *Journal of Communication*, 23(3), 315-327.
- Kramer, M. M. (2012). Financial advice and individual investor portfolio performance. *Financial Management*, 41(2), 395-428.
- Kumar, S., & Goyal, N. (2015). Behavioural biases in investment decision making—a systematic literature review. *Qualitative Research in financial markets*, 7(1), 88-108.
- Lai, P. C. (2017). The literature review of technology adoption models and theories for the novelty technology. *JISTEM-Journal of Information Systems and Technology Management*, 14(1), 21-38.
- Oviani, L., & Oetama, R. S. (2018). New Traders' Mood when using Trading Online Application in Universitas Multimedia Nusantara. *International Journal of New Media Technology*, 5(1), 13-17.
- Lee, T. A., & Tweedie, D. P. (1977). The Private Shareholder and the Corporate Report, institute of Chartered Accountants in England and Wales.
- Li, G. (2014). Information sharing and stock market participation: Evidence from extended families. *Review of Economics and Statistics*, 96(1), 151-160.
- Litman, J., Hutchins, T., & Russon, R. (2005). Epistemic curiosity, feeling-of-knowing, and exploratory behaviour. *Cognition & Emotion*, 19(4), 559-582.
- Loibl, C., & Hira, T. K. (2009). Investor information search. *Journal of economic psychology*, 30(1), 24-41.
- Loibl, C., & Hira, T. K. (2011). Know your subject: A gendered perspective on investor information search. *Journal of Behavioral Finance*, 12(3), 117-130.
- Lu, H. Y., Palmgreen, P. C., Zimmerman, R. S., Lane, D. R., & Alexander, L. J. (2006). Personality traits as predictors of intentions to seek online information about STDs and HIV/AIDS among junior and senior college students in Taiwan. *CyberPsychology & Behavior*, 9(5), 577-583.
- Maditinos, D. I., Šević, Ž., & Theriou, N. G. (2007). Investors' behaviour in the Athens Stock Exchange (ASE). *Studies in economics and Finance*, 24(1), 32-50.
- Malkiel, B. G., & Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The journal of Finance*, 25(2), 383-417.

- Marcus, G. E., Neuman, W. R., & MacKuen, M. (2000). *Affective intelligence and political judgment*. University of Chicago Press.
- Masood, O., Aktan, B., & Chaudhary, S. (2009). The investment decision-making process from a risk manager's perspective: a survey. *Qualitative Research in Financial Markets*, 1(2), 106-120.
- Mayne, T. J. (1999). Negative affect and health: The importance of being earnest. *Cognition & Emotion*, 13(5), 601-635.
- Middleton, C. A., Fifield, S. G., & Power, D. M. (2007). Investment in Central and Eastern European equities: an investigation of the practices and viewpoints of practitioners. *Studies in Economics and Finance*, 24(1), 13-31.
- Morawakage, P. S., & Nimal, P. D. (2015). Equity market volatility behavior in Sri Lankan context.
- Tauni, M. Z., Fang, H. X., & Iqbal, A. (2016). Information sources and trading behavior: does investor personality matter?. *Qualitative Research in Financial Markets*, 8(2), 94-117.
- Mullainathan, S., Noeth, M., & Schoar, A. (2012). *The market for financial advice: An audit study* (No. w17929). National Bureau of Economic Research.
- Mullainathan, S., Noeth, M., & Schoar, A. (2012). *The market for financial advice: An audit study* (No. w17929). National Bureau of Economic Research.
- Neumann, J. V., & Morgenstern, O. (1944). *Theory of Games and Economic Behavior* (Princeton University, Princeton, NJ).
- Ng, L., & Wu, F. (2010). Peer effects in the trading decisions of individual investors. *Financial Management*, 39(2), 807-831.
- Ngoc, P. T., & Yoo, M. (2014, February). The lexicon-based sentiment analysis for fan page ranking in Facebook. In *2014 International Conference on Information Networking (ICOIN)* (pp. 444-448). IEEE.
- Osborne, J. W., & Costello, A. B. (2004). Sample size and subject to item ratio in principal components analysis. *Practical assessment, research & evaluation*, 9(11), 8.
- Patel, R. och Davidson, B. (1994). *Forskningsmetodikens grunder: Att planera, genomföra och rapportera en undersökning. 2: a uppl. Lund: Studentlitteratur.*
- Peress, J. (2003). Wealth, information acquisition, and portfolio choice. *The Review of Financial Studies*, 17(3), 879-914.
- Peter, P. L. S., & Senaratne, B. (2013). Investor behaviour in Sri Lankan Stock Market.
- Ancuta, P. I. I. (2015). Benefits And Drawbacks Of Online Trading Versus Traditional Trading. Educational Factors In Online Trading. *Annals of the University of Oradea: Economic Science*, 25(1), 1253-1259.
- Potter, R. E. (1971). An empirical study of motivations of common stock investors. *Southern Journal of Business*, 6(1), 41-44.
- Rahim, A. A. (2013). Problems and Prospects of Online Share Trading Practices in India. *International Journal of Marketing, Financial Services & Management Research*, 2(4).
- Ricciardi, V., & Simon, H. K. (2000). What is behavioral finance?.
- Nagy, R. A., & Obenberger, R. W. (1994). Factors influencing individual investor behavior.

- Financial Analysts Journal*, 63-68.
- Edirisinghe, S. S., Ajward, R. A., Bandara, D., & Hareendra, P. (2015). The Analysis of Degree and Impact of Demographic Factors on Financial Literacy in a Non-University Higher Education Institution in Sri Lanka.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.
- Surendran, P. (2012). Technology acceptance model: A survey of literature. *International Journal of Business and Social Research*, 2(4), 175-178.
- Wang, G., Abdul, H., & Nurul, F. A. (2017, September). Comparative analysis of e-commerce and social media based trading in Indonesia. In *IOP Conference Series: Materials Science and Engineering* (Vol. 237, No. 1, p. 012028). IOP Publishing.
- Shiller, R. J. (2006). Tools for financial innovation: Neoclassical versus behavioral finance. *Financial Review*, 41(1), 1-8.
- Statman, M., Fisher, K. L., & Anginer, D. (2008). Affect in a behavioral asset-pricing model. *Financial Analysts Journal*, 64(2), 20-29.
- Strahilevitz, M. A., Odean, T., & Barber, B. M. (2011). Once burned, twice shy: How naïve learning, counterfactuals, and regret affect the repurchase of stocks previously sold. *Journal of Marketing Research*, 48(SPL), S102-S120.
- Tauni, M. Z., Fang, H. X., & Yousaf, S. (2015). The influence of Investor personality traits on information acquisition and trading behavior: Evidence from Chinese futures exchange. *Personality and Individual Differences*, 87, 248-255.
- Tijjani, B., Fifield, S. G. M., & Power, D. M. (2009). The appraisal of equity investments by Nigerian investors. *Qualitative Research in Financial Markets*, 1(1), 6-26.
- van Witteloostuijn, A., & Muehlfeld, K. S. (2008). Trader personality and trading performance: A framework and financial market experiment. *Discussion Paper Series/Tjalling C. Koopmans Research Institute*, 8(28).
- Vancouver, J. B., & Morrison, E. W. (1995). Feedback inquiry: The effect of source attributes and individual differences. *Organizational Behavior and Human Decision Processes*, 62(3), 276-285.
- Webb, C. (1999). Analysing qualitative data: computerized and other approaches. *Journal of advanced nursing*, 29(2), 323-330.
- Weerasiri, R. A. S., & Hennanayake, H. M. G. Y. J. (2016). Factors Influencing on Purchase Intention of Men's cosmetic Products: with special Reference to the Men's Fairness cream Products.
- Winchester, D. D., Huston, S. J., & Finke, M. S. (2011). Investor Prudence and the Role of Financial Advice. *Journal of Financial Service Professionals*, 65(4).
- Yang, S., Hsu, Y., & Tu, C. (2012). How do traders influence investor confidence and trading volume? A dyad study in the futures market. *Emerging Markets Finance and Trade*, 48(sup3), 23-34.
- Zhang, A. C. (2014). Financial advice and asset allocation of individual investors. *Pacific Accounting Review*, 26(3), 226-247.

Jeyaraj, M. N. Analyzing the Plausible Alternatives in Contracting the Societal Fissure Caused by Digital Divide in Sri Lanka. *World Academy of Science, Engineering and Technology, International Journal of Computer, Electrical, Automation, Control and Information Engineering*, 11(1), 48-52.

## Determinants of International Migration to Middle-East Countries - Gravity Model Approach

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### Abstract

Sri Lanka possesses a long history of labor migration commenced from first half of the 20th Century. Presently, Middle East region dominates the foreign employment market in Sri Lanka accounting for more than 90 percent departures from the country. In Sri Lanka, macroeconomic studies related to migration are less than that of microeconomic studies. As a contribution to reduce this gap, this study examines the macroeconomic determinants of international labor migration from Sri Lanka to Middle East countries using gravity model of migration. Since Ordinary Least Squared results in inconsistency in estimated coefficients under the presence of heteroscedasticity, Poisson Pseudo Maximum Likelihood estimation technique was used to estimate panel data directly from its multiplicative form instead of log linearization. Secondary data over the period of 2007 to 2015 were used to estimate the model with destination-year fixed effects to capture unobserved time-variant and time-invariant variables as well as to account for the multilateral resistance. According to the results, Sri Lankan population, GDP per capita, unemployment rate, and poverty head count ratio are the push factors which force people to move from Sri Lanka while the destination countries' population, GDP per capita, unemployment rate and dependency ratio are the pull factors which attract migrants towards the destination. Moreover, distance between Sri Lanka and destination also discovered as significant under the research study.

**Keywords.** Fixed effects; Gravity model; Labor migration; Poisson pseudo maximum likelihood technique.

### 1. Introduction

International labor migration is defined as the "Movement of persons who leave their country of origin, or the country of habitual residence, to establish themselves either permanently or temporarily in another country" (IOM, 2011). The current global estimate is that there were around 244 million international migrants in the world in 2015, which equates to 3.3 per cent of the global population. (McAuliffe and Ruhs, 2017.)

The reasons that stimulate people to migrate are numerous and operate in complex and interactive ways at individual, family and socio economic levels. The dissemination of information and lower

transport costs facilitate increased labor mobility and the creation of transitional communities (Nonnenmacher, 2008). Workers move to find better employment opportunities and working conditions. While wage differentials are an important incentive, access to higher levels of health and education services, more personal security and generally better quality of life can also be important elements affecting the decision to work abroad (Jayawardhana and Jaythilaka, 2009).

Migration can generate very large benefits for migrants, their families and countries of origin. The wages that migrants earn abroad can be many multiples of what they could earn doing similar jobs at home (McAuliffe and Ruhs, 2017). Importantly, the beneficial effects of migration for migrants and their families go beyond economic impacts and frequently include improvements in other dimensions of human development, such as education and health (Klugman, 2009.). For example, according to the World Bank (2016) migrants from the poorest countries, on average, experienced a 15-fold increase in income, a doubling of school enrolment rates, and a 16-fold reduction in child mortality after moving to a developed country.

In the case of Sri Lanka, labor migration plays an important role in the economy and it has massive impacts on the society. It has become increasingly significant and a beneficial component which can generate significant welfare gains for migrants as well as the country in reducing the poverty levels and enhancing the living standards of many people. According to the annual statistical report of foreign employment released by Sri Lanka Bureau for Foreign Employment (2016) which is the main administrative body regulating migration, a total of 242,930 persons (males 66%, females 34%) left for foreign employment in 2016.

Remittances, the major outcome of migration play an important role in the Sri Lankan economy. For an example, during the year 2015, the workers' remittances accounted a sum of Rs. 948,957million and it was around 9% of the GDP of the country. The workers' remittances in 2016 were Rs. 1,054,489 Million worth. Moreover, remittances have become the second largest foreign exchange earner in Sri Lanka (Sri Lanka Bureau of Foreign Employment, 2016). Since 1976, when formal foreign employment commenced, migration has generated substantial inflows of remittances at the same time relieving the pressure on unemployment of youth by providing employment abroad (Ministry of Foreign Employment, 2017).

Labor migration to the Middle East Countries is concerned in the study since the Middle East region dominates the foreign employment market in Sri Lanka accounting for more than 90% of departures from the country and send more than 50% of remittances to Sri Lanka. Within the Middle East region Kingdom of Saudi Arabia, Qatar, U.A.E, Kuwait and Oman were the major labor receiving countries which have hired over 88.38 % of Sri Lankan workers in the year 2015 (Ministry of Foreign Employment, 2017).

The reason lying behind this enormous need of labor in these middle-east countries can be described as follows. The oil shocks of the 1970s generated a massive flow of petro dollars into the oil producing countries of the Middle East. But due to their small populations, OPEC countries were unable to meet their growing labor demand, and therefore they recruited workforces from countries like South and Southeast Asia where cheap labor is available. Since then, India, Pakistan, Sri Lanka, Bangladesh and the Philippines have been the main suppliers of labor to the Middle East especially unskilled female workers.

Prior to the oil exploitation, number of male migrants who were employed in construction and infrastructure building were higher than the female migrants (Shaw, 2008). Although it is considered

as a low wage compared to the wages earned by high skilled and professional migrant workers, it is quite higher in Sri Lanka, often several times the amount a worker can earn back at home. Moreover, casual workers, when they are in the home country do not usually have regular work due to seasonality, changing weather conditions, etc. Thus, workers tend to work abroad for a higher, regular wage even for a fixed period.

Migration internationally could be broadly categorized into two. They are skilled labor migration and unskilled labor migration. Migration can be temporary or permanent depending on the opportunities, cost of migration, level of education, family ties, economic background of the migrants and so on. Most international migrants in 1960s and 1970s at this time were skilled personnel. It is a fact that introduction of economic liberalization policies in late 1970s creates many job opportunities locally and as a result of opening up of the economy, employment opportunities abroad also are created. This was not so before economic liberalization where the country had more or less nationalized closed economy with policies like foreign exchange control and import substitution. During this era, a few elites were able to migrate to foreign countries. Thanks to the economic liberalization policies and demand from Middle East, large waves of migration from Sri Lanka started to occur after 1979. It is really interesting that most of the international migrants to Middle East (about 70 % of the total migrants) are unskilled laborers. 62 % of total stock of migrants was females and most of them were housemaids. The migrations flows have further aggravated as a result of the modern transport facilities, improvement in communication technologies etc. The importance of migration flows increase day by day for the development of Sri Lankan economy. Therefore, from the policy perspective, analysis of migration flows would make it possible for the source region as well as for the destination region to clearly identify main determinants behind international migration and understand the potential effects on labor market and economic development. It was found that empirical evidence on determinants of international migration is lacking in Sri Lanka. Hence, this paper attempts to explore the determinants of International migration from Sri Lanka to Middle East region.

## **2. Determinants of International Migration – A Review of Literature**

Migration is affected by both macro level as well as micro level factors. Microeconomic approaches focus on the migration behavior of individuals and aims to explain the decision making process by migrants to remain in home or to migrate to another one. Micro models of migration usually are based on the characteristics of an individual. Apart from them, regional level characteristics also shape up the migration decision. The major determinant of migration proposed in neoclassical theory is the wage differential between the sending region and the receiving region of migrants. The basis of Todaro (1969) and Harris and Todaro (1970) models is also the wage differentials although their major focus is on the expected earnings *i.e.* actual urban earnings times the unemployment there. More recent finding by Nonthakot and Villano (2008) reveal that disparity of wage between farm and non-farm sectors generate farm labor out migration from lower wage rate areas. Apart from wage differentials, Cai and Wang (2003) investigate the spatial patterns and determinants of large scale migration in China and they find that differences in expected income and extent of marketization between regions are important factors in determining the migration flows. Taylor *et al.*, (2003) in their study on rural urban migration in China show that rapid creation of off farm enterprise due to economy's expansion has led to increase in labor migration out of agriculture. Sjaastad (1962) concentrates on human capital variables like age and education. Human capital



theory of Sjaastad (1962) reveals that age is a major determinant of migration and shows that migration decreases with the age. It is also noted in the migration literature that education levels of migrants and other household members positively influence the migration decision. Giving emphasis on the link between schooling and migration, Matsumoto *et al.*, (2006) further show that local language abilities (measured by the number of local languages one can speak) increase the propensity to migrate and participate in non-farm activities. Mincer (1978) and Stark (1991) find that household size is one of the major determinants in migration and it increases with the increase in family size in the source country while Mendola (2008) shows that number of working family members increases the benefits of migration as family members working in different labor markets provide insurance for the members left behind with regard to the available opportunities. Mendola (2008) further explains that household size and type of residence are positively associated with migration decision.

Macroeconomic approaches study the patterns of migration of the whole population or certain groups within a framework of a given territory. Lee (1966) explains two types of factors affecting migration. They are push factors and pull factors. Push factors of migration are poverty, low income, small land holdings, lack of jobs and low wages whereas pull factors are higher wages for highly skilled laborers and strong network at the potential destination (World Bank, 2007). In a study carried out in Bangladesh, Ullah (2004) reveals that both push and pull factors affect the migration decision and they mention those factors as the search for work, landlessness, extreme poverty, loss of income, easy access to informal sectors in cities and joining families or relatives. Uneven development and interregional inequalities may also lead to driving people from one region to another (World Bank, 2007; Deshingkar, 2006). Housen *et al.*, (2013) highlight the reason for limited international migration from many low income countries and they reveal that lack of human capital, especially high skilled labor or qualified professionals, is the major cause for limited migration. Larson and Mundlak (1997) opine that migration rates are higher in countries with younger population.

According to Borjas (2000), the workers calculate the value of the opportunities available in each of the alternative labor markets, compute the cost of making the move, and choose whichever option maximizes the net present value of lifetime income. The author further highlights that migration occurs when there is a good chance that the worker will earn his human capital investment. As a result, migrants will tend to move from low-income to high income regions, and larger the income differential between the regions or cheaper it is to move, greater the number of migrants. Ullah (2012) concludes that the economic, demographic, and cultural factors have significant influence on emigration decision. According to him, effects of cultural factors like religion and language are stronger.

In contrast, Kim and Cohen (2010) show that the most influential factors affecting inflows of migrants are demographic (population of origin and destination and infant mortality rate of origin and destination) and geographic (distance between capitals and land area of the destination) and the most influential variables on outflows are population of origin and destination, infant mortality rate of destination, and distance between capitals. Chort and de la Rupelle (2015) carried out a state level panel data analysis to investigate the determinants of the regional patterns of Mexico-US migration flows. According to their results economic, climatic and social factors are the significant determinants that shapes regional migration patterns. Ahmad *et al.* (2008) point out that people decide to migrate abroad due to better economic conditions prevailing in the host countries. The

better economic and employment opportunities in the host country boosts the remittances and thus, people move abroad. According to their research, inflation, unemployment rate and declining wage rate are the push factors and the inflow of remittances is the pull factor of international migration from Pakistan.

According to the research study carried out by Crespo-Cuaresma., *et al* (2013) per capita GDP of destination and origin countries, populations of both origin and destination countries, the distance between the countries as well as colonial relationships, common language and contiguity were found to be as important factors in determining global bilateral migration flows.

In the case of Sri Lanka, there are few research studies regarding the determinants of international migration and almost all of them have conducted using micro level factors. According to the best of our knowledge, there is hardly any research which had been carried out to find out the macroeconomic determinants of international migration approaching gravity model.

In finding the determinants of international migration, most of the researchers have used the gravity model which has been frequently applied in the study of international trade flows. Anderson (2011) reviewed the recent developments of gravity model and states that gravity has been one of the most successful empirical models in economics, which explains the variation in economic interaction across space in both trade and factor movements. Most of the studies carried out using gravity models have concentrated on OECD countries and used data on migration flows. For example, Mayda (2010) empirically investigated the determinants of migration inflows into 14 OECD countries using panel data and found that immigration flows are positively correlated to the destination countries' GDP per worker. However, the effect of GDP per worker is not found to be statistically significant. Karemera *et al.*, (2000) examine the influence of political, economic and demographic factors on the size and composition of migration flows to North America using a modified gravity model and find that the population of origin countries and the income of destination countries are two major determinants of migration to North America.

### 3. Methodology

#### 3.1 Data

The study utilizes a panel data set gathered for period of nine years ranging from 2007 to 2015 to identify the significant macroeconomic determinants of international labor migration. All the data regarding the variables were gathered from secondary data sources. Labor departures to eight Middle East countries namely Bahrain, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia and United Arab Emirates (UAE) were collected from Economic and Social Statistics of Central Bank of Sri Lanka-2016. These eight countries were considered as destination countries and Sri Lanka was considered as the origin country.

Distance between capital cities (in kilometers) was collected from the CEPII's database. Data regarding the populations of countries, unemployment rates, GDP per capita and the dependency ratio were collected from World Bank's World Development Indicators. From the Department of Census and Statistics Sri Lanka, poverty head count ratios were collected

### 3.2 Empirical Approach

In identifying the determinants of international migration, many scholars have used several empirical tools. However, application of gravity model in migration researches is few. The gravity model is extensively used in international trade and investment and it has been well-proved as a robust ex-post methodology in this regard. In the initial stages of developing gravity models for migration, Zipf (1946) hypothesizes that the volume of migration between two places is directly proportional to product of the product of the population of the origin and the destination and inversely related to the distance between two. There are several gravity factors used in the gravity models. They are considered as pull factors and push factors. The major push factor is the wage differential between the source country and the destination country. Another essential gravity factor for immigration is the population or size of labor market in the home and host country. The gravity model is analogous to the Newton's law about universal gravitation. The mathematical form of the gravity model is as follows;

$$M_{ij} = g \times \frac{P_i^\alpha \times P_j^\beta}{D_{ij}^\gamma} \text{-----(1)}$$

Statistical form of the gravity model is given by;

$$M_{ij} = \text{MIGRANT}_{ij} = f(\text{POP}_i, \text{POP}_j, \text{DISTANCE}_{ij}, \dots) + \varepsilon_{ij} \text{-----(2)}$$

If we take the above equation in its logarithm form,

$$\log M_{ijt} = \beta_0 + \beta_1 \log(\text{GDPPC})_{ijt} + \beta_2 \log P_{it} + \beta_3 \log P_{jt} + \beta_4 D_{ij} + \varepsilon_{ij} \text{----- (3)}$$

Equation (3) is the simplest form of gravity model Where;

$M_{ijt}$  – Annual migration outflow from region  $i$  to region  $j$

$\text{GDPPC}_{ijt}$  – GDP per capita of destination country

$P_{it}$  – Population of source region ( $i$ )

$P_{jt}$  – Population of destination region

$D_{ij}$  – Physical distance between ( $i$  and  $j$ )

In equation (3), the gravity model suggests that  $\beta_1 > 0$  and  $\beta_2 > 0$  but  $\beta_3 < 0$ . The equation (3) is empirically tested to investigate the relationship between the volume and direction of international migration flows. Furthermore, the standard gravity model is extended with a number of variables to test whether they are relevant in explaining the migration.

$$M_{ijt} = \beta_0 + \beta_1 \log(\text{GDPPC})_{it} + \beta_2 \log \text{GDPPC}_{jt} + \beta_3 \log P_{it} + \beta_4 \log P_{jt} + \beta_5 \log D_{ij} + \beta_6 \log \text{UNEMPR}_{it} + \beta_7 \log \text{UNEMPR}_{jt} + \beta_8 \log \text{DPNDNCYR}_{jt} + \beta_9 \log \text{PVRTYHR}_{it} + \beta_{10} \text{DES}_{ji} + \varepsilon_{ijt} \text{-----(4)}$$

$\text{DES}_{ji}$  - Destination year fixed effects

$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9, \beta_{10}$  – Coefficients (elasticities) to be estimated

$\varepsilon_{ijt}$  – Random Error

Table 3.1  
*Variables of the research study*

Notation	Description	Unit of Measurement
$M_{ijt}$	Annual migration outflow from region $i$ to region $j$	Number of persons
$P_{it}$	Population of Sri Lanka	Number of persons
$P_{jt}$	Population of destination region	Number of persons
$D_{ij}$	Physical distance between ( $i$ and $j$ )	Kilometers
$GDPPC_{it}$	GDP per capita of Sri Lanka	US Dollars
$GDPPC_{jt}$	GDP per capita of destination	US Dollars
$UNEMPR_{it}$	Unemployment rate of Sri Lanka	Percentage
$UNEMPR_{jt}$	Unemployment rate of destination	Percentage
$DPNDNCYR_{jt}$	Dependency ratio of destination	Percentage
$PVRTYHR_{it}$	Poverty Headcount Ratio of Sri Lanka	Percentage

### 3.2 Description of Variables

Population is a measure of labor market size in a country. Larger the size of labor pool in the source country, higher the rate of emigration. Similarly, larger the population in the destination country, larger the labor market for immigrants (Lewer and Berg, 2008). Hence, the coefficient is expected to have a positive sign. An increase in the distance between two countries is expected to discourage migration from one country to another as distance can be considered as a proxy for cost of information and movement (Kim and Cohen, 2010). Therefore, the coefficient should have a negative value. Coefficient of the GDP per capita in the origin is expected to have a negative value while the coefficient of the destination is expected to have a positive value because, according to the labor market theory of immigration, higher per capita income at home reduces tendency to emigrate while a higher per capita income of recipient country induces immigration (Ullah, 2012).

Number of migrants sent to the destination country depends on unemployment rate of the origin and number of migrants received by the destination depends on the unemployment rate of destination. A rise in the unemployment rates of the origin will increase emigration and a rise in the unemployment rate of the destination will reduce migration towards the destination. Therefore, the coefficients of unemployment in origin and destination are expected to have a positive and a negative values respectively.

Low dependency ratio is considered as desirable because it indicates that more adults of working age are available. Increased dependency ratio has negative impacts on the growth of the economy resulting lower productivity in the country (Lainton, 2011). Therefore, coefficient is expected to have a positive value due to the fact that higher dependency ratio in a destination country will tend to encourage immigration.

Coefficient of Poverty headcount ratio is expected to have a negative value referring that larger the percentage of people below the poverty line lesser the emigration.

### 3.3 Estimation of the Model

There is a long tradition in the trade literature of loglinearizing equation (1) and estimating the parameters of interest by least squares, using the equation (3). However, Silva and Tenreyro, (2006) point out that in the presence of heteroscedasticity (error term does not have a constant variance), logarithmic transformation causes inconsistency in the estimated coefficients. This conclusion results from the Jensen's inequality, which states that the expected value of a logarithm of random variable does not equal to the logarithm of its expected value. Under such situations, Poisson Psuedo Maximum Likelihood (PPML) technique which estimates the data directly from multiplicative form can be used to avoid the problem of heteroscedasticity. Moreover, logarithmic transformation can cause troubles when dealing with zero migrant flows. Therefore, Breusch-Pagan/Cook-Weisberg test was conducted to check for the heteroscedasticity.

Due to the presence of heteroscedasticity which was revealed from the test, application of OLS method will result in inconsistent estimation. Therefore, the analysis was done using PPML estimation technique following Silva and Tenreyro (2006). Also, they point out that PPML does not require the data to follow a Poisson distribution (that is why it is a pseudo-maximum likelihood estimator and not a maximum likelihood estimator) and all that is needed for the PPML estimator to be consistent is that the conditional mean to be correctly specified in the form,

$$E(y_i|x) = \exp(x_i\beta)$$

Moreover, PPML does not assume an equi-dispersion as in poison model. PPML is optimal when the conditional variance is proportional (not necessarily equal) to the conditional mean. This allows for both under and over-dispersion. Even if the conditional variance is not proportional to the conditional mean, the PPML will still be consistent.

Ramos (2016) states that multilateral resistance to migration which is related to the influence of third countries in determining migration flows between two particular countries should be considered when modeling migration. If it is not considered, the influence of alternative destinations could bias the results of analysis. One of the possible solutions to overcome this problem is to include origin-year dummies or destination-year dummies. Inclusion of these different type of fixed-effects also helps to reduce other potential negative effects, such as the omitted variable bias.

This suggestion stems from the Anderson and Van Wincoop (2003) who argue that importer and exporter fixed effects should be added to the equation when modeling trade to account for the multilateral resistance. Furthermore, they conclude that the models estimated with PPML after adding fixed effects are fully consistent. Following the empirical studies, this research study uses destination-year fixed effects ( $DES_{jt}$ ) using dummies to account for both time invariant and time variant destination specific characteristics as well as to account for the multilateral resistance. The estimation was assumed in a time frame due to the application of panel data to the study. Therefore,  $t$  (time index) was added to the equation.

## 4. Results and Discussion

### 4.1 Descriptive Analysis

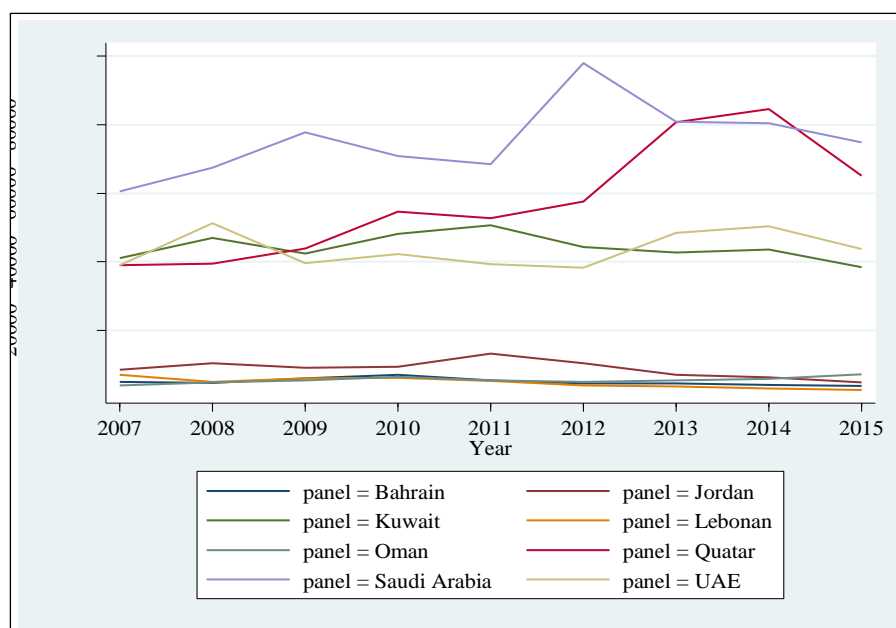


Figure 4.1. Annual migrant flows from Sri Lanka to Middle East

Figure 4.1 shows the annual migrant flows from Sri Lanka to eight Middle East countries during the period 2007 to 2015. According to the graph, Saudi Arabia, Qatar, Kuwait and UAE countries constitutes the largest inflow of migrants. As stated by the SLBFE, increasing job opportunities has resulted the increased migrant flows in those countries. Saudi Arabia has received the highest inflow from 2007 to 2012 with a peak of 97,964 in 2012. The migrant flow has then reduced to 80,887 in 2013 by being second to Qatar. When observing the performance of Qatar it can clearly be seen that the migrant flow has increased gradually with slight fluctuations until 2014 and it has declined to 65,139 migrants in 2015.

On the other hand, rest of the four countries (Bahrain, Jordan, Lebanon, and Oman) exhibit similar trends and they have low inflow of migrants compared to the first four countries. But, still holds a large proportion of Sri Lankan migrants when considering other countries to which Sri Lankan labor migration occurs.

However, it is observed that the migrant flows have declined in all four major countries in 2015 although the Middle East region dominates the foreign employment market in Sri Lanka.

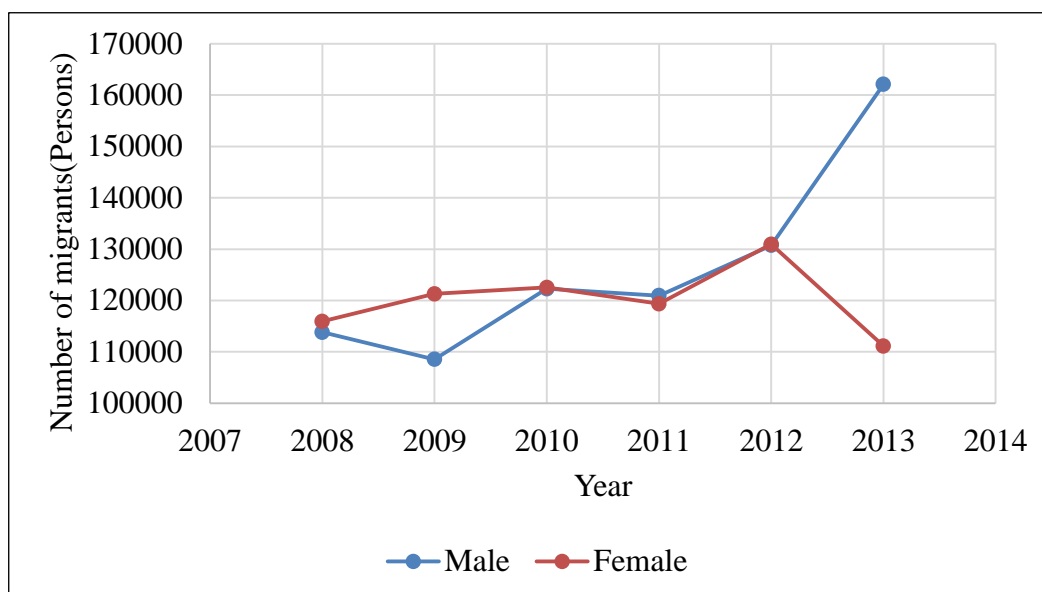


Figure 4.2. Departures for Middle East from Sri Lanka by gender from 2008 to 2013

Figure 4.2 shows the number of female and male migrants from Sri Lanka to Middle East countries from the year 2008 to 2013. It can clearly be seen that the number of male and female migrants have shown similar patterns in every year except for the year 2009 and 2013.

In the year 2009, number of female migrants has increased to 121,306 and the number of male migrants has dropped to 108,539. When observing the migration behavior in 2013, there is a dramatic difference between the male and female migrant flows. Male migrant flow has come to a peak of 162,110 while the female migrants has declined to 111,129 resembling a significant difference between two flows.

Possible reasons for the reduction of female migrant flows might be the mental and physical illnesses as well as abuses faced by them while working abroad. In the case of males, increased job opportunities such as construction, heavy vehicle driving, manufacturing etc. might be the possible reasons for the increased migrant flows.

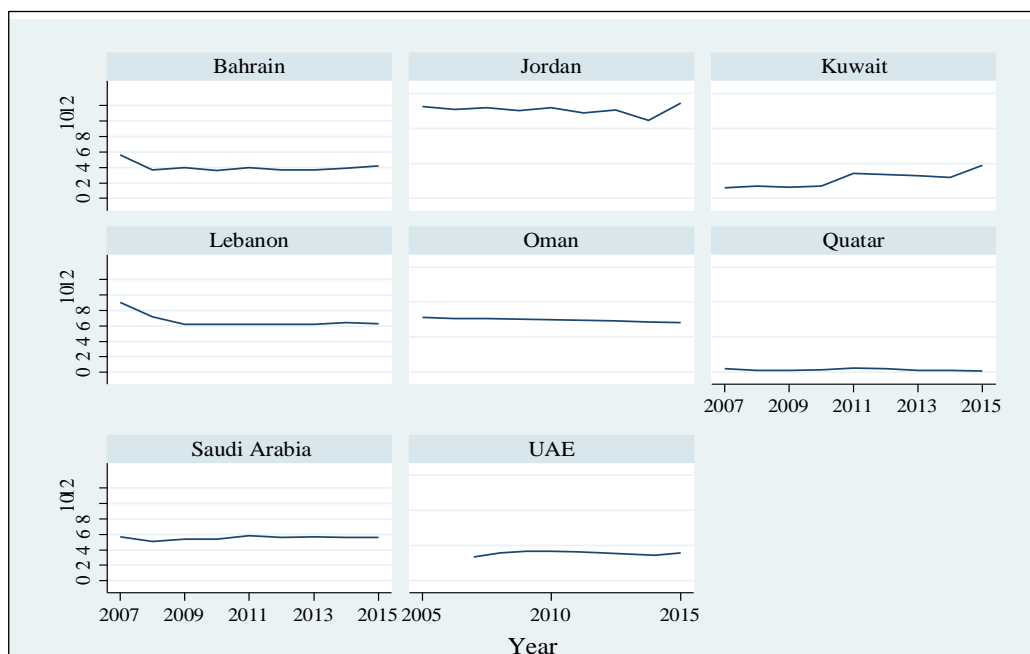


Figure 4.3. Unemployment rate of Destination from 2007 to 2015

Figure 4.3 indicates the unemployment rates of destination countries during the period 2007 to 2015. According to the graphs, unemployment rates of every country has been increased in 2015 compared to 2014 except for Lebanon and Qatar. Jordan and Kuwait exhibit significant increment of unemployment rates compared to other countries. This increased unemployment rates might be one of the possible reasons to reduce migration from Sri Lanka to Middle East in 2015 than in 2014 (Central Bank of Sri Lanka, 2016). Because, instead of searching job opportunities in countries with high unemployment rates, migrants tend to move to alternative destinations where enough employment opportunities are available.

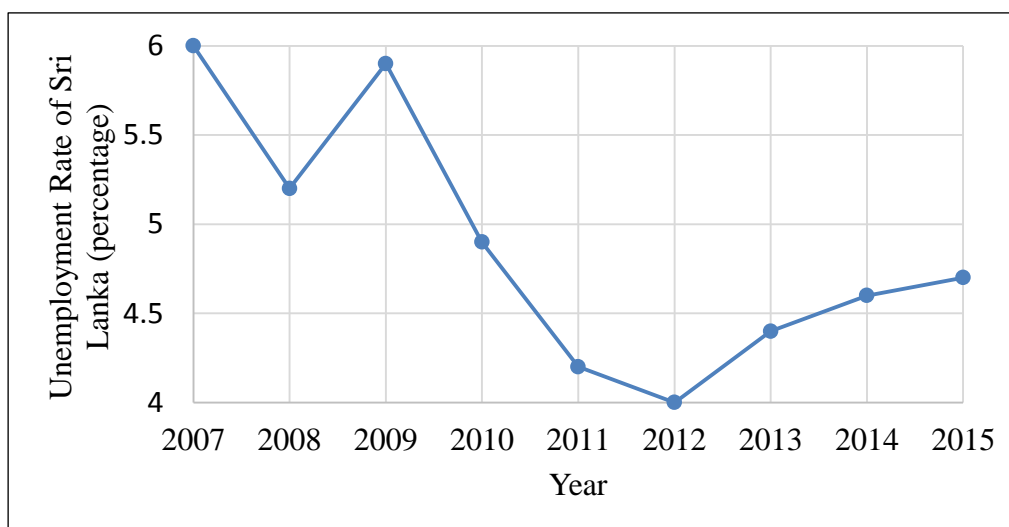


Figure 4.4. Unemployment rate of Sri Lanka from 2007 to 2015



The figure of Unemployment rate of Sri Lanka has undergone dramatic fluctuations during the period 2007 to 2015. After a significant reduction of unemployment rate from 2009 to 2012 until 4%, it has increased up to 4.7% in 2015. Higher unemployment rate of a country encourage people to migrate towards countries with low unemployment rates. Therefore, it is expected to increase migration from Sri Lanka with the increment of unemployment rate.

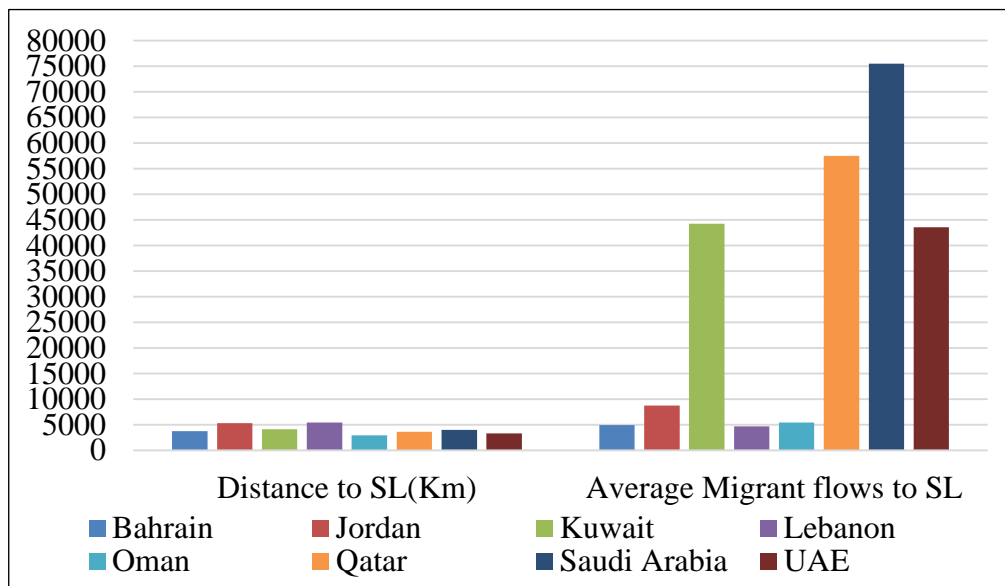


Figure 4.5. Distances and average migrant flows from Sri Lanka to the Middle East countries

Figure 4.5 shows the distances and average migrant flows from Sri Lanka to eight Middle East countries. According to the statistical analysis, distance coefficient consists with a positive sign by opposing the literature although it is significant under 1% significance level (see Table 4.2). As per the literature, migrant flow should be reduced with the increment of distance between the origin and destination country. Thus, the coefficient is expected to have a negative value. Figure 4.5 attempts to explain the results of the analysis.

In keeping with the theory, country with the highest distance should have the lowest number of migrants and the country with the shortest distance should have the largest number of migrants. According to the graph, Lebanon is the farthest country from Sri Lanka and it has obtained the lowest number of average migrants as per the theory. But, when considering the Oman, country with the shortest distance to Sri Lanka has received second lowest number of average migrants opposing the theory.

Furthermore, when observing the graph it can clearly be seen that the migrant flow is not inversely related to the distance between countries. As a good example it is observed that Saudi Arabia, the country with the fourth highest distance has received the largest number of average migrants.

Since majority of the migrants move to Middle East countries for labor are unskilled and housemaids who suffer from poverty distance cannot be considered as a barrier for them to move to another country if they can earn higher wages as their purpose is to earn the cost of living and send remittances to their families. Therefore, if the conditions of the destination countries are better than home, they tend to move. Moreover, as per Greenwood (1997) distance coefficients declines over time due to the development of information, communication and transport technologies.

For further clarification of this scenario, Figure 4.6 which indicates average GDP per capita of destination countries was used. When comparing these two figures it can be seen that the three countries out of four which have the largest number of migrants constitutes with the largest amounts of GDP per capita indicating that GDP per capita is one of the major factors which attracts migrants towards the destination

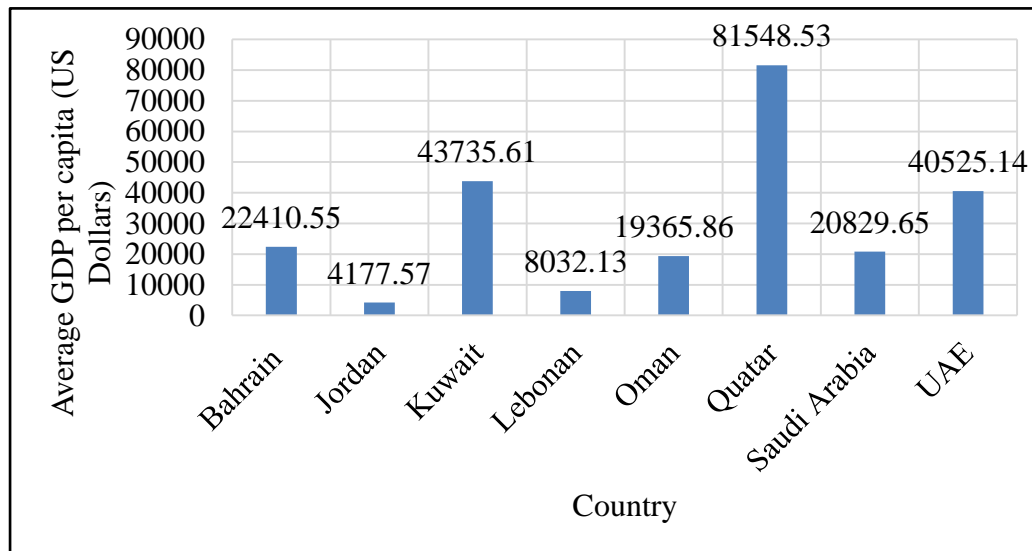


Figure 4.6. Average GDP per capita of destination countries

Finally, the results of the statistical analysis can be accepted after considering all these facts that the distance is not a barrier to migration if the migrants can earn a higher wage rate and therefore, increase in distance by 1% will increase the migrant flow by 1.22% (see Table 4.2).

Estimated coefficients in statistical analysis demonstrate that both GDP per capita of origin as well as the destination country are significant under 10% and 1% significance levels respectively. Although the coefficient sign is as expected in destination country, coefficient sign of the origin is conflicted with the theory. It indicates that unit increment in GDP per capita in origin increases migrant flow by 0.0008% while unit increment in GDP per capita in destination region increases the migrant flow by 0.00003% (see Table 4.2). It is obvious that more migrants are attracted towards the destination if they are cable of having a higher wage there than at home. On the other hand, migration will be reduced if the workers have a higher wage rate in their home country. However, there is a deviation from the literature when considering the coefficient sign of GDP in Sri Lanka. This consequence is explained in figure 4.7 indicating that higher GDP per capita of destination with respect to the home increases migrant flow although the GDP per capita at home increases.

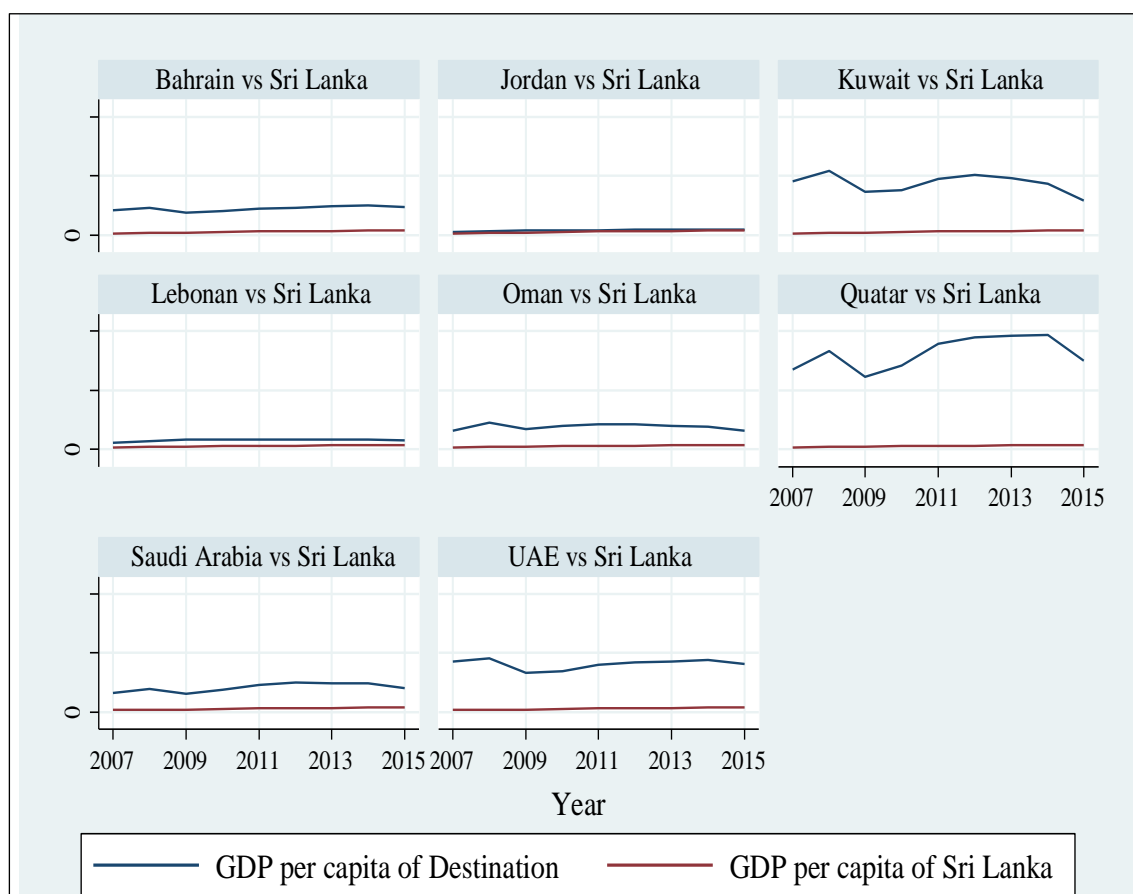


Figure 4.7. Sri Lankan GDP per capita with Destination GDP capita

Figure 4.7 shows the GDP per capita of Sri Lanka with the GDP per capita of destination countries. When observing the graphs, it can clearly be seen that the GDP per capita of all the destination countries except for Jordan is higher compared to Sri Lanka. When taking the decision of migration, workers compare the wages of both origin and destination and they tend to move to a country with a higher wage rate than their home. Moreover, GDP per capita reflects the economic condition of a country specifying that higher the GDP per capita, higher the economic condition of the country. Therefore, if destination countries have a higher GDP per capita than home, they move to those countries although the GDP per capita at home increases. Hence, it is clear that the migrant flow is expected to increase with the increment of GDP of Sri Lanka due to the higher GDP capita of destination countries compared to Sri Lanka.

Chort and de la Rupelle (2015) obtained same results with respect to these two variables in their research on Determinants of Mexico-US Outward and Inward Migration Flows. According to their explanation, after controlling for time variant factors with fixed effects at the Mexican state level (violence, climatic shocks, population) and dyadic factors, the GDP per capita at origin has a positive impact on the number of out-migration flows. Therefore, increase in GDP per capita in Mexican states increases out-migration.

Furthermore, this scenario can be seen from another perspective. GDP per capita is a measure of average income per person per year which can be calculated by dividing the GDP by mid-year

population. Since employees are categorized according to their skilled level as professional, middle level, clerical and related, skilled, unskilled and housemaids, there is a significant income inequality present in the country according to their wage rate. GDP per capita is constituted with the income of all these six categories.

Therefore, considerable increment or decrement in any skilled level can cause significant fluctuations in country's GDP per capita. As an example, if the income of professionals or any other higher wage category increases considerably compared to other categories with low wages, GDP per capita of the country also increases. But, the situation of the poor remains unchanged. Therefore, it is not reasonable to expect an increment in migration with the increment of GDP per capita in the home.

#### 4.2 Statistical Analysis

Result of the Breusch-Pagan / Cook-Weisberg test for heteroscedasticity was turned out as follows,

**Ho: Constant variance**

**Variables: fitted values of migrant flow**

**chi2 (1) = 10.44**

**Prob > chi2 = 0.0012**

The test checks the null hypothesis that all the error variances are constant versus the alternative, error variances are not constant. A large chi-square would indicate that heteroscedasticity is present. According to the results, chi-square value turned out to be large (10.44) indicating that heteroscedasticity is present.

Table 4.2 indicates the results of PPML estimation technique. According to the methodology explained. Column 4 records the results of extended gravity model with destination-year fixed effects. Additionally, Column 1, and 2 shows the results of basic gravity equation without and with destination-year fixed effects respectively and Columns 3 indicates the results of extended gravity model without destination-year fixed.

Table 4.2  
*Results of PPML Estimation Technique*

	(1)	(2)	(3)	(4)
Population of destination(in logs)	0.45***	0.47***	0.84***	0.81***
Population of origin(in logs)	0.67	-28.14**	-3.70	-45.19***
Distance between origin and destination (in logs)	-1.34***	-1.18	0.38	1.23***

GDP per capita of destination			0.000024***	0.000035***
Unemployment Rate of destination			-0.16***	-0.13***
Dependency ratio of destination			0.0059	0.0079*
GDP per capita of origin			-3.43e-06	0.00085*
Unemployment Rate of origin			0.13	0.35**
Poverty headcount ratio of origin			-0.0253495	-0.0697713***
Constant	3.109257	485.2495**	55.73349	743.2567***
N	72	72	72	72
R-squared	0.35278388	0.96147566	0.91725814	0.99976629
Destination-year fixed effects	No	Yes	No	Yes

\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

In the basic gravity model (column 1), only the population of destination and the distance between two regions have become significant under 1% significance level with expected coefficient signs. But the population of Sri Lanka (i) is not significant opposing the theory of the basic gravity model of migration suggested by Stewart in 1941.

After adding fixed effects to the basic gravity equation (column 2) population of destination and the population of Sri Lanka have become significant under 1% and 5% significance levels respectively while distance coefficient turned out to be insignificant. When considering the signs of coefficients, destination population has obtained expected positive sign but the origin population has obtained negative sign objecting the theory.

After implementing PPML technique to extended gravity model without fixed effects (column 3) only three variables namely destination population, GDP per capita and unemployment rate turned out to be significant under 1% significance level with expected coefficients.

According to the results obtained through the extended gravity model with destination-year fixed effects (column 4), all the variables turned out to be significant. Population of destination country as well as the population of origin are significant under 1% significance level. According to the literature, population of both origin and destination should have a positive coefficient. Since the population reflects the labor force in a country it is agreed that with the increment of population migration also increases. However, population of origin has a negative coefficient while the population of destination has a positive coefficient reflecting that larger the population in origin lesser the migration and larger the population in destination larger the migration.

Since majority of the migrants move towards Middle East are females, their migration behavior influences significantly on the migration process of the country. Due to the facts explained in figure

4.2, female migration has been reduced considerably in recent years. Moreover, male migrants also tend to move to countries like Singapore, Malaysia, and Korea etc. instead of Middle East due to higher wage rates as well as better facilities prevailing in those countries. Therefore, although the labor force in the country increases, migration towards the Middle East is decreased. Consequently, one percent increment of population in destination region will increase migrant flow by 0.81% and one percent increment of population in Sri Lanka reduce the migrant flow by 45.19%.

Due to lot of difficulties, harassments as well as poor working conditions faced by the unskilled workers while working abroad, major aim of the government is to ensure skilled and safe migration and to create decent jobs for Sri Lankans at home and promoting migration by choice rather than by poverty and need. With that purpose, government plans, to promote skilled migration through better training, diversification, identification of and capitalizing on Sri Lanka's competitive advantages, to protect the rights of the migrants by reducing the vulnerabilities in the destination, to promote employment in rural areas where out-migration is high and to establish bilateral agreements with labor receiving countries to promote respect and safeguard labor rights of migrant workers.

By application of such policies government can ensure a safe migration and also they can improve the skills of the migrants to increase their value at destinations to earn higher wage rates. As a result, the migration would also be increased.

When considering the unemployment rates, destination unemployment rate is significant under 1% significance level and origin unemployment rate is significant under 5% significance level. Destination region and the migrant flow have a negative relationship while Sri Lanka (origin) and migrant flow have a positive relationship.

When comparing with the literature such as Morettini *et al.* (2012) with respect to the destination unemployment, Mayda (2005), both coefficients have acquired expected signs reflecting that higher unemployment rates in origin increases out-migration while higher unemployment rates in destination discourage or reduce in-migration due to the lack of job opportunities.

Therefore, unit increment of unemployment rate of the origin region increases migrant flow by 0.35% and unit increment of the unemployment rate in destination region reduce the migrant flow from Sri Lanka by 0.12%.

Dependency ratio of destination country is significant under 10% significance level with a positive coefficient as expected. With the increment of dependency ratio, productivity of a country reduces (Lainton, 2011). As a result, destination countries encourage in-migration to enhance their economic growth. Therefore, unit increment of dependency ratio of destination country increases migrant flow from Sri Lanka by 0.007%.

Poverty Headcount Ratio constitutes with a negative coefficient in the statistical analysis results. Generally, it is believed that when people are poor migration would be increased. But, according to the results migrant flow from Sri Lanka reduces with the increment of the people below the poverty line. It is true that the poverty can be reduced with the migration due to the impact of remittances (Adams and Page, 2003). But, if the initial cost of moving is very high, it is difficult for them to afford the migration cost. Therefore, they will not be able to fulfill their need although their desire is to migrate for labor. Consequently, the migration reduces. Thus, unit increment of poverty headcount ratio of a country reduces migrant flow by 0.069%.

As a solution to this condition, government can promote employment in rural areas where out-migration is high to create alternative livelihoods and employment opportunities therein. Therefore, the need of migration will be reduced and the adverse effects on families especially on spouses and children due to the migration of unskilled females will be reduced.

## **5. Conclusions and Recommendations**

This research study was conducted by approaching gravity model to find out the macroeconomic determinants of international migration from Sri Lanka to selected eight Middle East countries over the period 2007-2015. Poisson Pseudo Maximum Likelihood estimation technique was applied to estimate the gravity model with destination-year fixed effects instead of OLS method due to the presence of heteroscedasticity.

According to the results obtained through the descriptive and statistical analysis, Sri Lankan population, GDP per capita, unemployment rate, and poverty head count ratio are the push factors which force people to move from Sri Lanka while the destination countries population, GDP per capita, unemployment rate and dependency ratio are the pull factors which attracts migrants towards the destination. Moreover, distance between Sri Lanka and destination also discovered as significant under the research study.

When comparing with the literature, all the variables except for three variables had obtained expected coefficient signs. Population of Sri Lanka, GDP per capita of Sri Lanka and distance coefficients turned out to be altered objecting the literature. However, by approaching necessary facts and figures those consequences were attempted to explain.

Sri Lanka has not been able to supply sufficient number of workers in mid-professional, skilled and semi-skilled job categories, for whom there is a high demand. For example in 2009, there was a demand for 784,212 positions with respect to all job categories but, Sri Lanka could supply only 247,119 positions (National Human Resources and Employment Policy, 2012). To minimize this condition, stronger mechanisms has been instituted by the government to identify foreign employment opportunities. Moreover, all stakeholders will be networked and facilities will be provided to monitor global trends in labor markets.

Through SLBFE, government has been promoting migration with the purpose of obtaining more opportunities in the overseas by regulating employment agencies, registering emigrants and providing welfare services to migrants and their families.

Government had introduced 'Nation Building Bonds' in 2006 to attract more financial inflows from Sri Lankan migrants. Moreover, in 2007, the Central Bank of Sri Lanka launched a program to encourage licensed commercial banks to open branches in countries with highest number of Sri Lankan migrants to facilitate the remittances transaction process.

Since this research has attempted to find out the determinants of migrant flows from Sri Lanka to Middle East countries without gender specification, future research can be carried out to find out the determinants of migration considering males and females separately to find out whether there are any specifications compared with this study. Furthermore, another research path is opened to find out the behavior of migration before and after the war period in Sri Lanka.

## References

- Adams, R. H. Jr. & Page, J. (2003). International migration, remittances, and poverty in developing countries (English). *Policy, Research working paper series*; no. WPS 3179. Washington, DC: World.
- Ahmad, N., Hussain, Z., Sial, M.H., Hussain, I. and Akram, W. (2008). Macroeconomic determinants of international migration from Pakistan. *Pakistan Economic and Social Review*, pp.85-99.
- Anderson, J. E. (2011). The gravity model. *Annu. Rev. Econ.*, 3, 133-160.
- Anderson, J. E. & Van Wincoop, E. (2003). Gravity with gravitas: a solution to the border puzzle. *The american economic review*, 93, 170-192.
- Borjas, G.J. (2000). Economics of Migration. International Encyclopedia of the Social and Behavioral Sciences, Section No. 3.4, Article No. 38. Boure.
- Cai, F. and Wang, D. (2003). Migration As Marketization: What Can We Learn from China's 2000 Census Data?, *The China Review*, Vol. 3 (2), pp 73-93.
- Central Bank of Sri Lanka. (2016). *Economic and Social Statistics of Sri Lanka 2016 Central Bank of Sri Lanka Statistics*, Colombo: Central Bank Printing Press.
- Chort, I. and De La Rupelle, M. (2016). Determinants of Mexico-US outward and return migration flows: A state-level panel data analysis. *Demography*, 53(5), pp.1453-1476.
- Crespo-Cuaresmo, J., Moser, M. Raggl, A. (2013). On the Determinants of Global Bilateral Migration Flows, WWFForEurope, Working Paper no 5.
- Deshingkar, P. (2006). Internal Migration, Poverty and Development in Asia, Briefing Paper 11, October, Overseas Development Institute, London
- Greenwood, M. J. (1997). Internal migration in developed countries. *Handbook of population and family economics*, 1, 647-720.
- Harris, J. R., & Todaro, M. P. (1970). Migration, unemployment and development: a two-sector analysis. *The American economic review*, 60(1), 126-142.
- Housen, T., Hopkins, S. and Earnest, J. (2013). A systematic review on the impact of internal remittances on poverty and consumption in developing countries: implications for policy, *Population Space and Place*, Vol. 19(5), pp 610–632.
- IOM (2011) The migration glossary. Geneva: International Organization for Migration.
- Jayawardhana, T. and Jaythilaka, R. (2009). International migration outlook-Sri Lanka, 2008. International Organization for Migration, Colombo.
- Karemera, D., Oguledo, V. I., & Davis, B. (2000). A gravity model analysis of international migration to North America. *Applied Economics*, 32(13), 1745-1755.
- Kim, K. and Cohen, J.E. (2010). Determinants of International Migration Flows to and from Industrialized Countries: A Panel Data Approach Beyond Gravity. *International Migration Review*, 44(4), pp.899-932.
- Klugman, J. (2009). Human development report 2009. Overcoming barriers: Human mobility and development.
- Lainton, A. (2011). *Dependency ratio and Immigration/emigration*. [Online] Available at: <https://andrewlainton.wordpress.com/2011/05/29/dependency-ratio-and-immigration/> [Accessed 28 August 2016].
- Larson, D. and Mundlak, Y. (1997). On the inter-sectoral migration of agricultural labor, *Economic Development and Cultural Change*, Vol.45(2), pp 259 – 319.
- Lee, E.S. (1966). A Theory of Migration. *Demography*, Vol.3, pp 47-57.



- Lewer, J.J. & Berg, H. Van den. (2008). A Gravity Model of Immigration. *Economic Letters*. 99(1):164-167
- Matsumoto, T., Kijima, Y. and Yamano, T. (2006). The role of local nonfarm activities and migration in reducing poverty: evidence from Ethiopia, Kenya, and Uganda, *Agricultural Economics*, Vol. 35, pp 449-458.
- Mayda, A. M. (2005). *International Migration: A Panel Data Analysis of Economic and Non-Economic Determinants*. IZA Discussion Paper No. 1590.
- Mayda, A. M. (2010). International migration: A panel data analysis of the determinants of bilateral flows. *Journal of Population Economics*, 23(4), 1249-1274.
- McAuliffe, M., & Ruhs, M. (2017). World Migration Report 2017. IOM, The UN migration agency.
- Mendola, M. (2008). Migration and technological change in rural households: Complements or substitutes?. *Journal of Development Economics*, 85(1-2), 150-175.
- Mincer, J. (1978). Family migration decisions. *Journal of political Economy*, 86(5), 749-773.
- Ministry of Foreign Employment (2017). Annual Performance Report. [online] Available at: <https://www.parliament.lk/uploads/documents/paperspresented/performance-report-ministry-of-foreign-employment-2017.pdf>, [Accessed 15 September 2018].
- Morettini, G., Presbitero, A.F., & Tamberi, M. (2012). Determinants of international migrations to Italian provinces. *Economics Bulletin* 32(2), 1604-1617.
- Nonnenmacher, S. (2008). "International Labour Mobility in the Evolving Global Labour Market", World Migration Report 2008, IOM.
- Nonthakot, P., & Villano, R. A. (2008). Migration and farm efficiency: evidence from northern Thailand. In *52nd Australian agricultural and resource economics society conference, Canberra, Australia* (Vol. 58).
- Ramos, R. (2016). Gravity models: a tool for migration analysis», IZA World of Labor, doi: 10.15185/izawol.239.
- Shaw, J. (2008). Migrants Remittances and Low Income Households in Sri Lanka: Development Policy Issues, Working Paper No.09, Monash Asia Institute, Clayton.
- Silva, J. S., & Tenreyro, S. (2006). The log of gravity. *The Review of Economics and statistics*, 88(4), 641-658.
- Sjaastad, L.A. (1962). The Costs and Returns of Human Migration, *Journal of Political Economy*, Vol. 70(5), Part 2: Investment in Human Beings, pp 80-93.
- Sri Lanka Bureau of Foreign Employment (SLBFE). (2016). Annual Statistical Report of Foreign Employment 2011, Sri Lanka Bureau of Foreign Employment, Colombo.
- Stark, O. (1991). The migration of labour, Blackwell, Cambridge and Oxford.
- Taylor, J. E., Rozelle, S., & De Brauw, A. (2003). Migration and incomes in source communities: A new economics of migration perspective from China. *Economic Development and Cultural Change*, 52(1), 75-101.
- Todaro, M. P. (1969). A model of labor migration and urban unemployment in less developed countries. *The American economic review*, 59(1), 138-148.
- Ullah, A.K.M.A. (2004). Bright City Lights and Slums of Dhaka City: Determinants of Rural-Urban Migration in Bangladesh, *Migration Letters*, Vol. 1(1), pp 26-41.
- Ullah, M.S. (2012). "Determinants of international labor migration from Bangladesh: a gravity model of panel data ", [Online] Available at: <http://www.ritsumei.ac.jp/acd/re/ssrc/result/memoirs/kiyou25/25-06.pdf>
- World Bank (2007). Sri Lanka Poverty Assessment: Engendering Growth with Equity:

Opportunities and Challenges, World Bank, Washington D.C

World Bank (2016). "Migration and Development: A Role for the World Bank Group". World Bank, Washington, DC.

Zipf, G. (1946). The  $P_1P_2 / D$  hypothesis: on the inter-city movement of persons. American Sociological Review 11:677-686.

## Effect of Financial Leverage on Firm Performance: Reference to Banks, Finance and Insurance Firms

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### Abstract

The research investigates effect of financial leverage on firm performance: reference to bank, finance and insurance firms listed in S&P SL20 index of the Colombo Stock Exchange (CSE). Data for the study were collected from 2011 to 2016 through annual reports and analyzed using multiple linear regressions. Profitability and Liquidity performance of firms was measured respectively by Return on Asset and the Current Ratio. Financial Leverage was measured by Debt Ratio, Debt Equity Ratio and Interest Coverage Ratio. Based on the analysis performed, it is noted that financial leverage significantly affect profitability while having a positive significant relationship with debt ratio while liquidity performance is not affected by financial leverage of banks and finance sector firms listed in S&P SL20.

**Keywords.** Leverage; Liquidity; Performance, Bank and Finance

### 1. Background

The banking and finance sector of an economy plays a key roles in any country in the world. This sector also plays an important role in the Sri Lankan economy, as it provides various kind of investing instruments to investors to gain returns while managing the risk of investments. The banking sector of every economy plays a key role in fostering growth and subsequently development (Duca & McLaughlin, 1990). As per the trends in economies arise the interest rates also fluctuate accordingly. Due to both local and global impacts Baking and Finance institutions in Sri Lanka and their consumers have focus on institutional vise performance. Therefore these institutions set up several economic evaluating measures to analyses the unfavorable impacts to face these in advance. There should be a proper mix between debt and equity to take advantage of a proper financial planning because debt capital is cheaper than equity capital with the attendant effect of lowering the average cost of capital of the firm (Banerjee, 2009). However, ROA (Return on Asset) and ROE (Return on Equity) are always taken as an important indicator of measuring banking and finance sector performance. Pimentel et al. (2005), defines profitability as the final measure of economic success achieved by a company in relation to the capital invested in it.

Liquidity is to check the ability to meet firms liabilities in the short run. Greuning and Bratanovic (2004) noted that maintaining an adequate degree of liquidity in the whole banking system is extremely important, because the registration of a liquidity crisis at a

single bank can have negative repercussions over the whole banking system thanks to the risk of contagion through interbank settlements.

Leverage is the ability to settle the liabilities in the long run and for this the capital structure of the firm should be at a level that always satisfies the needs of its investors and customers. Gatsi, Gadzo & Akoto (2013) state that the ability of the company's management to increase their profit by using debt indicates the quality of the management's corporate governance. Good corporate governance shows the companies' performance on their use of debt to increase their profits. The use of debt capital increases the earnings on equity capital as long as the rate of return on the firm's investment exceeds the explicit cost of financing the investment (Abdul & Adelabu, 2015). The inability to settle the short term liabilities will affect the company's operations as well and affect firm reputation.

The findings on this research will contribute to the theories banking and finance. The research will help distinguish empirically, whether firms liquidity and leverage have a significant impact on their profitability. The findings of the research can guide finance managers in banks and finance sector to make investment decisions that will satisfy the stakeholder's' interest with regard to liquidity, leverage and profitability needs of the investors. This study will support the framing of rules and regulations that lead to minimize failure risk in the sector Standard and poor Sri Lanka 20 Index banking and finance sector to face strongly while challenging to the global economy.

The main objectives of this study is to identify whether the financial leverage does significantly affect profitability measured by Return on Asset and also to determine whether there is a significant relationship between financial leverage and liquidity of banks measured by the current ratio.

## 2. Literature Review

Richard and Laughlin (1980), suggest that the knowledge of liquidity status is important for investors and managers for evaluating the company future, estimating investing risk and return plus stock price on one hand and the necessity of removing weaknesses and defects of traditional liquidity indices (current and liquid ratio) on the other hand. Atrill and McLaney (2008) define working capital as a measure of both a company's efficiency and its short-term financial health. It represents that portion of current assets financed by long term funding not requiring immediate payment. The working capital ratio is calculated as:  $\text{Working Capital} = \text{Current Assets} - \text{Current liabilities}$ . Chandra (2001) defines current ratio as a liquidity ratio that measures a company's ability to pay short-term obligations. It's calculated as ratio of current assets to current liabilities. The ratio is mainly used to give an idea of the company's ability to pay back its short-term liabilities (debt and payables) with its short-term assets (cash, inventory, receivables). The rule of the thumb is that a ratio

between 1.2 and 2.0 is sufficient. On bank profitability in Canada” observed (Who observed?) that liquidity was an instrumental factor during the 2008-2009 financial crises.

Niresh, (2012) noted long-term debt and total debt were found to be insignificant in determining return on equity in the banking industry of Sri Lanka. This means that deposits do not necessarily translate into enhancing returns on equity in the banking industry of Sri Lanka. Wijethilaka, (2015). States that based on the findings of the research there is a positive relationship between bank income diversification and bank performance despite the fact that degree of diversification being not in the peak within Sri Lankan context. The total leverage of a manufacturing firm affects to the ROE of the firm. Although financial leverage and operating liability leverage subscribed for the total leverage, their individual effect on ROE is not significant. When considering the ROA, regression results indicates that financial leverage affects to the ROA significantly and it was surprisingly negative (Samarakoon & Kumara 2014). Rajkumar (2014) found that the financial leverage has a negative relationship with reference to the financial performance of John Keells Holdings plc Sri Lanka during the periods 2006 - 2012. However, financial leverage has a significant impact on financial performance.

Rasiah et al. (2010) in his research found asset portfolio mix, loans and interest income, investments, non-interest income earning assets, total expenses, operating expenses, personnel expenses, liability composition, deposit composition, liquidity ratios, capital structure as internal factors influencing bank profitability. Any combination of common stock, preferred stock and debt used in financing the assets of a firm creates some level of financial risk. In other words, financial risk is directly related to the firm’s capital and financial structure/leverage (Pandey, 2010).

Pimentel et al. (2005), defines profitability as the final measure of economic success achieved by a company in relation to the capital invested in it. The assessment of profitability is usually done through the ROA (Return on Assets = Net Income / Total Assets) and ROE (Return on Equity = Net Income / Equity), which is the ultimate measure of economic success. Whitehead (2001) defines ROA as the ratio that measures the firm’s ability to use its assets to create profits. It’s computed as the ratio of net income to the average assets of the company during the year. ROA is useful number for comparing competing companies in the same industry. Return on assets gives an indication of the capital intensity of the company, which will depend on the industry; companies that require large initial investments will generally have lower return on assets.

Ezeamama (2010) states that debt ratio (DR) measures the amount of the total funds provided by creditors in relation to the total assets of the firm. Debt ratio = Total debt/Total Assets.

Enekwe (2014) posits that debt to equity ratio is a financial ratio indicating the relative proportion of equity and debt used to finance a company's assets which is an indicator of the financial leverage. Pandey (2010) states that it indicates the ratio of net operating income (or EBIT) to interest charges. Investors usually have an idea of financial risk of a firm by comparing the coverage ratios of similar firms with an accepted industry standard, the investors. Soub (2012) argues that there are various measures of financial performance. For instance return on sales reveals how much a company earns in relation to its sales, return on assets explain a firm's ability to make use of its assets.

Eljelly (2004), suggests that practically, profitability and liquidity are effective indicators of the corporate health and performance of not only the commercial banks but all profit-oriented ventures. It is usually a difficult task for managers to ensure that business organizations operate on the optimal mix of equity and debt. They are in constant struggle of ensuring the adequate sources of long-term financing that will maximize the wealth of shareholders (Njeri & Kagiri, 2013).

Bourke (1989) carried out a study to establish the relationship between liquid assets and bank profitability for 90 banks in Europe, North America and Australia from 1972 to 1981, the study used econometric framework presented in an equation. The dependent variable, profitability, was regressed against a non-linear expression of relative liquid asset holdings, as well as a set of control variables.

Wald (1999) in his research study argued that debt to assets ratio has significant negative relation with the firm profitability. He did his study on the firm's capital structure which operates in United States, United Kingdom, Japan, France, and Germany. He used firm size, growth and firm's riskiness as explanatory variables.

Sheel (1994) in his study also supported the negative relation between debt to assets ratio and firms past profitability. He used cross sectional regression analysis to study the leverage behavior of 32 firms in two industry groups, which were the hotel industry and manufacturing sector. His findings confirmed that all leverage determinants except firm size are significant in explaining leverage variations in debt behavior.

The financing or leverage decision is a significant managerial decision because it influences the shareholder's return and risk and the market value of the firm (Omondi & Muturi, 2013). Leverage is viewed as a result of events that determines companies' source of financing to run the business (Alkhatib, 2012).

Larry & Stulz(1995) conducted a study on the effect of debt on firms in Ghana which resulted positive significant association between total debt and total assets and return on equity. A study carried out by Murphy (1968), on financing behavior of listed Chinese firms resulted in a conclusion that a negative relationship between profitability and firms leverage exists. Njeri&Kagiri (2013) state that leverage increases the level of the debt in the capital structure and the turnover of the business and hence its profit, resulting in an increase in

returns to the business owners. They also claim that an increase in interest rate is expected to result in reduced borrowing, increased interest expenses and thus reduced returns to business owners. Pandey (2010) states that financial leverage occurs when there are no fixed financial charges (interest and preference dividend). Firms are either levered or unlevered. An unlevered firm is an all-equity firm, whereas a levered firm is made up of ownership equity and debt (Andy, Chuck & Alison, 2002). As debt increases, financial leverage increases.

Berger (1995) analyzed the statistical relationships between bank earnings and capital for 50 U.S. banks over the period of 1983-1989 using multiple regression analysis and found that, contrary to what one might expect in situations of perfect capital markets with symmetric information there is a positive relationship between capital and return on equity. Bordeleau, Crawford and Graham (2009) reviewed the impact of liquidity on bank profitability for 55 US banks and 10 Canadian banks between the period of 1997 and 2009. The study employed quantitative measures to assess the impact of liquidity on bank profitability. Results from the study suggested that a nonlinear relationship exists, whereby profitability is improved for banks that hold some liquid assets, however, there is a point beyond which holding further liquid assets diminishes a banks' profitability, all else equal.

Njihia (2005), in a study to identify determinants of commercial banks profitability in Kenya identified liquidity as one of the factors affecting profitability. The study involved 35 commercial banks operating in Kenya over a period of 5 years. The study employed 24 descriptive statistics and multiple regression analysis to estimate the determinants of commercial banks profitability. The study concluded that in one of the years under study liquid assets significantly determined the profit of the commercial banks especially in the period after political instability after the elections. The ratio of deposits held, loans and advances held by the commercial banks influenced the profitability.

Mangalam & Govindasamy (2010) analyzed and understood the impact of leverage on the profitability of the firm by investigating the relationship between leverage and the earning per share. They analyzed leverage in three ways which were financial leverage, operating leverage and combine leverage.

Baker (1973) analyzed that effect of financial leverage or relatively greater use of debt capital, on industry profitability. This study developed and tested a model consisting of two equations, one explaining industry profitability in terms of the usual market structure variables plus leverage and the other on a new equation incorporating risk variables to explain leverage.

## 2.1 Research Hypotheses

The hypotheses for this study are stated in null forms as follows:

Ho: Financial leverage does not significantly affect profitability measured by Return on Asset.

Ho: There is no significant relationship between financial leverage and liquidity of banks measured by current ratio.

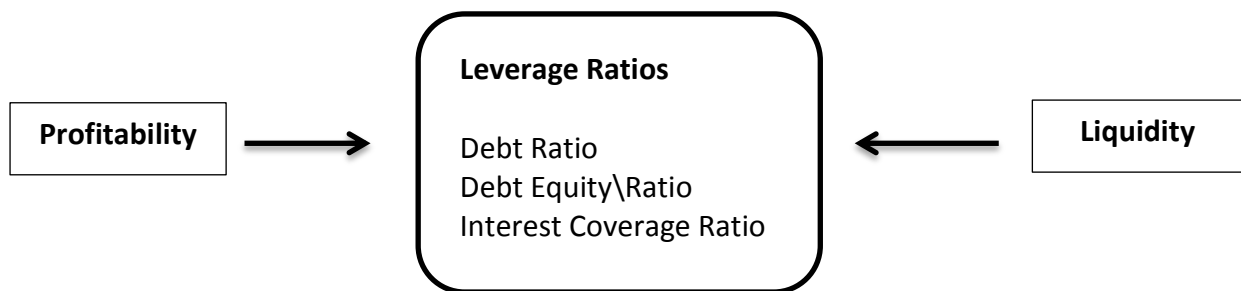


Figure 1. Conceptual Framework

## 2.2 Model of the Study

The Model for this study utilised Multiple Regression Analysis and composite variables as proxies for firm characteristics. The empirical model is specified as follows:

$$ROA = f(DR, DER, ICR)$$

$$CR = f(DR, DER, ICR)$$

The full specification of the regression equations using unranked OLS are:

$$ROA = \beta_0 + \beta_1 DR_j + \beta_2 DER_j + \beta_3 ICR_j + \epsilon_j$$

$$CR = \beta_0 + \beta_1 DR_j + \beta_2 DER_j + \beta_3 ICR_j + \epsilon_j$$

Where: DR= Debt Ratio

DER= Debt Equity Ratio

ICR= Interest Coverage Ratio

ROA= Return on Assets

CR = Current Ratio

$\beta_0$ = constant

$\beta_1$ = coefficient of debt ratio

$\beta_2$ = coefficient of debt-equity ratio

$\beta_3$ = coefficient of interest coverage ratio

$\epsilon$  = stochastic error term



### **3. Research Methods**

#### ***3.1 Sample and Data***

The population of this study comprises all 299 companies listed in the Colombo Stock Exchange (CSE) during the five year period 2012-2016. To select the sample, the following restrictions were imposed: (1) a sampled company must be listed in S&P SL20; (2) the financial year end of the sample companies must be March, 31; (3) the firm has published its complete financial statements; (4) to ensure some homogeneity of information, firms in Banking, Finance and Insurance sectors are considered and the shares of sampled companies must be actively traded in the period under consideration. The selected firms are Seylan Bank PLC, People's Leasing and Finance PLC, DFCC Bank PLC, Lanka Orix Leasing PLC, Commercial Bank of Ceylon PLC, Sampath Bank PLC, Hatton National Bank PLC and National Development Bank PLC. On the above criteria, 40 firm-years were obtained. The accounting data were collected mainly from the published financial statements of the sampled firms and the CSE website. Data obtained were analysed by employing Ordinary Least Squares (OLS) multiple regression approach because it enables the investigation of the collective influence of several independent variables on a single dependent variable.

#### **4. Data presentation and analysis**

The collected data were analyzed using correlation analysis and Ordinary Least Square Regression technique.

Table 1  
*Correlations*

		ROA	CR	DR	DER	ICR
ROA	Pearson Correlation	1	-.132	.229	-.166	-.137
	Sig. (2-tailed)		.417	.155	.305	.400
	N	40	40	40	40	40
CR	Pearson Correlation	-.132	1	-.139	-.310	.262
	Sig. (2-tailed)	.417		.392	.052	.102
	N	40	40	40	40	40
DR	Pearson Correlation	.229	-.139	1	.413**	-.075
	Sig. (2-tailed)	.155	.392		.008	.646
	N	40	40	40	40	40
DER	Pearson Correlation	-.166	-.310	.413**	1	-.115
	Sig. (2-tailed)	.305	.052	.008		.479
	N	40	40	40	40	40
ICR	Pearson Correlation	-.137	.262	-.075	-.115	1
	Sig. (2-tailed)	.400	.102	.646	.479	
	N	40	40	40	40	40

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

Correlation analysis quantifies the degree of two or more variables that are linearly related, i.e. how well the estimating equation fits. It describes the relationship for all the pairs of variables. From the output, it can be found that, the correlation coefficient between ROA and DR is 0.229 which can be concluded that there is a positive correlation but insignificant correlation exists. The correlation coefficient between ROA with DER and ICR are respectively -0.166 and -0.137 which indicates that there is a weak negative correlation at 95% significance level. Meanwhile, the relationship between CR and DER is marginally significant (-0.310) and it indicates that there is a weak negative correlations. Also the relationship between CR and DR is negative and insignificant -0.139. Moreover, CR and ICR is 0.262 which shows there is an insignificant positive correlation.

## Hypothesis 1

Ho: Financial leverage does not significantly affect profitability measured by Return on Asset.

Table 2  
*Model Summary*

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.395 <sup>a</sup>	.156	.086	1.03835

a. Predictors: (Constant), ICR, DR, DER

Table 3  
*ANOVA<sup>b</sup>*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.192	3	2.397	2.224	.102 <sup>a</sup>
	Residual	38.814	36	1.078		
	Total	46.006	39			

a. Predictors: (Constant), ICR, DR, DER

b. Dependent Variable: ROA

Table 4  
*Coefficients<sup>a</sup>*

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.614	.331		1.856	.072
	DR	.151	.072	.354	2.107	.042
	DER	-.069	.035	-.330	-1.954	.059
	ICR	-.244	.254	-.148	-.961	.343

a. Dependent Variable: ROA

The empirical results showed regression coefficients of the Debt ratio, debt equity ratio and interest coverage ratio at 0.151, -0.069 and- 0.244 respectively at t values of 2.107, -1.954

and -0.961. This implies that the Debt ratio has a positive significant effect on return on assets employed since sig value = 0.042 which is less than 5%. Debt-equity ratio has a insignificant negative effect on ROA as sig value = 0.059. Interest coverage ratio has a negative coefficient but did not show significance within the level of significance adopted for this study as sig=0.343>0.05. Thus the higher the debt ratio, the more profitable a firm would be. Profitability however reduces with increased debt-equity ratio while Interest coverage ratio does not particularly affect profitability. Evaluating the model, the value of the R<sup>2</sup> is 0.156 which in other words means that 15.6 percent variation in the net profitability of firms is explained by financial leverage. The remaining 84.4% unexplained variable is largely due to variation in other variables outside the regression model which are otherwise included in the stochastic error term. The f-value 2.224 of the model suggested that the overall model is statically significant because it has a value higher than the critical value at 5% level of significance.

Therefore, the null hypothesis is rejected and the alternate hypothesis is accepted. This implies that financial leverage affects profitability measured by Return on Assets.

#### Hypothesis 2

Ho: There is no significant relationship between financial leverage and liquidity of banks measured by current ratio.

Table 5  
*Model Summary*

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.385 <sup>a</sup>	.148	.077	9.24475

a. Predictors: (Constant), ICR, DR, DER

Table 6  
*ANOVA<sup>b</sup>*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	534.073	3	178.024	2.083	.120 <sup>a</sup>
	Residual	3076.757	36	85.465		
	Total	3610.830	39			

a. Predictors: (Constant), ICR, DR, DER

b. Dependent Variable: CR

Table 7  
Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	T	
1	(Constant)	4.667	2.944		1.585	.122
	DR	-.022	.637	-.006	-.035	.972
	DER	-.523	.316	-.281	-1.655	.107
	ICR	3.350	2.263	.229	1.480	.147

a. Dependent Variable: CR

The intercept of the equation that represents the other variables that affect the change relationship is 4.667 at 0.122 significance level which is higher than 0.05. The financial leverage measures also do not depict significance as the significance values for each of them are greater than 0.05. The values of R- squared & the adjusted R- squared in the model summary table (0.148 and 0.077) explains that the model has very low predictor power. The f statistic reads 2.083 at 0.05 level of significance as shown in the model summary. The value of the model is 2.083 and it indicates the alternate hypothesis is rejected and the null hypothesis accepted because calculated f value is less than critical f value. Thus, the liquidity of banks is not affected by financial leverage.

Therefore, the alternate hypothesis is rejected and the null hypothesis is accepted that there is no relationship between financial leverage and liquidity of banks.

## 5. Conclusion

This study examined the effect of financial leverage on firm performance: with reference to banks, finance and insurance firms listed in S&P SL20. The study covered 8 listed banks over the period of 2012 or 2011? to 2016 and the major findings of the study are summarized as below:

Outcomes disclosed that financial leverage significantly affect profitability on banks and finance firms indexed in S&P SL20. Long term loans have lower cost than equity and have interest accrued to them. The more leverage a bank employs, the more profitable it becomes. This is consistent with the findings of Njeri and Kagiri (2013), Abdul and Adelabu (2015), and Abubakar(2015).

Liquidity and its performance of banks and finance sector firms listed in S&P SL20 are not affected by financial leverage. The availability of working capital and the working capital management practices of the banks are virtually independent of whether debt is included in

the capital structure or not. Alkhatib (2012) found a positive significant relationship. Results shown that proficiency of banks increased with financial leverage even though it was not too significant.

Further studies can be focused on considering the impact of economic variables on the performance of businesses, incorporate macro-economic factors to the model. And also the study covered only the listed Sri Lankan banks from the Banks, Finance & Insurance sector. Therefore, additional investigation is required to examine firms in the different sectors tend to follow different capital structure patterns and time dimension to have greater number of observations.

## References

- Abdul, A. & Adelabu, I. T. (2015), Impact of Financial Leverage on Firm Performance: Evaluation of Total Nigeria Plc, *International Journal of Science Commerce And Humanities*, 3(6).
- Alkhatib, K. (2012) The Determinants of Leverage of Listed Companies, *International Journal of Business and Social Science*. 3(24): 78-83.
- Andy, C.W.C, Chuck, C.Y.K., & Alison, E.L. (2002). The Determination of Capital Structure: Is National Culture a Missing Piece of the Puzzle? *Journal of International Business Studies*, 33, 19- 32.
- Atrill, P. & McLaney E. (2008). *Accounting and Finance for Non-Specialist*, Edinburgh, Pearson Education limited.
- Baker, S.H (1973). *Risk, leverage and profitability: an industry analysis. The Review of Economic and Statistics*, 55, 503-507.
- Banerjee, B. (2009), *Fundamentals of Financial Management*, New Delhi: PHI Learning Private Limited.
- Bank of Canada (2010). The Impact of Liquidity on Bank Profitability, *Working paper* 2010-38.
- Barclay, M. & Smith, C. Jr. (1995). The maturity structure of corporate debt, *Journal of Finance*, 50, 609–631.
- Bei Z. & Wijewardana, W.P. (2012) *Financial leverage, firm growth and financial strength in listed companies in Sri Lanka*. *Procedia- social and behavioural sciences* 40(2012) Pp 709-715
- Berger, A. N. (1995). The relationship between capital and earnings in banking. *Journal of Money, Credit and Banking*, 27(2-5), 432-456.
- Bordeleau, E., Crawford, A. & Graham, C. (2009). Regulatory Constraints on Bank Leverage: Issues and Lessons from the Canadian Experience, Bank of Canada Discussion Paper 2009-15.
- Bourke, P. (1989). Concentration and other determinants of bank profitability in Europe, North America and Australia. *Journal of Banking and Finance*, 13, 65-79

- Chandra, P. (2001). *Financial management theory and practice*, NewDelhi, Tata McGraw Hill Publishing company Limited.
- Duca, J., & McLaughlin, M. (1990). Developments affecting the profitability of commercial banks. *Federal Reserve Bulletin*, 477–499.
- Eljelly, A. (2004), Liquidity-profitability tradeoff: An empirical investigation in an emerging market. *International Journal of Commerce & Management*, 14(2), 48-61
- Enekwe, C.I., Agu, C.I. & Eziedo, (2014), The Effect of Financial Leverage on Financial Performance: Evidence of Quoted Pharmaceutical Companies in Nigeria, *IOSR Journal of Economics and Finance* 5(3)
- Ezeamama, M.C (2010), *Fundamentals of Financial Management: A practical guide*. Enugu: EMA press Ltd.
- Gatsi, J.G., Gadzo, S.G. & Akoto, R.K. (2013), *Degree of Financial and Operating Leverage and Profitability of Insurance Firms in Ghana*. Canadian International Business and Management, 7(2): 57-65.
- Greuning, H. & Bratanovic, S. (2004). *Analysis and risk management banking*, Bucharest, Irecson Publishing House.
- Mangalam, S.C. & Govindasamy, P. (2010). Leverage: an analysis and its impact on profitability with reference to selected cement companies in India. *Journal of Economics, Finance and Administrative Science*, 27, 50-75.
- Nireesh, J. A. (2012). *Trade-off between liquidity and profitability, A Study of selected Manufacturing Firms in Sri Lanka*. University of Jaffna
- Njeri, M.M.K. & Kagiri, A.W. (2013), Effect of Capital Structure on Financial Performance of Banking Institutions Listed in Nairobi Securities Exchange, *International Journal of Science and Research*.
- Njihia, J. K. (2003). *Determinants of Banks profitability: the case of Commercial Banks in Kenya*. Unpublished MBA research project, University of Nairobi
- Omondi, M.M. & Muturi, W., (2013), Factors Affecting the Financial Performance of Listed Companies at the Nairobi Securities Exchange in Kenya, *Research Journal of Finance and Accounting*, 4(15).
- Pandey, I.M (2010). *Financial Management*, New Delhi: Vikas Publishing House Limited.
- Pimentel, R. C., Braga, R., & Casanova, S. P. C. (2005). Interaction between profitability and liquidity: an exploratory study. *Journal of Accounting Master of Science in Accounting*, UERJ, Rio de Janeiro
- Rajkumar, P. (2014). Impact of Financial Leverage on Financial Performance: Special Reference to John Keells Holdings plc in Sri Lanka. *Scientific Research Journal*, 2(II)
- Rasiah, R., Gammeltoft, P. & Jiang, Y. (2010). Home Government Policies and Outward Foreign Direct Investment from Emerging Economies: Lessons from Asia, *International Journal of Emerging Markets*, 5(3), 333-357.
- Richard, V. D. & Laughlin E. J. (1980). *A Cash Conversion Cycle Approach to Liquidity Analysis Financial Management*. 36 (1), 32-38.

- Samarakoon, S.M.R.K and Kumara, E.S. (2014). Effect of Leverage on Profitability and Market Performance in the Manufacturing Sector of Sri Lanka: A Panel Regression Analysis., *Journal of Accountancy and Finance*, 1(1)
- Sheel, A. (1994). Determinants of capital structure choice and empirics on leverage behavior: A comparative analysis of hotel and manufacturing firms. *Hospitality Research Journal*, 17, 3-16
- Wald, J. K. (1999). How firm characteristics affect capital structure: an international comparison. *Journal of Finance Research*, 22,161-188.
- Whitehead, G. (2001). *Principles of accounting*, 3rd edition. London, Hodder Education
- Wijethilaka, E.T.S. (2015). *Impact of Bank Income Diversification to Bank Performance: Evidence from Sri Lanka*.In Proceedings of the 4th Students' Research Symposium, University of Kelaniya, Sri Lanka.p 48.
- Zikmund, W. G.,Babin, B. J., Carr C. J. & Griffin M., (2010). *Business Research Methods*, South Western, Cengage Learning, 8th Edition.



## **Human Resource Management**

## Human Resource Management in Building a Sustainable Business Organization

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### Abstract

This study attempts to bring a Human Resource Management (HRM) perspective into one of the major debates, i.e. sustainability, advocated by the scholarly and business community. The extant literature provides a suggestion made by most scholars to have HRM involved in this debate, albeit its practicability remains questionable. The main objective, of the study therefore, is to identify the perspective and level of involvement of process by human resource (HR) on sustainability with related ethics. This is a case study based on a company engaged in the business of coconut fiber products. The method of collecting data was in-depth face to face interviews conducted with thirteen HR and non-HR managerial personnel of the case organization. The data analysis confirmed that there are limits for HR in practicing sustainability and further, HR needs the support of non-HR personnel in practicing sustainability. Since sustainability an integrated approach, most times HR only influences the people part of sustainability by leading employees to practice it. This study found that HR is mostly concerned only on employees, which is considering as the ultimate duty of HR. And most other non-HR or the technical personnel have the concern on other two aspects of sustainability - planet and profit. Thus, the researcher believes that this might open new vistas for enriching further this debate.

**Keywords.** HRM, Sustainability, Ethics

### 1. Introduction

Research on sustainability is proliferating regardless of the area it addresses within the organization. Even though most of the other functions in organizations such as accounting and operations management have taken priority on sustainability research over the last decade, it is evident research on Human Resource Management (herein after referred to as HRM) and sustainability also has been increased considerably in recent years (Harris & Tregidga, 2012). The concept of sustainability is contested (Hahn, Figge, Pinkse, & Preuss, 2010) and the definition of Brundlandt Commission seems to be very famous amongst scholars which brings the meaning as utilizing resources at present while conserving those resources to be used by future generations as well (Ehnert & Harry, 2012; Ehnert, Parsa, Roper, Wagner, & Muller-Camen, 2016; Guerci & Pedrini, 2013; Hahn et al., 2010; Kramar, 2014; Milne, Kearins, & Walton, 2006; Wilkinson, Hill, & Gollan, 2001). As mentioned

by Weerakoon (personal communication, December 9, 2016), 2016, sustainability can be considered as a situation where the rich rides a bicycle, but not where the poor drives a car. Though sustainability has a definition as above, it is now being backtracked by emphasizing that sustainability is not only for human beings but also the mindset of people which cares about every other being living on this planet, and also the wellbeing of everyone (Opatha, 2016). In the business arena, organizations have to consider more on sustainability as some scholars identify businesses as the cause of many problems experienced worldwide at present, specially the damages to the environment (Hahn et al., 2010). Since the environmental posers are the most visible effects to the community, most organizations are post-haste to get onto the sustainability bandwagon as a solution to those problems. But whether it is addressing the sustainability of core business of the organization is still a problem.

Within the concept of sustainability, some past scholars have differentiated sustainability as strong and weak. Harris and Tregidga (2012) recognize strong sustainability as the situation where profit or economic success is achieved only through the base of environmental and social progress of the organization. On the other hand, weak sustainability is achieved from the simultaneous combination of people, planet, and profit aspects or sustainability is the point where all the three aspects get connected (beginning with “or” the second section of the sentence seems odd). The concept of Triple Bottom Line (herein after referred as TBL) which consists social, environmental and economical aspects are also significant and a frequently used term under sustainability. Most of the scholars have identified TBL efficacy as sustainable development (Jabbour & Santos, 2008). According to Vanclay (2004), TBL has turned from a concept to an accounting measurement to practice inside the organizations by creating both pros and cons. With a pure accounting background, organizations might be able to measure the achievements with regard to TBL (or sustainability) clearly, but achieving the fundamental purpose of sustainability can be questionable.

HRM is a major function in an organization which helps to build a quality base of employees through various practices. According to Kramar (2014, p. 1072) “HRM is a broad term that refers to the activities associated with the management of the people who do the work of organisations”. With regard to HRM, there is a huge responsibility to lead people to work towards the goals and objectives of the organization. Human Resource Management is the function which propels employees to achieve goals of the organization. In the trend of sustainability, HRM has to play a role going beyond the routine activities, to create value for the organization in terms of sustainability. But it is evidenced that the extant literature suggests that HRM is still far behind to address sustainability by considering it as a prominent task of HR (Harris & Tregidga, 2012). Even though the research on HRM and sustainability is in a state of proliferating, the attention is far behind than the other aspects of HR (Ehnert & Harry, 2012). But scholars based on secondary data research have strongly suggests that HR has to involve with sustainability in order to achieve sustainability in the organizations (Jabbour & Santos, 2008; Kramar, 2014). According to Harris and Tregidga

(2012), Strategic Human Resource Management (herein after referred as SHRM) is supposed to work as a tool for managing people, acting proactively, integrative while creating value. Ulrich, Younger, Brockbank, and Ulrich (2012,) suggests that “High performing HR professionals think and act from the outside/in” which means that HR needs to analyze the external environment to adopt necessary actions inside the organization. Further, Ulrich, Younger, and Brockbank (2008) explain that HR departments have to be considered as a separate business inside the organization which emphasizes the huge responsibility of HR for the business. Also they identify HR has a role to be performed by creating value for various types of stakeholders of the organization.

While considering the Sri Lankan context, it is evidenced that Corporate Social Responsibility (herein after referred to as CSR) is popular in the corporate sector, in the name of sustainability. Getting engaged in activities which benefit both the society and the firm have prioritized while ignoring to make the core business of the firm sustainable. Also, it can be said that only a few scholars have taken the priority to research on sustainability and HRM so far in Sri Lanka.

Considering such circumstances, it comes across as important to analyze the role of HRM to implement the new trend of sustainability within the organization. The objectives addressed in this study are, to identify how current HRM practices address sustainability in the organization and how they are linked with strategy formulation, to explore how HRM could foster sustainability within the organization, and to understand why does the interpretation of HRM and Non-HRM practitioners affect organizational sustainability

As the researcher mentioned above with some extant literature, the role of HRM is important, but yet questionable in organizations. Thus this research intends to address the research issue of, why HR does not play a prominent role in ensuring sustainability of organizations?

Ethics can be considered as a significant part of sustainability (Ehrenfeld, as cited in Abeydeera, Kearins, & Trigidga, 2016). Appreciating the human values and taking care of each other has been identified therein by the author. Even though it is very famous to recognize sustainability as TBL (Gallego-Álvarez, Prado-Lorenzo, Rodríguez-Domínguez, & García-Sánchez, 2010), currently the term sustainability is identifying mostly as an emotional concept, such as a mindset (Opatha, 2016). But sometimes scholars have forgotten to address that aspect through their studies since mostly TBL has taken the priority in the studies of sustainability. With this study, the researcher is trying to bridge the existing empirical gap of involvement of HR with sustainability as well as by addressing ethics.

Since the most significant asset an organization has is its employees, treating them ethically will enhance employee satisfaction. So, this study will shed a light on where HR can add value for the organization with the practices related with sustainability and ethics.

Also this study would be able to identify the relationship between sustainability and the other functions of an organization, such as marketing, quality, and more as the researcher progressed through interviewing stakeholders in other functions as well. Thus this study will provide a good understanding of real task of HR towards sustainability of the organization. With the purpose of providing the above mentioned context in this paper, the extant literature has been reviewed below, followed by the methods adopted for the study. Next, the findings are presented under data presentation and analysis. Thereafter, the conclusion and contributions are discussed and the paper concludes with some practical implications and directions for future research.

## **2. Literature review**

### ***2.1 Sustainability and organizations***

Sustainability is a very broad concept which has to be approached not in a single way but in multi-faceted ways. It basically consists of various dimensions such as environmental dimension, people dimension, financial dimension as well as ethical dimension (Kramar, 2014).

With a thorough understanding of sustainability, some authors have identified it in two folds as strong and weak sustainability. In real sustainable practices also, the adaptation can be identified as strong and weak. According to Milne et al. (2006), people who believe in weak sustainability tend to generalize their view without adhering to a deep ecological concept whereas strong sustainability believers tend to base their view on a deep environmental concept. Harris and Tregidga (2012) have elaborated that the three pillars coming under sustainability as people, planet, and profit are considering as related, but separated under weak sustainability whereas under strong sustainability, those three are not separated but represent a nested concept which the environment and society are coming as the solid base to achieve economy or the profit. The common characteristics of both definitions of strong and weak sustainability are “maintenance, sustenance, or continuity of a certain resource, system, condition, or relationship” (Voinov & Farley, 2007, p. 105). These two perspectives reveal the mindsets towards sustainability in two different ways. Further, some of the scholars have explicated that sustainability has to be considered as a multi-faceted approach where it needs to be achieved not in a single way, but with simultaneous attempts in different ways (Hahn et al., 2010; Hart & Milstein, 2003; Jabbour & Santos, 2008).

Meanwhile some authors have commented about the usefulness of changes within the business for sustainability. According to Vollebergh and Kemfert (2005), the technological advancements can lead to better sustainable policies towards strong sustainability since they address economic value addition as well as environmental friendliness at the same time. The win-win paradigm which has been identified only by a few authors also propels the concept of weak and strong sustainability (Hahn et al., 2010). The acute problem with the win-win paradigm is that every activity towards sustainability will be judged through a pure financial perspective and also as for this paradigm, people, planet, and profit objectives of

sustainability can be achieved simultaneously (Hahn et al., 2010). This win-win paradigm and weak sustainability can be considered as connected concepts to each other.

Sustainable behavior in organizations has become an inevitable aspect in the modern business world. Since organizations are actively involved in providing goods and services for the economy, i.e. to the society so that there can be possible situations where they conduct unethical or harmful practices. In that sense, having a sustainable code of ethics/practices might be able to provide quality goods and services for the society while ensuring the economic prosperity of the organization (Mariappanadar, 2012).

According to Shrivastava (1995, p. 124) "Organizations are systems of production, serving the goals of stakeholders and operating in a dynamic economic, social, and political environment". The same author has developed a paradigm to serve all the stakeholders of an organization in a quality way while ensuring the sustainability, named "eco-centric management". In the sustainability literature, the stakeholder approach has been highlighted which actually appears as a good approach for sustainability (Kramar, 2014). The stakeholder approach suggests that the organization has to consider all of their stakeholders and their stakes, to be sustainable. Kolk (as cited in Gill, Dickinson, & Scharl, 2008) has commented that the concern on sustainability in organizations has increased due to the pressure from various types of stakeholders. According to Greenwood (as cited in Mariappanadar, 2012), stakeholder approach is a trade-off situation between shareholders and the other stakeholders. Hart and Milstein (2003) have commented that the consideration of shareholder value can lead to a more effective sustainability in organizations. Further, authors (Donaldson & Preston, year; Elkington as cited in Kaptein & Wempe, 2001) have identified stakeholders into three categories as stakeholders who are concern on profits, who are concern on environment, and who are concern on people.

Elkington (as cited in Hart & Milstein, 2003) has identified a sustainable organization as an organization which achieves the three aspects of people, planet, and profit simultaneously. By emphasizing the concept of sustainability in organizations, Welford (as cited in Milne et al., 2006) has commented that being the culprits for the sustainability issues, the definitions adopted by businesses are mostly for the benefit of themselves and those definitions are often towards weak sustainability interpretations. Dunphy and Griffiths (as cited in Wilkinson et al., 2001, p. 1493) have identified several macro factors which obstruct corporations moving towards sustainability and those factors are, "population explosion, natural limits to Non-renewable resources, reduced species diversity, growing ecotoxins, over-exploitation of renewable resources, incentive systems encouraging waste and destruction, and extreme differences in income". But in the same paper, authors have identified two main challenges which companies can overcome by adhering to sustainability practices. First is that the company can reduce external pressures from government, customers and other stakeholders. Second, the company can address internal problems for

human resource sustainability such as turnover (Wilkinson et al., 2001). So in that regard, it is beneficial in multiple ways for companies to practice sustainability.

It is evidenced that some organizations are adhering to green practices in the name of sustainability. The damages caused by the business organization for the natural environment in terms of energy, water, and other natural resources have been discussed by Rimanoczy and Pearson (2010). Bansal and Roth (2000) have found three motives for companies to adopt greening workplaces as ecological responsibility, legitimation, and competitiveness. Also they have found that due to the competitiveness in the market, organizations will take initiatives to adopt those green practices only if it is paying financially at the end (Aragón-Correa and Rubio-López, as cited in Hahn et al., 2010). Moreover companies have to get adapted to green practices as there is always pressure in the market to become so (Pfeffer, 2010). Marcus and Fremeth (as cited in Pfeffer, 2010) have commented that for an organization to go green it has to come from the people of the organization and leaders always have to be the triggers. But the personal beliefs of managers in the organization might become another fact which can affect sustainability practices of the organization. Abeydeera et al. (2016) have explored that even the managers who have a deep concern on environment, or sustainable practices in their personal lives are compelled to play a completely contradictory role in the organizational context as more profit-oriented persons. The problem within the organizations with regard to green practices is that, the players in such organizations are so enthusiastic to talk about environmental preservation but yet the practicality is problematic. Sometimes it can be noticed that sustainability issues have been concealed inside this green washing. Also, it can be commented that, if the processes of the organization are sustainable, harm to the environment can be reduced as most of the environmental problems are occurring as the outcome of unsustainability. If organizations can abide by congenial business practices to achieve carbon neutrality, reduce wastage, and reduce landfilling through sustainable business practices, it will be good for the business, as well as the planet.

Another aspect that organizations tend to utilize in terms of sustainability is CSR or Corporate Sustainability (herein after referred as CS). Jayakumar (2016) has commented that with CSR, organizations used to ensure long-term growth through triple bottom line and Hahn and Figge (as cited in Ehnert & Harry, 2012) have elaborated that CS also follows a win-win paradigm in sustainability. According to Dahlsrud (2008) there are uncertainties which are clearly visible both in the academia and corporates in terms of CSR. According to Jones-Christensen et al. (as cited in Harris & Tregidga, 2012), the term CSR itself can bring misinterpretations such as, it only talks about society or ethics. According to Visser (as cited in Fernando, Lawrence, Kelly, & Arunachalam, 2015) companies cannot just marginalize CSR as it has to address a vast area including social, environmental, ethical, governance, and labor practices in the field. Gallego-Álvarez et al., 2010 have elaborated that CSR is a lucrative practice in an organization which will create positive reputation for the organization. According to Caprar and Neville (as cited in Lange, Busch, & Delgado-Ceballos,

2012) green washing is another term used to identify firm's real behavior on sustainability, because some organizations pretend sustainable practices which they identify as green washing. The issue with CSR as for sustainability is that, it ignores being sustainable in terms of the core business of the organization, which should have been addressed by sustainability as the main point.

American Management Association and Human Resource Institute (as cited in Opatha, 2016, p. 5) have identified most popular and common sustainable practices in the world. The top three sustainable practices of them are, "(1) Ensure the health and safety of employees (4.02), (2) Ensure accountability for ethics at all levels (3.95), (3) Engage collaboratively with community and nongovernment groups (3.47)". With these identified practices, it can be noticed that the organizations are now tending to focus their attention on employees as well as ethics in terms of sustainability.

Also it can be recognized that, to become a sustainable organization, one needs to count sustainability as a part of their organizational culture (Lange et al., 2012). A culture of an organization always propels the people in it to behave in a way where the culture has been arranged. Borland (as cited in Stoughton & Ludema, 2012) has suggested that an organization needs significant changes in culture, if the organization aiming for sustainability. And with the multiple case studies developed by Stoughton and Ludema (2012) using three different organizations, have found that the senior management has to take the lead to convert organizational culture towards a sustainability focused one.

The strategy of an organization can be considered as the most vital element where all functions are carried out by aligning with the strategy of the organization. Tyson (1997) has defined strategy as a plan which is used to gain the competitive advantage by aligning with organizational goals and objectives or/and a process which are used to ensuring that managerial actions bring organizational goals and objectives to a success. Fernando (2015) has remarked that, for sustainability to flourish in an organization and also for the organization to sustain in the long term, there has to be an embedded strategy in terms of sustainability and the corporate sustainability. By aligning sustainability with the organizational strategy, it will enable to mitigate the unsustainability risk in the future which can be occurring due to the organizational activities. Seven imperatives have been introduced by Fernando (2015) in his book which plays a pivotal role in a sustainable business organization. Those seven imperatives are, sustainability mindset Chief Executive Officer (herein after referred as CEO); framing and positioning sustainability; sustainability enabling governance; one strategy which embeds sustainability corporate strategy; sustainability measurement, reporting, and rewards; strategic stakeholder engagement; sustainability-led differentiation and innovation.

Since most of the business organizations are operating amidst highly volatile and competitive environment, they have to take into account all the stakes of different stakeholders (Bonn & Fisher, 2011). James and Schmitz (2011) have pointed out that,



through the leadership education, it could be able to build a sustainable organization since the major reason for organizations to act unsustainably because the leaders lack the awareness on sustainability and its importance. And same authors have expressed that a leader who thinks out of the box, will see sustainability as an ethical matter.

## ***2.2 Human resource management and sustainability in organizations***

HRM has become a major function in any organization. Since human resource is treated as the most valuable resource in the organization, managing it also has become a prominent task. According to Boxall and Purcell (as cited in Kramar, 2014) HRM is all about conducting the activities which are related with employees. Further, Schuler and Jackson (as cited in Kramar, 2014) have commented that, with effective HR practices, the performance of the organization can be enhanced.

Conner and Ulrich (as cited in Lemmergaard, 2009) have recognized four roles which HR is supposed to play in the organization by a survey with 256 HR practitioners as, directing the organization towards strategy, managing change, considering about the welfare of employees, and handling the administrative stuffs in the organization. Further, Ulrich, Younger, Brockbank and Ulrich (2012) have explained that HR should create value for the organization by managing performance. They have revisited the roles of HR, after collecting data from over 20,000 individuals globally and again they have restructured six main competencies to be excelled by HR as strategic positioner, credible activist, capability builder, change champion, human resource innovator and integrator, and technology proponent. Some of these competencies can also be linked with sustainability in miscellaneous ways when they are studying deeply.

Stone and Deadrick (2015) have identified some factors which will affect future of HRM as transformations in the economy, globalization, domestic diversity, and technology. Thus, the identification of sustainability factor seems to be far behind yet. Even though it has suggested that the nature of HR contributes to sustainability in the organization (Daily & Huang, 2001; Jabbour & Santos, 2008), by considering all the above facts, it is evidenced that except the literature exclusively for sustainable HRM, the extant literature on HRM has so far failed to trigger the conversation on sustainability as a substantial duty of HRM.

Mostly HR function has to confront with trends which are emerging in the market from time to time. Sustainability is one of those trends at present. Ehnert and Harry (2012) have disclosed two ways where HRM becomes an influential aspect for sustainability. Firstly HRM always has to consider about the societal approach of the sustainability. Secondly due to the issues related with HR, such as aging population and health issues, effective HRM can contribute for organizational sustainability by reducing the effect of those issues. Further Taylor, Osland, and Egri (as cited in Stankeviciute & Savaneviciene, 2013) have pointed out two reasons why sustainability is important to HRM. Firstly as a mediating factor and secondly as an outcome factor. With the mediating effect, HRM is directing employees

towards sustainability by adjusting mindsets and with the outcome effect it is following sustainable practices within HR in order to build a quality employee base in the long term.

The extant literature has elaborated the term sustainable HRM as a new evolution in the HR pathway. Müller-Christ and Remer (as cited in Ehnert & Harry, 2012) have identified sustainable HRM as a process of creating an environment which benefits the organization by having quality people with them in the future. Similarly, Gollan (as cited in Ehnert & Harry, 2012) has defined sustainable HRM as creating value for the organization through HR practices and ensure the capacity to generate value constantly. Mariappanadar (2012) has discussed about the negative effects on employees as well as on the other stakeholders by drawing attention exclusively for negative externalities. He has commented that sustainable HRM is about taking steps to reduce those types of negative effects on all the stakeholders including third parties such as families of the employees. The author has also emphasized the ethical dimension of sustainability which has identified as “holistic corporate sustainability”. So, with the “holistic corporate sustainability”, negative externalities can be reduced which leads to a more sustainable workforce/organization which differentiate sustainable HRM from the traditional HRM. Even though the term sustainable HRM has given different definitions, a common characteristic can be highlighted as the consideration about sustainable behavior of employees in the organization (Jabbour & Santos, 2008; Kramar, 2014). According to Kramar (2014), sustainable HRM consists of financial outcomes, social outcomes, and ecological outcomes which might help to create value for the organization. He has identified a common characteristic of sustainable HRM and basic HR practices as both of them help to uplift the status quo of “human and social capital” in the organization (p. 1075). Further, Jabbour and Santos (2008) have elaborated the importance of formulating proper strategies in order to integrate HRM with sustainability. Wright and Snell (as cited in Jabbour & Santos, 2008) have commented the process of formulating strategies as an “interactive and dynamic process” (p. 2137).

With regard to the three aspects of sustainability (or TBL) there are various activities HR has to perform as suggested by Jabbour and Santos (2008) and they have commented that adhering to the following practices by HR, it can be achieved sustainability in the organization. For better economical performance - fostering innovations; for better social performance - managing diversity, and; for better environmental performance - effectively managing Environmental Management System (herein after referred as EMS).

With all the above explanations, it is evidenced that the involvement of HR managers with sustainability is less researched. It emphasizes that even though scholars suggested HR to get involved with sustainability, practical situation of that kind of an involvement is still less. Harris and Tregidga (2012) conducted a research with 14 HR managers in New Zealand to understand the position held by those managers with regard to environmental sustainability. The authors explored that even the HR managers have a concern about the environment in their personal lives, it is disappearing at the organizational level. Most of

those managers considered that environmental sustainability is not one of their responsibilities.

The literature on HRM and sustainability seems to be mostly has been conducted with secondary data only. Thus up to now it seems there is an empirical gap in literature on sustainability and HRM intervention.

### **3. Methodology**

#### **3.1 Research strategy**

The research strategy employed by the researcher is qualitative approach focusing on a single, embedded case study. A case study can be identified as a special method of conducting a study and all the research methods can be categorized according to three main purposes as “exploratory, descriptive, and explanatory” (Yin, 1984, p. 7).

As the researcher conducted this study in order to understand the role of HR or HRM? on organizational sustainability, embedded case study method was helpful to research deeply on this situation. According to Yin (as cited in Eisenhardt, 1989), case studies can be used to research deeply in one situation/organization with different layers. Embedded case studies differ from other single case studies as they have more than one unit of analysis to be analyzed within the case.

The researcher is using the name of the company selected as the case as Company X and Company X – Sector B for the research site. Company X is one of the biggest conglomerates in Sri Lanka which is well prominent in driving a sustainable business process for more than 135 years as a renowned multinational. Company X is always triggering the business towards a healthy future by currently engaging in 12 sectors of businesses, both in service and manufacturing sectors by diversifying their business portfolio. In the current study there are three units of analysis under sector B as Sub-sector BI (Company A), Sub-sector BII (Company B), and Sub-sector BIII (Company C).

#### **3.2 Sample**

The thirteen participants of the research consisted of HR professionals, and also the other stakeholders those who have a stake in the sustainability function of Sector B. It included group HR head, HR manager/s, factory managers, marketing personnel, quality assurance personnel, engineering personnel, and supply chain management personnel. Among three HR professionals interviewed, there was one from corporate head office in Colombo and other two were from the production plants located in suburbs of Colombo. The marketing personnel was from the Colombo corporate head office and the rest of other Non-HR professionals were also from suburbs of Colombo.

Purposive sampling was used as the sampling technique in the study. Since the researcher employed the single case study method, the participants were the sustainability practitioners of the organization and they were selected for the purpose of collecting data.

The collection of data primarily was conducted through semi-structured interviews with HR and Non-HR practitioners of Sector B. This method helped the researcher ensure the reliability of the study while allowing the researcher to understand the reality well.

The researcher also adopted the method of observation to collect primary data. While visiting to the several plants, the method of observation helped to understand how practical the sustainable practices are within the organization. Through observations, the researcher was able to judge upon the human behavior which ensures the reliability of the data.

To collect secondary data, the researcher adopted the method of analyzing archival records. At present, most organizations which practice sustainability prepare sustainability reports. Thus, analysis of the Annual reports and other relevant sustainability reports of past two years lead to validate the data collected using primary methods.

As to collect primary data, the researcher used two separate interview guides i.e. one for HR professionals and the other one for Non-HR professionals. The interview guides embodied structured questions and also as for the situation facing at the interview, the researcher raised probing questions. The two interview guides which were used by the researcher for HR professionals and Non-HR professionals are shown in the Appendix 1 and Appendix 2 respectively.

The above description provided a brief understanding regarding the research strategy, methods and, the sample which were utilized by the researcher. So, it can be stated that by using three different methods under the qualitative approach, the fidelity of the study was enhanced herewith.

#### **4.1 Data analysis**

The collected data were analyzed using thematic analysis technique. Clarke and Braun (2013a) have identified qualitative research as a world which exists to discover many facts yet. Thus thematic analysis is a technique which is used to discovering those things in the qualitative world. Braun and Clarke (as cited in Clarke & Braun, 2013b) have identified six linear steps in thematic analysis. According to them, without completing one step, the other cannot be achieved. Those six steps are, “familiarisation with the data, coding, searching for themes, reviewing themes, defining and naming themes, and writing up” (Clarke & Braun, 2013b, p. 121).

After getting familiarized with the data collected, the priori codes were identified firstly and the emergent codes were identified as for the responses of the interviewees. Then the themes were developed for those priori and emergent codes. They have been illustrated in the following Table 1 and 2 respectively.

Table 1

*Priori codes and themes*

Codes	Themes
Sustainability aspect of HR mostly concerns on health and safety of employees	Perspective of HR towards sustainability fairly positive
HR considers sustainability as none of its responsibility	
To strategically link sustainability in the organization, sustainability has to be a part of its culture	
Embedded sustainability strategy is very much important to achieve sustainability	Importance of an embedded sustainability strategy
By having an embedded sustainability strategy, sustainability will become a part of the culture of the organization	
For an embedded strategy, top management involvement is very much important	
Ethics become the base for sustainability	Sustainability and ethics are related to each other
In organizational context, ethics have to be linked with each and every activity of the organization	

*Note:* The above table illustrates the priori codes identified by the researcher

Table 2

*Emergent codes and themes*

Codes	Themes
The significant job of HR towards sustainability is to involve with employees to make sure that they are practicing sustainability	The job of HR for a sustainable business organization is mostly on people side
HR is taking the leading role to practice sustainability	
HR has to consider sustainability in each and every HR activity from the recruitment to the retirement	
Strategically HR has to think about taking sustainability-minded people on board	
For HR to lead a sustainable culture, it has to be cascaded down by a top to bottom approach	Relationship between ethics and sustainability seems not much familiar to
Only a few people see a relationship between ethics and sustainability	
Influence of ethics on sustainable culture is not much familiar to most professionals	

If ethics are in the practice accurately, then the organization would win the competitiveness and there is no need for having a separate concept called sustainability	Non-HR professionals
All HR professionals do see a relationship between ethics and sustainability whereas some Non-HR professionals do not	
Non-HR professionals see HR as a function which exists to treat people well, stimulate people, and to do other related HR functions	The perspective of Non-HR professionals with regard to HR involvement with sustainability is also fairly positive
All other departments also have the same responsibility towards sustainability	
HR cannot handle the technical side of sustainability activities	

*Note:* The above table shows the emergent codes identified by the researcher

Within the analysis section, the researcher presents the findings in terms of each and every objective of the research.

#### ***4.1.1 How do current HRM practices address sustainability in the organization and how are they linked with strategy formulation?***

With regard to the first objective, the researcher could find that even though HR professionals have a good personal sense towards sustainability, there is no considerable knowledge of what needs to be done in terms of sustainability in organizational context. Most of the HR personnel other than the people in corporate head office, are involved with routine activities of HR and they are less concerned with long-term HR vision for sustainability. As for the discussions have had with the HR professionals, it was clear that HR is mostly into the routine activities.

“In all the three sectors there are few executive staff members. So with them I am looking at the HR functions. Mainly the recruitment, welfare, performance management, industrial relations and all the other HR areas”. (Interviewee 02 – Mr. P)

“Basically as far as I am concerned my main duty is to supply sufficient people to production and other support areas. Basically, it is manpower planning”. (Interviewee 06 – Mr. D)

“Under HR, we are doing recruitment, training, and we are preparing retention plans, also payroll”. (Interviewee 11 – Mr. N)

Other than these routine activities, when considers the strategic term, HR mostly cares about taking right-minded people into the organization, developing them and so on. Further, HR professionals do care about employee health and safety aspects, as same as the researcher found in the extant literature. HR personnel in the organization, consider about the health and safety of employees.

“Under people aspect we can monitor accidents for reducing them. And employee health and safety aspects”. (Interviewee 11 – Mr. N)

“Under people pillar we focus on employee engagement, employee safety, and better life for the community. These are the major three things we are working on people front”. (Interviewee 04 – Mr. R)

Regardless of above mentioned individual opinions, at Company X – Sector B, HR is making a considerable contribution to sustainability, mostly by leading the sustainability function. Most HR professionals and non-HR professionals agreed that HR can lead the sustainability function because employees are biased towards HR most times.

“Here means Sector B, sustainability is not coming under HR. We are giving the leadership”. (Interviewee 02 – Mr. P)

“Yeah definitely it has to take from HR. Because HR is the place where we source good people, where we train people for development, and where you can initiate things. So I think, yes, they should initiate and that initiation will definitely benefit sustainability.” (Interviewee 03 – Mr. S)

Moreover, there were some opinions like HR is not so important on sustainability front as well.

“So HR contribution to build sustainability is also depends. Most times it’s not. If the HR guy has the passion and all for sustainability factor, then he is supportive and he is driving and it is right. But it depends. If you go to other places, not Company X but other places it is highly unlikely”. (Interviewee 04 – Mr. R)

“That sustainability area should be under someone who is having kind of environmental and technical knowledge. Promoting and advertising areas can be easily done by HR. but I feel sustainability is more technical area than that”. (Interviewee 06 – Mr. D)

Thus, with the discussions the researcher has had with HR professionals, it was revealed that even though they have personal concern for sustainability, the room for them to practice it in organizational context is small. The major reason for that situation might be the other responsibilities which have been entrusted to HR professionals.

#### ***4.1.2 How HR could foster a sustainable culture based on ethics within the organization?***

At Sector B, and also in the whole organization there were sustainability practices which could be observed with the visits made by the researcher to different sites. The programs they conduct within the premises have enabled the organization to identify individual sustainability practices of employees across the board and to appreciate those employees by stimulating them to continue the same. With those programs the organization is recognizing even a small act towards sustainability which might be something beyond

employees' responsibilities and appreciate it. Thus it could be mentioned that Sector B does have a culture of sustainability as a practice of Company X itself. But these sustainability initiatives have come into play only during last three to four years.

"About 2 years ago sustainability came to my field. Because that was the time Company X was really driving for sustainability" (Interviewee 05 – Mr. H)

Hence in this kind of a prevailing situation, the activities conducted by HR such as promoting sustainability, and training people could be mentioned as initiatives to enhance the sustainability culture within the organization.

"Yes. Actually I think it was there from the day I joined here. But now it has increased more. For the last three to four years, all are very much concern on this sustainability factor and I think there is an embedded strategy now. They do trainings and all the stuff for employees. Group HR is doing those things for all the sectors here. In group HR, there is a separate person for sustainability. He is doing these trainings mainly". (Interviewee 11 – Mr. N)

And also most professionals believe that sustainability to be practiced as a part of the culture; it has to come from the top of the organization. In other words, top management involvement is very much important in implementing a sustainability driven culture in the organization.

"You cannot keep sustainability just as a day to day operation. Otherwise it should be just a data entering thing. It will not have a relationship with the organizational culture. Because if it is a strategy definitely it will come from the top, then it will come to the middle and to the worker. Otherwise it won't have the connection". (Interviewee 02 – Mr. P)

"You have to have a strong push. That's it. In organizations, mainly the Director, the MD, the Chairman pushing that, it's needed. Otherwise it will go lethargically or for the sake of going it will go". (Interviewee 04 – Mr. R)

Thus as for the collected data, it could reveal that most of the time HR cannot build a culture of sustainability alone. The sustainability culture has to be initiated at the top of the organization and HR can assist to maintain and enhance the implemented culture.

#### ***4.1.3 Why does the perspective of HR and non-HR practitioners affect sustainability in the organization?***

Throughout the process of interviews, the researcher could identify truly interesting personal perceptions about sustainability. Regardless of the various positions the interviewees are holding, most interviewees had engaged personal opinions towards sustainability.



“In the industry we are using the earth’s resources to earn money. These resources belong to all animals and all humans on the planet. If we are getting benefits from the resources which are available for all we should pay back to the environment”. (Interviewee 07 – Mr. K)

“I personally think we should be conscious about what we do. The word sustainability came quite recently. I’m very anti-plastic person to be honest. We see market also moves towards more sustainable stuffs”. (Interviewee 05 – Mr. H)

Since almost all the sites the researcher visited did have sustainability practices mainly towards environmental preservation, all professionals did have some responsibility for sustainability. In that regard, the practices of Sector B have brought much value for the organizational sustainability procedure.

“Now here earlier we had mercury bulbs. They use higher energy. But now in building number 1 to 4 we have replaced them with LED bulbs”. (Interviewee 12 – Mr. U)

“Mainly with the sustainability factor, we are monitoring the monthly electricity consumption. And fuel consumption, water consumption, and waste management. And we have a target in reducing cost by 10%-12%”. (Interviewee 09 – Mr. L)

Thus, the perspective of HR and non-HR professionals at Sector B towards sustainability is positive and it helps the organization achieve sustainability.

#### ***4.1.4 Prevailing sustainable culture at Company X – Sector B***

With the several site visits the researcher made, it could be observed that as a responsible conglomerate in Sri Lanka, Company X is practising sustainability in a considerable manner. They do have an embedded sustainability strategy within the organization which drives them for it.

“We are trying to become the best sustainable conglomerate in Sri Lanka by next 5, 4 years’ time, it is like the mission of ours”. (Interviewee 04 – Mr. R)

“Last year we came up to 12% reducing carbon emission. So our target, the target of board of directors is to make Company X a carbon neutral company. By being a carbon neutral company doesn’t mean that we are not emitting CO<sub>2</sub>. Say for an example, if you are emitting 100 units, we need to produce at least 100 or more oxygen. That’s how it works”. (Interviewee 05 – Mr. H)

Thus at Company X, there is a prevailing culture of sustainability and also it could be said that there are people on board with sustainability-minded. That factor itself had become major influencing factor at Company X to be this much successful in sustainability front.

“My idea is I think there is no requirement for a separate department, but all the people in organization, they have a responsibility towards sustainability”. (Interviewee 01 – Ms. N)

Hence with the conducted interviews, the researcher identified that Company X as the mother organization of Sector B, drives all the sectors for sustainability including that of Sector B with considerable amount of sustainability practices, in to an appreciable level thus far.

## 5. Conclusion

With this study conducted at Company X – Sector B, the researcher gathered knowledge on HR involvement with sustainability. HR professionals interviewed by the researcher expressed fairly a positive attitude towards sustainability. The most striking phenomenon noticed is that one at the head office is really having a concern on long-term vision of sustainability whereas the other two do not show that much sense even though they answered diligently questions during the interview. In reality, HR at Sector B conducts training sessions, and most non-HR professionals also agreed that HR gives priority to train people and conduct awareness programs within premises to build sustainability. Thus, what HR is doing strategically to achieve sustainability is taking right-minded people on board who could eventually become a part of the sustainable culture in the organization.

Furthermore, regarding the ethical aspect studied, it was found that three professionals did not agree with seeing a relationship between ethics and sustainability. All three professionals were non-HR professionals. All other HR and non-HR professionals agree with seeing a link between ethics and sustainability. Moreover, some professionals said that by becoming ethical in the market it would ensure the trustworthiness in the mind customers and then it will lead to sustainability of the business for a longer period of time. They further emphasized it by taking the history of Company X which has been in existence for more than 135 plus years amidst huge competition in the market. Quintessentially, though the company is doing ethically in business context, most professionals were less familiar with the notion ethics in the business context.

With the final objectives of this study, the researcher identified that individual perceptions of both HR and non-HR professionals affect organizational sustainability. Almost all production plants visited by the researcher had at least waste management practice or all practices such as managing waste, water efficiency, and energy. Some professionals were used to turning off lights and air conditioners when they were walking out of their office rooms whereas some were not. As the organization, Sector B will be able to achieve the cost reduction targets if practices of this kind are reinforced positively within premises. Thus it could be said that the individual perspective of all the professionals and employees are affecting the achievement of organizational sustainability goal.

As a concluding note, it could be said that Sector B does have good sustainability practices and right people on board. And also, HR contributes considerably for this worthy cause, *albeit* it is not sufficient in the wake of current and potential expansion of operations of the organization.

### **6. Practical implications**

In order to enhance the situation, the researcher prefers to make the following recommendations to the management of Company X – Sector B, for relevant policy formulation.

Firstly, initiations to include sustainability aspects in the performance of HR professionals as a Key Performance Indicator (herein after referred as KPI) will be beneficial for the company.

Also, designing attention grabbing and advisable notice boards to be displayed within premises to stimulate employees and keep in their mind about the importance of sustainability every now and then will be helpful to enhance the dedication towards sustainability.

Finally, paying attention to have a permanent cadre than manpower employees, where permanent cadre will have a higher bondage with the company will be a long-term strategy for the company in becoming sustainable business organization.

### **7. Directions for future research**

With the understanding the researcher received from this study, a few more areas for future studies with regard to sustainability could be suggested.

When discussing with the interviewees, the researcher clearly noticed that the personal opinion about sustainability varies from individual to individual. The researcher decided that the reason is mostly due to the differences in personality of such individuals. Thus it was suggested to conduct a future research on personality type of individuals and perspective of sustainability.

Moreover, it is suggested to replicate the same study by utilizing multiple case study method as the research strategy to get a comparable and comprehensive understanding.

With the discussion had with the Interviewee 05, Mr. H, who is the Assistant Manager – Marketing, the researcher identified that customer demands also have a major impact for organizations to practice sustainability. Thus conducting a future research on customer demands and sustainability also will be beneficial to enhance the much knowledge on sustainability.

## References

- Abeydeera, S., Kearins, K., & Tregidga, H. (2016). Does Buddhism enable a different sustainability ethic at work? *The Journal of Corporate Citizenship Issue*, 2016 (62), 109-130. doi:10.9774/GLEAF.4700.2016.ju.000013
- Bansal, P., & Roth, K. (2000). Why companies go green: A model of ecological responsiveness. *Academy of Management Journal*, 43(4), 717-736. doi:10.2307/1556363
- Bonn, I., & Fisher, J. (2011). Sustainability: The missing ingredient in strategy. *Journal of Business Strategy*, 32(1), 5-14. doi:10.1108/02756661111100274
- Clarke, V., & Braun, V. (2013a). Successful qualitative research: A practical guide for beginners. London: Sage
- Clarke, V., & Braun, V. (2013b) Teaching thematic analysis: Over- coming challenges and developing strategies for effective learning. *The Psychologist*, 26 (2), 120-123. Retrieved from <http://eprints.uwe.ac.uk/21155>
- Dahlsrud, A. (2008). How corporate social responsibility is defined: An analysis of 37 definitions. *Corporate Social Responsibility and Environmental Management*, 15(1), 1-13. doi:10.1002/csr.132
- Daily, B. F., & Huang, S. (2001). Achieving sustainability through attention to human resource factors in environmental management. *International Journal of Operations & Production Management*, 21(12), 1539-1552. doi:10.1108/01443570110410892
- Ehnert, I., & Harry, W. (2012). Recent developments and future prospects on sustainable human resource management: Introduction to the special issue. *Management Revue*, 23(3), 221-238. doi:10.1688/1861-990
- Ehnert, I., Parsa, S., Roper, I., Wagner, M., & Muller-Camen, M. (2016). Reporting on sustainability and HRM: A comparative study of sustainability reporting practices by the world's largest companies. *The International Journal of Human Resource Management*, 27(1), 88-108. doi:10.1080/09585192.2015.1024157
- Eisenhardt, K. M. (1989). Building theories from case study research. *The Academy of Management Review*, 14(4), 532-550.
- Fernando, R. A. (2015). *Strategic corporate sustainability: 7 imperatives for sustainable business*. Singapore: Patridge Publications.
- Fernando, S., Lawrence, S., Kelly, M., & Arunachalam, M. (2015). CSR practices in Sri Lanka: An exploratory analysis. *Social Responsibility Journal*, 11(4), 868-892. doi:10.1108/srj-08-2013-0101
- Gallego-Álvarez, I., Prado-Lorenzo, J., Rodríguez-Domínguez, L., & García-Sánchez, I. (2010). Are social and environmental practices a marketing tool? *Management Decision*, 48(10), 1440-1455. doi:10.1108/00251741011090261
- Gill, D. L., Dickinson, S. J., & Scharl, A. (2008). Communicating sustainability: A web content analysis of North American, Asian and European firms. *Journal of Communication Management*, 12(3), 243-262. doi:10.1108/13632540810899425

- Guerci, M., & Pedrini, M. (2013). The consensus between Italian HR and sustainability managers on HR management for sustainability driven change towards a 'strong HR management system. *The International Journal of Human Resource Management*, 25(13), 1787-1814. doi:10.1080/09585192.2013.860388
- Weerakoon, D. (2016, December 9). D. Wijetunga. Industry Dialogue 2016: The 11<sup>th</sup> International Research Conference on Management and Finance 2016. Hahn, T., Figge, F., Pinkse, J., & Preuss, L. (2010). Trade-offs in corporate sustainability: You can't have your cake and eat it. *Business Strategy and the Environment*, 19(4), 217-229. doi:10.1002/bse.674
- Hart, S. L., & Milstein, M. B. (2003). Creating sustainable value. *Academy of Management Executive*, 17(2), 56-69. doi:10.5465/AME.2003.10025194
- Harris, C., & Tregidga, H. (2012). HR managers and environmental sustainability: Strategic leaders or passive observers? *The International Journal of Human Resource Management*, 23(2), 236-254. doi:10.1080/09585192.2011.561221
- Jabbour, C. J., & Santos, F. C. (2008). The central role of human resource management in the search for sustainable organizations. *The International Journal of Human Resource Management*, 19(12), 2133-2154. doi:10.1080/09585190802479389
- James, C. D., & Schmitz, C. L. (2011). Transforming sustainability education: Ethics, leadership, community engagement, and social entrepreneurship. *International Journal of Business and Social Science*, 2(5), 1-7.
- Jayakumar, T. (2016). From philanthropy to strategic corporate sustainability: A case study in India. *Journal of Business Strategy*, 37(6), 39-50. doi:10.1108/jbs-10-2015-0110
- Kaptein, M., & Wempe, J. (2001). Sustainability management: Balancing conflicting economic, environmental and social corporate responsibilities. *Journal of Corporate Citizenship*, 1(2), 91-106.
- Kramar, R. (2014). Beyond strategic human resource management: Is sustainable human resource management the next approach? *The International Journal of Human Resource Management*, 25(8), 1069-1089. doi:10.1080/09585192.2013.816863
- Lange, D. E., Busch, T., & Delgado-Ceballos, J. (2012). Sustaining sustainability in organizations. *Journal of Business Ethics*, 110(2), 151-156. doi:10.1007/s10551-012-1425-0
- Lemmergaard, J. (2009). From administrative expert to strategic partner. *Employee Relations*, 31(2), 182-196. doi:10.1108/01425450910925328
- Mariappanadar, S. (2012). Harm of efficiency oriented HRM practices on stakeholders: An ethical issue for sustainability. *Society and Business Review*, 7(2), 168-184. doi:10.1108/17465681211237628
- Milne, M. J., Kearins, K., & Walton, S. (2006). Creating adventures in wonderland: The journey metaphor and environmental sustainability. *Organization*, 13(6), 801-839. doi:10.1177/1350508406068506
- Opatha, H. H. D. N. P. (2016). Towards a sustainable future: Reflections. *Sri Lankan Journal of Human Resource Management*, 6(1), 1-12.

- Pfeffer, J. (2010). Building sustainable organizations: The human factor. *Academy of Management Perspectives*, 24(1), 34-45. doi:10.5465/amp.2010.50304415
- Rimanoczy, I., & Pearson, T. (2010). Role of HR in the new world of sustainability. *Industrial and Commercial Training*, 42(1), 11-17. doi:10.1108/00197851011013661
- Shrivastava, P. (1995). Ecocentric management for a risk society. *The Academy of Management Review*, 20(1), 118-137. doi:10.2307/258889
- Stankeviciute, Z., & Savaneviciene, A. (2013). Sustainability as a concept for human resource management. *Economics and Management*, 18(4), 837-846. doi:10.5755/j01.em.18.4.5631
- Stone, D. L., & Deadrick, D. L. (2015). Challenges and opportunities affecting the future of human resource management. *Human Resource Management Review*, 25(2), 139-145. doi:10.1016/j.hrmr.2015.01.003
- Stoughton, A. M., & Ludema, J. (2012). The driving forces of sustainability. *Journal of Organizational Change Management*, 25(4), 501-517. doi: 10.1108/09534811211239191
- Tyson, S. (1997). Human resource strategy: a process for managing the contribution of HRM to organizational performance. *The International Journal of Human Resource Management*, 8(3), 277-290, doi:10.1080/095851997341649
- Ulrich, D., Younger, J., & Brockbank, W. (2008). The twenty first century HR organization. *Human Resource Management*, 47(4), 829-850. doi: 10.1002/hrm.20247
- Ulrich, D., Younger, J., Brockbank, W., & Ulrich, M. (2012). HR talent and the new HR competencies. *Strategic HR Review*, 11(4), 217-222. doi:10.1108/14754391211234940
- Vanclay, F. (2004). Impact assessment and the triple bottom line: Competing pathways to sustainability? *Sustainability and Social Science: Round Table Proceedings*, 27-39.
- Vollebergh, H. R., & Kemfert, C. (2005). The role of technological change for a sustainable development. *Ecological Economics*, 54(2), 133-147. doi:10.1016/j.ecolecon.2004.12.025
- Voinov, A., & Farley, J. (2007). Reconciling sustainability, systems theory and discounting. *Ecological Economics*, 63(1), 104-113. doi:10.1016/j.ecolecon.2006.10.005
- Wilkinson, A., Hill, M., & Gollan, P. (2001). The sustainability debate. *International Journal of Operations and Production Management*, 12(12), 1492-1502. doi:10.1108/01443570110410865

## Appendices

### Appendix 1: Interview guide for HR professionals

This interview would take one hour, at most, and will be based on this interview guide and subsequent probing questions.

- 1) May I please know some information about your job role and also personal background.
- 2) What are the duties which have been assigned to you under your current position in the company?
- 3) So, may I know whether your company has a strategy and you provide any inputs to formulate this strategy.
- 4) There is a trend in companies to practice sustainability. How do you perceive the concept of sustainability?
- 5) What is your opinion about whether sustainability should be linked clearly with the business strategy of the company?
- 6) Do you think that Company X has a strategy for sustainability which is embedded into its business strategy?
- 7) Some companies have a separate section for sustainability. Do you think that sustainability should come under the purview of HR department?
- 8) In your perspective, what it meant by ethics?
- 9) What do you think about ethics and sustainability? Are those two separate concepts or are they linked with each other?
- 10) How do you see that ethics taking the priority within the organization in achieving sustainability?
- 11) HR is a function which pays much attention to the culture of the organization. In that sense, how HR could contribute to building a sustainable culture in the organization?

Thank you for cooperation.

## **Appendix 2: Interview guide for non-HR professionals**

This interview would take one hour, at most, and will be based on this interview guide and subsequent probing questions.

- 1) May I please know some information about your job role and personal background.
- 2) What are the duties which have been assigned to you under your current position in the company?
- 3) So, may I know whether your company is has a strategy and you provide any inputs to formulate this strategy.
- 4) There is a trend in companies to practice sustainability. How do you perceive the concept of sustainability?
- 5) What is your opinion about whether sustainability should be linked clearly with the business strategy of the company?
- 6) Some companies do have a separate section for sustainability. Do you think that sustainability also needs to have a separate department which consists of people who are committed to build sustainability? If so, then what will be the positive impact of having such kind of a separate section?

- 7) How do you see HR in the organization? Is HR a significant function in building sustainability?
- 8) In your perspective, what it meant by ethics?
- 9) What do you think about ethics and sustainability? Are those two separate concepts or are they linked with each other?
- 10) How do you see that HR function in the organization taking the priority of ensuring ethicality within the organization in order to achieve sustainability?

Thank you for cooperation.



## **Towards A Sustainable HRM Model for Human Productivity in Tea Industry: An Empirical Study of Tea Plantation Sector In Sri Lanka**

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### **Abstract**

The need for an innovative, ethical and sustainable Human Resource Management (HRM) model is a vital and a strategic requirement for tea industry in Sri Lanka in order to gain a competitive advantage while facing global and local challenges in a rapidly changing business environment. The unique requirement of this industry is to enhance the employee productivity. However mere application of traditional HRM activities and functions will not be adequate. In this context the aim of this paper is to propose a unique, innovative and sustainable HRM model that would enhance human productivity. The study also proposes scales of knowledge management practices, and human care practices to be validated in future research. The study is specifically focusing on the tea industry since tea is the major contributor for overall performance of the plantation industry, in terms of national output, plantation workforce (employment status), productivity indicators and net foreign earnings. To achieve the aim of the study, un-structured interviews were conducted with 15 senior level managers of well performing tea estates in the plantation industry of Sri Lanka. The responses from managers were coded and lists of human care practices and knowledge management practices were identified. A HRM model of human productivity was proposed based on the premises of psychological contract, organizational support and social exchange theories. The study revealed the importance of knowledge management practices and identified best human care practices as sustainable HR practices, which provide a strong foundation for consistent enhancement of worker productivity in tea industry. The study further expresses the impact of these sustainable HR practices, towards quality of work-life and quality of life of the employees as direct impact and the relationship with the worker productivity. Therefore, the final impact on the worker productivity is not only aiming at short term benefits for the industry, but also long term benefits for the workers as well as for the industry. The model concentrates more on treating plantation employees as a 'social-human unit' within the industry and how best human care practices and knowledge management practices will provide a solid foundation for sustainable Human Resource Management practices as a whole.

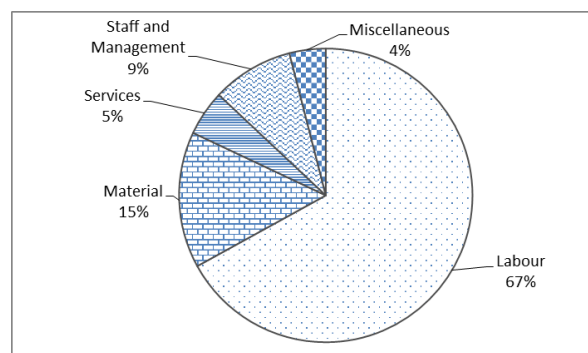
**Keywords:** Sustainable HRM model, Human productivity, Plantation industry, Sri Lanka

## 1. Introduction

Human Resource Management (HRM) is a management function in organizations designed to maximize organizational performance via enhancing productivity of its employees. The HRM field evolved since the 18th century in Europe from a simple idea by Robert Owen and Charles Babbage during the industrial revolution who believed that people were crucial to the success of an organization (Garbutt, 1979).

The plantation industry is economically, politically and socially a very strategic and an important sector in our country's socio-economic and ethno cultural milieu since for over 150 years from its inception, plantation agriculture has played a prominent role in the economy of Sri Lanka by being the backbone and a permanent component. The role of tea within the plantation industry is significant, being the key contributor for overall plantation industry performances and a global brand image well over other plantation crops such as rubber and coconut. Despite the fact that there has been a rapid growth of the non-agricultural sector and lack of dynamism in the tea industry, the tea industry still remains as a vital sector of the Sri Lankan economy in terms of the national output, employment and net foreign earnings (Wijayasiri, Arunatilake & Kelegama, 2018). It is the most labour intensive national industry employing 10% of the national labour force of 8 Million and direct employment to 700,000 people (Central Bank of Sri Lanka, 2016).

Kelegama (2010) stressed that one of the key issues confronting the tea industry is its decline in productivity, which remains lowest amongst tea producing countries such as Kenya and India. He further stated that, among several causal factors for the low productivity and production in the industry, high wages and high cost of production plays a significant contribution. As shown in Figure 1, the cost of labour alone accounts for 65 -70% of the total Cost of Production (COP) per kilogram of made tea. The productivity of labour, particularly the harvesters, has a very high correlation to the total productivity and profitability of tea plantations. Tea harvesting continues to be very highly labour intensive regardless of the size of the operation and any diminution of productivity by harvesters exacerbates the tenuous relationship of the industry's sensitivity to profits (Sivaram, 2000).



*Figure 1. Components of the production cost of manufacturing 1 Kilo of Tea (Percentage – wise). Adapted from Sri Lanka Tea Board Statistical Bulletin (2010).*

Harvesting is the main operation which supply the raw material to the supply chain and it is also the principle contributor for field productivity. Individual harvester output has a significant impact on the field productivity in plantations as harvesting is done manually and is a highly labour intensive field operation. Field productivity has a direct relationship to the cost of production which in turn impacts on profits and the sustainability of the industry which ultimately impacts on the livelihood of all those who are dependent on the tea industry.

Apart from the tea crop and related challenges facing today, work force related factors have also made an impact on the present crisis situation facing the tea industry. In this context, shortage of skilled workers for plantations along with the increase in the resident “non-workers” within the estate population and the depletion of the quality of work life of the estate workers also have contributed to the low productivity levels experiencing in the tea estates of Sri Lanka. This present critical issues around the tea estates have been caused by the combination of the gaps in management systems, policy practice and civic rights of the work force. Kurihara (2007, p. 128) further explains that “it is apparent that the conventional plantation management system is not equipped for serving the estate residents for basic social services, which was not required at its establishment in the 19<sup>th</sup> century. The plantation system’s holistic control over the estate resident’s life does not respond to the resident’s needs that have become more serious than ever. These needs were not pre-set in the system”.

As discussed earlier, it is well accepted that the tea plantation industry has been the most labour intensive industry in the country and therefore, reducing the cost of labour will increase profit margins which will enable organizations to invest more on the welfare of their employees. On the other hand, Sri Lanka poverty level in plantation sector exceeds the national average, with 30 % living below the poverty line (Yogaratnam, 2010). The actual situation in most of the cases in tea plantation work life is that the working conditions of plantation workers are often poor, with low wages, low job opportunities, lack of security on income, discrimination based on ethnic and gender lines, lack of protective measures with inadequate basic facilities such as drinking water, food, sanitary facilities and housing. Yogaratnam (2010) explains that, there is no possibility for tea plantation workers to improve working conditions which has been linked with the ineffective trade unions in which, they are not really representing the ordinary work force due to uncontrollable political pressure.

In respect of human productivity in the tea plantation industry, shortage of skillful workforce as well as the impact on high turnover has a great impact. Bawa and Jantan (2005) identified that there is a significant negative relationship between HR practices and voluntary turnover in plantation industry. They further elaborated on the propensity of employees to quit their jobs when working conditions are not conducive. Sri Lanka’s overall

rate of productivity growth is low, lower even in relation to the standards reached in poorer countries in Asia. According to the global competitiveness report for 2000- 2001, Sri Lanka ranked 57<sup>th</sup> out of a sample of 75 countries in terms of firm level micro economic competitiveness. Almost 80% of Sri Lankan employment is concentrated in sectors with either low productivity levels or low productivity growth, specifically in agriculture, which employs 36% of the formal private sector, productivity growth is about 2.1% per year (ILO, 2000). Barr and Serneels (2008) provided empirical evidence that firm productivity is related to worker's pro-social behavior in the workplace. At the firm level, we find a strong positive relationship between firm productivity and reciprocating behavior among workers. In order to enhance the worker productivity and social sustainability, role of tea plantation's human resource segment, capturing and sharing the specific knowledge within every human element is becoming an emerging a—research area for sustainable development of the industry.

In this context, Kodithuwakku and Priyanath (2007) revealed that the financial benefits i.e. salary, allowances, salary increments, overtime and loan facilities, non-financial facilities, welfare facilities like housing, education, health, daycare centers, transport, electricity etc. provided by the management company for laborers are highly effective in improving the labor productivity through the increase of labor satisfaction. Labor satisfaction stemming from financial and non-financial benefits are relatively very high. On the other hand, strict management and application of new technology for the tea estates affect the improvement of labor productivity. Finally, it can be concluded that the labor productivity in tea plantation sector has improved after privatization due to the improvement of labor satisfaction, strict management and application of new techniques in the private companies. Further, Sivaram (2000) explained that, a combination of better skills, improved knowledge, positive attitudes and human care support will go a long way to upgrade an average productivity worker in to a top performer.

Therefore, the need of a sustainable HRM model covering conceptual HRM concepts as well as total human care with best knowledge management practices, is a vital requirement of overall productivity enhancement in tea industry keeping the eye on long-run. The model should strategically link with key performance indicators of the core business and also enhance the quality of life and quality of work-life of entire plantation community including the most valuable work-force in tea plantations.

To gain competitive advantage over the rising competition in tea plantation industry, increasing the performance levels of human productivity indicators have become a vital need. The most strategic way forward to fulfill this requirement is to understand and value the knowledge levels of the work-force and creating cultural changes to the existing human resource framework. This in return will enhance their present status of work lives as well as personal lives, by practicing human care best practices and allowing them to exchange their

expertise areas for sustainable productivity enhancement in the industry which is the most lacking component at the moment. Based on these research deficiencies in the plantation sector, the overarching research problem of this study is whether human care practices and knowledge management practices lead to quality of work life and quality of life of plantation employees and in turn whether employee productivity will be enhanced. Therefore, this study attempts to understand the role of quality of work life and quality of life on the relationship between sustainable HR practices and employee productivity; to develop scales for knowledge management and human care practices; and to propose a new model of human productivity applicable to the plantation industry.

## 2. Literature Review

Plantation sector in Sri Lanka began way back in early 1880s' with planting perennial crops such as coffee. Replacing coffee with tea was taken over because of coffee was affected with 'coffee rust disease'. The commercial planting of tea in Sri Lanka was introduced to Sri Lanka by a Scotsman, James Taylor in 1867, on 19 acres of land at Loolecondara Estate, Hewaheta. This carried out with the idea of testing tea as a possible alternative crop for coffee, which was facing a leaf rust epidemic and was destroying the coffee plantations in the country (Sivapalan, Kulasegaram & Kathiravetpillai, 1986). Wal (2008) has presented that tea produced in the country is popular as "Ceylon tea" ranks among the best available teas in the international trade. Sri Lankan tea industry which is 150 years old, accounts as the world's third largest black Tea producer, covers 17% of world's Tea export market, produces the world's best quality Tea and earns 2<sup>nd</sup> largest net foreign exchange income for Sri Lanka which is recorded as US\$ 1.5 Billion in 2014 (Central bank of Sri Lanka, 2014).

The area planted under tea increased dramatically until the early 1950s and thus tea emerged as the most important export crop compared with the other two major agricultural export crops that spurred Sri Lanka's economic growth during the last century. For more than century, Sri Lanka's tea industry has been the backbone of the island's economy contributing 40% of export revenue, 30 % to the agricultural labor force and also to the Gross Domestic Production (GDP). During the mentioned period the country's development activities and the socio-economic progress have been closely linked with the tea industry (Kodithuwakku and Priyanath, 2007). However, the dominance of the tea sector in the economy has been declining since late 1960s. The position Sri Lanka held in the world tea economy underwent significant changes between mid-1960s and early 1990s, with the country's share of the world market declining from 20% to 9.5% in 1993 (Bandara, 1996). The contribution to GDP from this sector, which accounted for around 16.5% in the early 1970s, had fallen to 13.5% in late 1970s and to 5.6% in 1985. This further decreased in late 1980 and in 1993 it was 2.1% of the GNP (Bandara, 1996). The tea Plantation sector is an important sector which, providing sustainable employment and supporting the livelihood of over ten percent of the population of Sri Lanka. The Tea industry therefore is the most labour intensive industry in the agricultural sector (Central Bank Sri Lanka, 2014). To develop

a “plantation family” as a “social unit” within the plantation community to enhance the productivity indicators, care for their basic human needs played a significant role and will continue to help to build up a strategic relationship between management and employees as major partners in this community. This is emphasized by the studies of Chadwick -Jones (1981) and further illustrated by Roloff (1987) that when individuals receive a benefit, they may experience a state of discomfort due to a sense of indebtedness and thus, force them to reciprocate the benefit in order to restore the equilibrium of the interpersonal relationship.

In respect of tea plantations, there are major productivity indicators which frequently using for measuring performances in the industry such as worker output per day (intake per harvester) and total quantity harvested per unit land area which refers to yield per hectare. The explanation was supported with the findings of Sivaram (2000) that in tea plantations, harvester productivity is the quantity of green leaf harvested per day by each individual harvester. Increasing harvester productivity is considered as increasing the quantity of green leaf harvested per day. This fact was further elaborated, as productivity is concerned with the process of achieving the ultimate goals of the organization in terms of the processing input to reflect the expected outcome of the system (Armstrong, 2010).

Increasing the workforce commitment is crucial to sustainable productivity improvement patterns specifically in tea plantations being a highly worker intensive industry. This fact was highlighted in the studies of Rusbult (1988) that people stayed in dissatisfying relationships because of their level of investment or a lack of alternatives. This was further emphasized by Redmond (2015) that, more investment, rewards and lack of alternatives increased a person’s commitment to the relationship. According to Rajadurai (2015) demographic factors, Personal Life Style factors and Socio Economic factors had an effect on individual productivity more than Management and Agronomic factors. Sivaram (2000) highlighted the impact of socio economic and health factors on the performance of women Tea workers in South India. In order to increase the present levels of worker productivity indicators frequently used in tea plantations, extent of using best human resource functions inculcating worker sensitive human care practices will also have a significant impact. This was supported with findings of Koukoli, S., Vlachonikolis, I.G. & Philalithis, A. (2002) that socio demographic factors are important as physical health variables affecting a person’s ability to function normally in their everyday life. Socio demographic variables included; gender, age, level of education, employment status, profession, marital status, total number of persons living in the house and living arrangements. They further indicated that nutritional status affects worker outcomes, particularly productivity indicators. The findings were well supported by studies of Kurian (2010) who stated that physical quality of life focuses on people’s welfare, their living and working conditions, their attitudes towards work and recreation. The factors that are taken into account for physical quality of life of

women workers in tea plantations are consumption patterns, health standards, educational status, working conditions, living conditions and socio cultural activities.

### **3. Methodology**

The method of data collection used in this study was face-to-face interviews, coupled with interviews over telephone based on a simple and un-structured questionnaire in order to identify and group the best human care practices, and also to identify and cluster the most appropriate Knowledge Management practices. The sample included 15 Senior Managers who are presently working in well-established tea plantations/ estates and selection was done through simple random sampling. The questions facilitated obtaining the consent of selected Senior Plantation Managers on the proposed model, mainly focusing on their knowledge on impact of quality of work-life and quality of life on the relationship between human care practices together with knowledge management practices towards worker productivity. This process was purely based on their experience in the tea industry. The reliability of the information was assured by replicating the questions in the questionnaire for same information using various patterns and such information was supported with the findings from multiple sources, publications, industry related research papers and participatory observations. Average duration taken per interview was 30 minutes and additional 15 minutes per participant was given to elaborate their open views on the model proposed and further clarifications.

The questionnaire was divided in to two main sections, part one for general information about the participants such as their experience, age and designation. The questions in part two were tabulated as open ended questions within the pre-determined structure for clustering Human Care practices and Knowledge Management practices which are comparatively important to enhance the quality of work-life and quality of life of the workforce in tea plantations and finally impacted on the worker productivity. The randomly selected plantation managers in the cadres of senior levels were given an opportunity to prioritize according to the relative importance of human care and knowledge management practices based on their work experience. Please refer appendix A for the detailed questionnaire.

The human care practices were clustered during the questionnaire development stage based on the pre-determined categories by considering the appropriate practical applications in the industry. Also, the knowledge management practices were grouped according to the steps involved in process of Knowledge Management cycle. The basis of identifying the selected human care and knowledge management practices were further supported by the findings from previous research articles and publications.

In addition to the human care practices and knowledge management practices, an open ended question was raised from the participants (What is your view on proposed model of

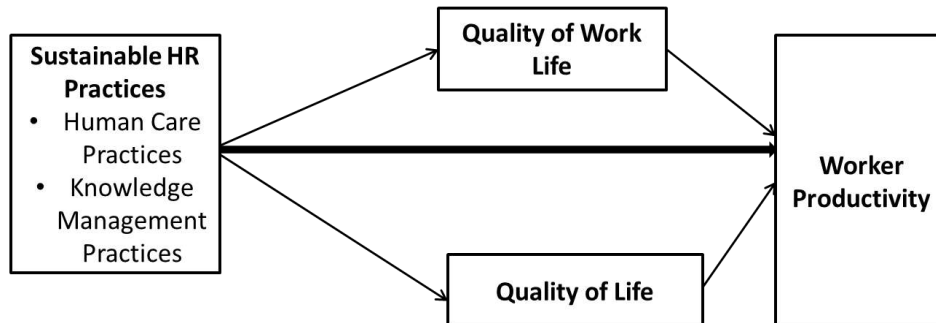
HRM in plantation industry towards uplifting the productivity parameters?) to enquire the participants views on the proposed model.

### ***3.1 Theoretical framework***

The productivity level of the worker has direct correlation with sustainable HR practices with a long-term focus, which is greatly impacted by human care best practices and knowledge management practices. The smoothness of the worker productivity enhancing process in tea plantation industry has direct relationship with the level and degree of the facilities provided to the entire plantation community, development of transparent and structured action plan, dynamic monitoring tools and feedback system as well as prompt corrective actions. The facilities can be categorized in identified different pillars, but they should purely reflect the match between basic human needs and the requirement of internal and external environmental forces. This includes the living, sanitation, health and nutrition, employee empowerment, capacity enhancement, and community education, which will boost their living standards and level of motivation. The strength of the process of enhancing worker productivity levels in tea plantations is the key foundation for the proposed human resource management model to be a sustainable one. This further related to the know-how of their own job performing areas or knowledge related to the job specifications in plantation communities, and the level of sharing this knowledge for the betterment of the industry's futuristic perspective. Aiming towards long-term sustainability of the industry, in parallel with the local and global challenges industry is facing, "knowledge" plays a vital role to be a "positive outlier" and to gain the competitive advantage in the rising productivity competition and the strength also expressed in terms of exchanging their knowledge to the industry development. The ultimate objective should be sustainable development of the tea plantation industry through a sound and competent human resource base. The proposed theoretical model is expected to make a unique contribution by incorporating human care practices and knowledge management practices as well as acknowledging the vital role of quality of life and quality of work life in enhancing employee productivity. The proposed model is based on the premise of Psychological Contract and Social Exchange Theories. The psychological contract, introduced by Argyris (1960) suggests that the employment relationship goes beyond the formal economic employment contract. The psychological contract is defined by Rousseau (1989, p.390) as "an individual's beliefs regarding reciprocal obligations set in the context of the employer/employee relationship." The psychological contract emerges when the employee believes that "a promise has been made and a consideration offered in exchange for it, binding the parties to some set of reciprocal obligations" (Rousseau 1989, p. 123). As explained by Blau (1964), social exchanges involve unspecified obligations: when one person does another a favour, there is an expectation of some future return. Employees tend to take a long-term approach to social exchange relationships at work, with the pattern of reciprocity over time determining the perceived balance in exchanges (Blau, 1964; Rousseau 1989). By applying these two theories it's



expected that the quality of work life and quality of life of tea plantation employees are enhanced through human care and knowledge management practices. Consequently, they develop a sense of an obligation to reciprocate by increasing their productivity.



*Figure 2. Theoretical framework*

Source: Authors (2018)

#### 4. Data analysis

The best human care and knowledge management practices identified through the interviews were grouped according to the pre-determined structure of identified best practices categories considering the researcher's experience in the plantation industry. The following best practices were identified under main criteria of human care practices and knowledge management practices.

Analyzing the facts and observations summarized from the interviews of experienced senior level plantation managers, they stressed that, identified best human care practices and knowledge management practices are directly influencing the enhancing worker productivity levels of Plantation industry in Sri Lanka, giving special emphasis to the tea industry. They further elaborated that in a practical sense, they have observed, a motivated work-force through enhanced level of quality of work-life and quality of life have resulted more out-put and improved the levels of productivity parameters such as intake per worker per day, worker out-turn and quality of raw material harvested. Furthermore, the selected plantation managers stated that, increasing the level of implementation of best human care practices and knowledge management practices they have identified, have a direct impact on the level of quality of work-life and quality of life.

Therefore, the HRM model proposed for tea plantation industry, explained the direct relationship of identified best human care practices and knowledge management practices as sustainable HR practices in improving worker productivity. This model further expressed the indirect relationship between the independent variables, i.e. human care and knowledge management practices as sustainable HR practices with dependent variable, i.e. worker productivity, through the mediators such as quality of work-life and quality of life.

**Best human care practices (views from plantation management perspective)****1. Living environment**

- Providing individual housing facilities with independent living environment
- Upgraded sanitary facilities with quality drinking water
- Providing facilities of crèches/ child care centers, etc (education facilities to their kids)
- Providing electricity facilities which will help them on their day-to-day work and children education
- Providing proper access roads to their residences.

**2. Health and nutrition**

- Medical care facilities from pregnancy to child birth (caring for mother and children)
- Proper medical facilities for best weight at birth (reduce infant mortality and mother mortality rate )
- Providing vaccination programmes for employees as well as children
- Programmes to eliminate anemia/ iron deficiency (required to maintain a healthy workforce with increased productivity)
- Providing all the medical facilities in house with qualified medical staff within the estates.
- Regular awareness sessions on birth control, family planning.
- Providing training on other health connected issues such as alcoholism, HIV/ AIDS, etc, which will increase the absenteeism rates

**3. Safety and Protection**

- Implementation of occupational safety and protection policies in strategic level.
- Assurance from the company on coverage of safety policy in all the levels of employees
- Providing all the necessary safety equipment to relevant work areas.
- Necessary awareness and training on updating use of new safety and protective equipment.
- Implementation of occupational safety standards.

**4. Employee Capacity Building**

- Providing micro financing facilities for small scale businesses through estate corporative societies.
- Training and awareness of savings, planning household budgeting and cash handling.
- Motivating to initiate their own family businesses and to cultivate their own home gardens to enhance their self-satisfaction

**5. Education and development**

- Providing necessary facilities and support for children of employees to complete their education in order to increase their social status as a family unit.
- Providing employment opportunities for the children of work-force based on their educational qualifications.
- Altering the boundaries of conventional succession plans in order for educated and talented youth within the plantation community to enter in to the managerial positions.

**6. Youth Empowerment**

- Training and guiding youth in plantations for their skill development and vocational training.
- Providing facilities and guidance for higher education- upgrading them as family unit.
- Providing facilities to upgrade their skills on other languages and on information technology.

(Source: Interview Data)

**Best knowledge management practices (views from plantation management perspective)****1. Collection and Capturing**

- Transparent communication tools irrespective of the language
- Mixing new technology and IT for capturing data and transform to meaningful information bases for speedy decision making.

**2. Classify, Organize and Storing**

- Adequately use of new technology on multiple sources.
- Implementing methods of sharing the best practices and advanced knowledge throughout the entire human resource segment for long-run.

**3. Sharing**

- Introducing methods of self-development through continuous learning culture.
- Introducing techniques of peer training methods, on the job training (OJT) through internal experts.
- Using IT to speedy sharing systems of knowledge acquired such as intra-net walls.
- Introducing 'Trainer's Trading Point'- A discussion database of needy training topics.
- Implementing knowledge competencies in an on-line system
- Introducing 'learning by example'- Initiated from estate level senior leadership

- Defining the competencies related to each positions of hierarchy in the plantation industry.

#### **4. Access and Use**

- Introducing 'dash board systems' for frequent reviews and monitoring
- System to be introduced to record systematically, the 'specialized knowledge' gained over the years by experience and system to introduce to inculcate this knowledge in to management decision making process wherever possible and applicable.

#### **5. Value Creation**

- Develop annual training calendar base on the needs and to match with organizations goals and objectives.
- Exchange the internal trainers from estate to estate.
- Offering more training opportunities on business innovations and development

#### **6. Sustainability**

- Promoting opportunities for higher studies to gain technical competencies match with new and modern scientific knowledge.
- Process of building-up more relationships with higher education institutes such as universities.
- Altering the recruitment process to recruit more educated and talented youth.
- Developing a talent pool and to link it with succession plan effectively.

(Source: Interview Data)

The above findings were supported with the theories and models developed through various researches. Szulanski (1996) highlighted that, it might be profitable to devote scarce resources and managerial attention to develop the learning capacities of organizational units, foster closer relationships between organizational units, and systematically understand and communicate practices (as knowledge management practices) which impact on the worker productivity levels than just merely paying incentives. Omotayo (2015), pointed out that without adequate care in how knowledge is managed, organizations will not be operating optimally and this will result in the ineffective and inefficient creation and delivery of products and services leading to lack of quality in work-life, which is what ultimately leads to the demise of the organization due to poor productivity levels. The relationship between sustainable HR practices and worker productivity further elaborated in psychological contract and social exchange theories. Implementing best HR practices will increase the level of employee engagement, which is considered to be a vital aspect behind the efficiency of the employees and thereby productivity of the organization (Lodha & Pathak, 2017). Moreover, they further elaborated that, the relationship between psychological contract and the employee engagement by analyzing the several factors from both the variables towards worker productivity. Employee

engagement initiatives as sustainable HR practices adopted in an organization, have been empirically linked to organizational commitment (Saks, 2006), role performance (Rich, LePine, & Crawford, 2010) and theoretically to productivity (Irvine, 2009; Masson, Royal, Agnew & Fine, 2008). In 2013 empirical research emerged indicating that employee engagement is associated with psychological contracts (Bal, Kooij, & DeJong, 2013; Chang, Hsu, Liou, & Tsai, 2013). Rousseau (1989) defined psychological contracts as the beliefs that are held by an individual regarding what they owe the organization, and what the organization owes them. Thus, fulfillment of employer promises, obligations, and commitments increases employee engagement (Coffman & Gonzalez-Molina, 2002; Bal et al., 2013; Chang et al., 2013). Chang et al. (2013) and Bal et al. (2013) empirically demonstrated that an increase in psychological contract fulfillment is related to an increase in employee engagement and ultimately the enhanced employee productivity.

## 5. Conclusion

The model proposed by this study as sustainable HRM model for tea industry, stressed the direct relationship between application of best human care practices and knowledge management practices towards worker productivity. This is an addition to the conceptual HRM models practiced in various industries, expressing the contrast in tea industry by adding more value towards enhancing worker productivity levels. This model will further explain the indirect relationship of quality of work-life and quality of life acting as mediators for human care and knowledge management practices to increase the existing productivity levels in the industry. Therefore, the total HRM package for the tea industry is purely dependent on the application of conceptual HRM functions and more importantly inculcating the best human care and knowledge management practices as sustainable HR practices which contribute to enhance the levels of more critical productivity indicators.

## References

- Argyris, C. (1960). Understanding organizational behavior. *American Political Science Review*, 54(3).
- Armstrong, S. (2010). *Handbook of Human-resource Management Practice* (11th ed.). *Human Resource Management International Digest*, 18(4), 48-59 doi: <https://doi.org/10.1108/hrmid.2010.04418dae.001>
- Bal, P., Kooij, D., & DeJong, S. (2013). How do developmental and accommodative HRM enhance employee engagement and commitment? The role of psychological contract and SOC strategies. *Journal of Management Studies*, 50(4)546-572.
- Bandara, R.W.T.M. (1996). *The present status of ecological capital management in the Tea Plantation sector in Sri Lanka. An exposition of the concept with illustrative case studies*. Colombo: University of Colombo.
- Barr, A., & Serneels, P. (2008). *Reciprocity in the workplace*. England: University of Oxford.

- Bawa, M.A., & Jantan M. (2005). Human Resource practices as determinants of employee turnover: An empirical investigation. *Asian Academy of Management Journal*, 10(02), 69-80.
- Blau, P.M. (1964). Exchange and power in social life. *Social Forces*, 44(1), 128-129. Retrieved from <https://doi.org/10.2307/2574842>.
- Central Bank of Sri Lanka. (2014). *Annual Report*. Colombo: Central Bank of Sri Lanka.
- Central Bank of Sri Lanka. (2016). *Annual Report*. Colombo: Central Bank of Sri Lanka.
- Chadwick-Jones, J.K. (1981). Renegotiating absence levels. *Journal of Organizational Behavior*, 2(4), 255-266.
- Chang, H.-T., Hsu, H.-M., Liou, J.-W., & Tsai, C.-T. (2013). Psychological contracts and innovative behavior: A moderated path analysis of work engagement and job resources. *Journal of Applied Psychology*, 43(10) 2120-2135.
- Coffman, C., & Gonzalez-Molina, G. (2002). *Follow This Path: How the world's greatest organizations drive growth by unleashing human potential*. New York: Warner Books.
- Garbutt, D. (1979). Charles Babbage – pioneer of scientific operations research. *The Accountant*, 7(2), 389-397.
- International Labour Organization. (2000). World Labour Report 2000: Income security and social protection in a changing world, International Labour Office, Geneva.
- Irvine, D. (2009). Retrieved from Bloomberg Business Week:  
[http://www.businessweek.com/bwdaily/dnflash/content/may2009/db2009058\\_952910.htm](http://www.businessweek.com/bwdaily/dnflash/content/may2009/db2009058_952910.htm).
- Kelegama, S. (2010). *Productivity Decline in the Tea Plantations and a Possible Way Forward*. Colombo: Vijitha Yapa Publications.
- Kodithuwakku, S., & Priyanath, H.M.S. (2007). Reasons for the improvement of labour productivity in Tea Plantations after privatization with special reference to the estate laborers in Tea Plantations after privatization with special reference to the estate laborers in Rathnapura district. *Sabaragamuwa University Journal*, 7(1), 37-47.
- Koukoli, S., Vlachonikolis, I.G. & Philalithis, A. (2002). Socio- demographic factors and self-reported functional status: the significance of social support. *BMC Health Services Research*, 2(20), 27-49.
- Kurihara, S. (2007). The estate plantation community in Nuwara Eliya district of Sri Lanka: An introductory overview of social issues and poverty among residents living under the conventional plantation system. *Yokohama Journal of Social Sciences*, 15, 123-129.
- Kurian, R. (1989). *State capital and labour in the plantation industry in Sri Lanka. PhD thesis, University of Amsterdam, 1834-1894*.
- Lodha, D., & Pathak, K. (2017). Effect of psychological contract on employee engagement. *Journal of Researchers*, 1(1) 6-9.
- Masson, R., Royal, M., Agnew, T., & Fine, S. (2008). Leveraging employee engagement: The practical implications. *Industrial and Organizational Psychology*, 1 (1)76-59.

- Omotayo, F.O. (2015). Knowledge management as an important tool in organizational management: A review of literature. *Library Philosophy and Practice (e-journal)*. 1238. Retrieved from <http://digitalcommons.unl.edu/libphilprac/1238>
- Rajadurai, R. (2015). *Determinants of Annual Productivity of Female Tea Harvesters in the Mid Country Regional Plantation Company Estates in Sri Lanka*. Peradeniya: Post Graduate Institute of Agriculture.
- Redmond, M.V. (2015). Face and politeness theories. *English Technical Reports and White Papers*. 2. Retrieved from [http://lib.dr.iastate.edu/engl\\_reports/2](http://lib.dr.iastate.edu/engl_reports/2).
- Rich, B., LePine, J., & Crawford, E. (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal*, 53(3), 617-635.
- Roloff, J. (1987). Learning from multi-stakeholder networks: Issue-focused stakeholder, management. *Journal of Business Ethics*, 82(01), 233-250.
- Rousseau, D. (1989). Psychological and implied contracts in organizations. *Employee Responsibilities and Rights Journal*, 2(2) 121 –139.
- Rusbult, C.E. (1988). Impact of exchange variables on exit, voice, loyalty, and neglect: An integrative model of responses to declining job satisfaction. *The Academy of Management Journal*.31 (3), 599-627.
- Saks, A.M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*. 21(7) doi: 10.1108/02683940610690169.
- Sivapalan, P., Kulasegaram, S., & Kathirvetpillai, A. (1986). *Hand Book on Tea. An overview of tea industry in Sri Lanka*. In A. K. N. Zoysa (Eds.) (2008), *Hand Book on Tea*, Thalawakelle: Tea Research Institute of Sri Lanka.
- Sivaram, B. (2000). *Plantation Management in the New Millennium*. Colombo: National Institute of Plantation Management.
- Sri Lanka Tea Board. (2010). Annual Report. Colombo: Sri Lanka Tea Board.
- Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic Management Journal*, 17(02). 27-43.
- Wal, S.V.D. (2008). *Sustainability issues in the Tea Sector: A Comparative Analysis of Six Leading Producing Countries*. Amsterdam, Netherlands: Centre for Research and Multinational Corporations.
- Wijayasiri, J., Arunatilake, N. & Kelegama, S. (2018). *Sri Lanka Tea Industry Transition: 150 years and beyond*. Colombo: Institute of Policy Studies of Sri Lanka.
- Yogarathnam, N. (2010, May 18). Economics of scale ineffective in Lankan Tea Business. *Daily News*, p. 06.

## Appendices

### Appendix A- Questionnaire developed by authors

CODE NO:

#### TOWARDS A SUSTAINABLE HRM MODEL FOR HUMAN PRODUCTIVITY IN TEA INDUSTRY: AN EMPIRICAL STUDY OF TEA PLANTATION SECTOR IN SRI LANKA

##### **PART 01:** Please mark your answer by use of ( ☐ )

- |                                  |                                   |                          |         |                          |       |                          |
|----------------------------------|-----------------------------------|--------------------------|---------|--------------------------|-------|--------------------------|
| 1. Age                           | : Less than 25                    | <input type="checkbox"/> | 26-25   | <input type="checkbox"/> | 36-45 | <input type="checkbox"/> |
|                                  | 46 – 35                           | <input type="checkbox"/> | Over 55 | <input type="checkbox"/> |       |                          |
| 2. Present Designation           | : Junior Assistant Superintendent | <input type="checkbox"/> |         |                          |       |                          |
|                                  | Assistant Superintendent          | <input type="checkbox"/> |         |                          |       |                          |
|                                  | Senior Assistant Superintendent   | <input type="checkbox"/> |         |                          |       |                          |
|                                  | Superintendent                    | <input type="checkbox"/> |         |                          |       |                          |
|                                  | Senior Manager and above          | <input type="checkbox"/> |         |                          |       |                          |
| 3. Experience in Plantations     | : Less than 5 years               | <input type="checkbox"/> |         |                          |       |                          |
|                                  | 5 - 10 years                      | <input type="checkbox"/> |         |                          |       |                          |
|                                  | 11 – 15 years                     | <input type="checkbox"/> |         |                          |       |                          |
|                                  | 16 – 25 years                     | <input type="checkbox"/> |         |                          |       |                          |
|                                  | Over 25 years                     | <input type="checkbox"/> |         |                          |       |                          |
| 4. Experience in present company | : Less than 2 years               | <input type="checkbox"/> |         |                          |       |                          |
|                                  | 2 - 4 years                       | <input type="checkbox"/> |         |                          |       |                          |
|                                  | 5 – 6 years                       | <input type="checkbox"/> |         |                          |       |                          |
|                                  | 7 – 8 years                       | <input type="checkbox"/> |         |                          |       |                          |
|                                  | Over 8 years                      | <input type="checkbox"/> |         |                          |       |                          |



5. Experience in present designation : Less than 2 years

2 - 4 years

5 – 6 years

7 – 8 years

Over 8 years

**PART TWO: Please provide appropriate answers in the given space.**

1. What are the most critical worker productivity indicators used in evaluating organizational performances in plantation industry?
2. What are the sustainable HR practices which have a significant impact on enhancing productivity levels in plantation industry?
3. How do you elaborate the relationship between quality of work-life of the human resource segment in plantations towards enhancing the productivity levels?
4. How do you elaborate the relationship between quality of life of plantation community including work-force towards enhancing the productivity levels?
5. What are the limitations of uplifting quality of life of the entire plantation community?
6. What are the limitations of uplifting the quality of work-life of work-force in plantations?
7. What is your view on the need of inculcating a knowledge based management culture in plantations?
8. In your opinion what are the best human care practices you are proposing to improve the quality of work-life and quality of life? (please prioritize according to the relative importance on worker productivity based on your practical experience in the industry).

HUMAN CARE PRACTICES	
1. HEALTH AND NUTRITION	
2. LIVING ENVIRONMENT	
3. SAFETY AND PROTECTION	

4. COMMUNITY CAPACITY BUILDING	
5. EDUCATION AND DEVELOPMENT	
6. YOUTH EMPOWERMENT	

9. What are the best Knowledge Management Practices you are proposing for improving quality of work-life and quality of life (please prioritize according to the relative importance on worker productivity based on your practical experience in the industry)

KNOWLEDGE MANAGEMENT PRACTICES	
1. Collection/ Capturing	
2. Classify, Organize and Storing	
3. Sharing and Disseminate	
4. Access and use/ review	
5. Value creation	
6. Sustainability	

10. What are your views on the proposed HRM model for tea plantation industry towards uplifting the productivity parameters?

## Factors Affecting Emotional Labour among Nursing Officers

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### Abstract

The purpose of this study is to extend the understanding on antecedents of emotional labour. along with the initial identification of the fact that some nurses in government hospitals in Sri Lanka do not display emotional labour, the relationship between Type-A/B personality, work hours, work values, educational level and the three dimensions of emotional labour (surface acting, deep acting and expressions of naturally felt emotions) were tested using data collected from 134 nursing officers of few government hospitals in Sri Lanka. The results illustrate that Type-A personality and work hours are positively related with surface acting and Type-B personality and work values are negatively related with surface acting. Type-A personality is negatively related with deep acting and work hours are negatively related with both deep acting and expressions of naturally felt emotions. Moreover, Type-B personality and work values are positively related with deep acting and expressions of naturally felt emotions. Implications are to enhance the quality of nurse-patient relationships. Further it was identified that hospitals should consider the work hours and personality of the nurses.

**Keywords.** Education Level, Emotional Labour, Personality, Work Hours, Work Values

### 1. Background

The entire world is proceeding towards a service centred economy (Shek, Chung, & Leung, 2015). Along with the rapid growth, service sector organizations face heavy competition as almost all service organizations are concerned about providing a better return to their shareholders and about enhancing their market share.

Walsh and Bartikowski (2013) recognized service providing employees “as the face of the service firm” (p. 1213), as it is the service providers who are capable of influencing the customers’ level of satisfaction and could create repeat and loyal customers to the service organization. “Presentation of emotions” during service interactions has become a key component of the work performed by employees where such emotions are being specified, regulated and expected by service organizations (Morris & Feldman, 1996). In other words, service encounter employees are required to express the expected emotions in the presence of customers or clients.

The concept emotional labour was first introduced by Hochschild (1983). Over the past three decades, many researchers have given a considerable amount of interest to study

about emotional labour (Hur, Moon, & Han, 2014). Kim and Han (2009) stated that when favourable emotional expressions are frequently displayed, an employee would be able to gather positive job experiences and feel more confident in developing strong human relations. This confidence makes employees feel empowered (Pugliesi, 1999). This is the bright side of emotional labour. On the other hand, there is a probability for an organization to lose their best employees as emotional labour is related to employee turnover intentions (Walsh & Bartikowski, 2013). It has been found that the way in which employees prefer to follow the display rules of an organization, says a lot about whether such effort would lead to stress or satisfaction (Seery & Corrigan, 2009). Therefore, our research that aims for extending knowledge on the factors and circumstances that could influence an employee's way of performing emotional labour is in fact important.

This study is based on exploring emotional labour among nursing professionals. Nurses' role of emotional labour is about "making patients feel safe, comfortable and at home" (Gray, 2010, p. 351). Mastracci and Hsieh (2016) defined emotional labour of nursing as efforts taken to convey or express emotions of care. Nurses have to deal with patients of whose lives are at risk, helpless and vulnerable. In such instance, nurses' care is of utmost importance for patients. A medical officer who had served the Department of Health for a considerable amount of years mentioned that, normally nurses are very hard-working individuals who strive to carry out their duties towards the patients under their care, in a very thorough and careful manner (Atukorale, 2008).

Even though, displaying expected emotional expressions is important, in reality such expectancies are not always met. At times nurses may deviate from their emotional role. For example, a Sri Lankan sociologist shares his experience of being hospitalized in a public hospital in Sri Lanka by revealing that the nurse in charge of the ward was not empathetic and that the Nightingale characteristics were absent (Herath, 2013). Furthermore, it has been revealed that the major reasons for the criticisms formed against nurses in public sector are that they are either insensitive or rude (Koelmeyer, 2017). Thus, this leads us to question why some nurses in government hospitals in Sri Lanka do not display emotional labour, despite emotional labour is a key part of their occupation?

Hochschild (1983) stated, as little has been discovered, in reality emotional labour stands as "shadow labour", hidden and undiscovered. Three decades later, with the contribution of numerous scholars, emotional labour has been able to crawl out through the shadows, but is currently held up at crossroads (Grandey & Gabriel, 2015). Therefore, it was identified that research in the field of emotional labour is essential to bring in more insight.

## **2. Literature Review**

### **2.1 Emotional Labour**

The term emotional labour was first introduced by the American sociologist Hochschild (1983). She defined emotional labour as, "the management of feeling to create a publicly observable facial and bodily display; emotional labor is sold for a wage and therefore has exchange value" (p. 7). Hochschild (1983) stated that, in various occupations that require emotional labour, interactions takes place in the form of face-to-face interactions, voice-to-

voice interactions or by both ways and the service provider should create an emotional state in the mind of the client, customer or the patient.

Ashforth and Humphrey (1993) termed emotional labour as displaying the expected or applicable emotions. Further, they considered emotional labour as a “double-edged sword” (p. 107) since emotional labour is capable of either enhancing or damaging organizational performance. Morris and Feldman (1996) defined emotional labour as the effort, planning, and control which is necessary to display the desired emotions in service encounters. Although different perspectives have been taken in defining emotional labour, all the definitions provide a common understanding that emotional labour is about regulating emotions in order to comply with organizational expectations. For this study, we select Grandey’s (2000) understanding of emotional labour, where emotional labour is a means to achieve desired organizational outcomes through regulation of feelings and expressions.

## ***2.2 Dimensions of Emotional Labour***

There is no agreed upon consensus with regard to the aspects or the dimensions of emotional labour. Initially, Hochschild (1983) categorized emotional labour based on the “acting” (based on how emotional labour is performed) as surface and deep acting. Surface acting is about changing expressions but not feelings (Grandey, 2000). For example, a nurse treats a patient in a caring and empathetic manner but interiorly, she is not really feeling the expression of care. Deep acting is the private experience of the emotion itself (Erickson & Ritter, 2001) where the actor or the service provider actually feels the display emotions or attempts to experience it in reality. For an example in order to feel happy a service provider could think of a wedding. Surface acting supports an individual to comply with display rules, but going beyond simply complying with display rules, deep acting generates authentic emotional displays (Allen, Pugh, Grandey, & Groth, 2010). Further, surface acting is found to be associated with a number of adverse repercussions or “undesired states”, whereas deep acting brings about favourable outcomes or “desirable states” to employees as well as to organizations.

Ashforth and Humphrey (1993) introduced a third means for emotional labour as expression of naturally felt emotions. They stated that a nurse who senses kindness and empathy towards an injured child, does not actually need to “act”. Further, when naturally felt emotions are expressed, there is no actual difference between what is really felt and what is being expressed. However, even after Ashforth and Humphrey identified a third means of emotional labour in 1993, only few studies have contributed to expand the knowledge on expression of naturally felt emotions (e.g., Cheung & Tang, 2010; Diefendorff, Croyle, & Gosserand, 2005; Newnham, 2017).

Differing from what Hochschild (1983) and Ashforth and Humphrey (1993) identified as dimensions of emotional labour, Morris and Feldman (1996) identified four other different dimensions of emotional labour as: frequency of emotional display, attentiveness to required display rules, variety of emotions required to be expressed, and emotional dissonance. However, Brotheridge and Grandey (2002) categorized emotional labour as job-focused emotional labour and employee-focused emotional labour. Pulgliesi (1999) took another different view in studying about the dimensions of emotional labour by identifying two main dimensions; self-focused emotional labour and other-focused emotional labour.

However, for this study we consider surface acting, deep acting and expression of naturally felt emotions as the dimensions of emotional labour. The next section of this literature review further narrows down to study in depth about the antecedents of emotional labour.

### **2.3 Antecedents of Emotional Labour**

Emotional labour is influenced by various factors. These factors can be categorized as person and job-related antecedents.

Researchers have studied about the relationship between gender and emotional labour and have figured out that gender differences do impact emotional labour (Erickson & Ritter; 2001; Grandey, 2000; Yang & Guy, 2015). Research reveals that majority of service contact occupations are performed by women (Grandey, 2000; Hochschild, 1983) since women are better at managing emotions resulting better performance (Grandey, 2000). In Hoshchild's (1983) study, flight attendants who were women were expected to shape their inner feelings to express cheerfulness and friendliness, while bill collectors who were men, were expected to express anger or emotional detachment to be more effective. Therefore, gender seems to have some sort of an impact on service encounters, depending on the type of the service occupation.

Emotional intelligence is another personal characteristic that could impact emotional labour. Mayer and Salovey (as cited in Santos, Mustafa, & Gwi, 2015) defined emotional intelligence as the ability to use emotional information in an accurate and efficient manner. The decision of, which emotional labour dimension to use depends on the extent to which the service provider is emotionally intelligent (Feldman, Barrett, & Gross as cited in Karim & Weisz, 2010). Santos et al. (2015) found an inverse relationship between emotional intelligence and surface acting, whereas no relationship was found with deep acting. In contrast, Karim and Weisz (2010) found that emotionally intelligent employees would display deep acting since they have the ability to understand the needs of the service receivers and to be empathetic towards service receiver's circumstances.

Age is a person-related antecedent of emotional labour. Cheung and Tang (2010) found that older employees use a greater amount of deep acting at workplaces since they are likely to utilize more of their cognitive ability in deciding on how to comply with display rules. Also, they are interested and motivated in actually trying to experience positive emotions and to avoid experiencing negative emotions within their remaining lifetime (Dahling & Perez, 2010). Given this positive relationship between chronological age and deep acting, it was identified that older employees are better followers of display rules than younger employees (Hur et al., 2014). Further, with the rising trend "ageing workforce population", this finding provides a greater level of understanding for organizations about their older employees. Cheung and Tang (2010) further revealed that older workers are more likely to use naturally felt emotions as well, but no significant correlation was found between age and surface acting.

Further, based on big five personality traits, Diefendorff et al. (2005) found that those who possess lower levels of extraversion, agreeableness, and conscientiousness and those who possess neuroticism are more likely to perform surface acting.

Display rules is a job-related antecedent of emotional labour. Organizations expect employees to express the right emotions in service interactions. It is display rules that shape employees emotional expressions and ultimately support to achieve organizational ends (Diefendorff, Erickson, Grandey, & Dahling, 2011). Display rules can be categorized as positive (positive emotions) and negative (negative emotion) and positive display rules must be expressed whereas negative display emotions are required to be suppressed (Diefendorff et al., 2005). Further, positive display rules were found to be positively related with deep acting and negative display rules were negatively related with surface acting.

#### **2.4 Emotional Labour and Nursing**

Among the scholars who have contributed for the field of emotional labour, some have focused on studying about healthcare professionals' role of emotional labour (Mann, 2005). Hochschild (1983) revealed that registered nurses, therapists, dental hygienists, therapy assistants and other related personnel are compelled to perform a higher level of emotional labour. Among these healthcare related professions, nursing is recognized as an occupation that requires a higher amount of emotional labour to be performed (Bolton, 2001). Also, nurses are viewed as 'emotional jugglers' as they are highly required to change, manage and express emotions according to the emotional requirement of healthcare settings (Bolton, 2001).

When nurses engage in patient care, they must follow an all-inclusive approach or a holistic approach to patient care, by meeting the psychological, social and spiritual needs in order to form closer relationships and a continuous delivery of nursing care (McQueen, 2004). Although at times nurses may feel disgusted, irritated or aggressive, those negative emotions are required to be controlled and suppressed (McQueen, 2004). This suppression could be more challenging when patients would become aggressive, hostile or uncooperative (de Castro, 2004, as cited in Mann, 2005). Nurses not only work with patients, they have to work with the patients' families as well (Seery & Corrigan, 2009). Therefore, with the wider range of display rules to be addressed, the nursing profession is undoubtedly challenging.

#### **2.5 Breaking Character**

Although, nurses are expected to display emotional labour, at times they may deviate from their desired organizational role. This results in tarnishing the nurse-patient relationship, where the patient does not get the desired care and empathy from the nurse. Grandey (2003) recognized this deviation of desired emotional displays as breaking character. Further, those who perform deep acting are less likely to break character. Surface acting is an endeavour to overcome breaking character; for an example by merely faking a smile (Grandey, 2003). Yet, suppressed negative feelings can be unknowingly conveyed through "micro-expressions" (Ekman et al. as cited in Grandey, 2003). Therefore, there is always a probability for the occurrence of such deviance from their expected role.

Thus, breaking character would move nurses away from displaying their expected job role and might as well impact on organizational outcomes. Therefore, in our opinion breaking character seems to be an important area to investigate. No empirical evidence has been

reviewed to identify how breaking character takes place among nurses, given the presence of the impact of various antecedents of emotional labour.

### 3. Methodology

#### 3.1 Research Philosophy and Strategy

This study is carried out in a positivistic stance as the positivistic way of thinking assumes that the existence of the social world is external and therefore the link between cause and effect (universal laws) can be applied in common grounds (Saunders, Lewis, & Thornhill, 2009). Therefore, an attempt was taken to gather and analyze the relevant social understandings through quantitative means. Following the survey strategy, a questionnaire was used to collect data during the period from August to October, 2017.

#### 3.2 Research Hypotheses and Model

In terms of analysing the relationship between personality type and emotional labour, we strive to focus on identifying how Type A/B personality could impact on emotional labour. Friedman and Rosenman (1959, as cited in Spence, Helmreich, & Pred, 1987) stated that Type-A behaviour pattern is bound with five main characteristics namely; “ambitiousness, competitiveness, time urgency, impatience, and aggressiveness” (p. 522). Along with these characteristics Type-A persons would require to display surface acting to comply with display rules. The use of deep acting and naturally felt emotions, on the other hand, would be much difficult if the service provider is always trying to speed up tasks or if the service provider is very hostile. Type-B persons are much relaxed and patient (Billing & Steverson, 2013). Therefore, Type-B persons might prefer to be relaxed by expressing their genuine emotions rather than by putting an effort to pretend emotional expressions. Thus, the following hypothesis is proposed:

*Hypothesis 1: (a) Type-A personality positively relates with surface acting and Type-B personality negatively relates with surface acting, (b) Type-A personality negatively relates with deep acting and Type-B positively with deep acting, and (c) Type-A personality negatively relates with naturally felt emotions and Type-B positively relates with naturally felt emotions acting.*

The next objective of the study strives for identifying the relationship between education level and emotional labour. Highly educated employees tend to use the best possible way in order to successfully complete emotionally demanding tasks (Xanthopoulou, Bakker, & Fischbach as cited in Innanen, Tolvanen, & Salmela-Aro, 2014). Therefore, an educated person might select to perform emotional labour through deep acting or natural expressions as they might need to go beyond mere compliance of display rules. Based on this argument, we proposed the following hypothesis:

*Hypothesis 2: Educational level influences (a) surface acting such that nurses with G. C. E. Advanced Level will display more surface acting than nurses with Diploma or Degree, (b) deep acting such that nurses with Degree and Diploma will display more deep acting than nurses with G. C. E. Advanced Level and, (c) influences expressions*



*of naturally felt emotions such that nurses with Degree and Diploma will display more natural emotions than nurses with G. C. E. Advanced Level.*

Work hours might impact on how an individual performs emotional labour. As increased amounts of work hours creates fatigue and tiredness among nursing officers, they might need to hide their true appearance during service interactions through the means of surface acting (Li, Gao, Shen, & Liu, 2014). When nurses have long work hours, genuine emotions and the use of deep acting to display emotional labour towards patients might become relatively difficult and they might use the surface acting to express desired expressions. Thus, it is hypothesised:

*Hypothesis 3: Work hours influence (a) surface acting such that nurses who work for relatively more hours will display more surface acting than nurses who work for relatively less amounts of hours, (b) deep acting such that nurses who work for relatively more hours will display less deep acting than nurses who work for relatively less amounts of hours and, (c) expressions of naturally felt emotions such that nurses who work for relatively more hours will display less natural expressions than nurses who work for relatively less amounts of hours.*

Work values are about the generalized beliefs and perceptions of individual employees with regard to what is really important for them in their work lives (Kuron, Lyons, Schweitzer, & Ng, 2015). An individual who values the work attributes to a higher extent would be less likely to perform surface acting. A higher amount of work values would motivate an individual to make an effort to actually feel the required emotions (deep acting) in order to comply with the expected emotions or the individual might simply display his or her naturally felt emotions. Thus, the following hypothesis is proposed.

*Hypothesis 4: Work values (a) negatively relate to surface acting, (b) positively relate to deep acting and (c) positively relate to expression of naturally felt emotions.*

Type A/B personality and education level are considered as person-related antecedents while work hours and work values are considered as job-related antecedents of emotional labour. Based on the above proposed relationships, the conceptual research model is shown in Figure 1.

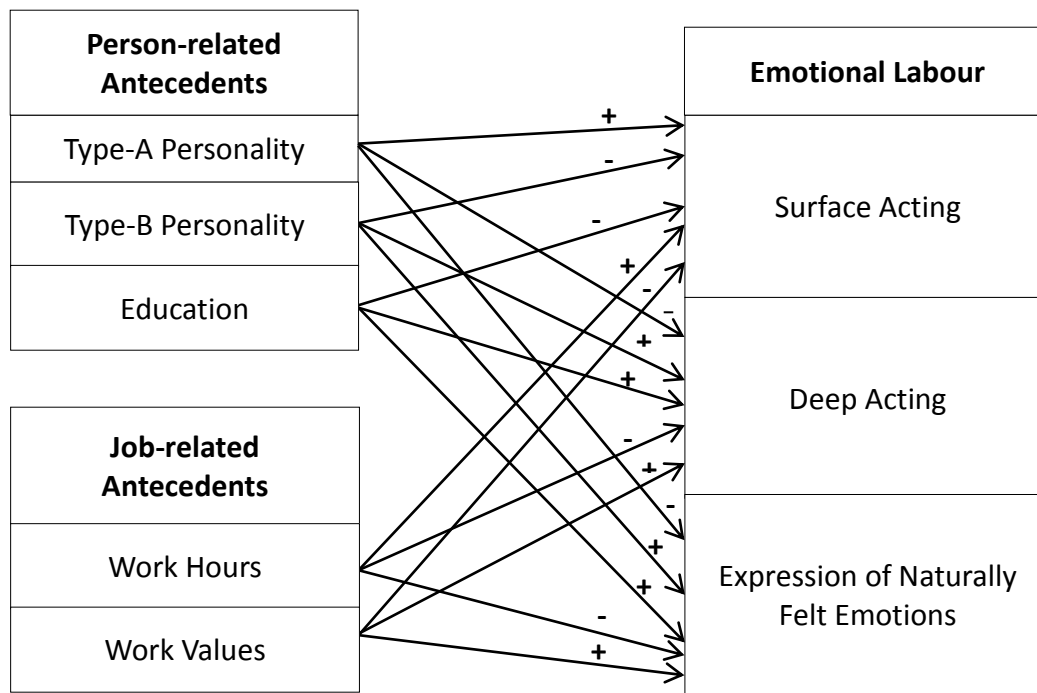


Figure 1. Conceptual Model

### 3.3 Sample of the Study

As the population for data collection, Grade III and Grade II medical nurses in government hospitals of Sri Lanka were considered. When comparing medical and surgical wards, the nurse-patient relationship is considerably higher than the nurse-patient relationship and workload in surgical wards (Al-Kandari & Thomas, 2008). Further, the nurse-patient relationship in medical wards seem to be more challenging and effort taking since “perceived adverse patient outcomes” in medical wards occur at an extent which is significantly greater than in surgical wards.

A self-administered questionnaire was distributed among nursing officers of few government hospitals in Sri Lanka through the means of both paper-based and online survey. Of the 150 hardcopies that were distributed, we recieved 117 (78% response rate). The online survey was shared among 183 along with a 21.3% response rate (39 responses). Considering both modes of the questionnaire, the total response rate was 46.8% (156 responses). After a careful examination 134 responses (40.24% response rate) were found as usable.

### 3.4 Measures

The scales that were considered are as follows:

**Emotional labour.** Surface acting and deep acting are measured from the Emotional Labour Scale developed by Brotheridge and Lee (2003) by using three items each (Cronbach’s  $\alpha = .85$  for surface acting and Cronbach’s  $\alpha = .82$  for deep acting). For example, “resist expressing my true feelings” to measure surface acting and “make an effort to actually feel the emotions that I need to display to others” to measure deep acting. The items range from (1) “never” to (5) “always”. Naturally felt emotions are measured from the three items (e.g., “the emotions I express to customers are genuine”) developed by Kruml and Geddes (2000) which ranges from (1) “strongly agree” to (5) “strongly disagree” with a reliability of Cronbach’s  $\alpha = 0.83$  (Diefendorff et al., 2005).

*Type A/B personality.* Type-A and Type-B personalities are measured with the Spence et al.(1987) adaptation of the Jenkin's Activity Scale. This scale includes with six items to measure *achievement strivings* (e.g. "How seriously do you take your work?") and five items to measure *impatience-irritability* (e.g. "do you tend to do most things in a hurry?"). The items are of five-point Likert scale with different anchors. The internal consistency of this scale stands as  $\alpha = 0.70$  (Billing & Steverson, 2013).

*Work values.* Work values were measured using the twenty-four item Work Values Questionnaire developed by Elizur (1996). Items include with fourteen *cognitive* work values (e.g. "meaningful wok"), five *affective* work values (e.g. "co-workers, fellow workers who are pleasant and agreeable" and five *instrumental* work values (e.g. "convenient hours of work"). The items range from (1) "very unimportant" to (5) "very important" and Cronbach's  $\alpha = 0.84$  (Selmer & Waldstrøm, 2007).

## 4. Data Analysis and Findings

### 4.1 Preliminary Analysis

The majority of the study's respondents (92.5%) were female. In terms of educational qualifications, 49.3% had nursing diploma holders and 34.3% had nursing degree while the rest of the 16.4% respondent's highest education level is G. C. E. Advanced Level. Majority of the participants (46.3%) represented the Training Hospital of Peradeniya. With regard to job category, the majority were Grade II nursing officers (47%) while 36.6% of the participant nursing officers were from Grade III category. Also, the scales used to measure the main study variables showed good internal consistency (Cronbach's  $\alpha > .75$ ).

### 4.2 Correlations

For this study, the bivariate Pearson correlation is used to identify the directions and the strength of the linear relationships that exist between study variables (Table 1). As predicted, Type-A personality is positively related ( $r = .63, p < .01$ ) and Type-B personality is negatively related to surface acting ( $r = -.63, p < .01$ ). When considering the relationship with deep acting, Type-A personality is negatively correlated ( $r = -.55, p < .01$ ) and Type-B is positively correlated ( $r = .55, p < .01$ ). Similarly, Type-A is negatively related ( $r = -.53$ ) and Type-B is positively related ( $r = .53$ ) to expressions of naturally felt emotions at  $p < .01$ . Moreover, there is a perfect negative Pearson correlation coefficient between Type-A and Type-B personality.

Education level ( $r = -.61$ ) is negatively correlated with surface acting ( $p < .01$ ) and is positively correlated with both deep acting ( $r = .54$ ) and expressions of naturally felt emotions ( $r = .59$ ) at  $p < .01$ . Further, there is a positive correlation between work hours and surface acting. This indicates that, increased work hours is associated with increased surface acting. Also, work hours is negatively correlated with deep acting ( $r = -.50, p < .01$ ) and expressions of naturally felt emotions ( $r = -.59, p < .01$ ). Moreover, according to Table 1 there is a negative correlation between work values is and surface acting ( $r = -.65, p < .01$ ). Work values is positively correlated with deep acting ( $r = .68$ ) and expressions of naturally felt emotions ( $r = .72$ ). Age, work experience and marital status seems to be negatively related with surface acting and positively related with both deep acting and expressing naturally felt emotions at  $p < .01$ . However, there is no significant correlation between gender and the dimensions of emotional labour.

Table 1  
Correlations

Scale	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Surface acting	(.788)												
2. Deep acting	-.53**	(.765)											
3. Natural	-.67**	.63**	(.780)										
4. Type-A	.63**	-.55**	-.53**	(.861)									
5. Type-B	-.63**	.55**	.53**	-	(.861)								
6. Work values	-.65**	.68**	.72**	1.00**	.60**	(.944)							
7. Education <sup>a</sup>	-.61**	.54**	.59**	-.44**	.44**	.62**							
8. Work hours <sup>b</sup>	.55**	-.50**	-.59**	.60**	.60**	-.64**	-						
9. Age <sup>c</sup>	-.43**	.44**	.43**	-.31**	.31**	.347**	.42**	.43**					
10. Gender <sup>d</sup>	-.11	.11	.16	-.22**	.22**	.252**	.16	-	-.04				
11. Income level <sup>e</sup>	-.40**	.53**	.48**	-.21*	.21*	.412**	.51**	.23**	.51**	-			
12. Job category <sup>f</sup>	-.50**	.49**	.54**	-.44**	.44**	.545**	.60**	-.34**	.60**	.06			
13. Work experience	-.41**	.40**	.44**	-.37**	.37**	.403**	.39**	-.58**	.73**	.10	.46**	.62**	
14. Marital status <sup>g</sup>	-.48**	.32**	.42**	-.322*	.32**	.359*	.37*	-.49**	.50**	.05	.39**	.61**	.51**

Note. \* p < .05 (two-tailed). \*\* p < .01 (two-tailed).

<sup>a</sup>Education: G.C.E. Advanced Level = 1, Diploma = 2, Degree = 3.

<sup>b</sup>Work hours: <45 hours = 1, 46 - 50 hours = 2, 51 - 55 hours = 3, 56 - 60 hours = 4, >60 hours = 5.

<sup>c</sup>Age: 18 - 27 years = 1, 28 - 37 years = 2, 38 - 47 years = 3, 48 - 57 years = 4, >57 years = 5.

<sup>d</sup>Gender: Male = 1, Female = 0.

<sup>e</sup>Income Level: Rs.15000 - 35000 = 1, Rs.35000 - 55000 = 2, Rs.55000 - 75000 = 3, More than Rs.75000 = 4.

<sup>f</sup>Job category: Student nurse = 1, Grade III nursing officer = 2, Grade III nursing officer = 3, Other = 4.

<sup>g</sup>Marital status: Single = 1, Married = 2, Divorced/separated/widowed = 3.

### 4.3 Regression Analysis for Hypothesis Testing

Regression analysis is used to predict the dimensions of emotional labour from personality (Type-A and Type-B) and work values. As shown in Table 2, the control variables of the study are included in model 1 and in addition to the control variables Type-A, Type-B and work values are included in model 2.

According to model summary statistics (Table 2), the multiple correlation coefficient ( $R$ ) between control variables and surface acting stands as .573 and has increased up to .764 by including Type-A, Type-B and work values to the model. Since model 2 is a better predictor of surface acting than model 1, the model parameters are analyzed hereon based on the results of model 2. Among the control variables, only marital status has a significant contribution to the model ( $\beta = -.214$ ,  $p < .01$ ). The model results show that there is a positive relationship between Type-A personality and surface acting ( $\beta = .349$ ), negative relationship between Type-B personality and surface acting ( $\beta = -.349$ ) and a negative relationship between work values and surface acting ( $\beta = -.357$ ) at  $p < .01$ . Hereby, *Hypothesis 1(a)* and *Hypothesis 4(a)* are supported.

Based on model 2 results for deep acting, income level seems to have a significant positive relationship with deep acting ( $\beta = .300$ ). With a significant contribution to model 2, Type-A personality is negatively related, Type-B personality is positively related and work values are positively related with deep acting. Hereby, *Hypothesis 1(b)* and *Hypothesis 4(b)* are supported.

Further, there is a positive relationship between work values and expressions of naturally felt emotions. However, the t-test results indicate that the relationship between personality (Type-A and Type-B) and expressions of naturally felt emotions is not significant. Hereby, *Hypothesis 4(c)* is supported, but *Hypothesis 1(c)* is not supported.

### 4.4 Mean Comparisons for Hypothesis Testing

Among the independent variables of this study, education level and work hours stands as categorical variables. Therefore, mean comparisons were used based on post hoc test with Bonferroni correction to test the assumed relationships in Hypothesis 2 and 3.

Based on the results of one-way ANOVA (Table 4), there is a significant effect of educational level on surface acting [ $F(2, 131) = 46.069$ ,  $p = .000$ ]. The post hoc test with Bonferroni correction (Table 3) indicates that, in terms of surface acting the mean scores for G. C. E. Advanced Level (4.14), Diploma (2.84) and Degree (2.36) are significantly different from each other at  $p < .05$ . Surface acting is significantly high among nurses with G. C. E. Advanced Level when compared with nurses with Diploma and Degree. Those who have completed the Degree are having the lowest probability to perform surface acting. Thus, the relationship between educational level and surface acting could be understood as, higher educational levels are associated with significantly lesser surface acting and vice versa. Hereby, *Hypothesis 2(a)* is supported.

The results of one-way ANOVA shows that the effect of educational level on deep acting is significant [ $F(2, 131) = 51.842$ ,  $p = .000$ ]. In terms of deep acting, the mean score for G. C. E.

Advanced Level (2.44) is significantly different from Diploma (4.04) and Degree (4.14) at  $p < .05$ . Therefore, Diploma and Degree indicates higher amounts of deep acting with significantly higher mean values than G. C. E. Advanced Level. If an individuals' highest educational level is G. C. E. Advanced Level, he or she is less likely to perform deep acting than those who have completed Diploma or Degree. On the other hand, those who have completed Diploma or Degree are more likely to perform deep acting during service encounters than those who have completed only G. C. E. Advanced Level. Thus, educational level is positively related with deep acting. Hereby, *Hypothesis 2(b)* is supported.

Table 2.  
Step-wise Regression Analysis

Variable	Surface Acting				Deep Acting				Expressions of Naturally felt Emotions			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>
<i>Control variables</i>												
Age	-.129	-1.130	-.115	-1.272	.176	1.572	.169	1.867	.086	.775	.087	.963
Gender	-.085	-1.130	.048	.781	.122	1.657	-.008	-.130	.136	1.856	.007	.117
Income level	-.138	-1.464	-.103	-1.344	.353	3.819**	.300	3.911**	.243	2.635*	.167	2.175*
Job category	-.174	-1.521	.071	.746	.172	1.529	-.065	-.681	.220	1.973	-.010	-.102
Work experience	-.011	-.099	.053	.584	-.002	-.016	-.060	-.662	.050	.453	-.002	-.019
Marital status	-.243	-2.573*	-.214	-2.846**	-.020	-.220	-.046	-.620	.116	1.260	.093	1.251
<i>Independent variables</i>												
Type-A			.349	4.669**			-.249	-3.338**			-.138	-1.850
Type-B			-.349	-4.669**			.249	3.338**			.138	1.850
Work Values			-.357	-4.397**			.423	5.220**			.506	6.250**
<i>Model Summary Statistics</i>												
R	.573		.764		.597		.766		.603		.766	
R <sup>2</sup>	.328		.584		.356		.587		.363		.587	
Adjusted R <sup>2</sup>	.297		.558		.326		.560		.333		.561	
$\Delta R^2$	.328		.256		.356		.231		.363		.224	
$\Delta F$	10.351		38.460		11.698		34.872		12.068		33.994	
Sig. $\Delta F$	.000		.000		.000		.000		.000		.000	

Note. \*p < .05. \*\*p < .01

According to the results of one-way ANOVA, there is a significant effect of educational level on expressions of naturally felt emotions [ $F(2, 131) = 51.973, p = .000$ ]. In terms of expressing naturally felt emotions, the mean score for G. C. E. Advanced Level (2.24) is significantly different from Diploma and Degree (3.92 and 4.09) at  $p < .05$  level. Those who have obtained G. C. E. Advanced Level as their highest educational achievement are less likely to express naturally felt emotions when compared with those who have completed Diploma or Degree and vice versa. However, there is no significant difference between those who have completed Diploma and Degree for expressing naturally felt emotions. Therefore, once an individual's highest educational achievement progresses from G. C. E. Advance Level to Diploma or Degree, such progression is positively associated with expressions of naturally felt emotions. Hence, *Hypothesis 2(c)* is supported.

Table 3.

Post Hoc Test (Bonferroni Correction) for Educational Level

Education level	Mean Value				Mean difference		
	SA	DA	Natural		SA	DA	Natural
A/L	4.14	2.44	2.24	A/L – Diploma	1.298*	-1.571*	-1.682*
				A/L – Degree	1.774*	-1.698*	-1.845*
Diploma	2.84	4.01	3.92	Diploma - A/L	-1.298*	1.571*	1.682*
				Diploma - Degree	.476*	-.128	-.163
Degree	2.36	4.14	4.09	Degree - A/L	-1.774*	1.698*	1.845*
				Degree - Diploma	-.476*	.128	.163

Note. A/L = G. C. E. Advanced Level \*. The mean difference is significant at the 0.05 level. SA = Surface Acting. DA = Deep Acting.

Next, the relationship between work hours and the dimensions of emotional labour is evaluated. Table 4 shows that there is a significant relationship between work hours and the three dimensions of emotional labour at  $p = .000$ . Table 5 indicates that, an individual who works for more than 51 hours per week (with mean values of 3.45, 3.85 and 3.43) would use significantly higher amounts of surface acting, when compared with an individual who works for less than 50 hours per week (with mean values of 2.29 and 2.67) and vice versa. In other words, the amount of work hours positively relates with surface acting. Hence, *Hypothesis 3(a)* is supported.

Table 4.

One-way ANOVA for Educational Level and Work Hours

Variable		Educational Level			Work Hours		
		df	F	Sig.	df	F	Sig.
Surface Acting	Between Groups	2	46.069	.000	4	18.388	.000
	Within Groups	131			129		
Deep Acting	Between Groups	2	51.842	.000	4	14.803	.000
	Within Groups	131			129		
Natural	Between Groups	2	65.973	.000	4	24.361	.000
	Within Groups	131			129		



In terms of deep acting, those who work for less than 45 hours (mean = 4.37) perform more deep acting than those who work for more than 51 hours at  $p < .05$  level (with mean values of 3.58, 2.82 and 3.80), but are not significantly different from those who work for 46 - 50 hours (mean = 3.94). Further, those who work for 46 - 50 hours perform more deep acting than those who work for 56 - 60 hours (mean = 2.82), but is not significantly different from any other category of work hours. Deep acting is significantly less among those who work for 51 - 55 hours per week (mean = 3.58), when compared with those who work for less than 45 hours (mean = 4.37), but is not significantly different from any other category of work hours. Therefore, although the magnitude of the relationship between work hours and deep acting vary between the categories of work hours, the direction of the relationship is the same. Higher amounts of work hours are capable of reducing ones' tendency to perform emotional labour through deep acting and vice versa. In other words, the amount of work hours negatively relates with deep acting. Hereby, *Hypothesis 3(b)* is supported.

Table 5.

Post Hoc Test (Bonferroni Correction) for Work Hours

Work hours	Mean Value				Mean Difference		
	SA	DA	Natural		SA	DA	Natural
< 45 (a)	2.29	4.37	4.25	a - b	-.381	.433	.266
				a - c	-1.169*	.796*	.642
				a - d	-1.564*	1.555*	1.731*
				a - e	-1.143*	.990*	1.200*
46 - 50 (b)	2.67	3.94	3.98	b - a	.381	-.433	-.266
				b - c	-.788*	.363	.375
				b - d	-1.183*	1.122*	1.465*
				b - e	-.762*	.557	.934*
51 - 55 (c)	3.45	3.58	3.61	c - a	1.169*	-.796*	-.642
				c - b	.788*	-.363	-.375
				c - d	-.395	.759	1.089*
				c - e	.026	.195	.558
56 - 60 (d)	3.85	2.82	2.52	d - a	1.564*	-1.555*	-1.731*
				d - b	1.183*	-1.122*	-1.465*
				d - c	.395	-.759	-1.089*
				d - e	.421	-.564	-.531
> 60 (e)	3.43	3.80	3.05	e - a	1.143*	-.990*	-1.200*
				e - b	.762*	-.557	-.934*
				e - c	-.026	-.195	-.558
				e - d	-.421	.564	.531

Note. \* The mean difference is significant at the 0.05 level. SA = Surface Acting. DA = Deep Acting.

If an individual works for less than 45 hours per week (mean = 4.25) he or she is capable of expressing relatively more genuine emotions, than an individual who works more than 56 hours per week. Conversely, in terms of expressing genuine emotions, there is no significant difference between those who work for less than 45 hours and 46 - 55 hours per week (mean = 3.98). However, those who work for 46 - 55 hours per week express significantly more natural emotions than those who work for more than 56 hours per week (mean values

= 2.52, 3.05). Moreover, working for 51 - 55 hours per week (mean = 3.61) is associated with significantly more expressions of naturally felt emotions than working for 56 - 60 hours per week (mean = 2.52). Therefore, similar to the results discussed under the relationship between work hours and deep acting, the magnitude of the relationship between work hours and expressions of naturally felt emotions vary between the categories of work hours, but the direction of the relationship is always positive. Hereby, *Hypothesis 3(c)* is supported.

## 5. Discussions and Conclusion

### 5.1 Personality (Type-A and Type-B) and Emotional Labour

The effectiveness of the service interaction is highly dependent on how an individual desires to perform emotional labour. There are various reasons that could affect the way that a service provider would display the organizationally expected emotional expressions.

Results suggest that Type-A and Type-B personality stand as a person-related antecedent of emotional labour, in relation to surface acting and deep acting. In order to bring in profound understandings, it is vital to consider the specific characteristics associated with Type-A and Type-B personalities. Watson, Minzenmayer, and Bowler (2006) revealed that on a given situation Type-A persons more often tend to manipulate their emotional expressions to hide their true appearance, because they do not believe or trust that their true appearance is sufficient. When an individuals' true appearance is manipulated during a service interaction, it becomes surface acting. Type-A individuals are impatient (Spence et al., 1987). The impatience of Type-A persons influences them to complete their daily work tasks quickly than Type-B persons (Billing & Steverson, 2013). Hence, Type-A's may not feel that they have enough time to privately experience the emotion that is required to be expressed, but would merely hide their true self through fake expressions. Conversely, as Type-B persons are patient (Billing & Steverson, 2013), they are more likely to make an effort to perform deep acting during service encounters.

However, in determining the performance of naturally felt emotions within service interactions, findings suggest that neither Type-A or Type-B personality has an impact. This finding is in contrary to the proposed hypothesis. This reveals that, whether a person is Type-A or Type-B is not a significant matter to be considered in expressing the emotions which are genuinely felt.

### 5.2 Educational Level and Emotional Labour

As a person-related antecedent of emotional labour, educational level has an impact on all three dimensions of emotional labour. According to the study sample, all those who have achieved G. C. E. Advanced Level as their highest educational level are nursing students. In terms of emotional labour, there is a change in the nature of the nurse-patient relationship once nursing students complete their nursing Diploma and become Grade III nursing officers. This is because, along with the knowledge obtain by completing the Diploma, performance of surface acting decrease while more deep acting and natural expressions become visible during nurse-patient interactions.

One could argue that once nursing students complete the Diploma, the extent of surface acting performed decrease along with the practical training or experience that they receive before they qualify as a Grade III nursing officer. However, the results show that there is no significant relationship between work experience and the dimensions of emotional labour. Therefore, it is educational level that is capable of supporting nursing students to reduce visually pretending emotions while caring for patients and of supporting them to make an effort to truly experience the emotional expressions or to express genuinely felt emotions.

### **5.3 Work Hours and Emotional Labour**

The work hours variable, stands as a job-related antecedent of emotional labour. Past researches have revealed that working for higher amounts of work hours could result with reduced levels of productivity and with more employee errors (Caruso, 2006). An employee who performs emotional labour is more productive if he or she could use deep acting or expressions of naturally felt emotions during service interaction platforms. Although, surface acting is a way of complying with the display rules since it is associated with a number of negative consequences (Walsh & Bartikowski, 2013), increased amounts of work hours could indirectly affect on the quality of the service provided by nurses.

However, Sawbridge and Hewison (2013) stated that performing emotional labour for higher amounts work hours does not have a clear impact on how nursing officers would care or treat for their patients. They revealed this by investigating nursing officers who worked for 12-hour shifts in United Kingdom. This finding is in contrary to the results of the current study as the current findings suggest a significant relationship between work hours and the dimensions of emotional labour. Therefore, this contradiction calls for further investigations.

### **5.4 Work Values and Emotional Labour**

Work values are considered as an important aspect of work, as employee tasks and behaviours are influenced by what they value the most at work (Kuron et al., 2015). Emotional labour is also a way of performing workplace related tasks through the means of regulating behaviours (expressions) during interactions. In line with this fact, the results of this study indicates that work values is a job-related antecedent of emotional labour and is capable of influencing the extent to which the dimensions of emotional labour will be used during service interactions. It is important to understand that since work values are capable of bringing in more authentic and genuine expressions, a greater extent of work values could lead towards a better nurse-patient interaction.

### **5.5 Practical Implications**

The findings of this study provide some practical implications for nursing officers engaged in emotional labour and for other decision makers. It is essential to keep in mind that a moral and ethical way of treating patients and their family members could be considered as a strategically important aspect of the effectiveness and efficiency of the healthcare service provided by a hospital. Although, surface acting is also a way of performing emotional labour, it simply meets the display rules and could easily create emotional conflicts within

those who perform or could even increase the probability for breaking character. Thus, surface acting could become a barrier for effective nurse-patient interactions.

The characteristics of Type-A personality encourage more surface acting, whereas Type-B personality encourages more deep acting. As the initial step to reduce the amount of surface acting being performed by nursing officers with Type-A personality, it is important to ensure that they are aware of the fact that their personality could bring in adversarial effects and consequences into nurse-patient interactions. Further, nursing officers with Type-B personality could be encouraged to support nursing officers with Type-A personality to be more patient during work.

The knowledge obtained by following the Diploma and Degree has supported nurses' way of performing emotional labour. Therefore, decision makers could ensure that the curriculum of the Diploma and Degree is restructured from time to time along with research findings that extend the knowledge about the emotional role of a nursing officer.

A nursing officers' way of performing emotional labour varies in relation to the extent of the work attributes which the nursing officer considers as important. This study measured the work values of the study sample in terms of cognitive, affective and instrumental work values. However, there could be unique work values among nursing officers depending on the nature of the profession. Also, work values are heavily dependent on cultural and social values (Kuron et al., 2015). Therefore, keeping in mind that work values stands as a subjective phenomenon, in practice in order to justify and to understand the root cause of a situation where a nursing officer might deviate from his or her emotional role, it is important to examine about their work values as well.

Surface acting brings about harmful effects to individuals who perform, as well as to the organization which they work for. Therefore, organizations need to take actions to promote deep acting and expressions of naturally felt emotions among their employees. For such purpose, training programmes could be introduced by focusing on emotion regulation skills (Karim & Weisz, 2010). These training programmes are effective than "the learning-by-doing mode and learning-from-senior mode" (Li et al., 2014, p. 705). The training programmes should be designed or planned to create awareness among nursing officers regarding the causes and consequences of emotional labour and thereby hospitals would be capable of providing a supporting hand for the conflicts that may arise during the course of a nurses' emotional role.

### **5.6 Limitations of the Study**

This study consists of few notable limitations. The research design limitation restricts the understandings and interpretations which are obtained through the results, since the cross-sectional nature of the study excludes the conclusions that could arise with cause and effect. A longitudinal research design could be considered to identify the causal inferences between the antecedents and the dimensions of emotional labour.

This study primarily focuses on medical nursing professionals in government hospitals in Sri Lanka. Thus, the study sample used is homogeneous in terms of job type. This brings in limitations in generalising the findings of the study. Since three different job levels are

considered (nursing students, Grade III nursing officers and Grade II nursing officers), the limitation is minimized up to a certain extent. However, whether these findings could be generalised to nursing professionals in private hospitals or healthcare institutions or to others who are engaged in occupations that call for higher amounts of emotional labour is questionable.

Next, the data collection process for this study was fulfilled through a self-administered questionnaire. Therefore, there is a probability for the findings to be biased by social desirability. This might bring about the common method variance bias (Mauno, Ruokolainen, Kinnunen, & Bloom, 2016).

### **5.7 Directions for Future Research**

This study is carried out to widen understandings regarding antecedents of emotional labour in relation to nursing officers. Although, the results of this study are applicable to nursing officers, these results may or may not be applicable to other occupations that mostly call for emotional labour. This is because the results for emotional labour could vary across different types of occupations depending on the level of the relationship, contact and emotional attachment between the parties involved in emotional labour (Seery & Corrigan, 2009). Therefore, further research is needed to identify how the findings of this study could be applicable to other occupations that require performance of emotional labour.

Contrary to the findings of this study, Sawbridge and Hewison (2013) highlighted that there is no clear relationship between work hours and emotional labour by considering shift basis work schedules of nursing officers. Therefore, as an implication for future research, we suggest exploring the impact of shift basis work of nursing officers on the dimensions of emotional labour.

An individual who values various work attributes towards a greater extent is also more committed to their work (Elizur, 1996). Job commitment may also encourage a service provider to perform deep acting and to express naturally felt emotions, rather than surface acting. Future research is needed to identify whether the relationship between work values and the dimensions of emotional labour is moderated through job commitment.

### **5.8 Conclusion**

Service providers should express the right emotions during service interactions. Emotional labour supports to build good relationships in such service interactions and provides with a guarantee for the quality of the service. The quality of the interaction that occurs between a nurse and a patient depends on how the nurse expresses emotions of care. Given the major importance of ensuring a good nurse-patient relationship, a nurse is highly responsible to play the role of emotional labour. However, in reality it is evident that some nurses have neglected the emotional labour aspect of their occupation, which in turn leads to breaking character. Therefore, it is of much importance to identify the reasons that impacts on nurses' display of emotional labour.

The findings of the current study contribute to extend the existing knowledge on the factors and circumstances that could influence a nursing officers' way of performing emotional labour. As person-related factors Type-A and Type-B personality and educational level are

significantly related to emotional labour. However, opposing to the proposed research framework, results suggest that there is no significant relationship between both Type-A and Type-B personality and expressions of naturally felt emotions. As job-related antecedents, work hours and work values are significantly related to the dimensions of emotional labour.

The emotional role of nursing officers, who more frequently engaged in emotional labour, is in fact important to maintain good nurse-patient relationships, to avoid or face conflicting situations that may arise while interacting with patients and to provide an exceptional healthcare service. Therefore, the emotional role of a nursing officer is challenging and effort taking. Decision makers also need to be aware of this challenging emotional role in terms of the causes and the consequences of emotional labour in order to provide with a supporting hand for nursing officers to comply with display rules.

Along with the contribution of scholars, emotional labour has become a concept that is widely being explored and the importance of emotional labour towards organizations has been proved. Accordingly, emotional labour no longer stands as 'shadow labour', but is held up at crossroads (Grandey & Gabriel, 2015). Therefore, we believe that the findings of the current study contribute to strengthen understandings on emotional labour in order to step forward from its crossroads.

## References

- Al-Kandari, F., & Thomas, D. (2009). Perceived adverse patient outcomes correlated to nurses' workload in medical and surgical wards of selected hospitals in Kuwait. *Journal of Clinical Nursing*, 18(4), 581–590. doi:10.1111/j.1365-2702.2008.02369.x.
- Allen, J. A., Pugh, S. D., Grandey, A. A., & Groth, M. (2010). Following display rules in good or bad faith?: Customer orientation as a moderator of the display rule-emotional labor relationship. *Human Performance*, 23(2), 101–115. doi:10.1080/08959281003621695.
- Ashforth, B. E., & Humphrey, R. H. (1993). Emotional labor in service roles: The influence of identity. *The Academy of Management Review*, 18(1), 88–115. doi:10.2307/258824.
- Atukorale, D. P. (2008, July 22). Bouquet to nursing staff, Department of Health. Retrieved April 09, 2017, from <http://archives.dailynews.lk/2001/pix/PrintPage.asp?REF=/2008/07/22/fea11.asp>.
- Billing, T. K., & Steverson, P. (2013). Moderating role of Type-A personality on stress-outcome relationships. *Management Decision*, 51(9), 1893–1904. doi:10.1108/md-01-2013-0018.
- Bolton, S. (2001). Changing faces: Nurses as emotional jugglers. *Sociology of Health and Illness*, 23(1), 85–100. doi:10.1111/1467-9566.00242.
- Brotheridge, C., & Grandey, A. (2002). Emotional labor and burnout: Comparing two perspectives of "people work". *Journal of Vocational Behavior*, 60(1), 17–39. doi:10.1006/jvbe.2001.1815.
- Brotheridge, C. M., & Lee, R. T. (2003). Development and validation of the Emotional Labour Scale. *Journal of Occupational and Organizational Psychology*, 76(3), 365–379. doi:10.1348/096317903769647229.
- Caruso, C. C. (2006). Possible broad impacts of long work hours. *Industrial Health*, 44(4), 531–536. doi:10.2486/indhealth.44.531

- Cheung, F. Y., & Tang, C. S. (2010). Effects of age, gender, and emotional labor strategies on job outcomes: Moderated mediation analyses. *Applied Psychology: Health and Well-being*, 2(3), 323–339. doi:10.1111/j.1758-0854.2010.01037.x.
- Dahling, J., & Perez, L. A. (2010). Older worker, different actor? Linking age and emotional labor. *Personality and Individual Differences*, 48(1), 574–578. doi:10.1016/j.paid.2009.12.009.
- Diefendorff, J. M., Croyle, M. H., & Gosserand, R. H. (2005). The dimensionality and antecedents of emotional labor strategies. *Journal of Vocational Behavior*, 66(2), 339–357. doi:10.1016/j.jvb.2004.02.001.
- Diefendorff, J. M., Erickson, R. J., Grandey, A. A., & Dahling, J. J. (2011). Emotional display rules as work unit norms: A multilevel analysis of emotional labor among nurses. *Journal of Occupational Health Psychology*, 16(2), 170–186. doi:10.1037/a0021725.
- Elizur, D. (1996). Work values and commitment. *International Journal of Manpower*, 17(3), 25–30. doi:10.1108/01437729610119496.
- Erickson, R. J., & Ritter, C. (2001). Emotional labor, burnout, and inauthenticity: Does gender matter? *Social Psychology Quarterly*, 64(2), 146–163. doi:10.2307/3090130.
- Grandey, A. A. (2000). Emotional regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology*, 5(1), 95–110. doi:10.1037//1076-8998.5.1.95.
- Grandey, A. A. (2003). When "the show must go on": Surface acting and deep acting as determinants of emotional exhaustion and peer-rated service delivery. *Academy of Management Journal*, 46(1), 86–96. doi:10.2307/30040678.
- Grandey, A. A., & Gabriel, A. S. (2015). Emotional labor at a crossroads: Where do we go from here? *Annual Review of Organizational Psychology and Organizational Behavior*, 2(1), 323–349. doi:10.1146/annurev-orgpsych-032414-111400.
- Gray, B. (2010). Emotional labour, gender and professional stereotypes of emotional and physical contact, and personal perspectives on the emotional labour of nursing. *Journal of Gender Studies*, 19(4), 349–360. doi:10.1080/09589236.2010.514207.
- Herath, D. (2013, July 26). Letter to the minister of health. *Colombo Telegraph*. Retrieved April 09, 2017, from <https://www.colombotelegraph.com/index.php/letter-to-the-minister-of-health/>
- Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. Berkeley: University of California Press.
- Hur, W., Moon, T., & Han, S. (2014). The role of chronological age and work experience on emotional labor. *Career Development International*, 19(7), 734–754. doi:10.1108/cdi-12-2013-0162.
- Innanen, H., Tolvanen, A., & Salmela-Aro, K. (2014). Burnout, work engagement and workaholism among highly educated employees: Profiles, antecedents and outcomes. *Burnout Research*, 1(1), 38–49. doi:10.1016/j.burn.2014.04.001.
- Karim, J., & Weisz, R. (2010). Emotional labour, emotional intelligence, and psychological distress. *Journal of the Indian Academy of Applied Psychology*, 36(2), 187–196.
- Kim, M. J., & Han, S. Y. (2009). Relationship between emotional labor consequences and employees coping strategy. *Asia Pacific Journal of Tourism Research*, 14(3), 225–239. doi:10.1080/10941660903023929.
- Koelmeyer, C. (2017, March 31). Nursing an economic injection. *The Nation*. Retrieved April 09, 2017, from <http://nation.lk/online/2017/04/01/nursing-an-economic-injection.html>.

- Kuron, L. K., Lyons, S. T., Schweitzer, L., & Ng, E. S. (2015). Millennials' work values: Differences across the school to work transition. *Personnel Review*, 44(6), 991–1009. doi:10.1108/pr-01-2014-0024.
- Li, J. H., Gao, P., Shen, X. Y., & Liu, X. (2014). A process model of emotional labor of nursing: Case study of two Chinese public hospitals. *International Journal of Public Administration*, 37(10), 695–707. doi:10.1080/01900692.2014.907310.
- Mann, S. (2005). A health care model of emotional labour. *Journal of Health Organization and Management*, 19(4/5), 304–317. doi:10.1108/14777260510615369.
- Mastracci, S., & Hsieh, C. (2016). Emotional labor and job stress in caring professions: Exploring universalism and particularism in construct and culture. *International Journal of Public Administration*, 39(14), 1125–1133. doi:10.1080/01900692.2015.1068327.
- Mauno, S., Ruokolainen, M., Kinnunen, U., & Bloom, J. D. (2016). Emotional labour and work engagement among nurses: examining perceived compassion, leadership and work ethic as stress buffers. *Journal of Advanced Nursing*, 72(5), 1169–1181. doi:10.1111/jan.12906.
- McQueen, A. C. (2004). Emotional intelligence in nursing work. *Journal of Advanced Nursing*, 47(1), 101–108. doi:10.1111/j.1365-2648.2004.03069.x.
- Morris, J. A., & Feldman, D. C. (1996). The dimensions, antecedents, and consequences of emotional labor. *Academy of Management Review*, 21(4), 986–1010. doi:10.5465/amr.1996.9704071861.
- Newnham, M. P. (2017). A comparison of the enactment and consequences of emotional labor between frontline hotel workers in two contrasting societal cultures. *Journal of Human Resources in Hospitality & Tourism*, 16(2), 192–214. doi:10.1080/15332845.2016.1202729.
- Pugliesi, K. (1999). The consequences of emotional labor: Effects on work stress, job satisfaction, and well-being. *Motivation and Emotion*, 23(2), 125–154.
- Santos, A., Mustafa, M. J., & Gwi, T. C. (2015). Trait emotional intelligence, emotional labour, and burnout among Malaysian HR professionals. *Management Research Review*, 38(1), 67–88. doi:10.1108/mrr-06-2013-0143.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed.). Harlow: Financial Times Prentice Hall.
- Sawbridge, Y., & Hewison, A. (2013). Thinking about the emotional labour of nursing – supporting nurses to care. *Journal of Health Organization and Management*, 27(1), 127–133. doi:10.1108/14777261311311834.
- Seery, B. L., & Corrigan, E. A. (2009). Emotional labor: links to work attitudes and emotional exhaustion. *Journal of Managerial Psychology*, 24(8), 797–813. doi:10.1108/02683940910996806.
- Selmer, J., & Waldstrøm, C. (2007). Work values of surviving and non-surviving managers during economic recession. *Career Development International*, 12(5), 433–445. doi:10.1108/13620430710773754.
- Shek, D. T., Chung, P. P., & Leung, H. (2015). Manufacturing economy vs. service economy: Implications for service leadership. *International Journal on Disability and Human Development*, 14(3), 205–215. doi:10.1515/ijdh-2015-0402.
- Spence, J. T., Helmreich, R. L., & Pred, R. S. (1987). Impatience versus achievement strivings in the Type A pattern: Differential effects on students' health and academic achievement. *Journal of Applied Psychology*, 72(4), 522–528. doi:10.1037//0021-9010.72.4.522.



- Walsh, G., & Bartikowski, B. (2013). Employee emotional labour and quitting intentions: Moderating effects of gender and age. *European Journal of Marketing*, 47(8), 1213–1237. doi:10.1108/03090561311324291.
- Watson, W. E., Minzenmayer, T., & Bowler, M. (2006). Type A personality characteristics and the effect on individual and team academic performance. *Journal of Applied Social Psychology*, 36(5), 1110–1128. doi:10.1111/j.0021-9029.2006.00033.x.
- Yang, S., & Guy, M. E. (2015). Gender effects on emotional labor in Seoul metropolitan area. *Public Personnel Management*, 44(1), 3–24. doi:10.1177/0091026014550491.

**Management, Organization Studies, Management of  
Technology and Disaster Management**

## Factors Affecting the Adoption Of Mobile Money Services In the Colombo District Of Sri Lanka

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### Abstract

The telecommunication industry which is one of the vital industries in Sri Lanka, has shown a significant growth during last decades. However, large number of players compare to the size of the market has increased the rivalry in Sri Lankan telecommunication industry. As a result, some of the players have introduced mobile money service, going beyond the traditional services and taking the advantage of technology. Though this service brings benefits to the customers, operators find it challenging to attract new customers in the last few years. Therefore, the main purpose of the study was to analyse the factors affecting the user intention of using mobile service in Sri Lanka. This was an empirical study and data collection was carried out through a structured questionnaire distributed to 200 executives of the IT sector in the Colombo district using convenience and judgmental sampling techniques. Data was analysed using quantitative data analysis techniques using SPSS software package. Key findings of the study show that awareness, knowledge and trust of the users have a positive relationship with use intention while perceived risk has a negative relationship with use intention for the mobile money services. Based on the results of the study, it can suggest that mobile telecom operators should take actions to mitigate the risk factors involving in the service, while taking actions to increasing awareness, knowledge and trust of the target market.

**Keywords.** Telecommunication Industry, Mobile Money Services, Intention-to-Use

### 1. Background

Telecommunication industry plays a vital role in every economy where both private and public sector engage in this industry. Similarly, after the deregulation of the telecommunication industry in Sri Lanka, the involvement of the private sector has increased. As per the Telecommunication Regulatory Commission of Sri Lanka (TRCSL) (2016) there are three players operating in the fixed access telephone and five players are operating in cellular mobile telephone. However, these five mobile service providers have to play in a small market and as a result, presently the service providers are struggling to keep their market share by acquiring new customers. Hence, the strategic approach to survive in the market place is retaining new customers and/or diversify the business to other possible areas (Silva & Yapa, 2009). As a result, with a competitive and saturated market for mobile

phones, mobile operators in Sri Lanka have launched number of new products into the market, some are even not entirely related to telecommunication industry such as E learning (Dissanayeke, Hewagamage, Ramberg, & Wikramanayake, 2014) and doctor channelling through mobile phones. Similarly, Barnes and Corbitt (2003) have highlighted that rapid changing technology and advancement of wireless telecommunications have led to creation of potential business opportunities that can be exploited. These innovations converge the mobile technology and financial services (Chung & Kwon, 2009) due to the salient attributes of mobile technologies such as ubiquity, convenience and interactivity.

Traditionally people need to carry money notes with them to do the financial transactions, later with the introduction of the electronic banking Automatic Teller Machines and Credit cards came into people's lives (Arabzadeh & Aghaeian, 2015). With those facilities, there was no longer a need to carry notes or coins in the wallet, thus this was very popular among the society. Even though PIN number is assigned to each card which is only known to the owner, Transactions can be done without the PIN number with the machines used by the merchants called POS machines (Tsiakis & Sthephanides, 2005). Therefore, stolen or misplaced card present high risk to the owner. By making this risk as an opportunity, mobile operator have taken a step to enter into the financial market by introducing various products which will serve their customers. With the introduction of mobile phone into financial services, mobile operators launch number of services to capture the money transactions done through ATM cards and Credit Cards (Kimenyi & Ndung'u, 2009). Initially it was through the applications on smart phone which provide the facility of financial transactions between two parties. However, in this situation bank must involve with this transaction since the money is kept in individuals' bank accounts and the mobile is only providing an interface to the user to access the bank account and do the banking services without visiting the bank. With Mobile Payments Guidelines No. 2 of 2011 The Central Bank of Sri Lanka issues licenses to mobile operators to maintain a custodian account based mobile payment services. According to the guideline, licensed service providers may issue e-money by accepting physical money from customers, merchants (Samarajiva & Dokeniya, 2005). On the other hand, licensed service providers operating custodian account based mobile payment systems may convert e-money into physical money for e-money holders (cash-outs) on their request, directly or through appointed merchants (Castri, 2013). This guideline marks the significant changes in mobile money services, where two mobile operators launch their e-money services named eZ cash service by Dialog Axiata PLC and mCash service by Mobitel (Pvt) Ltd.

Mobile operators are allocating a higher percentage of their investment to introduce new products and services to their customers, this includes the cost of product development, equipment, surveys, software, advertising and marketing. The success of the new product depends on the awareness and interest of the customers to purchase or use the new product or service (Biemans, Griffin, & Moenaert, 2016). When it comes to services it will be difficult to popular this with the consumers since there is no tangible product to sell, making

it difficult for services to be successful in the market. As per Chemingui and Lallouna (2013) customers are willing to use services if only it satisfies their needs and behavior. Similarly, Wessels and Drennan (2010) argued that perceived usefulness, perceived risk, cost, and compatibility affect consumer acceptance of mobile banking. Acceptance and adoption of mobile technology is the key driver in determining the level of financial participations among the mobile users. There are still factors holding back customers from acceptance of e-payment (Nyambura et al., 2013).

The products introduced by the Sri Lankan two mobile service providers becomes a failed product since mobile operator was unable to acquire users from traditional banking system to this new service. The mobile operators are not being able to adopt users to use their product and only around 20% of the registered user base is actively using these services. Due to low success rate, mobile operators are not getting a significant return on investment and on the other hand mobile users are not getting the benefits of these new services. Pilot survey revealed that even with the effort and expenditure to build the awareness among the mobile phone users on mobile money services, still people are reluctant to move into this. Therefore, it is vital to identify the factors affecting the adaptation of mobile money services in Sri Lanka.

The research objectives of this study were firstly, to recognize the level of awareness of mobile money services of people in Colombo district in Sri Lanka. Secondly, to identify the level of knowledge of mobile money services of people in Colombo district in Sri Lanka. Thirdly, to identify the level of trust of mobile money services of people in Colombo district in Sri Lanka and fourthly, to explain the relationship between risk and adoption of mobile money service. Finally, to examine the influence of awareness, knowledge, trust and risk on user intention to use the Mobile Money services. This study was limited only to the mobile money service and survey was carried out only in the Colombo District. However, the findings of this study can be used by the mobile operators to plan their strategies on adapting the users. The remains of the paper are organized as follows. Firstly, it discusses the literature leading to hypothesis development and conceptual model, secondly it presents the research methods adopted in the study and thirdly it discusses the findings and implications. Finally, it presents conclusions and areas for future research.

## **2. Literature Review & Hypothesis Development**

From the invention of fire and the wheel in the early stages of human development, advancement of technology had helped mankind to become the most advanced species in the world. Thus, it is obvious that invention of new technologies and advancements of existing technologies cannot be put to on hold (Hall & Khan, 2003). There are many advanced technologies invented both in production as well as in service sector within last fifty years. There is various kind of technologies developed in the industries of Medical (Wears & Berg, 2005), Electronic, Agriculture, Military, Telecommunication (Li & Whallwy,

2002), and IT,. However, to clarify new technology as a successful technology, users must accept that technology and be able to use the technology for its intended purpose.

There are many literature studies in technology acceptance but these studies are cantered towards few key models or theories. Being recently introduced new technology, acceptance of mobile money services should be investigated using these models for user acceptance (Sayid, Echchabi & Aziz, 2012). The models which are widely used in new technology acceptance area are Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), Technology Acceptance Model (TAM) (Davis, 1989), Diffusion of Innovation Theory (Rogers, 1962) and Consumer Behavior (Kotler & Armstrong, 2010). TRA consists of three main components named as Behavioral intention (BI), Attitude (A) and Subjective Norm (SN). This theory declares that a person's behavioral intention depends on the person's attitude about the behavior and subjective norms. Fishbein and Ajzen (1975) suggested that a person's actual behavior can be concluded by analysing his or her prior intention along with the beliefs that the person would have for the given behaviour. According to their definition, the intention that a person has prior to performing an actual behaviour is considered as behavioral intention. This has been using as a measure of person's intention to perform a behavior (Espada, Griffin, González, & Orgilés, 2015). Apart from behavioral intention Fishbein and Ajzen(1975) suggested that there are two factors which could influence behavioral intention. The attitude that a person has towards the actual behavior and the subjective norm associated with the behavior in question.

Consumers make many buying decisions on a daily basis, the decision to buy particular product or service is dependent on several factors. The success of adaptation to any new product or service is directly affected by the behaviour of the consumer. Kotler and Armstrong (2010) posited that consumer behaviour consists of three main areas. Marketing stimuli consist of four P's: Product, Price, Promotion and Place. Along with the other stimuli's these factors are inputted into buyer's black box. With the influence from Buyers characteristic's these inputs are then turned in to buyer's responses such as Product choice, Dealer Choice, Purchase Timing, Brand Choice and Purchase frequency. The main influencing factor in the buyer's black box is the Buyer's Characteristics (Kotler & Armstrong, 2010) stated that there are four areas that would change the buyer's characteristics named culture factors, social factors, personal factors and psychological factors.

Further, product awareness provides the familiarity about the existence of the product they wish to buy in future (Alkhunaizan & Love, 2012).Therefore, the information about the existence of the e money service or prior experience creates user awareness and hence, user intention to use the service will create. As per the study of Laforet and Li (2005) and Tobbin (2013) awareness of a person is one of a factor which can affect the acceptance and adoption of mobile banking. Bhanot, Bapat, and Bera (2012) highlighted that financial education to the low-income individuals, distance to the banks and government contribution as the factors influencing mobile banking adoption and where Chen (2013) suggested that these factors are part of the individual awareness. Therefore, awareness of

the customers can be a one of a main factor which can affect the adoption of e money. Hence, the first hypothesis of the study is,

H1: There is a positive relationship between Awareness and intention to use mobile money services.

Knowledge is the know-how of the product usage. This includes technology of the new service, complexity of the usage of the new service and level of performance of the new service (Alkhunaizan & Love, 2012). If the technology of the service is superior and users are unable to adopt that with individual's level of education background it is highly unlikely that users will develop positive intention of using the service. Similarly, if the product or service is too complex to use or has advanced features which can't be absorbed by the individuals then there is a high potential to build negative attitude towards it. Similarly, Garcia-Murillo and Annabi, (2002) highlighted that knowledge helps the consumers to trade products or services easily, this is because users with high level of understanding will use services better, more efficiently and be able to avoid the risks. Further, knowledge helps to recognize the innovation, the desire from new technologies, thereby applying the service faster and easier (Schreier & Prögl, 2008). Similar, findings of Marcketti and Shelley (2009) highlighted that consumers' knowledge of products has a significantly positive effect on their perceived ease to use. Hence, the second hypothesis of the study is,

H2: There is a positive relationship between Knowledge and intention to use mobile money services.

Trust can be identified as a willingness to use the new service with a sense of comfort, safety, and risk acceptance (Kim, Mirusmonov, & Lee, 2010). Brand Image and loyalty are two key components that define the users trust on the product or service (Pavlou, 2003). In the study by Siau and Shen (2003), trust can be divided into two categories: trust in the ability of mobile technology that will reduce transaction risk; and trust about service providers will meet the expectations of customers. As per Bhattacharjee (2002) trust can be a vital factor especially in mobile banking or e payment as the transactions are made in a telephone network that is more vulnerable and uncertain than the traditional payment transaction. Mobile payments are more vulnerable to the risk and hence, trust would help reduce the need to understand, control, and monitor activities, thereby allowing customers to use services easily and efficiently without much effort in translation of online service (Munoz, Esparza, Aguilar, Carrascal, & Forne, 2010). Higher the confidence level may increase the honesty and reliability of the service provider and hence, higher intention to use the service (Gefen, Karahanna, & Straub, 2003). On the other hand, mobile transaction needs to enter personal information and as a result, the customers expect that their personal information are secured with the service provider (Zhou, 2011). Therefore, the trust is playing vital role with customer intention to use a product or service. Hence, the third hypothesis of the study is,

H3: There is a positive relationship between Trust and intention to use mobile money services.

In financial transactions, especially in ecommerce area it is important to protect the assets. This is not limited only to the financials but also to privacy and time factors (Pavlou, 2003). In the digital world, it is difficult to trace who is having the user's personal information and how that can be used for unauthorized access. Therefore, this could lead to the development of negative attitude towards usage. Risk is means the absence of security during paying process due to unexpected errors or transactions made without honesty between the buyer and the seller (Havlena & DeSarbo, 1991) or the loss of information leading to financial losses due to the disturbing hacker (Ganesan, 1994). Therefore, the risk is the unexpected, unintended, and undesired loss (Pavlou, 2003). The evaluation of risk level is calculated by the level at which an individual expects possible negative results or errors when a transaction is being proceeded (Peter & Tarpey, 1975). In the context of mobile technology, risk is expected and acceptable; it is what customers have to take at a certain level of danger when trying a new service (Sweeney, Soutar, & Johnson, 1999). Mobile payment is a form of online transactions. It will include those transactions occurring between individual's unknown to each other which increase the risk of financial loss and the uncertainty about the identity or the quality of products. Without appropriate measures, the faulty transaction that is possibly occurred may result in unwanted loss for customers and potential larger costs for providers. Hence, the fourth hypothesis of the study is,

H4: There is a negative relationship between Risk and intention to use mobile money services.

### **3. Conceptual Framework**

Based on the literature study key attributes which are identified as the factors affecting the user's intention to use the mobile money service are awareness, knowledge, trust, risk, buyer characteristics and demographic factors. Using these factors conceptual framework is defined to study the factors affecting the adoption of mobile money services. Based on above relationships conceptual model is defined for this study is shown in Figure 1. As per the conceptual frame work, intention to use mobile money service is the dependent variable and awareness, knowledge, trust, risk and buyer characteristics consider as the independent variables.



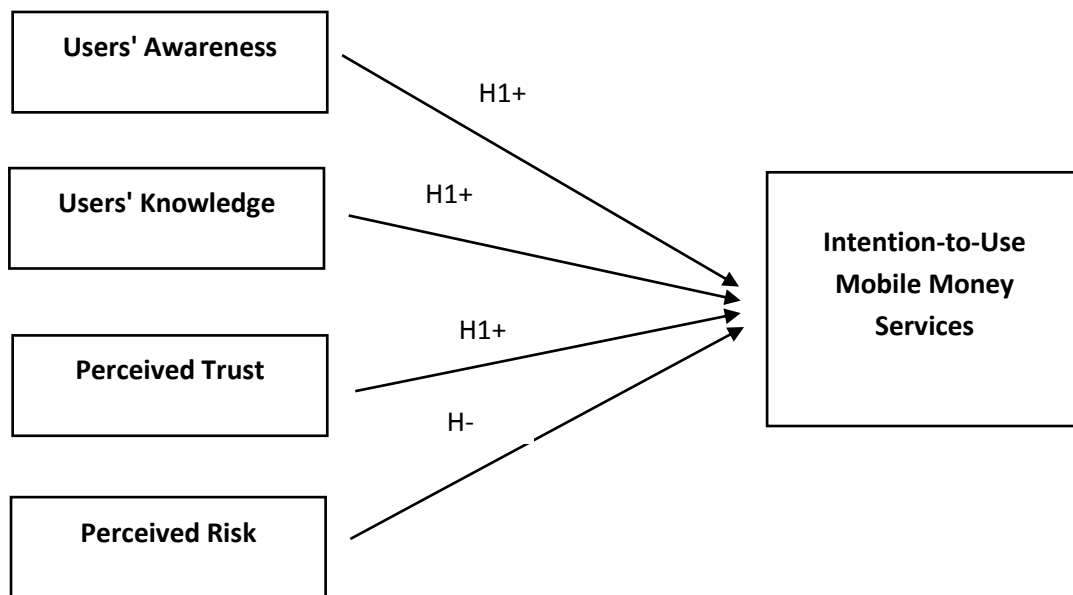


Figure 1. Conceptual Model

Source: Authors developed based on literature

### 3.1 Operationalization of Variables

Operationalization of the variables in order to develop the questionnaire was adopted from the literature. The variable awareness was measured through product experience, prior usage of similar service. The knowledge was operationalized as technology, performance, complexity and usage (Alkhunaizan & Love, 2012). Based on Paylou (2003) perceived trust was measured through brand image and brand loyalty whilst perceived risk was measured through financial risk, performance risk, time risk, psychological risk and privacy risk. Further, the intention to buy the product was used to measure the user intention (Hanzaee, & Adibifard, 2012).

## 4. Methods

This research follows the positivism philosophy by using the existing theories to develop the hypotheses (Saunders Lewis, & Thornhill, 2009). Aligning with the objective and considering the time and reachability limitations IT sector executives were selected as the population for the study. Based on the a mix of convenience and judgmental sampling techniques, 200 respondents were selected for the study. Data collection of this study is based on the survey. Web based Questionnaire was used to collect the primary data from the selected sample and the secondary data was also collected from the relevant electronic documents and prints. The structured questionnaire was the main data collection method used for collection of data related to awareness, knowledge, perceived trust and perceived risk in the mobile money services (Liu & Tai, 2016). Additionally, few focused group interviews were conducted with industry experts who are working closely with mobile money services to understand the procedure, history and future developments of relevant service. Data

analysis is carried out by SPSS software by using descriptive statistical analysis and inferential statistical analysis.

Structured Questions were developed in a way that it is easy to understand by the respondent and can be answered quick and efficient manner. Due to the nature of the selected sample population it was assumed that all respondents are familiar with the English language and are capable on answering the questions written in the English language, therefore questionnaire was developed only in the English language. The questionnaire consists of three main sections, in the first section brief introduction is given to the respondent about the scope of the research and explain the objective of the questionnaire, in second section questions are focused on collection demographic factors. The third section was intended to collect information related to the indicators developed based on the conceptual framework. Pilot test are used in survey-based research to identify the weaknesses and optimize the questionnaire, pilot test was carried out with selected set of participants and feedback was obtained from the users and based on that few modifications were performed to the wording of the questionnaire

Data analysis in this study was carried out using Statistical Package for Social Sciences (SPSS) software and is based on the descriptive and inferential statistics. After that, descriptive statistics are used to examine the characteristics of the sample. Then Pearson correlation and regression analysis are performed to test the hypotheses derived using the conceptual model and to measure the strength of the relationship. The Cronbach's alpha indicates how well the items in a set are positively correlated to one another. The closer the reliability reaches 1.0, the better the reliability and validity. Generally, reliabilities less than 0.6 are considered poor. Those in the range of 0.7 are acceptable and those over 0.8 good (Sekaran, 2008).

## **5. Data Analysis and Presentation**

### ***5.1 Demographic Profile of the Respondents***

As the first step of the data analysis, characteristics of respondents are explained using descriptive statistics. 48% of the sample is Male respondents and 52% are Female respondents. 48.5% of the respondents are between age of 20 to 30 years. Age group 31-40 years is the second highest group with 36.5% and age group 41-50 years are having 14% respondents. Finally, age group 51-60 has 1% of respondents. Only 5% of respondents have completed only secondary level of education. 42% of respondents are having diploma level as their highest level of education and majority of the respondents are having degree level of education which is 50.5%. Only 2.5% are having Post graduate level of education.

There are three categories of employees. There are 5% who are working in government sector and 15% are self-employed. Majority of 80% are working in private sector. Majority of the responders in the industry has more hundred thousand incomes per month (64%) and further the most number of incomes per month is more than two hundred thousand

(23.5%). It was seen that all the respondents in the collected data had used mobile phones at least one time.

### 5.2 Reliability and Validity Test

The reliability test was conducted to check whether the questions had been asked for the measuring variables are uni- directional if Cronbach's Alpha is greater than 0.7 (Sekaran, 2008). According to the independent variables of Awareness, Risk, Trust, Knowledge and Buyer Characteristic satisfy the condition while the alpha value for dependent variable of user intention just left behind for the value of 0.7 as two items were used to measure the variable. Factor analysis results have shown factor loadings greater than 0.5 for all elements. Hence, the constructs were considered as valid measures (Churchill, 1979). Further, it was reasonable to assume that all variables have face validity and construct validity as they were adapted from well-established measures in literature (Sekaran, 2008).

### 5.3 Descriptive Analysis

Table 1

*Descriptive analysis of Independent variables*

	N	Mean	Std. Deviation	Std. Error Mean
Awareness	200	2.9808	.61780	.04369
Risk	200	3.0041	.40453	.02860
Trust	200	2.9697	.53892	.03811
Knowledge	200	2.9742	.56923	.04025

Table 1 shows the descriptive statistics of independent variables. Based on the scale (1 – strongly disagree to 5- strongly agree) and the descriptive statistics, Independent variable “Risk” show 3.0041 mean value and a standard deviation of 0.4045. This implies that that most of the responses are within  $3.0041 \pm 0.4045$  (2.5996 – 3.4086 of the Likert scale). Further, the “Awareness” has scored mean value of 2.9808 with the standard deviation of 0.6178. This shows that the responses are within  $2.9808 \pm 0.6178$  (2.3631 – 3.5987 of the Likert scale). Independent variable “Trust” show 2.9697 mean value and a standard deviation of 0.5389. This implies that that most of the responses are within  $2.9697 \pm 0.5389$  (2.4308 – 3.5086 of the Likert scale). Finally, the independent variable “Knowledge” show 2.9742 mean value and a standard deviation of 0.5692. This implies that that most of the responses are within  $2.9742 \pm 0.5692$  (2.405 – 3.5434 of the Likert scale).

These descriptive statistics provide a general and primary description about the independent variables. It is essential to have inferential statistical analysis to test the hypothesis highlighted in the conceptual model. Hence, a further analysis was carried out on relationships among independent and dependent variables as depicted in the sections below.

Table 2  
*Correlation Matrix*

	User Intention :Pearson Correlation
Awareness	.947
Risk	-.955
Trust	.952
Knowledge	.915

Table 2 shows the correlation coefficients between dimensions of independent and dependent variables at 0.01 level significance. Four constructs showed significant positive association with user intention while Risk has shown a negative association with user intention. All five constructs have shown significant correlation while Risk has shown the association between user intentions, which record correlation as -0.955. The lowest correlation has shown the association between knowledge and user intention which record as 0.915 while highest positive correlation of 0.952 has reported for the association between Trust and user intention.

#### **5.4 Inferential Analysis: Test of Hypotheses**

End of the data collection, the inferential analysis is done to infer the relationships between two variables, differences in a variable among different subgroups and how several independent variables might explain the variance in the dependent variable (Sekaran 2008). Therefore, inferential analysis methods were used to reach conclusions that extend beyond the immediate data alone.

Table 3  
*Model Summary*

<b>Model Summary<sup>b</sup></b>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.968 <sup>a</sup>	.936	.935	.24731	1.962

a. Predictors: (Constant), Buyer Characteristic, Knowledge, Trust, Awareness, Risk

b. Dependent Variable: User Intention

Table 3 showing the coefficient of determination, the model predicting the impact of Awareness, Risk, trust and Knowledge on user intention has a R<sup>2</sup> of 0.936. This indicates that 93.6 percent of total variance of user intention is explained by the independent variables

Table 4  
*Coefficients of Table*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.775	1.183		1.500	.035
Awareness	.336	.124	.214	2.717	.007
Risk	-.667	.234	-.279	-2.845	.005
Trust	.607	.133	.338	4.567	.000
Knowledge	.147	.110	.087	1.346	.010

Table 4 shows that the beta value of the Awareness is 0.214 and significant at 0.05 level. Hence, the impact of Awareness on user intention of usage of mobile money service is significant at 0.05. Therefore, H1 is accepted. This implies that higher the customer awareness, higher intention to use the mobile money service by Sri Lankan customers.

The beta value of Knowledge is 0.087 and significant at 0.05 level. Hence, the impact of Knowledge on user intention of usage of mobile money service is significant at 0.05. Therefore, H2 is accepted. As a result, higher Knowledge of users will increase the user intention of use the mobile money service in Sri Lanka.

The independent variable Trust has shown the beta value of 0.338 and is significant at 0.05 level. Hence, the impact of Trust on user intention of usage of mobile money service is significant at 0.05. Therefore, H3 is accepted. As a result, higher Trust of users will increase the user intention of use the mobile money service in Sri Lanka.

The beta value of the Risk is -0.279 and significant at 0.05 level. Hence, the impact of Risk on user intention of usage of mobile money service is significant at 0.05. Therefore, H4 is accepted. As a result, higher risk will reduce the user intention of use the mobile money service in Sri Lanka.

## 5.5 Discussion of Findings

Table 6  
*Summary of the Hypothesis testing*

Hypothesis	P_ Value	Decision
H1: There is a positive relationship between Awareness and intention to use mobile money services	0.000(0.214)	Accepted
H2: There is a positive relationship between Knowledge and intention to use mobile money services	0.000(0.087)	Accepted
H3: There is a positive relationship between Trust and intention to use mobile money services	0.000(0.338)	Accepted
H4: There is a negative relationship between Risk and intention to use mobile money services	0.000(-0.279)	Accepted

The multiple regression analysis has indicated that there is a positive relationship between Awareness of the users and their intention to use mobile money service in Sri Lanka. These findings are consistent with the findings of Laforet and Li (2005) and Tobbin (2013). This is justifiable because the awareness provides the familiarity about the existence of the product that they wish to buy in future. Further, this study provides evidence that there is a positive relationship between users' knowledge and intention- to -use mobile money services. Similarly, Marcketti and Shelley (2009) have identified a positive relationship between knowledge and user intention. Explaining the situation, Garcia-Murillo and Annabi, (2002) showed that knowledge will increase the efficiency and avoid the risks and thereby leading to faster and easier use of service where people's use intention will get affected.

On the other hand, similar to the findings of Gefen et al., (2003), it was evidenced that there is a positive relationship between Trust and intention-to-use of mobile money services. In the context of mobile technology, risk is expected and acceptable; it is what customers have to take at a certain level of danger when trying a new service (Sweeney et al., 1999). Similar to the findings, this study highlighted that there is a negative relationship between Risk and intention to use mobile money services. This is getting critical as users have to reveal their personal information to a third party and they are very sensitive when revealing the financial information for an unknown party.

## **6. Conclusion and contributions**

The study was carried out to analyze the factors affecting the adoption of the mobile money service in Sri Lanka. There were four reasons identified based on literature and conceptual framework was developed based on that. Awareness, Knowledge, Trust and Risk are recognized as the main contributors to the user intention of using mobile money service. Based on the literature survey it was expected that all the factors are positively influencing the user intention except for the risk which is having a negative influence. It was identified that in the sample current level of awareness, knowledge, trust and risk are below the neutral level of 3 on the five point Likert scale.

Four factors which were identified through literature survey were tested using hypotheses to examine the relationships that these factors have on the user intention. According to the findings, all the hypotheses are accepted as p values are less than 0.05 level and it concludes that Awareness, knowledge and Trust are positively related with the user intention while risk is negatively related with the user intention.

### **6.1 Recommendations**

Analysis results show that there is a positive relationship between users' awareness, knowledge, trust and users' intention. Therefore, improving these factors would attract more users to use the services in future. Also, the study reveals that there is a negative relationship with the perceived risk and user acceptance of the mobile money services. Therefore, steps need to be taken to minimize the risk factors for this service. Development

of the infrastructure to safeguard the personal information of the users as well as safeguard transactions are the key areas that need to be addressed to minimize the risk.

Awareness is identified as one of the factors which are affecting the adoption of mobile money service. Being a new to the market it is important to make sure consumers are aware of the existence of the product. Operators must spend extra attention on making the individuals updated on the new products or the services introduced by them. Increasing efforts on marketing are needed to take the product existence to the customers. Media is the widely used method for marketing over the years which helps companies to spread products to their customers. However, media like newspaper or magazines are going out of service with the invention of technologies. Advertisement in television is still effective since people are still watching the television programs in their free time. However, online marketing has been booming up since last few years and becoming the most effective as well as cost-efficient method which is being used by most enterprises for their main tool of marketing. Social media such as Facebook, Twitter, Instagram, WhatsApp offers an excellent platform to build the product awareness to consumers with a lesser amount of cost compared to the television advertisement. These social media platforms are very popular among millennials, which will become the next set of consumers. Offering free trial usage period is also used by many service providers or manufacturers to increase the product awareness among the consumers, this concept has been widely used in the software industry and manufacturing industry to make the product popular among the society. Providing free usage for 30 days or free samples have proven effective in the past. Therefore, the same concept can be used to increase the awareness of mobile money services. Since the mobile operators already have an established customer base, they can offer free registration and service usage for 30 days period for their existing customers.

The next factor identified through the study is the knowledge of the new product. It was proven that increasing the product knowledge have a positive relationship with the user intent on adopting the mobile money service. Therefore, it is recommended to plan to increase the knowledge of this service. There are four components identified which have a direct impact on product knowledge. Technology, Performance, Usage and Complexity. Arranging essential training, publish simple user manuals should be performed to improve the user's knowledge of the service. In addition to that service personals and helpdesk personal must be able to answer any questions raised by the users during the product use. Having a complex operational procedure will make it difficult for the user to understand the usage of the new product. Therefore, making the user interface simple will be helpful for attracting the users, especially if the users have lower capabilities in understanding the complex systems.

As per the objectives of the study, it was identified that trust plays a vital role in adopting new products. Higher the confidence built on the new service by the users there is a high potential for accepting the service by the users. Brand image and Brand loyalty are the main components that need to be improved to improve the trust on new product. Launching

loyalty programs and provide benefits to users who are staying on a long-term basis with the operator is suggested to improve the loyalty as well as brand image. Prioritizing the customer base and provide discounts, less service charges, priority service queues in service centres are few of the activities that can be used to build loyal customers.

The perceived risk is the only factor which was identified as having a negative relationship with the users' intention to use the mobile money services. Thus, service providers should take necessary steps to make this component as lower as possible. In current commercial versions, unauthorized access is prevented by means of a PIN code which is known only to the user. However, this PIN code is having only 4 digits and can be easily hacked by a hacker due to the low complexity. Having complex string with numeric and alphanumeric characters are the standard policy applicable for passwords. Therefore, making the password complex will reduce the vulnerability of the service access. Protecting privacy information of the user is the key area which needs to be amplified by mobile operators, since this service will involve financial transactions, confidentiality must be maintained with highest standards.

Every new product has its advantages as well as disadvantages. This is also applicable for the mobile money services as well, as it can be used for making an illegal financial transaction in the black market. The government needs to interfere to minimize such usage of these services. Rather than traditional banknotes which leave no trail to track such transactions, electronic money can be tracked with the right set of skills and equipment. Therefore, the government has a responsibility to empower the law enforcement agencies with a right set of skills to prevent the illegal use of mobile money by criminals. By focusing on exciting the stated actions it is expected to increase the positive relationships and decrease the negative relationship on user intention, to improve the user adoption of mobile money service.

## ***6.2 Limitations and Future Research***

Even though this study contributes practically, following limitations were identified. This study is limited to the IT executives in the Colombo district only, and this is due to the time and resources limitation in collecting the data from other geographical areas. Therefore, it is recommended to undertake the similar studies covering all the districts will provide better understanding about the user intention of the mobile money service. Further, it can be considering the geographic differences of user and their intention to use of mobile money services. Information was collected only from executive level users but most of propels are busy and they reluctant to give some information. User intention based on demographic factors were not analysed during the study, hence the scope of the research can be further extended in this area. The higher value of R2 should be interpreted cautiously and future studies can consider incorporating possible variables that might mediate and moderator these direct relationships.



## References

- Alkhunaizan, A., & Love, S. (2012). What drives mobile commerce? An empirical evaluation of the revised UTAUT model. *International Journal of Management and Marketing Academy*, 2(1), 82–99.
- Arabzadeh, E., & Aghaeian, S. (2015). The relationship of sages and management of credit cards on lifestyles and purchasing behaviors of cardholders. *International Journal of Management Research and Business Strategy*, 4(3).
- Barnes, S. J., & Corbitt, B. (2003). Mobile banking: Concept and potential. *International Journal of Mobile Communications*, 1, 273–288.
- Bhanot, D., Bapat, V., & Bera, S. (2012). Studying financial inclusion in north-east India. *International Journal of Bank Marketing*, 30(6), 465–484.
- Bhattacharjee, A. (2002). Individual trust in online firms: Scale development and initial test. *Journal of Management Information Systems*, 19(1), 211–241.
- Biemans, W. G., Griffin, A., & Moenaert, R. K. (2016). Perspective: New service development: How the field developed, its current status and recommendations for moving the field forward. *Journal of Product Innovation Management*, 33(4), 382–397.
- Castri, S. (2013). Enabling mobile money policies in Sri Lanka the rise of eZ Cash. Retrieved from: <https://www.gsma.com/mobilefordevelopment/programme/mobile-money/enabling-mobile-money-policies-in-sri-lanka-the-rise-of-ez-cash>
- Chen, C. (2013). Perceived risk, usage frequency of mobile banking services. *Managing Service Quality: An International Journal*, 23(5), 410–436.
- Churchill, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16(1), 64–73.
- Chung, N., & Kwon, S. J. (2009). The effect of customers' mobile experience and technical support on the intention to use mobile banking. *Cyber Psychology and Behavior*, 12, 539–543.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information. *MIS Quarterly*, 13(3), 318–340.
- Dissanayeke U, Hewagamage K. P, Ramberg R, & Wikramanayake G. N. (2014). Study to initiate mobile learning among a group of young farmers from Kandy district: An Activity Theory based approach. *Tropical Agricultural Research*, 26(1), 26–38.
- Espada, J. P., Griffin, K. W., González, M. T., & Orgilés, M. (2015). Predicting alcohol-impaired driving among Spanish youth with the theory of reasoned action. *The Spanish journal of psychology*, 18.
- Fishbein, M. & Ajzen, I. (1975). *Belief, attitude, intention and behaviour: An introduction to theory and research* reading, MA: Addison-Wesley.
- Ganesan, S. (1994). Determinants of long-term orientation in buyer-seller relationships, *Journal of Marketing*, 58(2), 1–19.
- Garcia-Murillo, M., & Annabi, H. (2002). Customer knowledge management. *Journal of the Operational Research Society*, 53, 875–884.

- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, 27(1), 51–90.
- Hall, B. H., & Khan, B. (2003). Adoption of new technology. CA; Department of Economics, University of California.
- Hanzaee, K. H., & Adibifard, S. (2012). New product specification and purchase intention: Validating and developing a native scale (NPPI-I). *Middle-East Journal of Scientific Research*, 12(4), 484–489.7
- Havlena, W. J., & DeSarbo, W. S. (1991). On the measurement of perceived consumer risk. *Decision Sciences*, 22(4), 927–939.
- Kim, C., Mirusmonov, M., & Lee, I. (2010). An empirical examination of factors influencing the intention to use mobile payment. *Computers in Human Behavior*, 26(3), 310–322.
- Kimenyi, S. M., & Ndung'u, S. N. (2009). Expanding the financial services frontier: Lessons from mobile phone banking in Kenya. Washington:Brookings Institution.
- Kotler, P. &Armstrong, G. (2010). Principles of marketing (13th ed.). New Jersey: Pearson Education Inc.
- Laforet, S., & Li, X. (2005). Consumers' attitudes towards online and mobile banking in China. *International Journal of Bank Marketing*, 23(5), 362–380.
- Li, F., & Whalley, J. (2002). Deconstruction of the telecommunications industry: From value chains to value networks. *Telecommunications policy*, 26(9-10), 451–472.
- Liu, G. & Tai, P. T. (2016). A study of factors affecting the intention to use mobile payment services in Vietnam. *Economics World*, 4(6), 249–273.
- Marcketti, S., & Shelley, M. (2009). Consumer concern, knowledge and attitude towards counterfeit apparel products. *International Journal of Consumer Studies*, 33(3), 327–337.
- Munoz, J. L., Esparza, O., Aguilar, M., Carrascal, V., & Forne, J. (2010). Reliable dynamic source routing for video-streaming over mobile ad hoc networks. *Computers Networks*, 54(1), 79–96.
- Nyambura, M., Mwololo, T., Winnie, W., Nyambura, M., Waema, T. M., & Mitullah, W. V. (2013). Factors influencing usage of new technologies in low-income households in Kenya: The case of Nairobi. *Info*, 14(4), 52–64doi:10.1108/14636691211240888
- Pavlou, P. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7, 69–103.
- Peter, J. P., & Tarpey, L. Z. S. (1975). A comparative analysis of three consumer decision strategies. *Journal of Consumer Research*, 2, 29–37.
- Rogers, E. M. (1962). Diffusion of innovations. New York: The Free Press.
- Samarajiva, R., & Dokeniya, A. (2005). Regulation and investment: Sri Lankan case study. Stimulating Investment in Network Development: Roles for Regulation, 141.
- Saunders, M, Lewis, P., & Thornhill, A. (2009). Research methods for business students. London, Financial Times Prentice Hall.

- Sayid, O., Echchabi, A., & Aziz, H. A. (2012). Investigating mobile money acceptance in Somalia: An empirical study. *Pakistan Journal of Commerce and Social Sciences*, 6(2), 269.
- Schreier, M. & Prüggl, R. W. (2008). Extending lead user theory: Antecedents and consequences of consumers' lead useriness. *Journal of Product Innovation Management*, 25(4), 331–346.
- Sekaran, U. (2008). *Research methods for business* (4th ed.). New York: Wiley.
- Siau, K., & Shen, Z. (2002). Building consumer trust in mobile commerce. *Communications of the ACM*, 46(4), 91–94.
- Silva, K. A., & Yapa, S. T. W. S. (2009). Customer retention: With special reference to telecommunication industry in Sri Lanka. Paper presented at International Conference on Business and Information, Kuala Lumpur.
- Sweeney, J. C., Soutar, G. N., & Johnson, L. W. (1999). The role of perceived risk in the quality-value relationship: A study in a retail environment. *Journal of Retailing*, 75(1), 77–105.
- Telecommunication Regulatory Commission of Sri Lanka (TRCSL). (2016). *Telecommunication Regulatory Commission of Sri Lanka*.
- Tobbin, P. (2013). Towards a model of adoption in mobile banking by the unbanked: A qualitative study. *Info*, 14(5), 74–88.
- Tsiakis, T & Sthephanides, G. (2005). The concept of security and trust in electronic payments. *Computers and Security*, 24, 10–15.
- Wears, R. L., & Berg, M. (2005). Computer technology and clinical work: Still waiting for Godot. *Jama*, 293(10), 1261–1263.
- Wessels, L., & Drennan, J. (2010). An investigation of consumer acceptance of M-banking. *International Journal of Bank Marketing*, 28(7), 547–568.
- Zhou, T. (2011). An empirical examination of initial trust in mobile banking. *Internet Research*, 21(5), 527–540

## Efficiency Of Sewing Machine Operators: An Interpretive Structural Modeling (ISM) Based Approach

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### Abstract

The primary objective of the study was to develop a structural model of the factors that influence sewing efficiency of the machine operators in Sri Lankan garment industry using the Interpretive Structural Modeling (ISM) technique. Here, factors were found through the literature survey and interviewing 20 garment industry experts. Then dominant barriers were decided through a questionnaire survey among 40 such experts. While, structured interviews were conducted with 25 garment industry experts to identify the interrelationships among these dominant factors. MICMAC analysis was conducted to identify the dependence and driving power of the factors. Here input delays were found as an autonomous variable. Then skill of the machine operators, work in process inventories, absenteeism of the machine operator, physical working environment, satisfaction of machine operators, attitudes of the machine operators, standard allowable minutes setting were concluded as the linkage variables. Further, sewing machine breakdowns, reworks in sewing lines, turnover of the machine operator were found as the dependent variables. Ultimately quality of supervision, training and development process of the organization, corporate culture, experience of the machine operator, garment construction variations, line balancing, educational level of the machine operators were concluded as the independent factors. Similarly, a hierarchical Interpretive Structural Model which consisted of four levels were developed to conclude the interrelationships among the factors that affect efficiency of sewing machine operators in Sri Lankan garment industry.

**Keywords.** Sewing Machine Operators, Efficiency, Garment Industry

### 1. Background of the study

The garment industry is significantly labour oriented. Due to the increasing labour wage in the developed countries, the apparel manufacturing has been migrated from the high wage developed world to low wage developing countries (Bheda et al. 2003). Even though the labor cost is cheaper than in developed countries, due to the specific market nature of the garment industries, for example, the short production life cycle, high volatility, low predictability, high level of impulse purchase and the requirement of quick market response,

the garment industry in developing countries is facing several greatest challenges these days (Daly & Towers 2004). In the Sri Lankan context lack of skilled labor, heavy dependence on a few export markets, insufficient product diversification, heavy dependence on imported raw material and accessories, high average hourly wage rates in relation to Asian competitors, low labor productivity compared to competitors, rigidity in the country's labor laws, longer lead time, variations in quality, slower technological development and issues related to trade agreements are some of the major issues that limit ability of the industry to face those challenges (Deerasinghe, 2009). Among these issues quality, lead time and cost are foremost to Sri Lankan garment industry, because they are the key parameters that need to be considered to satisfy its western buyers.

In point of fact, higher lead time, cost and poor quality emphasize the requirement of the productivity improvement in the industry. Then the lead time and cost reduction emphasize the requirement of efficiency improvement. Therefore, improving the efficiency is the decisive requirement in Sri Lankan garment industry. As explained by Oakland (2003) efficiency is an issue of process input and shows or used to measure the performance of a particular machine, employee, workstation, line, section, plant and industry, etc and it is concerned with the percentage resource actually used over the resources that were planned to be used.

The production process of a garment is separated into four main phases: designing/clothing pattern generation, fabric cutting, sewing, and ironing/ packing (Chen et al. 2014). Most of Sri Lankan garment factories operate at 80% - 90% efficiency level (Deerasinghe, 2009). In the garment manufacturing process sewing is the most critical function (since it assembles what customer asks) and it is the area efficiency problems are frequent as it is wholly labour oriented. Most the time, failure to meet delivery time is because of stitching. Stitching operations (with respect to cutting and finishing) needs high skill as well as quality work, because of the difficulty associated with repairing of products sewed to wrong specifications (Paneru, 2011). An operator with higher efficiency produces more garments than an operator with lower efficiency within the same time frame. When operators work with higher efficiency, manufacturing cost of the factory decreases. Also, factory capacity is estimated according to the operator efficiency which decides the line efficiency, overall efficiency of the particular garment factory and ultimately efficiency in the whole the garment industry. Actually, the sewing machine operator plays the central role in the sewing operation, because even with sophisticated machinery only their hands can create what the customer asks (Dragcevic, 2011). Hence the machine operator is the key factor that should be considered in the efficiency improvement efforts in the garment industry. Then improving the sewing machine operators' efficiency is the decisive requirement of Sri Lankan apparel industry (Deerasinghe, 2009)

According to the opinions of apparel industry experts, despite the size, most of the garment factories face the problem of low efficiency in sewing and majority of them operates at 60%-70% sewing efficiency level. The following paragraph presents a summary of opinions of 20 garment industry specialists about the poor sewing efficiency issue in the Sri Lankan garment industry.

“Sewing operation in the garment industry is dominated by females. Because, they are more patient and nimbler than men, controllable than men, less mobile and less likely to join a trade union than men and better in sewing because this job tallies with their traditional jobs. Almost all profit of any garment factory depends on the hands and fingers of these operators. Skillful highly efficient sewing operators are in high demand in this industry. But in Sri Lanka most of the operators are lacking in skill. Majority of the garment factories in Sri Lanka, operates below the targeted sewing efficiency level (this level is different from factory to factory, but most of the factories target 60%-70% efficiency level). Sewing process is wholly labor oriented. So, machine operators are the key factor that reduces the sewing efficiency in the industry. Most of the operators are highly inefficient at the beginning of a particular garment style and reach the targeted efficiency level in the last pieces of that particular style. But there are some operators who fail to reach the targeted efficiency level even in last pieces. Style changes are inherent in the garment industry as it is a fashionable product. So, the industry finds it essential to have operators who can sew any garment style with the expected efficiency level. Specially, the garment factories in the fashion wear category frequently face the problem of style changes. Actually, due to the poor sewing efficiency (it denotes increased sewing cycle time) overtime requirement has been increased to achieve the production targets and customer due dates. On the other hand, it has resulted in increase of cost of manufacturing and failure to achieve the profit targets of apparel manufacturing companies. Importantly poor sewing efficiency has partially contributed to the poor due date performance of Sri Lanka apparel companies. Due to these reasons industry is required to improve the sewing efficiency for reducing the lead time and its manufacturing cost”.

As the industry experts and previous research findings stressed the poor sewing efficiency is a significant problem to the Sri Lankan garment industry. Accordingly, this study investigated “what are the causes that affect efficiency of sewing machine operators in the Sri Lankan Garment Industry” as the ground work for improving the sewing efficiency in Sri Lankan garment industry.

Then the primary objective of the study was to develop a structural model of the factors that influence efficiency of the sewing machine operators in Sri Lankan garment industry. Identification of the dominant factors that influence sewing efficiency of the machine operators in Sri Lankan garment industry, determine the interrelationships among these

dominant factors and observe their driving and dependence power using MICMAC analysis were the key research stages followed to achieve the key research objective.

## **2. Literature review**

### **2.1. Standard allowed minute (SAM)**

According to Telsang (2006) SAM means how much time is required to make one complete unit of product including allowances. Allowed Minute (SAM) is the time value arrived at for a task based on the average rate of output which qualified workers will naturally achieve without over exertion provided that they know and adhere to the specified method and provided that they are motivated to apply themselves to their work (International Labor Office, n.d.). Some of the purposes of using SAM as a parameter are measuring factory or individual operator performance, measuring labor cost and associated cost ratios, calculating operators' payroll and incentive amount, production scheduling and line balancing. Generally, a garment manufacturing company is difficult to manage and control the shop floor without using SAM of the garment styles and individual operations. SAM determination is a key responsibility of the operations department and if an infeasible SAM was determined, the lines would show a big efficiency gap every day.

### **2.2. Machine breakdowns**

Sewing machine breakdown is one of the main problems for the workers in the production process. The consistency of sewing machines is important because, if any one of the sewing machines is down the entire production may be nil (Bisen & Srivastava n.d. as cited in Paneru, 2011). Sewing machine breakdowns mainly affect for the production process and it affects efficiency reduction, production delays and causes poor quality of production (Hiba 1988). Waiting (waiting time) that leads to efficiency reduction can occur due to unmatched worker /machine performance, machine breakdowns, lack of work knowledge and stock outs etc (Paneru, 2011). Machine break-downs result in untimely closure of the plant and very poor production performance (Tanwari et al., 2009). Critical rates of machine breakdown have reduced the system throughput and causes delays in the production systems. Besides, machines are key elements in manufacturing systems and their breakdown can dramatically affect system performance measures.

### **2.3. Experience**

Most female garment workers are young, unmarried, with little education, of rural origin and from poor families. So, women who work in the garment industry have had no previous work experience (operators who don't have any experience in the garment sector, especially in sewing operation) affect to the efficiency level of the factory (Majumder &

Begum, 2000). It emphasizes that the efficiency of the garment industry is partly depend on the experience of the machine operators.

#### ***2.4. Educational level***

Individuals with higher levels of education have both greater fluid and crystallized intelligence (Ceci, 1991; Neisser et al., 1996 as cited in Thomas & Daniel, 2009). Fluid intelligence refers to the capacity of working memory, abstract reasoning, attention, and processing complex information, whereas crystallized intelligence refers to general knowledge, extent of vocabulary, and verbal comprehension. By and large, intelligence and education level are positively and significantly correlated. (Kaufman, 1990; Trusty & Niles, 2004 as cited in Thomas & Daniel, 2009). Actually, the sewing machine operators need to retain some work instructions in their mind for continuing the sewing operation without defects and machine breakdowns which diminish the sewing efficiency. In this sense, educated machine operators will demonstrate a high sewing efficiency than the low educated operators.

#### ***2.5. Machine operator's skill***

Lack of skilled labor is one of the major challenges facing the Sri Lankan Apparel Industry. Lack of skilled labor normally affects the efficiency level of factories (Dheerasinghe, 2009). Lack of skills in as operator may create a handling problem of the fabric parts in the case of garment manufacturing. Excessive or improper handling and positioning of the fabric parts during sewing lead to seam puckering. Furthermore, if the operator is unable to handle the sewing machine properly, there is a chance of seam damage due to frequent needle breakages (Solinger et al., as cited in Mandal 2008). Lack of work knowledge and skills of operators results in efficiency reduction in a plant (Paneru, 2011).

#### ***2.6. Operators' job satisfaction***

A satisfied worker is more likely to be creative, flexible, innovative and loyal. Job satisfaction is a product of the events and conditions that people experience on their jobs. Job satisfaction benefits the organization includes reduction in complaints and grievances, absenteeism, turnover, and termination; as well as improved punctuality and worker morale (Brown, 1996 as cited in Ahamed, 2014). If a person's work is interesting, pay is fair, promotional opportunities are excellent, his or her supervisor is helpful and co-workers are friendly it helps to satisfy the worker with their job. Furthermore, job satisfaction benefits the organization including reduction in complaints and grievances, absenteeism, turnover as well as improved productivity, work morale and efficiency (Brief, 2002 as cited in Ahamed, 2014).



### **2.7. Operators' absenteeism**

Absenteeism refers to unscheduled absence of employees (Jones et al., 2009). Absenteeism and plant-level efficiency are negatively associated when production processes are not highly automated, those who are absent are central to the production process, and absences cannot be anticipated (Moch and Fitzgibbons, 1982). Like quitting rates, high rates of absenteeism are also unwanted by the organization because it imposes a number of costs on the employer, such as the direct loss of output from absent employees, overtime for other employees to fill in, temporary helping and extra management costs (Oi, 1962 as cited in Luu, 2011). Grievance rates, absenteeism and contract negotiation behavior is all negatively and significantly associated with product quality (Katz, et al. 1983 as cited in Luu, 2011). On the negative side, operator's absenteeism causes co-workers additional work (which is perceived as a burden, not a benefit) and overtime (which may be viewed as negative when it interferes with nonworking responsibilities), accidents can occur when the co-worker is confronted with an unfamiliar machine or set of job activities. Hence the absenteeism of a co-worker in a production line results to reduction of the efficiency in that line.

### **2.8. Rework**

Reworks in the garments industry is a common works that hampers the smooth production rate and focus poor quality products having an impact on overall factory economy. Minimization of reworks is a must in quality and productivity improvement. Rework is a vital issue for poor quality product and low production rate. Reworks are the non -productive activities focusing on any activity that customer are not willing to pay for. Non-productive activities describe that the customer does not consider as adding value to his product (Islam et al., 2012). When operator makes defective products, quality section of the line checks it out and resend the defective item to the respective operator. The operator takes time to make the correction of this product. For this reason, in this process the bottleneck may be happened which limits the total production and target of line and also to make the shipment delayed (Ahmad et al., 2012).

### **2.9. Physical work environment and efficiency**

The physical aspects of a workplace environment can have a direct impact on the productivity, health and safety, comfort, concentration, job satisfaction and morale of the people within it. Important factors in the work environment that should be considered include building design and age, workplace layout, workstation set-up, furniture and equipment design and quality, space, temperature, ventilation, lighting, noise, vibration, radiation, air quality (Work Safe Australia (NOHSC), 1989). A well-designed working environment is very important for a productive work. Each organization should be designed

their working environment to suit the requirements of workers. Organized working place minimizes material handling, improves efficiency, reduce worker exhaustion and improve the worker's attendance, job satisfaction, motivation, moral and health. Proper layout of the organization reduces accidents and promotes health and safety for the workers. Better lighting system of the organization increases productivity and reduces difficulties and eye strain for workers. It is very important for any organization to improve the efficiency of works (Hiba,1988).

### **2.10. Supervision and efficiency**

Supervisors' behavior affects quality, handling time, schedule adherence and operators' absences in the production floor (Center for Human Resources, Wharton School of the University of Pennsylvania n.d.). So, the way of supervision in a plant may results on the efficiency and productivity of it.

## **3. Methodology**

The aim of the study was to develop a structural model of the factors that influence sewing efficiency of the machine operators in Sri Lankan garment industry. The Interpretive Structural Modeling (ISM) Technique was employed for achieving the research objective.

ISM was originated by J. Warfield in 1973 for studying the multifaceted socioeconomic systems. "The ISM process transforms unclear, poorly articulated mental models of systems into a visible and well-defined model" (Warfield, 1974). "ISM is found to be a well-proven and widely accepted system modelling approach for analyzing the interrelationships between the variables influencing the system" (Sage, 1997).

Correspondingly, ISM process stages comprise: identification of elements, establishing a contextual relationship between elements, developing a structural self-interaction matrix (SSIM) of elements, developing a reachability matrix from the SSIM, partitioning of a reachability matrix into different levels, draw a directed graph (DIGRAPH) to remove transitive links, conversion of the resultant digraph into an ISM and review of the ISM model to check for conceptual inconsistency (Warfield, 1975).

As the figure 1 demonstrates, in developing the structural model of factors that influence sewing efficiency of the machine operators in Sri Lankan garment industry, at the start, the researcher identified numerous factors that affect sewing efficiency of machine operators through the literature survey and interviewing 20 garment industry experts. An ISM model can't represent all the factors that affect research problem. Hence a questionnaire survey among 40 garment industry experts was conducted to identify the key barriers out of the barrier list which was found through reviewing the literature and interviewing the experts.

The most important stage of the ISM is to identification of the interrelationships among the most critical factors that affect research issue and it was done through the knowledge of experts in the relevant field. Then structured interviews were conducted with 25 experts from academia and industry, to identify the interrelationships among the key factors. As ISM methodology recommends, a structural self-interaction matrix (SSIM) was used to collect expert opinions on the relationships among the key factors. Then classification of these factors was carried out based upon dependence and driving power with the help of MICMAC analysis. Ultimately ISM based model of these factors was developed through analyzing the interrelationships emphasized in the SSIM by the experts.

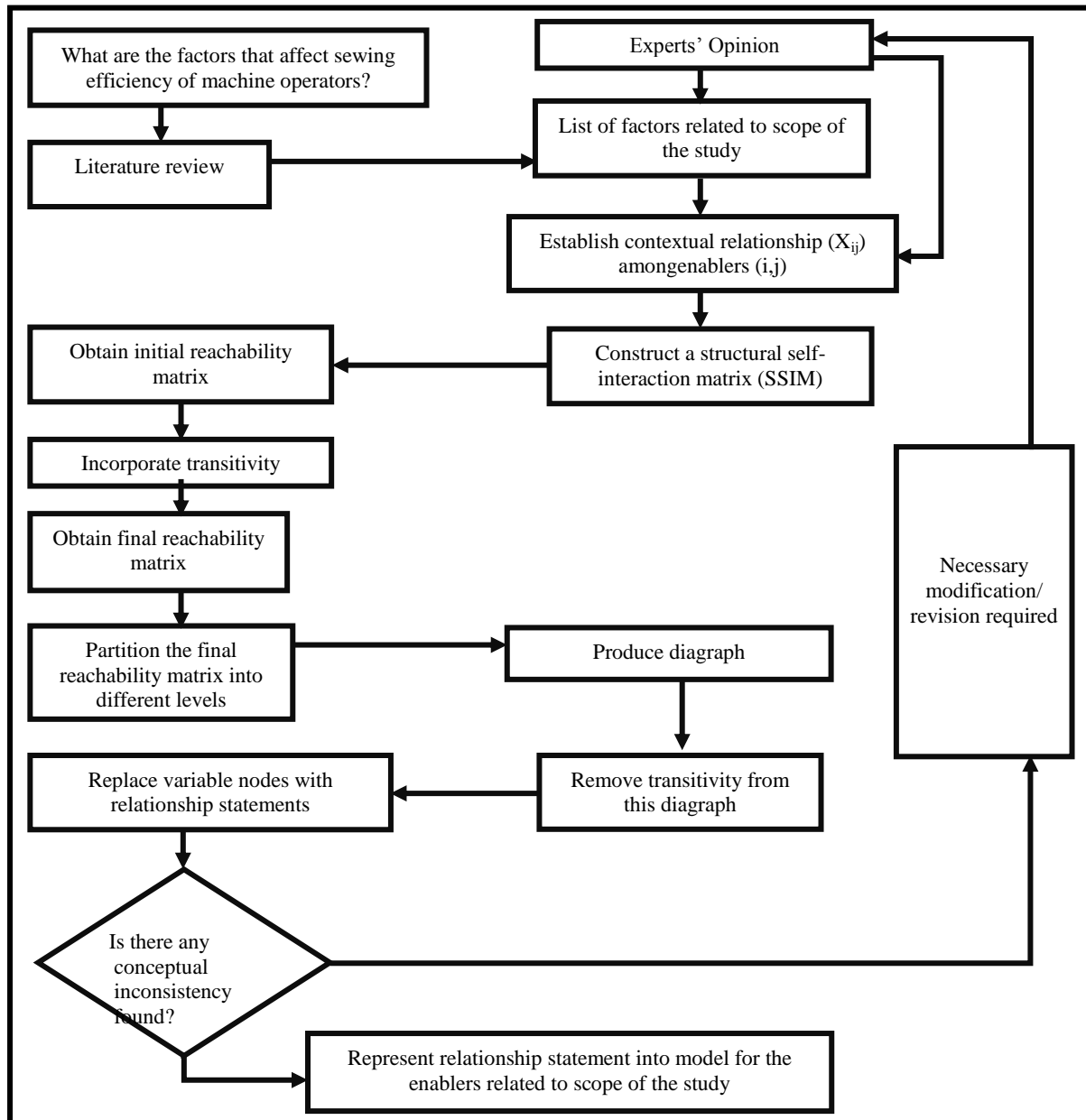


Figure 1. Flow of the ISM Process

Source: (Warfield, 1975)

All the experts who possess a knowledge related to the sewing efficiency were considered as the population of this study and concerning the data requirements the it utilized three purposively selected samples. The first sample which consisted of 20 experts were utilized to identify the numerous factors that affect sewing efficiency of machine operators. The second sample which consisted of 40 experts were used to determine the most critical factors that affect sewing efficiency. Then for identify the interrelationships among the most critical factors, that affect sewing efficiency, the third sample which consisted of 25 experts were utilized.

#### 4. Data analysis and presentation

##### 4.1. Dominant factors affect sewing efficiency of machine operators

For achieving the research objective, at the outset through the literature survey and by discussing with 20 experts from industry, the factors that affect sewing efficiency of the machine operators were identified. The table 1 demonstrate the all the factors that affect the sewing operators' efficiency which were found through literature survey and interviewing. Even though a massive number of factors identified, the researcher was difficult to integrate all these factors in the structural model. Hence in the next stage, the researcher wanted to select most dominant factors out of the total list. Here a questionnaire was developed including factors that affect efficiency of the machine operators and it was circulated among 40 garment industry experts. Here these experts were instructed to rank those factors allocating marks according to its significance. Table 1 shows the allocated total marks by the experts for each factor that affect sewing efficiency of machine operators also.

Table 1.

*Factors affect sewing efficiency of machine operators*

No	Factor	Definition	Source	Score	Rank
1	Skill of the machine operators	Operators' ability to do the sewing function well or how expertise the operator for the sewing function.	(Dheerasinghe, 2009; Paneru, 2011).	184	1
2	Experience of the machine operator	How much is the operators' practical contact with the sewing function	(Majumder & Begum, 2000).	171	2
3	Garment construction variations	The variety of the specifications and features in a particular garment item	Interviews	165	3
4	Work in process	Partially finished garment items which are waiting for completion	Interviews	163	4

	inventories				
5	Sewing machine breakdowns	A failure of a sewing machine to function the sewing properly	(Hiba, 1988; Tanwari et al., 2009).	163	4
6	Reworks in sewing lines	Re-processing a defective garment item to achieve the designed specifications and features	(Islam et al., 2012; Ahmad et al., 2012).	158	5
7	Quality of supervision	The way of observe and direct the work of sewing machine operators	(Center for Human Resources, n.d.)	154	6
8	Line balancing	Leveling the workload across all processes in a cell or value stream to remove bottlenecks and excess capacity.	Interviews	148	7
9	Absenteeism of the machine operator	Voluntary nonattendance at work, without valid reason	(Jones et al., 2009; Moch & Fitzgibbons, 1982).	148	7
10	Turnover of the machine operator	The number or percentage of workers who leave an organization and are replaced by new <i>employees</i> .	Interviews	147	8
11	Training and development process of the organization	Formal, ongoing efforts that are made within organizations to improve the performance and self-fulfillment of their employees through a variety of educational methods and programs.	Interviews	140	9
12	Physical working environment	The physical environment includes components of the tangible workplace environment that comprise employee's working conditions	(Hiba, 1988).	138	10
13	Corporate culture	<i>Corporate culture</i> refers to the shared values, attitudes, standards, and beliefs that characterize members of an organization	Interviews	136	11
14	Satisfaction	How content or <i>satisfied the</i>	(Brown,	135	12

	of machine operators	<i>operators</i> with their jobs.	1996; Brief, 2002)		
15	Input delays	Delay of raw material that are required for the sewing function	Interviews	132	13
16	Quality of sewing materials	How raw material meets the agreed specifications	Interviews	132	13
17	Attitudes of the machine operators	A settled way of thinking or feeling about the organization by operators.	Interviews	130	14
18	Educational level of the machine operators	Progression from very elementary to more complicated learning experience	(Ceci, 1991; Neisser et al., 1996	129	15
19	SAM setting	Deciding the standard allowable minutes for a particular garment item	(Telsang, 2006)	128	16
20	Power failures	A short-term or a long-term loss of the electric power to a particular area.	Interviews	128	16
21	Marital state of the operators	Operators' situation with regard to whether one is single, married, separated, divorced, or widowed.	Interviews	127	17
22	Age level of the operator	Age of the operator in years	Interviews	126	18
23	Gender of the operator	Whether the operator is male or female	Interviews	120	19
24	Quality requirement by customer	The features and specifications expected by the customer of the garment item	Interviews	114	20

Source: (Questionnaire survey, 2018)

Concerning the scores given by the experts, the researcher selected 19 factors which received high marks. They were: skill of the machine operators, experience of the machine operator, garment construction variations, work in process inventories, sewing machine breakdowns, reworks in sewing lines, quality of supervision, line balancing, absenteeism of the machine operator, turnover of the machine operator, training and development process of the organization, physical working environment, corporate culture, satisfaction of machine operators, input delays, quality of sewing materials, attitudes of the machine operators, educational level of the machine operators and SAM setting.

#### 4.2. Interrelationships among the dominant factors

Determining the interrelationships among the dominant factors was the next critical step in building the structural model of the factors that influence sewing efficiency of the machine operators. As the ISM technique recommends, a Structured Self Interaction Metrics (SSIM) was utilized to illustrate the interrelationships among the selected dominant factors. ISM methodology suggests the use of expert opinions in developing the contextual relationship among the enablers. Hence for determining the interrelationships among the variables, 20 garment industry related experts were selected out of the 40 experts who were selected to determine the scores of each factor. Metrix 1 shows the SSIM which demonstrate the interrelationships among the factors affect sewing efficiency of machine operators.

Metrix 1.

*Structural self-interaction matrix*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1		A	A	V	V	V	A	A	A	O	A	A	A	X	A	V	A	A	V
2			O	V	V	V	O	O	O	O	O	O	O	V	O	O	V	O	O
3				V	V	V	O	O	V	O	O	O	O	V	O	O	O	O	O
4					X	X	A	A	X	X	A	X	A	X	O	A	O	O	A
5						V	A	O	A	A	A	A	A	X	O	A	A	A	A
6							A	A	X	X	A	A	A	X	O	A	A	A	A
7								V	V	V	X	V	X	V	O	V	O	O	O
8									V	V	A	O	A	V	O	O	O	O	A
9										O	A	A	A	A	O	A	A	O	A
10											A	A	A	A	O	A	A	A	A
11												V	X	V	O	O	V	O	A
12													X	X	O	A	V	O	O
13														V	O	V	V	O	O
14															O	A	A	A	A
15																O	O	O	O
16																	O	O	O
17																		A	A
18																			O
19																			

Source: Expert interviews

Where;

1. Skill of the machine operators
2. Experience of the machine operator
3. Garment construction variations
4. Work in process inventories
5. Sewing machine breakdowns
6. Reworks in sewing lines
7. Quality of supervision
8. Line balancing
9. Absenteeism of the machine operator
10. Turnover of the machine operator
11. Training and development process of the organization
12. Physical working environment
13. Corporate culture
14. Satisfaction of machine operators
15. Input delays
16. Quality of sewing materials
17. Attitudes of the machine operators
18. Educational level of the machine operators
19. SAM setting.

Here four symbols are used to denote the direction of relationship between the criterion (i and j):

V- Criterion i will help to achieve criterion j.

A- Criterion j will be achieved by criterion i.

X -Criterion i and j will help to achieve each other.

O -Criterion i and j are unrelated.

The following would explain the use of the symbols V, A, X, and O in SSIM. Skill of the machine operator affect work in process inventories.

Thus, the relationship between skill of the machine operator and work in process inventories is denoted by "V" in the SSIM. Skill of the machine operator can be affected by experience of the machine operator. Thus, the relationship between skill of the machine operator and experience of the machine operator is denoted by "A" in the SSIM. Skill of the machine operators and satisfaction of machine operators help achieve each other. Thus, the relationship between skill of the machine operators and satisfaction of machine operators is denoted by "X" in the SSIM. No relationship exists between skill of the machine operators and turnover of the machine operator hence the relationship between these factors is denoted by "O" in the SSIM. The SSIM is developed based on a pair-wise comparison of variables. The SSIM is formed by asking questions such as, "does skill of the machine operator affect work in process inventories?"



### 4.3. Initial reachability matrix

In this step the SSIM is transformed into a binary matrix called the initial reachability matrix by substituting V, A, X, O by 1 and 0 as per the case. The rules for the substitution of 1's and 0's is the given as followings.

If the (i, j) entry in the SSIM is V, then the (i, j) entry in the reachability matrix becomes 1 and the (j, i) entry becomes 0.

If the (i, j) entry in the SSIM is A, then the (i, j) entry in the reachability matrix becomes 0 and the (j, i) entry becomes 1.

If the (i, j) entry in the SSIM is X, then the (i, j) entry in the reachability matrix becomes 1 and the (j, i) entry also becomes 1.

If the (i, j) entry in the SSIM is O, then the (i, j) entry in the reachability matrix becomes 0 and the (j, i) entry also becomes 0.

The initial reachability matrix for this SSIM is shown in matrix 2

Matrix 2.

Initial reachability matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	1	0	0	1	1	1	0	0	0	0	0	0	0	1	0	1	0	0	1
2	1	1	0	1	1	1	0	0	0	0	0	0	0	1	0	0	1	0	0
3	1	0	1	1	1	1	0	0	1	0	0	0	0	1	0	0	0	0	0
4	0	0	0	1	1	1	0	0	1	1	0	1	0	1	0	0	0	0	0
5	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0
6	0	0	0	1	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0
7	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0
8	1	0	0	1	0	1	0	1	1	1	0	0	0	1	0	0	0	0	0
9	1	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0
10	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0
11	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0
12	1	0	0	1	1	1	0	0	1	1	0	1	1	1	0	0	1	0	0
13	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
14	1	0	0	1	1	1	0	0	1	1	0	1	0	1	0	0	0	0	0
15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
16	0	0	0	1	1	1	0	0	1	1	0	1	0	1	0	1	0	0	0
17	1	0	0	0	1	1	0	0	1	1	0	0	0	1	0	0	1	0	0
18	1	0	0	0	1	1	0	0	0	1	0	0	0	1	0	0	1	1	0
19	0	0	0	1	1	1	0	1	1	1	1	0	0	1	0	0	1	0	1

Source: Expert survey, 2018

#### 4.4. Final reachability matrix

Here when establishing the relationship between various factors transitivity was also considered. As per the rule of transitivity, if a variable A leads to a variable B and if B leads to another variable C, then A leads to C. Following this rule, a final reachability matrix was developed and driving power and dependence of factors are also computed. Driving power is the total number of ones in the corresponding rows and dependence is the total number of ones in the corresponding columns of final reachability matrix. Here, the driving power of a particular variable is the total number of variables (including itself) which it may help achieve. The dependence is the total number of variables which may help in achieving it.

Final reachability matrix is shown in matrix.

Metrix 3.

Final reachability matrix

	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1	1	1	1	Driving power
										0	1	2	3	4	5	6	7	8	9	
1	1	0	0	1	1	1	0	1	1	1	1	1	0	1	0	1	1	0	1	13
2	1	1	0	1	1	1	0	0	1	1	0	1	0	1	0	1	1	0	1	12
3	1	0	1	1	1	1	0	0	1	1	0	1	0	1	0	1	0	0	1	11
4	1	0	0	1	1	1	0	0	1	1	0	1	1	1	0	0	1	0	0	10
5	1	0	0	1	1	1	0	0	1	1	0	1	0	1	0	0	0	0	0	08
6	1	0	0	1	1	1	0	0	1	1	0	1	0	1	0	0	0	0	0	08
7	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	15
8	1	0	0	1	1	1	0	1	1	1	0	1	0	1	0	1	0	0	1	11
9	1	0	0	1	1	1	0	0	1	1	0	1	0	1	0	1	0	0	1	10
10	0	0	0	1	1	1	0	0	1	1	0	1	0	1	0	0	0	0	0	07
11	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	15
12	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	15
13	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	15
14	1	0	0	1	1	1	0	0	1	1	0	1	1	1	0	1	1	0	1	12
15	1	0	0	1	1	1	0	0	0	0	0	0	0	1	1	1	0	0	1	08
16	1	0	0	1	1	1	0	0	1	1	0	1	1	1	0	1	1	0	0	11
17	1	0	0	1	1	1	0	0	1	1	0	1	0	1	0	1	1	0	1	11
18	1	0	0	1	1	1	0	0	1	1	0	1	0	1	0	1	1	1	1	12
19	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	14
Dep ende nce pow er	1 8	1	1	1 9	1 9	1 9	5	7	1 8	1 8	6	1 8	8	1 9	1	1 4	1 2	1	1 4	Σ=218

Source: Expert survey, 2018

**4.5. Level partition**

From the final reachability matrix, the reachability and antecedents of each element of prospects were developed and the level partition was done. Table 2, 3, 4 and 5 demonstrate the reachability set, antecedent set, intersection set and level partition of the 19 factors that affect the sewing efficiency of machine operators. This will help to categorize the equally valued elements/factors of prospects.

Table 2

*Reachability set, antecedent set, intersection set and level partition -Iteration 01*

No.	Reachability Set	Antecedent Set	Intersection Set	Level
1	1,4,5,6,8,9,10,11,12,14,16,17,19	1,2,3,4,5,6,7,8,9,11,12,13,14,15,16,17,18, 19	1,4,5,6,8,9,11,12,14,16,17,19	
2	1,2,4,5,6,9,10,12,14,16,17,19	2	2	
3	1,3,4,5,6,9,10,12,14,16,19	3	3	
4	1,4,5,6,9,10,12,13,14,17	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19	1,4,5,6,9,10,12,13,14,17	I
5	1,4,5,6,9,10,12,14	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19	1,4,5,6,9,10,12,14	I
6	1,4,5,6,9,10,12,14	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19	1,4,5,6,9,10,12,14	I
7	1,4,5,6,7,8,9,10,11,12,13,14,16,17,19	7,11,12,13,19	7,11,12,13,19	
8	1,4,5,6,8,9,10,12,14,16,19	1,7,8,11,12,13,19	1,8,12,19	
9	1,4,5,6,9,10,12,14,16,19	1,2,3,4,5,6,7,8,9,10,11,12,13,14,16,17,18,19	1,4,5,6,9,10,12,14,16,19	I
10	4,5,6,9,10,12,14	1,2,3,4,5,6,7,8,9,10,11,12,13,14,16,17,18,19	4,5,6,9,10,12,14	I
11	1,4,5,6,7,8,9,10,11,12,13,14,16,17,19	1,7,11,12,13,19	1,7,11,12,13,19	
12	1,4,5,6,7,8,9,10,11,12,13,14,16,17,19	1,2,3,4,5,6,7,8,9,10,11,12,13,14,16,17,18,19	1,4,5,6,7,8,9,10,11,12,13,14,16,17,19	I
13	1,4,5,6,7,8,9,10,11,12,13,14,16,17,19	4,7,11,12,13,14,16,19	4,7,11,12,13,14,16,19	
14	1,4,5,6,9,10,12,13,14,16,17,19	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19	1,4,5,6,9,10,12,13,14,16,17,19	I
15	1,4,5,6,14,15,16,19	15	15	
16	1,4,5,6,9,10,12,13,14,16,17	1,2,3,7,8,9,11,12,13,14,15,16,17,18	1,9,12,13,14,16,17	
17	1,4,5,6,9,10,12,14,16,17,19	1,2,4,7,11,12,13,14,16,17,18,19	1,4,12,14,16,17,19	
18	1,4,5,6,9,10,12,14,16,17,18,19	18	18	
19	1,4,5,6,7,8,9,10,11,12,13,14,17,19	1,2,3,7,8,9,11,12,13,14,15,17,18,19	1,7,8,9,11,12,13,14,17,19	

Source: Expert survey, 2018

Table 3

*Reachability set, antecedent set, intersection set and level partition -Iteration 02*

No.	Reachability Set	Antecedent Set	Intersection Set	Level
1	1,8,11,16,17,19	1,2,3,7,8,11,13,15,16,17,18,19	1,8,11,16,17,19	II
2	1,2,16,17,19	2	2	
3	1,3,16,19	3	3	
7	1,7,8,11,13,16,17,19	7,11,13,19	7,11,13,19	
8	1,8,16,19	1,7,8,11,13,19	1,8,19	
11	1,7,8,11,13,16,17,19	1,7,11,13,19	1,7,11,13,19	
13	1,7,8,11,13,16,17,19	7,11,13,16,19	7,11,13,16,19	
15	1,15,16,19	15	15	
16	1,13,16,17	1,2,3,7,8,11,13,15,16,17,18	1,13,16,17	II
17	1,16,17,19	1,2,7,11,13,16,17,18,19	1,16,17,19	II
18	1,16,17,18,19	18	18	
19	1,7,8,11,13,17,19	1,2,3,7,8,11,13,15,17,18,19	1,7,8,11,13,17,19	II

Source: Expert survey, 2018

Table 4

*Reachability set, antecedent set, intersection set and level partition -Iteration 03*

No.	Reachability Set	Antecedent Set	Intersection Set	Level
2	2	2	2	III
3	3	3	3	III
7	7,8,11,13	7,11,13	7,11,13	
8	8	7,8,11,13	8	III
11	7,8,11,13	7,11,13	7,11,13	
13	7,8,11,13	11,13	7,11,13	
15	15	15	15	III
18	18	18	18	III

Source: Expert survey, 2018

Table 5

*Reachability set, antecedent set, intersection set and level partition -Iteration 04*

No.	Reachability Set	Antecedent Set	Intersection Set	Level
7	7,11,13	7,11,13	7,11,13	IV
11	7,11,13	7,11,13	7,11,13	IV
13	7,11,13	11,13	7,11,13	IV

Source: Expert survey, 2018

Here to get level partitions four iterations were necessitated. The reachability set consists of the element itself and other elements, which it may achieve, whereas the antecedent set consists of the element itself and the other elements, which help in achieving it. The elements which are common in reachability sets and antecedent are assigned at the intersection set. The reachability sets, the intersection sets and antecedent sets help to pinpoint the top-level elements. If all the elements of the intersection set and reachability sets of a particular enable rare same, then that enabler is assigned in the top-level group (level I group). The top-level elements in the iteration one is removed from the set for the formation of the next table. This process is repeated till all levels of each element are found. These levels recognized by this procedure are exploited for the formation of diagram.

As iteration tables exhibit work in process inventories, sewing machine breakdowns, reworks in sewing lines, absenteeism of the machine operator, turnover of the machine operator, physical working environment and satisfaction of machine operators were the level one variables in the ISM model. Then skill of the machine operators, quality of sewing materials, attitudes of the machine operators and SAM setting were the level two variables. Experience of the machine operator, garment construction variations, line balancing, input delays and educational level of the machine operators were level three variables. Quality of supervision, training and development process of the organization and corporate culture were the level four variables.

#### 4.5. Diagram of opportunities

Diagram simply signifies the relationship between the elements of prospects as per the numbers assigned to them. If there is a relationship between elements j and i, this is represented by an arrow which points from i to j or j to i or both directions. Diagram of opportunities is shown in figure 02.

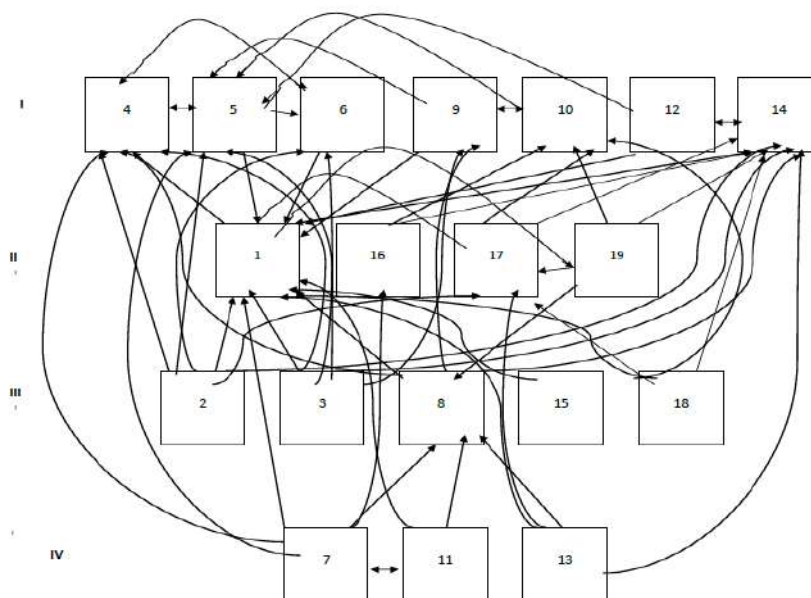


Figure 2. Diagram of opportunities

#### 4.6. ISM based model of factors that affect efficiency of sewing machine operators in the Sri Lankan garment industry

Diagram does not give a wide-ranging picture of the context. Diagram is converted to ISM to get a complete representation of the inter relationship among the elements. In the ISM elements of prospects of control system are represented by names of elements itself and not by numbers and is shown in figure 3.

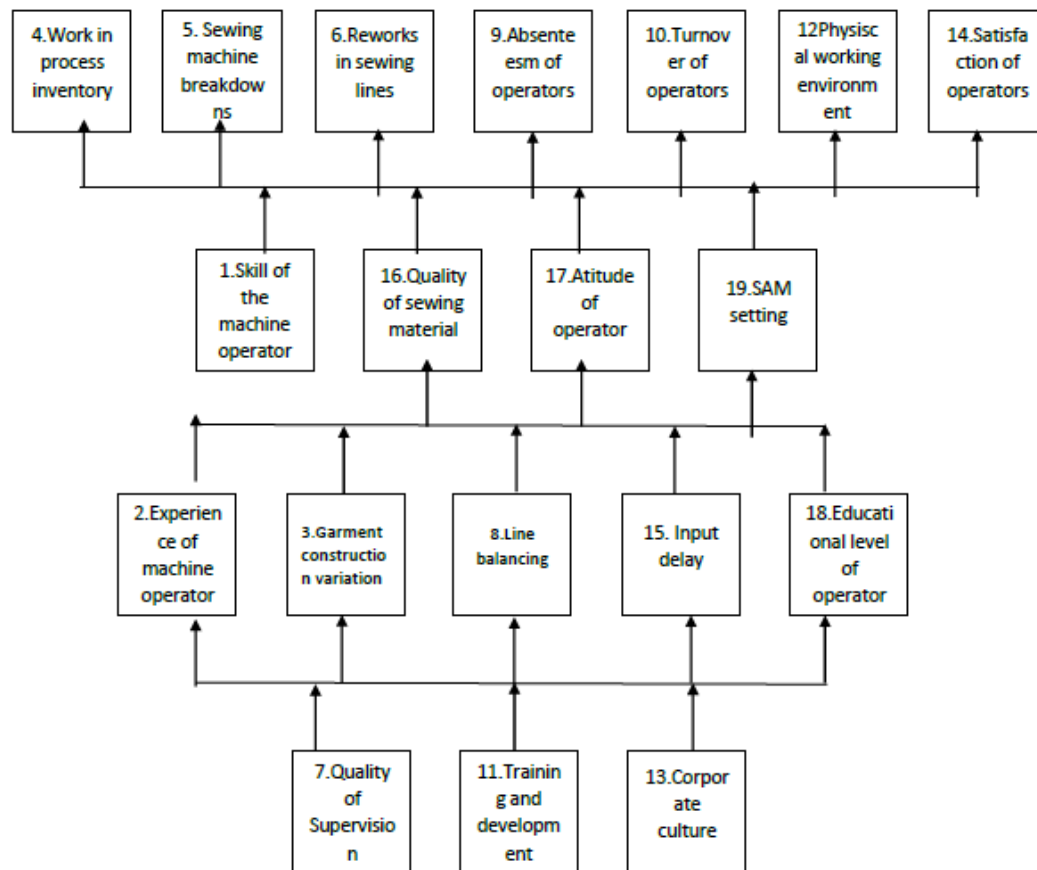
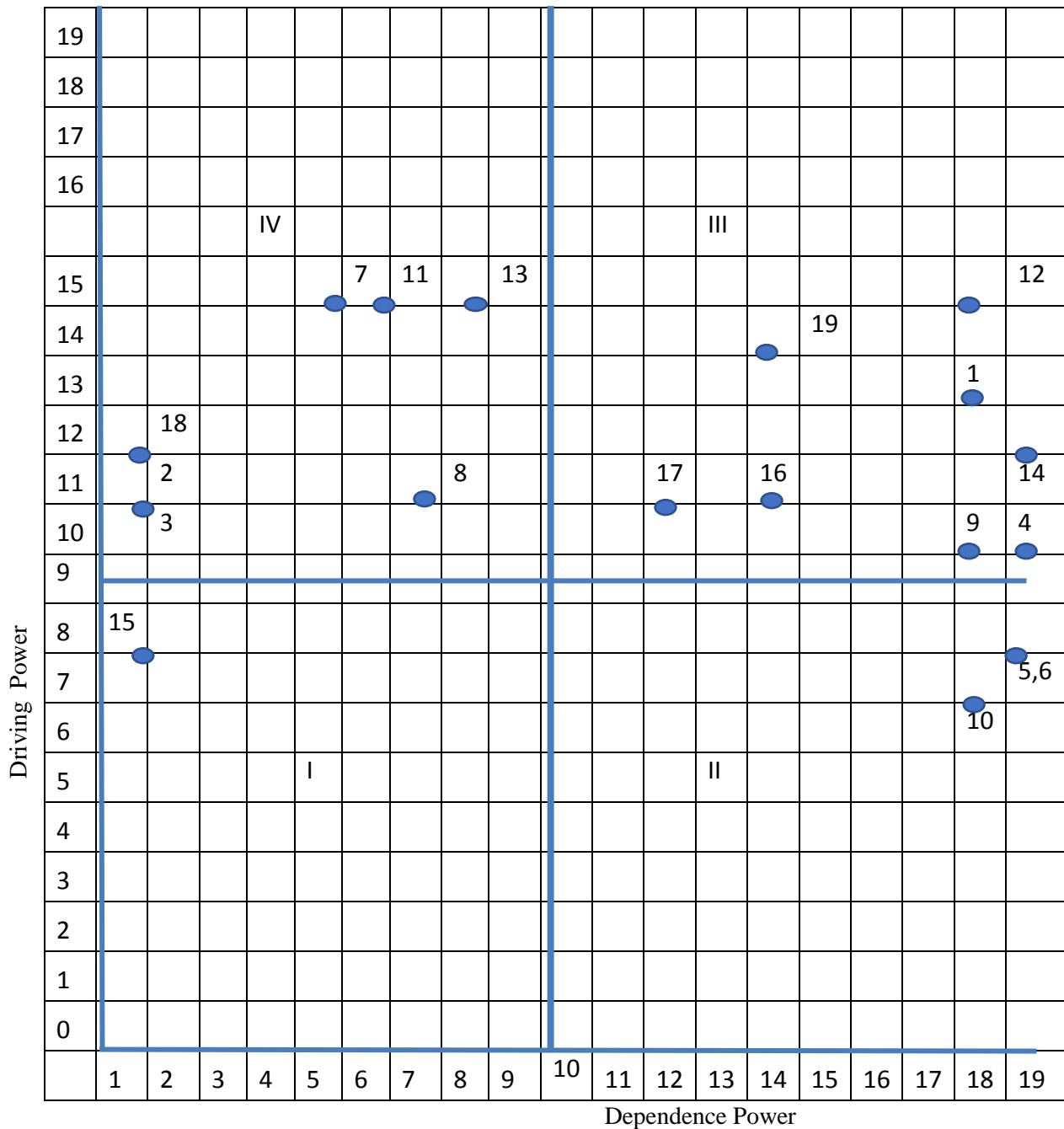


Figure 3. ISM-factors that affect efficiency of sewing machine operators in the Sri Lankan garment industry

#### 4.7. MICMAC analysis

Based on the driving power and dependence, which is found in the final reachability metrics, a graph is plotted as shown in the graph 1, classifying the enablers into four clusters. They are (i) Autonomous. (ii) Dependent (iii) linkage and (iv) independent factors. Autonomous group has low driving power and low dependence. They can be eliminated from the system. Dependent group has low driving power and high dependence. Linkage group has high driving power and high dependence. They are the most important elements. Any action on this will affect the entire system. Independent group has high driving power and low dependence. Driving power-dependence diagram for factors that affect the efficiency of sewing machine operators in the garment industry, Sri Lanka is shown in graph 1.



Graph 01. MICMAC analysis

Matrice d'Impacts croises-multiplication appliquée an classment (cross-impact matrix multiplication applied to classification) is abbreviated as MICMAC. The purpose of MICMAC analysis is to analyze the drive power and dependence power of factors. MICMAC principle is based on multiplication properties of matrix. It is done to identify the key factors that drive the system in various categories. Based on their drive power and dependence power, the factors, have been classified into four categories i.e. autonomous factors, linkage factors, dependent and independent factors.



*4.7.1. Autonomous factors (I)s:* These factors have weak drive power and weak dependence power. They are relatively disconnected from the system, with which they have few links, which may be very strong. As the graph 01 demonstrates input delays were identified as an autonomous variable.

*4.7.2. Linkage factors (III):* These factors have strong drive power as well as strong dependence power. These factors are unstable in the fact that any action on these factors will have an effect on others and also a feedback effect on themselves. skill of the machine operators, work in process inventories, absenteeism of the machine operator, physical working environment, satisfaction of machine operators, attitudes of the machine operators and SAM setting were identified as the linkage factors

*4.7.3. Dependent factors (II):* These factors have weak drive power but strong dependence power. Here sewing machine breakdowns, reworks in sewing lines and turnover of the machine operator were identified as the dependent variables.

*4.7.4. Independent factors (IV):* These factors have strong drive power but weak dependence power. A factor with a very strong drive power, called the 'key factor' falls into the category of independent or linkage factors. Then quality of supervision, training and development process of the organization, corporate culture, experience of the machine operator, garment construction variations, line balancing and educational level of the machine operators were identified as the independent factors.

## 5. Conclusion and contributions

The primary objective of the study was to develop a structural model of the factors that influence sewing efficiency of the machine operators in Sri Lankan garment industry. For achieving this research objective, at first the researcher wanted to select the dominant factors that influence sewing efficiency of the machine operators in Sri Lankan garment industry. Here the researcher selected 19 dominant factors and they were skill of the machine operators, experience of the machine operator, garment construction variations, work in process inventories, sewing machine breakdowns, reworks in sewing lines, quality of supervision, line balancing, absenteeism of the machine operator, turnover of the machine operator, training and development process of the organization, physical working environment, corporate culture, satisfaction of machine operators, input delays, quality of sewing materials, attitudes of the machine operators, educational level of the machine operators and SAM setting. Subsequently the researcher determined the interrelationships among these dominant factors. Figure 2 conclude the interrelationships among these dominant factors. Finally, the researcher categorized the 19 factors that affect sewing efficiency of machine operators in Sri Lankan garment industry in to four categories of autonomous, dependent, linkage and independent variables through the MICMAC analysis. Here input delays were found as an autonomous variable. Then skill of the machine

operators, work in process inventories, absenteeism of the machine operator, physical working environment, satisfaction of machine operators, attitudes of the machine operators, SAM setting were concluded as the linkage factors.

Further, sewing machine breakdowns, reworks in sewing lines, turnover of the machine operator were found as the dependent variables. Ultimately quality of supervision, training and development process of the organization, corporate culture, experience of the machine operator, garment construction variations, line balancing, educational level of the machine operators were concluded as the independent factors.

Figure 3 shows the ISM based model that was developed to conclude the factors that influence sewing efficiency of the machine operators in Sri Lankan garment industry. Here the model consisted of four levels. Then work in process inventories, sewing machine breakdowns, reworks in sewing lines, absenteeism of the machine operator, turnover of the machine operator, physical working environment and satisfaction of machine operators were the level one variables in the ISM model. Then skill of the machine operators, quality of sewing materials, attitudes of the machine operators and SAM setting were the level two variables. Experience of the machine operator, garment construction variations, line balancing, input delays and educational level of the machine operators were level three variables. Quality of supervision, training and development process of the organization and corporate culture were the level four variables.

## 6. Implications

In this model autonomous variables can be eliminated. Then for getting decision about the linkage variables, further studies and higher management involvement is required. But eliminating independent variables may directly results to eliminate the dependent factors. It means the sewing machine breakdowns, reworks in sewing lines, turnover of the machine operator can be addressed through addressing quality of supervision, training and development process of the organization, corporate culture, experience of the machine operator, garment construction variations, line balancing and educational level of the machine operators. Thus, implementing strategies for retain well experienced sewing machine operators, improve the quality of sewing machines, tools and equipment, creating a Total Quality Management based culture and proper production scheduling are suggested to improve the efficiency of machine operators in the Sri Lankan garment industry.

This study developed a hypothetical model of factors that influence efficiency of sewing machine operators in Sri Lankan garment industry based upon experts' opinions. The model needs to be tested in real world setting. Then the results of model may vary. Also, this model has not been validated and the Structural Equation Modeling (SEM) may be used to test the validity of this hypothetical model. Further this study addressed only the garment industry. Therefore, other researchers are suggested to address the operational efficiency problems using this approach which was followed by the researcher.

## References

- Agrawal, A., Minis, I., Nagi, R. (2000). Cycle Time Reduction by Improved MRP-Based Production Planning. *International Journal of Production Research*. Vol. 38. No. 18
- Ahamed, F. (2014). Job Dissatisfaction in the Bangladesh Ready-Made Garment; to what extent HR/IR Practices Can Grow Exhilaration of RMG Workers. *International Journal of Business and Management Review International Journal of Business and Management Review*. Vol.2.No.1
- Ahmad, S., Amin, A., Khalil, B., Rashed, C.A.A. (2012). Impact of Efficiency in Apparel Supply Chain. *Asian Journal of Natural & Applied Sciences*. Leena and Luna International, Oyama, Japan.
- Ajala, E.M., (2012). The Influence of Workplace Environment on Workers' Welfare, Performance and Productivity. *University of Ibadan*, 141 Volume 12, No. 1. The African Symposium. An online journal of the African Educational Res
- Alwi, S. (2003). Factors Influencing Construction Productivity in the Indonesian Context. 5th EASTS Conference, Fukuoka, Japan.
- Atwood, M., Dimmock, S. (1996). *Personal Management* (third edition)
- Bartel, A., Freeman, R., Ichniowski, C., Kleiner, M. (2003). Can a Work Organization have an Attitude Problem? The Impact of Workplaces on Employee Attitudes and Economic Outcomes. NBER Working Paper No.9987
- Besigwa, E.T. (2011). Quality of Supervision and Employee Performance in Mairye Estates Ltd
- Bheda, R., Narag, A.S., Singla, M.L. (2003). Apparel Manufacturing a Strategy for Productivity Improvement, *Journal of Fashion Marketing and Management*, Volume 7
- Chatterjee, B. (1999). *Executive Guide to Human Resources Management*. Vol. 1 No. 4
- Chen, J.C., Hsinchu, C.C., Chen, C., Li, Y.J., Lin, C.J., Lin, T., Chen, Y. (2014). Assembly Line Balancing Problem of Sewing Lines in Garment Industry. *Proceedings of the 2014 International Conference on Industrial Engineering and Operations Management*. Bali, Indonesia
- Daly, M.B., Towers N., (2004). Lean or Agile: A Solution for Supply Chain Management in the Textile and Clothing Industry. *International Journal of Operations & Production Management* Vol. 24
- DBA Software Inc. (2013). *Manufacturing Efficiency Guide*
- Dheerasinghe, R. n.d. *Garment Industry in Sri Lanka Challenges- Prospects and Strategies*. No.40
- Dragcevic, Z. Kirin, S., Saravanja, B. (2011). A method of workplace design for sewing operations. *Proceedings of the 22nd International DAAAM Symposium*, Volume 22, No. 1
- Groover, M. P. (2007). *Work systems: the methods, measurement and management of work*, Prentice Hal.
- Hetzel, W.B. (1988). Cycle Time Reduction and Strategic Inventory Placement across a Multistage Process. *Sloan School of Management*. Master thesis. No.106.

- Hiba, J.C. (1988). Improving Working Conditions and Productivity in the Garment Industry
- [Hopp, W.J., Spearman, M. L.](#) (2008). Factory Physics (Third edition). Waveland Press Inc.
- Horning, F.N., McCann J., (2003). Cycle Time Reduction Gives Life to Productivity.  
<http://www.inboundlogistics.com>
- International Labor Office, Geneva. n.d. Introduction to work study, (4th revised edition)
- Islam, M.M., Khan, A.M., Khan, M.R., (2013). Minimization of Defects in the Sewing Section of Apparel Industry. Research Journal of Management Sciences. Vol. 2(8)
- Islam, M.M., Khan, A.M, Khan, M.M.R. (2013). Minimization of Reworks in Quality and Productivity Improvement in the Apparel Industry. Vol. 1, No.4 ISSN 2305-8269. International Journal of Engineering and Applied Sciences
- Jones, M. K., Jones, R.J., Latreille, P.L, Sloane, P.J. (2009). Training, Job Satisfaction, and Workplace Performance in Britain: Evidence from WERS 2004 . Labour Vol. 23
- Kiran, M., Mathew, C., Kuriakose, J. (2013). Root Cause Analysis for Reducing Breakdowns in a Manufacturing Industry. International Journal of Emerging Technology and Advanced Engineering. Volume 3
- Liyanage, D.M., Galhena, B.L. (2009). Determinants of Turnover Intention of Sewing Machine Operators: Case from Leading Apparel Company.
- Luu, H. (2011). The Relationship between Employee Attitudes and Organizational Performance: Evidence from Cooperative Retail Stores. Colgate University. Thesis Advisor: Professor Takao Kato
- Majumder, P.P., Begum, A. (2000). The Gender Imbalance in the export-oriented garment industry in Bangladesh.
- Mandal, S. (2008). Studies on Seam Quality with Sewing thread size stitch density and fabric properties.
- Moch, M. K., Fitzgibbons, D.E. (1982). Automation, Employee Centrality of the Production Process, the Extent to which Absences can be Anticipated, and the Relationship between Absenteeism and Operating Efficiency; An Empirical Assessment. University of Texas at Dallas
- Nahar, K., Islam, M. M., Rahman, M. M., Hossain, M. M. (2012). Evaluation of OEE for Implementing Total Productive Maintenance (TPM) in Sewing Machine of a Knit Factory.
- Nakajima, S. (1988). Introduction to TPM: Total Productive Maintenance Productivity Press, Cambridge, MA.
- Niebel, B., Freivalds, A. (2008). Methods, Standards and Work design. McGraw-Hill.
- Oakland, J.S. (2003). Total Quality Management Text with Cases (Third edition). Martins the Printers .Great Britain
- Ong, J.O., Twentiarani ,Y. (2012). Increasing Line Efficiency by using Time Study and Line Balancing. Asia Pacific Industrial Engineering & Management Systems Conference
- Paneru, N. (2011). Implementation of Lean Manufacturing Tools in Garment Manufacturing Process Focusing Sewing Section of Men's Shirt. Oulu University of Applied Sciences. Master Thesis.No 80

- Paul, S. Goodman, P.S., Atkin, R.S. (1984). Effects of Absenteeism on Individuals and Organizations. Carnegie Mellon University. Research Showcase @ CMU. Tepper School of Business Proceedings of the Global Engineering, Science and Technology Conference. Dhaka, Bangladesh
- Praveen, S., Deepak, K., Manoj, K.S. (2015). Reduction of work in process inventory and production lead time in a bearing industry using value stream mapping tool. International Journal of Managing Value and Supply Chains (IJMVSC) Vol. 6, No. 2
- Pushpakumari, M.D. (2008). The Impact of Job Satisfaction on Job Performance: An Empirical Analysis
- Roy, S.S., Ghosh, S.K., Chakraborty, R. (2012). Application of Industrial Engineering in Garments Sewing Floor. Daffodil International University, Dhaka, Bangladesh. Bachelor of Science Report.No.79
- Salvendy, G. (Ed.) (2001). Handbook of Industrial Engineering: Technology and Operations Management(third edition).John Wiley & Sons, Hoboken, NJ.
- Sarkar,P. Online Clothing Study , [www.Onlineclothingstudy.com](http://www.Onlineclothingstudy.com), retrieved 06.01.2014
- Shahram, T., Cristian, M. (2011). The Impact of Lean Operations on the Chinese Manufacturing Performance. Journal of Manufacturing Technology Management Vol. 22 No. 2, 2011
- Tanwari, A., Memon, S., Arbab, A. (2011). Impact of Machine Breakdowns on Productivity. Mehran University Research Journal of Engineering & Technology, Volume 30, No. 4
- Telsang, M. (2006). Industrial Engineering and Production Management.
- Thomas, W. H., Feldman, D. C. (2009). How Broadly does Education Contribute to Job Performance?
- The Manufacturing Industry Skills Advisory Council SA Inc. (2007). A practical guide for Employers, Supervisors and Team Leaders in the South Australian Manufacturing Industry
- Zandin, K. (Ed.) 2001. Maynard's Industrial Engineering Handbook (fifth edition). McGraw-Hill, New York, NY.

## Self-Directed Learning Readiness Of First Year Undergraduates

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### Abstract

Self-directed learning has been the most clichéd yet unsatisfied need of the tertiary education in Sri Lanka for many years. The sole purpose of this study is dedicated to examine the readiness of undergraduates to pursue self-directed learning along with the attitudes of the same undergraduates in channelling their effort in self-directed learning process. A paper based questionnaire was distributed among 86 First year, first semester undergraduates where 78 valid responses were obtained. Self-directed learning readiness and pertaining attitudes were measured using a Likert scale ranging from strongly disagree (1) to strongly agree (5). The results proved that most of the business faculty undergraduates are adequately ready for self-directed learning and English language plays a key role in determining their readiness for self-directed learning processes.

**Keywords.** Self-Directed Learning, Tertiary Education, Undergraduate Education.

### 01. Background

Unlike decades ago, undergraduates are now exposed to limitless sources of information where knowledge has become a by-product of their daily mundane activities. With intense technological advancements and continuous changes in the education system, knowledge is no longer limited to its clichéd frames. Apparently, this accessibility advantage has facilitated many students to pursue their higher education goals in a more rapid phase. As identified by 21<sup>st</sup> century Learning Frameworks, self-directed learning becomes a vital skill for students in such a context. According to Himenstra (2004), self-directed learning can be defined as a process in which learners independently take responsibility for planning, expediting and appraising their own learning.

As an adult learning method, self-directed learning requires the learners to initiate responsible learning via identifying learning resources and setting goals in par with their own needs while considering selection of appropriate strategies and evaluation of learning outcomes (Knowles, 1975). This clearly requires certain degree of positive change in both attitudes and perceptions in undergraduates. Though it is expected, individuals who had completed more years of formal education to demonstrate a higher self-directed learning preparedness (Sabbaghain, 1980), the situation in Sri Lanka is quite different. Hence, the capability to overcome the existing barriers for self-directed learning in Sri Lanka is still questionable.

No change is sustainable without a proper attitudinal shift in the minds of undergraduates. The horizons of Sri Lanka's higher education can only be expanded with an effective attitudinal change and it is the duty of the policy makers to do be more focussed on students' attitudes to channel students' energy towards self-directed learning. This brings the importance of examining the underlying relationship between students' attitudes and readiness for self-directed learning which is hardly happened in general social sciences background.

As Gibbons (2002) identified in his book: *Self-directed learning*, expects following seven attitudes from an individual to excel at self-directed learning. responsibility commitment (A1), confidence/Self-awareness (A2), curiosity-wonder (A3), drive-intensity (A4), optimism-positivity (A5), courage in risk taking (A6) and determination of ingenuity (A7) are the identified attitudes which lead the learner to evaluate his/her behaviour.

Although the education system in Sri Lanka anticipates to be more student centric, the effects have not yet been realised. This climate has created tremendous issues in pursuing higher education endeavours in modern days. Mentality of the fresh offspring of 13-years of free education process is not sufficiently directed towards capturing the real essence of higher education aspects on their own. This questions their eligibility to grasp the breadth and depth of the contemporary issues in the commercial world. Thus, it is a common phenomenon that students fail miserably at their higher education endeavours. This perhaps links with the attitudes and perceptions towards self-directed learning.

It is true that the educators are the primary conduits through which the undergraduates get access into and absorb knowledge (Scott & Gregg, 2000). Yet, sole reliance of the panel of academics is inappropriate, especially in a context where knowledge should be explored rather than gained through passive learning. The concept of students directing their own learning breed reliance and credibility about the future state of higher education in any country. Almost every faculty anticipates their respective undergraduates to be independent, responsible and self-reliant young adults who could demonstrate the value that had been instilled by their faculties (Greene, 2009; Longley, 2007; Shelley, 2007)

Although there's a visible desire for being self-directed in pursuing education, there's a gap between the expected and real outcomes anticipated by the general tertiary educational level in Sri Lanka. Through the process of research, it was identified that language plays a key role in pursuing higher education. Tertiary education in Sri Lanka can mostly be pursued in English, because it is used as the medium through which the pedagogy is delivered. Yet the enrolment does not consider the medium in which they have done their G.C.E advanced levels. This had been an issue for many years and common to Sri Lankan tertiary level education. This aspect is not sufficiently addressed in the researches done in this area which invariably creates a research gap.

By considering the situation of the Faculty of Business in University of Moratuwa, it is much evident that understanding self-directed learning readiness of undergraduates is much

important. Hence, in this study, I have attempted to examine the readiness of first year undergraduates of Faculty of Business for self-directed learning. Further, I examined how attitudes of undergraduates affect to self-directed learning, where the relationships among attitudes and three subscales of self-directed learning readiness scale were measured.

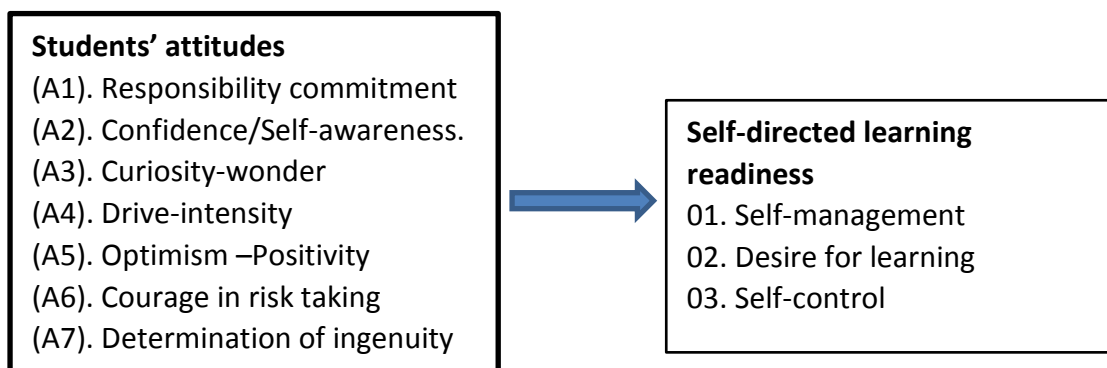


Figure 1. The conceptual framework

## 02. Literature Review

As Kember (1997) proved, there are two broad dimensions in teaching. Those can be summoned as teacher centred which is more contented oriented conception and the student centred or learning oriented conception. Since teaching is invariably subjected to learning, this broader dimensional view is vital in understanding and formulating strategies in education, especially in tertiary education.

Self-directed learning is extensively discussed in many teachings of various scholars. It can also be seen used interchangeably as student-centred learning (O'Neil & McMahon, 2005), flexible learning (Taylor, 2000) and experiential learning (Burnard, 1999).

As Farrington (1991) states, there could only be a considerable disagreement or confusion on self-directed learning on the basis of synonyms and nothing else could belittle the importance of such learning method.

According to Rogers (1983a), a shift in power from the expert teacher to the student learner is required to effectuate self-directed learning. Further, it is also anticipated that this transformation process should be subtly guided, rather than being a typical teacher in an educational atmosphere (Simon, 1999). This process of maturation is preliminary to the process of a student being ready for his/her learning. In this phase of 'readiness', it is expected that the learner would start his learning process whenever he/she is ready (Simon, 1999).

In a world of choice and democracy, student-directed learning plays a crucial role. If a learner could establish his/her goals in self-teaching projects by finding different ways through relevant resources and accompanying various strategies to maintain motivation in learning independently, he/she can be identified as a self-directed learner (Tough, 1967). Apart from instituting learning goals, identifying appropriate materials and implementing



relevant strategies in learning, self-directed learners also tempt to evaluate their learning process with or without the assistance of others (Knowles, 1975). According to Knowles, such learners behave proactively and are willing to take initiative in learning than merely being passive. Additionally, they get exposed to more meaningful learning experience which results a longer retention.

An individual must be sufficiently secured and confident to experience varied circumstantial consequences to learn for themselves (Rogers, 1983b). The concept of 'what students are doing' to achieve, rather than 'what teachers are doing' to educate them is described with more emphasis on student-centred learning (Harden & Crosby, 2000). Hence it is essential to have a reflexive approach to teaching and learning processes of both parties to facilitate self-directed learning (Lea, Stephenson, & Troy, 2003)

A higher prominence is given to intrinsic motivation of an individual in self-directed learning (Knowles, 1975). This is strengthened by the inherent power, or rather the volition where the learner's effort is arbitrated in the aisles of interest and enthusiasm, quintessentially on tasks and activities to pursue the goals.

In late 90's, it was predicted that self-directed learning would be essential to ensure survival of individuals and human race living in the new world (Knowles, 1975). As expected, self-directed learning became an effective mode of learning for individuals in sustaining their lives. This was predominantly occurred due to sudden and constant changes created due to uprising advancement of technology where self-directed learning was adequately equipped with the capacity to manage chaos (Guglielmino, 2008). Further, in her dissertation she elucidated the criticality of self-directed learning on the grounds of context, activation and universality. According to Guglielmino, self-directed learning is an inherent, basic and regular characteristic of human behaviour, especially could be observed when encountered by challenges. The severity and intensity could be varied on the basis of situations.

It is identified that self-directed learning leads to increasing knowledge, skills, accomplishments or personal development in anybody who is aspiring to channel his/her efforts through any method or any circumstances at any given time (Gibbons, 2002). This is paramount in today's volatile environment where undergraduates are expected to possess adequate and relevant skills to make informed adhoc decisions in contemporary organizations. Further, the learning that gained through self-direction can be advantageous in determining what to do and what not with more focus paid on the designing of viable solutions to regain knowledge (Hmelo et al., 1997)

Facilitation of self-directed learning can be done through creating an atmosphere with sufficient coherence paid to raising awareness and control of one's learning (Hartman, 2001) This is well described with the term "metacognition" where the learners are expected to link their characteristics of adulthood with life-long learning (Brockett & Hiemstra, 1991; Grow, 1991; Knowles et al., 1998)

In contrary to Fay (1988), an increased sense of autonomy is crucial in bringing self-directed learning into a reality. It also should be coupled with mutual respect in the context of student-teacher relationship to catalyse the impact (Biggs, 1999)

Satirically, “self” in self-directed learning can even be promoted through various objects. It is needless to be only focused on an extreme end of solitary learning, but it could often be persuaded via friends, peers, colleagues, experts in a particular area of interest to instil the behaviour of self-directed learning (Caffarella, 1993). Further, it is expressed that books, magazines, journals can be contributed in facilitating self-directed learning.

Many countries have considered self-directed leaning as a goal of their respective education systems (Guglielmino, 2008). Manual for review of undergraduate study programmes of Sri Lankan universities and higher education institutions (2015) had considered self-directed learning as a standard under the criterion of human and physical resources to review the quality of Sri Lankan higher education.

Borrowing the idea made by Hinchliff (2004) in relation to self-directed learning for nurses, it is quite reasonable to state that self-directed learning certifies the learners to be more flexible and open to change. This can further be elucidated with its linkage to the growth of confidence and professionalism where the undergraduates can be benefited.

Under the category of tertiary education, universities play a critical role in responding to the uprising challenges of society created due to the resistance of self-direction in adult learning (Hiemstra, 1991; Himestra & Brockett, 1994). Further, it is expressed that there is a considerable amount of responsibility, when it comes to educators in upholding the skills of self-directed learning where the students could later be benefited at their workplaces (Kell & Van Deursen, 2002) Hence, both learners and educators should hold less ambiguity in selecting most appropriate teaching-learning strategies to strengthen learner’s skills in pursuing self-directedness in their respective learning endeavours (Norman, 1999).

In self-directed learning, a more emphasis is laid on placing learners at the heart of learning process to meet their respective goals through student- centred approaches to avoid unnecessary waste of human and educational resources utilized on areas that the students are already in aware and uninterested (Edwards, 2001). Hence, it is important to pay more adherence to self-directed learning in tertiary education.

As Huang (2008) identified, it is important to maintain a healthy student-teacher relationship with sufficient learning resources to facilitate and ideal environment for undergraduates to aspire a self-directed learning. Once the students are adequately fuelled with acquired capabilities to effectively engage in self-directed learning, it can be probed as readiness for self-directed learning (Gilany & Abusaad, 2012)

There are several assumptions with regarding to self-directed learning readiness. Firstly, it is assumed that there’s a certain degree of readiness for self-directed learning in any individual. Secondly, competencies needed for self-directed learning can be nurtured over

the years to a certain extent. Finally, it is also assumed that the capacity required to engage in self-directed learning could be generalised to other settings (Candy, 1991; Guglielmino, 1989)

The final assumption reveals the possibility of linking the inherent self-directed learning readiness in a new, unfamiliar context (Fisher, King & Tague, 2001). This is vital in our case of developing skills and personality characteristics of business undergraduates in our newly formed faculty to provide more insights and direction through which their paths should be carried out.

Most extensively utilized instrument in measuring self-directed learning readiness is the scale of Guglielmino's (1977) self-directed learning readiness (Linares, 1999; O'kell, 1988). These scales basically measure the readiness using three constructs, namely; Self-Management (SM), Desire for Learning (DL) and Self-Control (SC). These three constructs are measured with several attributes such as 13 items for SM, 12 items for DL and 15 items for SC which are in par with the construct itself.

Further, it is critical to examine the attitudes of undergraduates in pursuing a self-directed learning in their day-to-day lives. As identified by S.F. Lea et al. (2003) it engages the student in the process of self-learning while giving more emphasis to meeting their learning needs through getting attracted into more of what they are truly interested.

Considering all the facts, it is important to apprehend self-directed learning readiness to maximize opportunities for learning while creating an atmosphere which is dedicated to foster the learning of students (Klunklin, Viseskul, Sripusanapan, & Turale, 2010). Apparently, this is crucial for a newly formed business faculty where there's a paramount foundation should be laid. Hence, it can be reasonably stated that the rigour of this concept, in the context of Faculty of Business in the University of Moratuwa is high where further research is essential.

### **03. Methodology**

The concept of self-directed learning readiness scale was initially brought by Lucy Guglielmino in her dissertation published in 1977. It consisted 58 items and was translated into many languages and used severely. Later, Fisher et al. (2001) redesigned the same scale with 40 items. As proposed by most of the literatures, it was identified that the most appropriate instrument to measure self-directed learning readiness of the first year undergraduates was the redesigned scale which had 40 items covering three sub scales: Self-management (SM) =13 items, Desire for learning (DL) = 12 items, Self-control (SC)= 15 items.

Table 1  
*SDLS items, mean and standard deviation*

Descriptive Statistics		
Item Code	Mean	Std. Deviation
SM1	3.5385	.84810
SM2	3.8205	.69774
SM3	3.3590	.83704
SM4	3.1795	.86405
SM5	3.3846	.75988
SM6	3.4744	.76827
SM7	3.3462	.95110
SM8	3.3462	.85016
SM9	3.3974	.99792
SM10	3.5641	.86174
SM11	3.8333	.82834
SM12	3.7564	1.00887
SM13	3.6795	.76436
DL1	4.2436	.79259
DL2	4.1538	.80706
DL3	4.2051	.82744
DL4	3.9487	.89584
DL5	3.7179	.80417
DL6	3.7179	.85124
DL7	3.8718	.74483
DL8	3.9872	.65453
DL9	4.0128	.79762
DL10	4.2308	.86675
DL11	4.2179	.69595
DL12	3.8333	.95912
SC1	4.0513	.77119
SC2	4.1795	.81772
SC3	4.1795	.83345
SC4	4.0513	.82016
SC5	3.6923	.84219
SC6	3.9103	.70593
SC7	3.7564	.92842
SC8	3.6795	.96016
SC9	3.9231	.81813
SC10	3.9103	.88547
SC11	3.7564	.75912
SC12	3.6923	.90177
SC13	3.9103	.74181
SC14	3.8333	.79637
SC15	3.6410	.83704

Being a well-reputed technical institution, University of Moratuwa made a decision to spread its wings to foster business undergraduates by creating a business faculty in 2017. 100 students were enrolled as the inaugural batch envisioning to transform businesses through innovations. This vision invariably needs to be linked with self-directed learning, since most of the transformations in contemporary organizational settings are more pragmatic and need broader perspectives. By considering these facts, the inaugural first year batch of Faculty of Business in University of Moratuwa was selected as the sample for this study.

The attitudes of the undergraduates are inevitably important at this stance, hence it is important to understand whether there is any relationship between attitudes and self-directed learning.

The circumstances in the Faculty of Business-University of Moratuwa shows no major difference with other faculties. Yet being a budding institute with a new curriculum which is obviously one of a kind when compared with other well-established business faculties in Sri Lanka, obviously make things different in subtle ways. This difference is shown in the areas of active participation in daily learning activities, academic performance and feedback obtained from the students. These responses effectuate the need for conducting this research.

Hence, this study further anticipates to evaluate the role played by attitudes in motivating undergraduates pursuing self-directed learning. As mentioned in the literature review above, seven attitudes were obtained through available literature. Questions were prepared accordingly while using the same Likert scale ranging from strongly disagree (1) to strongly disagree (5). Hence, Cornbach alpha was calculated to examine the internal reliability.

Data was collected via a structured questionnaire where respondents were requested to mark their opinion based on a Likert scale ranging from strongly agree (SA) = 5, Agree (A) = 4, Moderate (M) = 3, Disagree (DA) = 2 and Strongly Disagree (SDA) = 1. 78 questionnaires were distributed and completed by the first year undergraduates. This method of data collection facilitated the researcher to remain unbiased. This becomes important especially in the context of a newly formed faculty where the researcher know each student in person.

Out of 86 of business faculty undergraduates, 78 valid responses were collected. All the respondents were in their first year and first semester, since the Faculty of Business was inaugurated in September 2017 and the academic year commenced from January 2018. Undergraduates underwent a three-month pre academic session prior to commencing their academic year. Out of 78 respondents, 58% were female and 42% were male. Z score of the respondents ranges from 1.04 – 2.27 covering many districts in Sri Lanka.

Descriptive statistics were measured by means where as independent samples T tests were performed to analyse data. Unless and otherwise stated, all tests were two-tailed where the statistically significance of the results were considered, if the P value is less than 0.05

#### 04. Analysis

Using the self-directed learning readiness scale, mean values were calculated. As table 01 depicts, the mean values ranges from 3.1795 (SM4) to 4.2436 (DL1). This invariably states that undergraduates are willing to learn new information even though they find it hard to set strict time frames for their studying purposes.

The Statistical Package for Social Sciences (SPSS; version 21) was used for storage and tabulation of data. It was also used to generate descriptive statistics and measure correlations between variables.

When considering the subscales considered, the highest and lowest mean values were obtained in self-management were 3.1795 (SM4) and 3.833 (SM11) respectively. In desire for learning, mean values varies from 3.7179 (DL5) to 4.2436 (DL1) whereas in self-control subscale highest and lowest mean values are 3.6410 (SC15) and 4.1795 (SC3).

Under the subscale of Self-management (SM), the collected data from the undergraduates of Faculty of Business had a distribution of scores ranging from 29 to 59 with a mean value of 45.68 which is quite similar to 44.26 of Fisher et al. (2001)

Desire for learning (DL) subscale had a distribution of scores ranging from 32 to 59 with a mean of 48.14 which is also in par with 47.31 of Fisher et al. (2001)

Self-control subscale scored had a distribution ranging from 37 to 74 with a mean value of 58.17. The result is congruent with Fisher et al. (2001) with a value of 58.98

As proved by Fisher et al. (2001), when all three subscales are examined, it is clearly evident that Self-control (SC) stands ahead compared to Desire for learning (DL) and Self-management (SM) giving more insights about undergraduate readiness for self-directed learning.

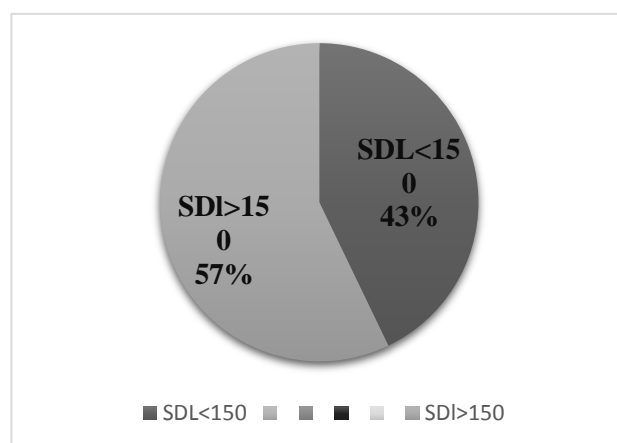


Figure 2. SDL Readiness of the first year undergraduates

When analysing self-directed learning readiness, Fisher et al. (2001) proposed that a score of 150 and greater can be considered as a higher readiness for self-directed learning. By considering the above suggestion, we can identify that 57% of our population is possessing a higher readiness for self-directed learning. This is graphically illustrated in the figure 02.

Klunklin et al. (2010) brought criteria to examine readiness for self-directed learning as follows; 4.50 – 5.00 (highest level), 3.50 – 4.49 (high level), 2.50 – 3.49 (moderate level), 1.50 – 2.49 (low level) and 1.00 – 1.49 (lowest level). Accordingly, 57% of the undergraduates of Faculty of Business, University of Moratuwa possess a higher level (overall mean value of 3.779) of self-directed learning readiness.

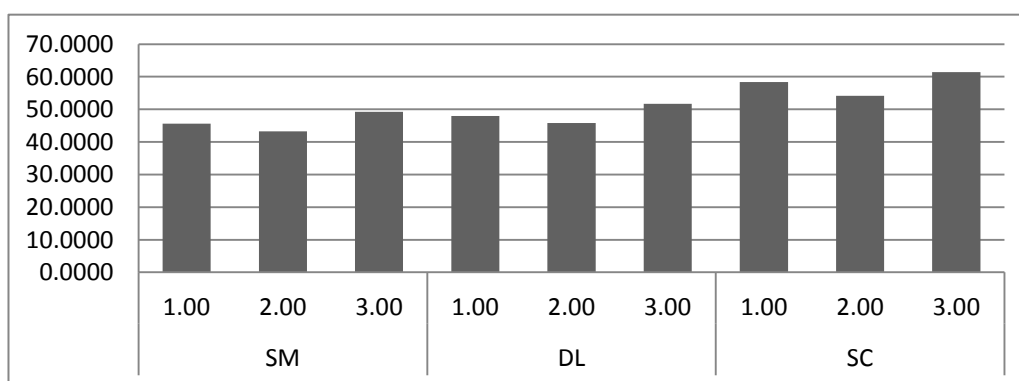


Figure 3. Comparison of Subscale mean values with medium

Faculty of Business, University of Moratuwa conducts its Bachelor of Business Science degree in English medium. Yet, students who sat for G.C.E AL in all three mediums: Sinhala (1), Tamil (2) and English (3) are given the opportunity for enrolment. Hence, it is reasonable to measure the mean values of all three mediums pertaining to each subscale to recognize if there's any insights about students' readiness for self-directed learning. The results are illustrated in the table 3. The population is comprised of Sinhala (59), Tamil (10) and English (9) undergraduates. Apparently, it is evident that English medium students possess the highest readiness to pursue self-directed learning.

In addition to that it is also visible that undergraduates from all three mediums are slightly speeding up their readiness for self-learning respectively from Self-management (SM), Desire for learning (DL) to Self-control (SC). Further, it is also evident that most of the undergraduates are opted to maintain a better self-control to pursue their learning objectives.

The situation is same for other two subscales, namely desire for learning and self-control. The results are tabulated below.

Table 3

*Descriptive statistics of the mediums pertaining to subscales*

		Mean	Std. deviation	Std. error
SM	1.00	45.56	4.64	0.60
	2.00	43.20	10.14	3.21
	3.00	49.22	6.98	2.33
DL	1.00	48.00	5.73	0.75
	2.00	45.80	7.39	2.34
	3.00	51.67	5.45	1.82
SC	1.00	58.36	8.19	1.07
	2.00	54.10	8.79	2.78
	3.00	61.44	7.58	2.53

The inaugural batch of Faculty of Business, University of Moratuwa is comprised of 95 students where only 78 were participated for this survey. When considering about gender, it is also important to examine whether there is any significant relationship between the subscales of self-directed learning readiness scale.

T tests were performed between gender and subscales: self-management (SM), Desire for learning (DL) and Self-control (SC) respectively. When considering about the results obtained via comparing SM with gender, a null hypothesis ( $H_0$ ) can be created as: there's no relationship between SM and gender. Yet the p value obtained from T test amounts to 0.097 can guide us to not to reject  $H_0$  on a note of being greater than the 0.05. In other words, this proves there's no relationship between SM and gender. Similarly, the T tests performed for DL and SC, prove there's no relationship between relevant subscales and gender as suggested by Fisher et al. (2001). The results obtained through T tests are illustrated below;

Table 04

*Independent sample T tests for SM/DL/SC*

	Levene's Test for Equality of Variances		
	F	Sig.	t
SM	2.824	0.097	0.131
DL	0.28	0.598	0.771
SC	0.132	0.718	0.84



Table 05

*Independent sample test of SM subscale*

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Differe nce	Std. Error Differe nce	95% Confidence Interval of the Difference	
									Lower	Upper
SM	Equal variances assumed	2.82	.097	-.13	76	.896	-.179	1.38	-2.92	2.56
	Equal variances not assumed			-.12	55.08	.901	-.179	1.45	-3.08	2.72

Table 06

*Independent sample test of DL subscale*

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Differ ence	Std. Error Differe nce	95% Confidence Interval of the Difference	
									Lower	Upper
DL	Equal variances assumed	.28	.59	.77	76	.443	1.069	1.387	-1.693	3.83
	Equal variances not assumed			.76	65.1	.450	1.069	1.408	-1.742	3.88

Table 07  
*Independent samples test of SC subscale*

		Levene's Test for Equality of Variance		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
SC	Equal variances assumed	.13	.72	-.84	76	.404	-1.60	1.91	-5.41	2.197
	Equal variances not assumed			-.85	71.03	.400	-1.60	1.89	-5.37	2.171

Attitudes play a key role in persuading undergraduates to be ready for self-directed learning. One of the objectives of this study was to examine the relationship between students' attitudes and their impact on subscales of self-directed learning readiness. When examining the relationship between students' attitude with readiness for self-directed learning, we can consider developing a null hypothesis ( $H_2$ ) as there's no relationship between students' attitudes and readiness for self-directed learning. Yet based on M. Gibbons (2002) it can be justified that the attitudes such as Responsibility commitment (A1), Confidence/Self-awareness (A2), Curiosity-wonder (A3), Drive-intensity (A4), Optimism – Positivity (A5), Courage in risk taking (A6) and Determination of ingenuity (A7) do maintain a relationship with self-directed learning ( $H_3$ ), expects following seven attitudes from an individual to excel at self-directed learning.

Accordingly, correlations were calculated and subsequently three multiple-regression models were formulated using stepwise method. The purpose of using this method was to eliminate the weakest correlated variables and figure out variables that mostly explain the distribution.

The following model summary was obtained once correlations are calculated against SM subscale.

Table 8

*Model Summary of SM*

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.537 <sup>a</sup>	.288	.279	5.06322
2	.604 <sup>b</sup>	.365	.348	4.81430
a. Predictors: (Constant), A6				
b. Predictors: (Constant), A6, A2				

Table 9

*Coefficients of SM model*

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
A6	2.353	0.675	3.4863	0.001
A2	2.639	0.877	3.01	0.004

As a statistical model, R- squared measures how close the data are to the fitted regression line. This is also addressed as the coefficient of multiple determination, in multiple regression model. R- squared clearly states the variability of the response data around the mean. It is generally accepted that higher the percentage, better fits the model. This study evaluates the relationship between subscales of Self-directed learning readiness with attitudes. In such a context, three multiple regression models can be formulated respectively.

When correlations are calculated against SM, a regression line can be drawn considering the highest  $R^2$  value. Based on the results, 60.4% variation of SM is represented by A6 and A2. Hence, the model can be formed as;  $SM = 26.554 + 2.353 A6 + 2.639 A2$ .

A Q-Q scatterplot is created by plotting two sets of quantiles against one another. This comes in handy when assessing a set of data for some theoretical distribution. In other words, Q-Q scatterplot ensures model accuracy only by considering the most appropriate observations that are in par and hardly dispersed from and with the model. Thus, the accuracy can be concluded as higher.

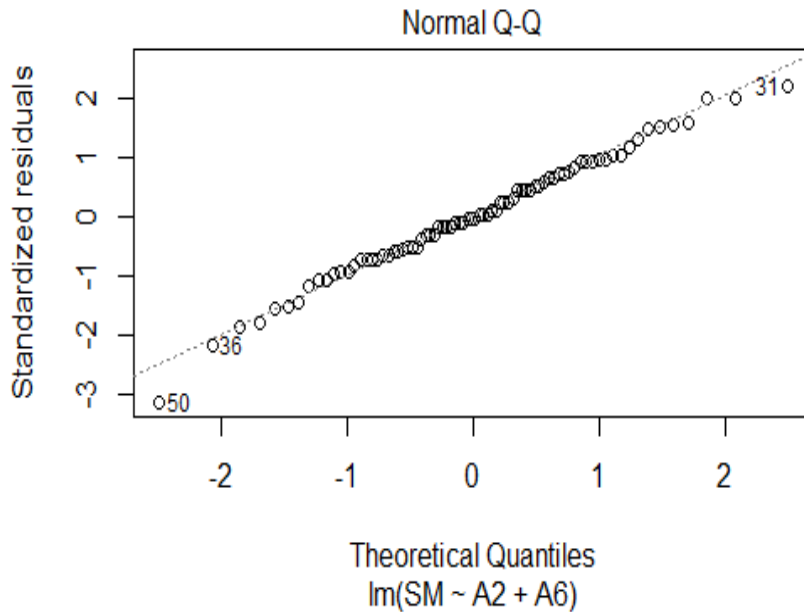


Figure 4. Regression line of SM model

This indicates that students' courage to take risks and self-awareness influence them to be more self-managed than the other attitudes concerned in this study. Rest of the independent variables, which are obviously the other attitudes, seemingly provide less or nor significance in forming the regression.

When the desire for learning compared with attitudes, apart from self-awareness(A2), determination of ingenuity(A7) and wonder led by curiosity (A3) add more insights. By considering the contribution to the model in terms of its proportions, it can be assumed that curiosity for learning new aspects (A2) plus determination-ingenuity (A7) contribute more along with curiosity (A3) compared to other attitudes.

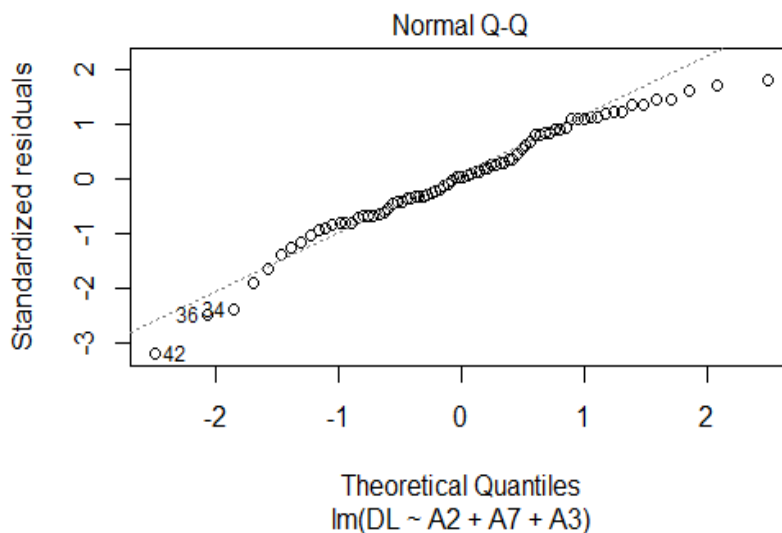


Figure 5. Regression line of DL model

This invariably adds value to the content. The following regression model can be formulated considering the highest R squared value generation option;  $DL = 22.522 + 2.760 A2 + 2.271 A7 + 1.561 A3$

Table 10

*Model summary of DL*

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.539 <sup>a</sup>	.291	.282	5.11404
2	.625 <sup>b</sup>	.391	.374	4.77235
3	.671 <sup>c</sup>	.450	.428	4.56364

a. Predictors: (Constant), A2

b. Predictors: (Constant), A2, A7

c. Predictors: (Constant), A2, A7, A3

Table 11

*Coefficients of DL model*

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
A2	2.76	0.806	3.426	0.001
A7	2.271	0.705	3.222	0.002
A3	1.561	0.551	2.831	0.006

When self-control is compared with attitudes,  $SC = 15.843 + 4.406 A2 + 2.339 A3 + 2.249 A5 + 1.810 A7$  can be obtained. Undergraduates show some significant level of curiosity geared up with optimism where they could achieve success via being self-directed in their respective learning processes.

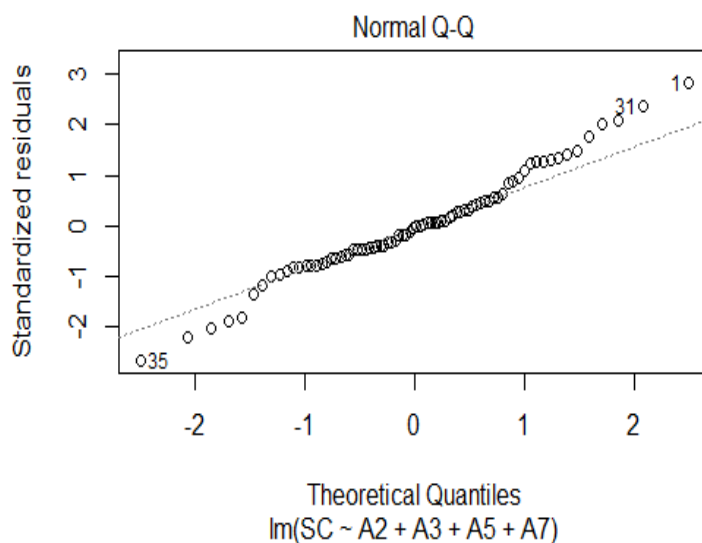


Figure 6. Regression line of SC model

Further, it is also evident that undergraduates are ultimately steered to become more determined and ready to pursue self-directed learning with determination-ingenuity attitude where they tempt to believe in themselves that they are unstoppable when they are adequately self-controlled.

Table 12

*Model summary of SC*

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.638 <sup>a</sup>	.407	.399	6.43934
2	.738 <sup>b</sup>	.544	.532	5.68220
3	.776 <sup>c</sup>	.602	.586	5.34382
4	.790 <sup>d</sup>	.624	.604	5.22828

a. Predictors: (Constant), A2

b. Predictors: (Constant), A2, A3

c. Predictors: (Constant), A2, A3, A5

Table 13  
*Coefficients of SC model*

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
A2	4.406	0.937	4.701	0.000
A3	2.339	0.683	3.426	0.001
A5	2.249	0.966	2.327	0.023
A7	1.81	0.872	2.075	0.041

## 05. Discussion

In general, the results obtained through this study gave an insightful, positive feedback. As a budding faculty, under the shade of already well-established business faculties in Sri Lanka, Faculty of Business – University of Moratuwa has to be more focussed in achieving its aspirations via its students. Catering to a group of fresh undergraduates with wide dispersed levels of attitudes, skills and knowledge is a tedious task, hence caution should be practised with immense care and consideration. In such a situation, self-directed learning plays a vital role in mapping the needs of the contemporary business world and students' academic pursuits.

The results proved that 58% of the population is sufficiently ready to pursue self-directed learning with more than 150 SDL rate (Fisher et al., 2001). This is further strengthened by the mean values of three subscales considered in the model: Self-management (45.68), Desire for learning (47.31) and Self-control (58.17) as suggested by Klunklin et al. (2010). Excitingly, there were some noteworthy observations in deciding the subscales enhancing the importance of conducting this study. Further, this study examined the relationship between students' attitudes pertaining to self-directed learning readiness with paramount coherence to its subscales.

In this study, it is found that the mean score of Self-control is greater than Self-management (SM) and Desire for learning (DL) subscales. This had also been proven by many scholars (Qamata-Mtshali, 2012; Gilany & Abusaad (2012); Abraham et al., 2011) This implies the mentality of the students who are fresh to an unknown culture and atmosphere. As means values suggest, even though undergraduates do strongly believe that they are more reliant about themselves in pursuing their own learning, they find it is hard to set strict time-frames. As proven by Williams (2004), undergraduates are supposed to select their higher education pursuits with a thorough understanding of their capabilities and should be willing to engage in continuous learning. Though this may sound as a paradox, in a context where the students are packed with all five days' lectures with three continuous assessments, it becomes a reality (Rosenbaum, 2004).

As fresh undergraduates who are straight out from colleges, invariably they are amateurish to compare and contrast their self-concept with their role perception. This is also established by the highest mean scores obtained in the SDL scale for all three subscales. The undergraduates of Business Faculty show an immense desire to learn new information (DL 01 - 4.2436) along with a higher degree of self-assurance where they trust themselves in pursuing their own learning (SM 11 - 3.833) and a significant level of self-reliance (SC 03 – 4.1795). Yet, they fail to establish strict time frames (SM 4 – 3.1795) and they hardly enjoy studying (DL 5 – 3.7179). As Lunyk-Child et al. (2001) pointed out, students may go through a process where they initially transform from negativity to positivity led with confidence and skills related to be self-directed. Hence, they prefer to set their own criteria to measure their performance (SC 15) which will ultimately reduce their improvement by stagnating to their own comfort zones.

Additionally, the reason behind why undergraduates scored low in the self-management (SM) subscale should be deeply addressed. This reflects the need for curriculum developers and the faculty itself to design and implement appropriate strategies. Thus, relevant areas could be developed facilitating the enhancement of self-directed learning skills (Smedley, 2007)

As proven by Gilany and Abusaad (2012), there can be higher level of self-directed learning readiness irrespective of students' demographics. In this study, T tests were performed to find the impact of gender on three subscales of self-directed learning readiness model. The results were in par with Fisher et al. (2001) where there was no significant impact on self-directed learning by gender.

When considering about interrelationships between subscales, it is evident that there's a significant positive relationship between desire for learning and self-control. This is predominant in pursuing self-directed learning because it determines learners' readiness to be focussed and achieve their learning aspirations. As facts prove, 57% of the undergraduates who represent the Faculty of Business are sufficiently fuelled up to self-directed learning. Yet it is important understand the external and other auxiliary aspects which have the potency to bring a more sustainable and better readiness (Smedley , 2007).

The speciality of this study comes with its identification of the language, especially the medium in which undergraduates have done their G.C.E. A\ls and the medium they are supposed to learn. It is clearly evident that students who have done their G.C.E. AL in English medium portray a very high self-directed learning readiness compared to other mediums. This highlights the one of Sri Lanka's inherent educational barriers. This implies the importance of developing language skills on ground level to uplift student-centric education system. Further, it maps with the needs of large corporates. When this issue is deeply analysed, it could be found out that almost 95% of the English medium students are from Colombo with higher Z-scores. Although the National Education Commission has identified



the importance of strengthening English medium education in state schools while expanding facilities for English learning in university level in its policy reports (2009), the situation hasn't been adequately addressed. In a nutshell, this summons many ground ridden socio-economic and cultural aspects. Hence caution must be practised to find sustainable solutions. Language plays a vital role in framing the basics for self-directed learning readiness. Thus, it is pivotal to address this issue in a bigger scale.

Attitudes of undergraduates pave the way to become self-directed in their learning (Kain, 2003). As analysed above, different relationships could be figured out generating many insights. The sole purpose of deriving regression lines was to find how attitudes contribute to become self-directed and to examine the extent to which those attitudes facilitate readiness for self-directed learning. As found out, undergraduates' attitudes are more inclined towards self-control compared to other subscales. This implies student's understanding about themselves and their role in gaining benefits of being self-directed. This exercise could also use as a primary method to assist both students and lecturers to evaluate their educational strategies. Students can gain some nuance about themselves, thus they would likely be positive to self-evaluate and find answers by themselves (Biggs, 1987. This would also lead to a better learning outcomes from undergraduates (Prosser & Trigwell, 1999)

## **06. Conclusion**

Based on the results obtained from the survey, it can be concluded that 57% of the undergraduates of the Faculty of Business are adequately ready for self-directed learning. The remainder should be channelled towards right path where they could also obtain the benefits of self-directed learning. It was found out language plays a vital role in being self-directed in learning processes. Especially in a context where people from different fields and mediums are connected to one stream. One of the secondary purposes of this study was to put a stepping stone to create an awareness among students' to be more engaged in self-directed learning process to gain their respective educational pursuits. In addition, it is important for to strengthening of the idea of self-direction within university culture. Thus, necessary action could be taken to enhance the readiness for self-directed learning in undergraduates.

## **07. Limitations**

This study is limited by the usage of convenience sampling, especially limited to a particular group of students with inadequate balance between demographics. The nature of the questionnaire based research limited the ability to explore the external factors which could hinder or promote self-directed learning readiness of the undergraduates of Faculty of Business. It is recommended that future studies adhere to those aspects. Researchers could also extend these baseline results with comparative studies including investigations of other aspects pertaining to self-directed learning readiness.

## References

- Abraham, R., Fisher, M., Kamath, A., Izzati, T., Nabila, S., & Atikah, N. (2011). Exploring first-year undergraduate medical students' self-directed learning readiness to physiology. *AJP: Advances in psychology education*, 393–395.
- Biggs, J. B. (1999). *Teaching for quality learning at university*. Buckingham: Open University Press.
- Brockett, R. G., & Himenstra, R. (1991). *Self-direction in learning: Perspectives on theory, research, and practice*. New York, NY: Routledge.
- Burnard, P. (1999). Carl Rogers and postmodernism: Challenges in nursing and health sciences. *Nursing and Health Sciences* 1, 241–247
- Candy, P. (1991a). *Self-direction for lifelong learning: A comprehensive guide to theory and practice*. San Francisco, USA: Jossey Bass.
- Grow, G. (1991). Teaching learners to be self-directed. *Adult Education Quarterly*. 41, 125–149.
- Edwards, R. (2001). Meeting individual learner needs: Power, subject, subjection. In C. Paechter, M. Preedy, D. Sottand J. Soler (Eds.), *Knowledge, power and learning*. London: SAGE.
- El-Gilany, A., & Abusaad, F., (2012). Self-directed learning readiness and learning styles among Saudi undergraduate nursing students. *Nurse Education Today*, 1040–1044.
- Farrington, I. (1991). Student-centred learning: Rhetoric and reality? *Journal of Further and Higher Education*, 15(3) 16–21.
- Fay, P. (1988). Open and student-centred learning: Evangelism and heresy, *Journal of Further and Higher Education*, 12, 3–19.
- Fisher, M. J., & King, J. (2001). The self-directed learning readiness scale for nursing education revisited: a confirmatory factor analysis. *Nurse Education Today*, 1040 – 1044.
- Fisher, M., King, J., & Tague, G. (2001). Development of a self-directed learning readiness scale for nursing education. *Nurse Education Today*, 21:516–525.
- Gibbons, M. (2002). *Activity -17, The attitudes of successful self-directed people*. Retrieved from <http://www.selfdirectedlearning.com/index.php/becoming-self-directed/activity-17-successful-attitudes>
- Greene, J. A. (2009). Collegiate faculty expectations regarding students' epistemic and ontological cognition and the likelihood of academic success. *Contemporary Educational Psychology*, 34(3), 230–239.
- Guglielmino, L. M. (2008). Why self-directed learning? *International Journal of Self-directed Learning*, 5(1), 1–14. Retrieved from [http://www.sdlglobal.com/IJSDL/IJS\\_DL1.2-2004.pdf](http://www.sdlglobal.com/IJSDL/IJS_DL1.2-2004.pdf)
- Guglielmino, M. (1977). *Development of the self-directed learning readiness scale* (Doctoral dissertation). University of Georgia, Dissertation Abstracts International. 38, 6467A.
- Harden, R. M., & Crosby, J. (2000). AMEE guide no. 20: The good teacher is more than a lecturer- The twelve roles of the teacher. *Medical Teacher* 22(4), 334347.

- Hiemstra, R. (1991). *Creating environments for effective adult learning – New directions for adult and continuing education*. San Francisco, CA: Jossey-Bass.
- Hiemstra, R. (2004). Self-directed learning lexicon. *International journal of self-directed learning*, 1(2), 1–6. Retrived from <http://www.sdlglobal.com/IJSDL/IJSDL1.2-2004.pdf>
- Hiemstra, R., & Brockett, G. (Eds) (1994). *Overcoming resistance to self-direction in adult learning*. San Francisco, CA; Jossey-Bass.
- Hinchliff, S. (2004). *The practitioner as teacher* (3<sup>rd</sup> ed.). London, UK: Elsevier.
- Huang, M. B. (2008), *Factors influencing self-directed learning readiness amongst Taiwanese nursing students* (Unpublished doctoral dissertation). Queensland University.
- Kain, D. J. (2003). Teacher-centred versus student-centred: Balancing constraint and theory in the composition classroom. *Pedagogy*, 3(1), 104 –108.
- Kell, C., & Van-Deusen, R. (2002). Student learning preferences reflect curricular change. *Medical Teacher*. 24(1), 32–40.
- Kember, D. (1997). A reconceptualization of the research into university academics conceptions of teaching. *Learning and Instruction* 7(3), 255–275.
- Klunklin, A., Viseskul, N., Sripusanapan, A., & Turale, S. (2010) Readiness for self-directed learning among nursing students in Thailand. *Nursing and Health Sciences*, 12(2), 177–181.
- Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers*. Association Press, New York, NY.
- Lea, S. J., Stephenson, D., & Troy, J. (2003). Higher education students' attitudes to student centred learning: Beyond 'educational bulimia'. *Studies in Higher Education* 28(3), 321–334.
- Linares, A. Z. (1999). A comparative study of learning characteristics of RN and generic students. *Journal of Nursing Education*, 38(9), 407–411.
- Longley, M. (2007). *How faculty differ: Examining college faculty member's expectations, teaching styles, and behaviour using Holland's theory of careers* (Doctoral dissertation). Iowa State University Ames, Iowa.
- Lunyk-Child O.I., Crooks, D., Ellis, P. J. Ofosu, C., O'Mara, L., & Rideout, E. (2001). Self-directed learning: Faculty and student perceptions. *Journal of Nursing Education*, 40(3), 116–123.
- National Education Commission (2009). *National policy framework on higher education, technical and vocational education 2009*.
- Norman, G. R. (1999). The adult learner; a mythical species? *Academic Medicine*, 74(8), 886–889.
- O'Kell, S. P. (1988). A study of the relationships between learning style, readiness for self-directed learning and teaching preference of learner nurses in one health district. *Nurse Education Today*, 8, 315–324
- O'Neill, G., & McMahon, T. (2005). Student-centred learning: What does it mean for students and lecturers?

- Prosser, M., & Trigwell, K. (1999). *Understanding learning and teaching: The experience of higher education*. Buckingham, Open University press.
- Qamata-Mtshali, N. (2012). *Problem-based learning vs traditional curricula: A comparative study of nursing students' self-directed learning readiness*. (Unpublished master's thesis). University of the Witwatersrand, Johannesburg.
- Rogers, C. R. (1983a). As a teacher, can I be myself? In *Freedom to Learn for the 80's*. Ohio: Charles E. Merrill Publishing Company.
- Rogers, C. R. (1983b). The politics of education. In *Freedom to Learn for the 80's*. Ohio: Charles E. Merrill Publishing Company.
- Rosenbaum, J. E. (2004). It's time to tell the kids: If you don't do well in high school, you won't do well in college (or on the job). *American Educator*, 8–15
- Scott, S. S., & Gregg, N. (2000). Meeting the evolving needs of faculty in providing access for college students with LD. *Journal of Learning Disabilities*, 33, 158–167.
- Shelley, F. J. (2007). *Exploring the relationships between self-efficacy and student success and persistence at the community college* (Doctoral dissertation). University of Massachusetts, Boston.
- Simon, B. (1999). Why no pedagogy in England? In J. Leach and B. Moon (Eds.), *Learners and pedagogy*. London: Sage Publications.
- Smedley, A. (2007). The self-directed learning readiness of first year bachelor of nursing students. *Journal of Research in Nursing*, 12(4).
- Taylor, P. G. (2000). Changing expectations: Preparing students for flexible learning. *The International Journal of Academic Development* 5(2), 107-115.
- Tough, A. (1978). Major learning effects: recent research and future directions. *Adult Education*, 28, 250–263.
- Williams, B. (2004). Self-direction in a problem based learning programme. *Nurse*
- Biggs, J.B. (1987). *Student approaches to learning and studying*. Hawthorn; Australian Council for Educational Research.
- Hmelo, C. E., and Ferrari, M. (1997). The problem-based learning tutorial: Cultivating higherorder thinking skills. *J. Educ. Gifted* 20: 401–422.
- Hartman, H. J. (2001) *Metacognition in Learning and Instruction: Theory, Research, and Practice*. Dordrecht, The Netherlands: Kluwer Academic Publishers. pp. 33-68
- Caffarella, R. S. (1993). Self-directed learning. *New Directions for Adult and Continuing Education* (Vol. 57). San Francisco, CA: Jossey-Bass
- Guglielmino, L. M. (1989). Guglielmino responds to Field's investigation. *Adult Education Quarterly*, 39(4), 235-240. <http://dx.doi.org/10.1177/0001848189039004005>
- Subbaghan, Z. S. (1980). Adult self-directedness and self-concept: an exploration of relationships (Doctoral dissertation, Iowa State University, 1979). *Dissertation Abstracts International*.40, 3701A.

## **Deciphering Nonverbal Cues: A Superfluity or Necessity?**

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### **Abstract**

The current study aims to bring into light a few prominent factors that bring about the requirement of having to interpret nonverbal cues. Whilst culture is a primary indicator in assessing the importance of identifying and interpreting nonverbal cues, this paper also includes gender and situation in a workplace context. Drawing on these three focal points, the paper will then show how each factor influences the dependency on these subtle cues in a work place environment. This paper has adopted a theory based model whereby the backbone of the paper relies alone on previous research in this field. It brings into perspective that collectivistic societies like Sri Lanka, which are considered to have high context communication styles, rely heavily on nonverbal cues. Simultaneously, within gender conformities, individuals who are at female dominant workplaces bound to read into and express themselves more through the use of these subtle cues. Situations such as superior-subordinate communication which revolve around social power too can influence the need to look out for nonverbal cues. This study contributes to the extensive literature in the field of nonverbal communication, bridging studies on nonverbal cues and culture, gender and situations, by disclosing when to be aware of nonverbal cues to facilitate efficient communication, and in the long run healthier work relationships.

**Keywords.** Nonverbal Cues, Cultural Frameworks, Gender

### **1. Background**

It's no secret that high employment turnover can prove to be of a costly affair for any company, regardless of the field of work the company operates in. It not only affects the morale of current staff but it in the long run could also hinder the performance levels of the company as a whole (Hinkin & Tracey, 2000). In his book, Leigh Branham (2005) identifies seven reasons focusing on why employees would leave a company, which revolve around employees feeling devalued and unrecognized, inadequate coaching and constructive feedback, and a loss of trust and confidence in senior leaders (Smidts, Pruyn & Cees, 2001), in some form these reasons can be linked to communication. In this era of fierce competition, even the smallest of differences integrated into corporate culture can make an impact so big it could lead to effective strategic change or bring losses to the company. Whilst the focus of this paper isn't on how to retain employees or reduce turnover costs, it aims to bring into light a subject that's upturned interest since the early 1930's. Effective communication is a managerial aspect that needs continuous improvement, and as with any

broad concept such as communication, it can be broken down into various forms, in this case nonverbal and verbal communication (Bavelas & Chovil, 2006).

Revolving around topics of body language and posture, nonverbal communication is widely acknowledged as an important, but is still vastly under researched and often misunderstood in some business practices (Riggio, 2005). One such common misinterpretation is that of Albert Mehrabian's 7-38-55 which has been abused by speakers who confidently state that 93% of all communication is nonverbal, with 55% exhibited through body language and 38% from the tone of the voice. In order to counteract the wrong application of his famous equation, Mehrabian (2011) a pioneer in nonverbal communication, explains that these numbers only pertain to certain situations, specifically involving the communication of one's own feelings and attitudes. The "Mehrabian myth" is an anecdote that illustrates the extensive gap between research and practice in the context of nonverbal communication.

Chimps have been observed using facial expressions and gestures (a type of nonverbal cue referred to as Kinesics, which will soon be introduced in the next segment) in the wild and in captivity, to ask other chimps to share food, for help in a fight, or to request a grooming session (Pollick, Jeneson, & de Waal, 2008). Whilst there do seem to be compelling parallels between specific facial expressions and gestures displayed by human and nonhuman primates, universally interpreted to hold similar meanings, it still remains true that communication among nonhuman primates, like chimps and monkeys, appears to be less complex than that of humans (Preuschoft, 2000; Tierney, 2007). A recent study by Galati, Schmidt and Tinti (2003) compared the facial expressions of children who were blind with those of sighted children and found many similarities. Even though the children who were blind couldn't see the facial expressions of others to mimic them, they still made the same expressions, suggesting an innate genetic basis for these behaviors.

### ***1.1 Nonverbal communication***

Nonverbal means of communication, an area that has brought about researches that peak interest and debate on the importance of understating these subtle cues from the early 1990's, is relevant now more than ever. With changes taking place around the globe in the business world, interpreting and understanding a message the company employees and managers are relaying to each other is vital for the future of any corporation (Knapp, Hall & Horgan, 2013). Evidently, it's no surprise that nonverbal means of communication play a huge role in daily routines, regardless of it being a work, social or personal relationships (Hartley, 2002). An abundance of research and information states that most people rely heavily on these nonverbal actions to express themselves and also to better understand those around them. Evidence also points out that, in circumstances where the verbal message seems to contradict with the nonverbal cue the sender has expressed, the receiver of the message would tend to rely in the nonverbal action to better interpret and understand the counterparties true opinion and feeling. However, it should also be kept in

mind that just as nonverbal cues could lead to a better understanding of the message being communicated; it could also lead to misunderstandings.

#### *1.1.1. Types of Nonverbal communication*

Just as verbal language is broken up into various categories, there are also different types of nonverbal communication (Refer to diagram 1). It should be kept in mind that these different types of nonverbal cues often work in concert with each other, thereby combining to repeat, modify, or even contradict the verbal message being sent.

(1) Kinesics meaning “movement,” refers to the study of hand, arm, body, and face movements, specifically gestures, head movements and posture, eye contact, and facial expressions. There are three main types of gestures, adaptors, emblems, and illustrators (Andersen, 1999). Adaptors are touching behaviors and movements. The act of subconsciously clicking pens, shaking legs, or engaging in other adaptors during classes, meetings, , twirling hair, or fidgeting with fingers or hands are considered self-adaptors. Emblems are gestures with specific meaning and illustrators, the most common type of gesture, are used to illustrate the verbal message they accompany. Hargie (2011) identifies four general human postures of standing, sitting, squatting, and lying down. Each of these postures includes multiple variations, and when combined with particular gestures or other nonverbal cues, can express different meanings. Eye contact serves several communicative functions ranging from regulating interaction to monitoring interaction, to conveying information, to establishing inter-personal connections. While listening, we tend to make more sustained eye contact, not glancing away as much as we do while speaking (Martin & Nakayama, 2010).

(2) Haptics refers to the study of communication by touch. Individuals often receive explicit advice and instruction on how to use touch than any other form of nonverbal communication. A lack of nonverbal communication competence related to touch could have negative interpersonal consequences; one such instance is if one doesn't follow the advice given about the importance of a firm handshake, a person might make negative judgments about their confidence or credibility.

(3) Vocalics includes the vocal qualities that go along with the verbal message, such as the pitch, volume, rate, vocal quality, and verbal fillers (Andersen, 1999). People tend to find speakers with a rate above average more credible and intelligent (Buller & Burgoon, 1986). Another factor of vocalics is the tone. Many people perceive nasal voices negatively and assign negative personality characteristics to them (Andersen, 1999).

(4) Proxemics; where space and distance influence communication. Every individual has varying definitions of “personal space”, and these definitions are contextual and depend on the situation and the relationship. Although our bubbles are invisible, people are socialized into the norms of personal space within their cultural group. Scholars have identified four

zones for US Americans, which are public, social, personal, and intimate distance (Hall, 1968).

(5) Chronemics is how time affects communication. Time can be classified into several different categories, including biological, personal, physical, and cultural time (Andersen, 1999) For example, promptness and the amount of time that is socially acceptable for lateness and waiting varies among individuals and contexts.

(6) Personal presentation and environment refers to how the objects we adorn ourselves and our surroundings, provide nonverbal cues that others make meaning from and how our physical environment, such as that of the layout of a room and seating positions and arrangements, influences communication.

### **1.2 Issue, Problem and learning points**

As the previous section has illustrated, nonverbal communication occurs in various forms, and each can be interpreted in a different way depending on cues used and on the context it is used in. The Problem brought in this paper then arises; when to interpret these nonverbal cues to better understand what's being communicated? However, in order to assess whether to be aware and read into these cues, one needs to focus on if there is a need to interpret these cues. And the need to do so, as the literature review suggests would depend on, but not limited to, are the differences in cultural aspects, gender and the situation in which this nonverbal cue takes place. For instance, a relevant situational factor is subordination and sensitivity to nonverbal cues that may vary depending on salary rank, gender role values and self-reported subordination. Where superiors may be less sensitive to nonverbal cues than their subordinates who have to be aware of how they express themselves as they're denied overt power which also assesses their social power. The Business Insider (2014) on *Common body language mistakes employees make* stated several ways in which employees unknowingly such as poor posture which would give others the impression of insecurity, laziness, and a general sense of unhappiness. However, the extent to which those around read into this cue and form the opinion that this individual is lazy and insecure would depend on factors which influence reliance on nonverbal communication such as culture, gender and the situational context. Thus the learning points in this paper would revolve around when to rely on nonverbal cues to enhance effective communication and when it's deemed inessential.

### **1.3 Importance of this research**

Some of the most meaningful communication is conveyed through nonverbal communication. Verbal messages may either be strengthened or diluted by nonverbal expressions. While these nonverbal messages may either be conveyed through human interaction such as facial expressions and physical movement. It mustn't be disregarded that nonverbal communication can also be conveyed through environmental elements such as



buildings and office spaces which could convey a message about the authority of the person. Although, in this aspect, even the action of pointing is considered a nonverbal cue (Kita, 2003), and it too can be interpreted in multiple ways, and some circumstances might not have any prominent implication at all. Similarly, nonverbal cues too, carry different meaning amongst certain cultures and in some, might not carry any significant value at all. Tipkins and McCarter (Kreitner, Robert & Angelo Kiniki, 1989) identified eight categories that facial expressions may be classified into: interest, enjoyment, surprise, distress, fear, shame, contempt and anger (Chandan, 1994).

The last decade has seen a tremendous upsurge in research and popular interest in the phenomena of nonverbal communication (Mehrabian, 2017) This paper seeks to look at nonverbal cues through the lens of culture, and if it is required to pay close attention and to which extent one should be cautious of how they act around others so as to avoid casting a misleading message. With changes taking place around the globe in the business world, interpreting and understanding a message the company employees and managers are relaying to each other is vital for the future of any corporation (Knapp, Hall & Horgan, 2013). Evidently, it does not require much effort for one to comprehend the fact that nonverbal means of communication plays a huge role in daily routines, regardless of it being a work, social or personal relationships (Hartley, 2002). For multinational companies and its employers, comprehending and adopting methods to effectively communicate with individuals from across the globe is a vital and beneficial aspect in their professional wheelhouse.

This research aims to show the importance of nonverbal cues and interpreting them when required. However in an attempt to narrow down the results, this paper will focus on three influencers of nonverbal cues; Culture, Gender and Situation. Where previous researches isolate each factor and explains each one individually, this paper allows the reader to assess which scenarios require reading into nonverbal cues and in which scenarios individuals tend to rely heavily on them, by bringing in 3 different factors with examples illustrating each. The literature review portion illustrates how nonverbal cues, such as gaze; a kinesic cue, are interpreted in different ways amongst various cultures. Most research prevalent to nonverbal cues talk about different interpretations and sensitivity to nonverbal cues based on gender. Placing caution over nonverbal cues, can prove to be of importance to superiors when they want to understand their employees better, and also to avoid miscommunication and allow more freedom in expressing themselves. And in turn, this study, while integrating different researches on culture, gender and situations specific to nonverbal communication, will enable the reader to better grasp in which contexts they should be aware of (if any) nonverbal cues.

## **2. Literature Review**

Tiersma (1993) states that a particular cue can be deemed as communication if it satisfies six main criteria. Firstly, if it is a cue that has transpired within the view of an audience (one where eye contact has been established). Secondly, if it is performed in a ritualistic or a

rather exaggerated manner. Third, if they are repetitive (meaning they happen in more than just one occasion). Fourth, if they are of longer duration than that of the normal. Fifth, if they have no such evident function if not a communicative one. Finally, if its occurrence is bounded within communicative context. Evidently however, nonverbal actions alone cannot articulate all meaning accurately, and one factor influencing this is the fact that there are differences amidst and within cultures (Burgoon, Guerrero, & Floyd, 2016).

Nonverbal cues affect everything from people's ability to make themselves understood and the quality of their social life to their ability to get along with and influence others. The research problem in this paper is identifying factors that would help assess whether to be cautious of nonverbal cues and when to be sensitive towards nonverbal cues. And in order to answer this question, the paper revolves around literature on nonverbal cues that draws distinct variations of nonverbal cue interpretations based on culture, gender and the situation. The book "Taking Cues from Body Language" (Barnum & Wolniansky, 1989) is a relatively old book that is of much relevance to this area of nonverbal communication. The authors state that nonverbal cues vary considerably from one culture to another culture. Strangers from a foreign land can misinterpret them for meanings which could be quite different from the ones they were originally intended for. An example this book brings out is one in which a misunderstanding is caused due to eye contact. It refers to the case when Barbara Walters had interviewed Colonel Muammar el-Qaddafi in Libya one spring for the television news program 20/20 twenty/twenty. And after the interview she had remarked, "He wouldn't look me in the eye. I found it disconcerting that he kept looking all over the room but rarely at me" due to the fact that she was not accustomed to that. In America, it is often a cause for concern, signaling the person as "shifty eyed" when the speaker won't look you directly in the eye, which roughly amounts to coming off as being untrustworthy. However, in an Arabic context, Colonel Muammar el-Qaddafi withholding eye contact was actually a compliment to Barbara Walters. Because to look at a woman straight on, and that too continuously, would be considered almost as serious as a physical assault in a part of the world where some women still wear a veil to avoid eye contact with men. Therefore, not looking is correct behavior and actually conveys respect towards the female counterparty. Eye contact is a nonverbal cue Americans are conditioned to expect in varying degrees. Our reading of it is almost at the subconscious level except when expectations are not met (Barnum & Wolniansky, 1989). Most research also states that women are typically more expressive nonverbally than men when in public or social settings, and their expressions are read more accurately by others (Brody & Hall, 2008). Therefore in settings which are more female dominant, there would be a tendency to rely more heavily on nonverbal communication.

In relating communication with culture, Meina Liu (2016) explains in detail how different aspects in culture affect how one communicates verbally and nonverbally. She goes on to discuss that of the many angles of cultural approach to the variations in communication styles, the most frequented is Edward Hall's high context and low context culture theory,

which was first introduced in 1976. Low context cultures are often compassed around individualistic cultures and mirrors an analytical style of thinking, in which the focus lies on specific, focal objects independent of the surrounding environment. Whereas with high context communication (which is more common among collective societies and reflects a holistic style of thinking) a larger proportion of context is taken into consideration when evaluating an action or an event. Low-context communication involves interpretation of what is conveyed in explicit verbal code, while in high-context communication, most of the information is either in the physical context or internalized in the person, with very little information given in the coded, explicit, transmitted part of the message. As described with the Saphir Whorf hypothesis, these differences can be a result of different language structures and compositional styles in diverse cultures, and these stylistic differences can result in misunderstandings, distrust and conflict in intercultural communication.

### **2.1 Cultural Frameworks**

Culture is often viewed as a function of interrelated systems that include the ecology (for example, the physical environment, and geography), subsistence ;in other words how individuals use their ecological resources to survive, and sociocultural systems such as institutions , roles, and values (Erez & Earley, 1993). Language is one such example of a very culture specific behavior (Matsumoto, 2006). Each culture has its own language, with its own vocabulary, syntax, grammar, phonology, and pragmatics (Barnlund & Yoshioka, 1990). The need to have a language may be a pan-cultural universal problem, and simultaneously having a language may be a universal solution to this problem. But the means in which each culture solves this problem, of developing its own language, is different in every culture.

A number of approaches have been used to describe and explain cultural differences; two approaches that are most widely accepted and relevant to understanding cultural variations in communication styles are value dimensions and thinking styles. The focus of this paper will mostly revolve around the former. Value can be defined as an “enduring belief that a specific mode of conduct is socially preferable to an opposite or converse mode of conduct”. These values form the basis for judging the desirability of some means or end of action. Once learned, values are integrated into an organized system of values that are relatively stable and serve a number of functions for individuals, such as predisposing them to favor particular ideologies, guiding self-presentations, influencing how these individual communicate, evaluate and judge the decisions made by others and their behaviors. The most widely cited work on cultural values is Geert Hofstede’s work on dimensions of cultural values.

Hofstede initially identified four dimensions of cultural values (2001): (1) power distance; which is defined as the extent to which a society accepts the fact that power is distributed unequally, one in which people accept a hierarchical order, where everybody has a place and requires no justification to decisions made by seniors. (2 ) individualism-collectivism,

where individualism is defined as a loosely knit social framework in which people are supposed to take care of only themselves and their immediate families, whereas collectivism is defined as a tight social network in which people distinguish between in-groups and outsiders, expecting their in-group to look after them, and in return owing absolute loyalty to them; (3) uncertainty avoidance, which is defined as the extent to which a society feels threatened by uncertain and ambiguous situations; and (d) masculinity-femininity, defined as the extent to which the dominant values in society are “masculine”, where there is assertiveness and the acquisition of money and things. Later, Hofstede and Bond (1988) added a fifth dimension, dynamic Confucianism (commonly referred to as Short term/ long term orientation) long-term orientation refers to future-oriented values such as persistence and thrift, whereas short-term orientation refers to past and present oriented values, such as respect for tradition and fulfilling social obligations (refer to Table 1). Andersen, Hecht, Hoobler & Smallwood (2002) bring together the work of Hofstede to portray the importance of interpreting verbal and nonverbal cues in the context of culture. The individualism-collectivism dimension alone has inspired thousands of empirical studies which examine cultural differences. Gudynekust (2003) states that a cultures’ individualistic / collectivistic nature can affect the priority it places on nonverbal communication. Collectivistic cultures that are deemed to be interdependent live in close proximity to one another whilst cultures who are more individualist tend to be more distant proximally. People in collectivistic cultures suppress emotional displays that are contrary to the mood of the group because maintaining group harmony is of the utmost importance. Individualistic cultures are more nonverbally affinitive and individuals need to provide intimacy cues (Andersen, Hecht, Hoobler, & Smallwood, 2003).

Table 1  
*Hofstedes cultural variances*

<i>Individualism/ Collectivism</i>	
Individualism: Loosely knit social framework- <b>Low context communication</b>	Collectivism: Tight social network- <b>High context communication</b>
Britain and Germany	Japan and China
<i>Power distance</i>	
Low power distance – less hierarchy is better	High Power Distance – More hierarchy is better
Ex: Denmark, New Zealand	Ex: Mexico, India
<i>Uncertainty Avoidance</i>	
Low uncertainty avoidance Universal guidelines for good and evil	Long-term orientation Definition of good and evil depends on

Prefer quick results	circumstances Value perseverance and tenacity
e.g. Western, Religions, Christianity, Islam	e.g. Confucianism, Hinduism, Buddhism
<i>Masculinity/ Feminine</i>	
Masculinity	Feminine
Ex: Japan, Austria, Mexico	Ex: Denmark, Norway, Sweden
<i>Dynamic Confucianism</i>	
Short-term orientation	Long-term orientation

Source: G. Hofstede and G. J. Hofstede, *Cultures and Organizations: Software of the Mind*, 2nd ed. (Boston: McGraw-Hill, 2004), p. 232.

In collectivistic societies, such as that of Japan and China, much of socialization emphasizes the use of self-criticisms by identifying one's shortcomings, or problems that prevent one from meeting the consensual standards of excellence that is shared within the society. In line with Akimoto and Sanbonmatsu's study (1999), self-effacement is practiced to maintain group harmony as modesty allows individuals to avoid offense. Therefore, in playing down one's individual performance and stressing the contribution of others, no one would feel threatened or offended. In such high-context communication cultures, the message receiver is expected to detect and appreciate the message sender's modesty, as well as the intention to enhance others' face through self-effacement. It is also generally assumed that praises should come from others and the use of self-effacement is often expected to result in the message receiver's positive, rather than any negative evaluation. However, in individualistic, low-context communication cultures, much of the socialization emphasizes the use of encouragements to promote individuals' self-esteem and self-efficacy. Self-enhancement helps to promote individuality because it allows an individual to directly assert thoughts, express desires, and promote themselves. Research even shows that European Canadians claim to be more satisfied with themselves than Japanese (Heine & Lehman, 1999).

Another dimension that draws lines with nonverbal cues is power distance. Members of high power-distance cultures are seemingly more sensitive to power differences between themselves and their addressees. By means of subtle nonverbal displays of submission, they convey respect and obedience to their superiors. To their counterparts, such displays are uncalled for. For example the Dutch who are members of low power distance societies, displaying extra deference to a person solely based on their relative differences in status is not an expected practice. Thereby in high power distance cultures, individuals are expected to show positive emotions to superiors, and are confined to expressing negative emotions to people with a lower status (Matsumoto 1991, according to Andersen et al., 2002). In addition, within high power distance cultures, subordinates show more bodily tension and smile more in an effort to please superiors and appear polite (Andersen & Bowman 1999).

### *2.1.1 The Role of Culture in the Nonverbal Communication Process*

David Matsumoto (2006) classifies culture with (1) Gestures (Kinesics) which as explained previously might imply different meaning according to different cultures; (2) Gaze (which is yet another form of kinesics) shows that gaze is associated with dominance, power, or aggression (Fehr & Exline, 1987) and affiliation and nurturance (Argyle & Cook, 1976); (3) Interpersonal Space (Proxemics): Hall (1966, 1973) specified four different levels of interpersonal space use depending on social relationship type: intimate, personal, social, and public. Where people of all cultures seem to make these distinctions, they differ in the spaces they attribute to them. Arab males, for example, tend to sit closer to each other than American males, with more direct, confrontational types of body orientations (Watson & Graves, 1966); (4) Other Nonverbal Behaviors, such as the semantic meanings attributed to body postures (Matsumoto & Kudoh, 1987) and vocal characteristics and hand and arm movements (Vrij & Winkel, 1991, 1992). Collectively, the evidence provides more than ample support for the contention that culture plays a large role in molding our nonverbal behaviors, which comprises an important part of the communication process.

### *2.1.2 Recognizing Nonverbal Behavior*

Although language is an effective and efficient means of communicating explicit information or content, every communication also conveys relational messages, information on how the talker wants to be understood and viewed by the listener. This can be explained with the fact that nonverbal communication concerns three main aspects. One which involves the sending of nonverbal messages, another involving the receiving of these nonverbal messages and the final being the complex interplay between the former mentioned two (Knapp; Hall & Horgan, 2013). These messages are communicated not by words, but through nonverbal behavior, including facial expressions, eye gaze, posture, and even our tone of voice (Watzlawick, Beavin, & Jackson, 1967). In addition, nonverbal behavior communicates deception. Early researchers believed that some nonverbal behaviors (e.g., avoiding eye contact or touching or rubbing the face) indicated lying. However, as more recent research has shown, deception is communicated by fairly idiosyncratic behaviors and seems to be revealed more by inconsistency in nonverbal communication than by specific nonverbal behaviors (Vrij, 2004). A useful theory in understanding nonverbal communication across cultures is expectancy violation theory. This theory suggests that we have expectations (mostly subconscious) about how others should behave nonverbally in particular situations. Because nonverbal communication occurs at a subconscious level, our negative or positive feelings toward someone may be due to the fact that they violated our expectations, without our realizing it (Floyd, Ramirez, & Burgoon, 2008).

### *2.1.3 High context and Low context cultures*

Of the theoretical perspectives proposed to understand cultural variations in communication styles, the most widely cited is that of high-context and low-context communication by Edward Hall (1976). Edward Hall's high-context and low-context communication is inspired by Bernstein's (1966) conceptualization of restricted and elaborate codes. Bernstein hypothesized that our speech patterns are conditioned through our social context. Although restricted and elaborated codes are a universal style of communicating, according to Hall (1976), cultures differ in the importance they place on words, and one communication style tends to be more predominant in one culture than another. Hall differentiated between high-context and low-context communication cultures and argued that low-context communication is used predominantly in individualistic cultures, whereas high-context communication is used predominantly in collectivistic cultures. Specifically, high-context communication occurs when most of the information is either in the physical context or internalized in the person, with very little information given in the coded, explicit, transmitted part of the message. Members of low-context communication cultures expect the message sender to be direct, provide detailed information, and use unambiguous language because they do not assume pre-existing knowledge of the people or the setting. According to Gudykunst and Kim (2003), members of collectivistic cultures tend to be concerned more with the overall emotional quality of interactions than with the meanings of specific words or sentences. Courtesy often takes precedence over truthfulness, which is consistent with the collectivistic cultures' emphasis on maintaining social harmony as the primary function of speech in interpersonal interactions. As a result, members from collectivistic cultures tend to give an agreeable and pleasant answer to questions when literal, factual answers might be perceived as unpleasant or embarrassing. Whereas an indirect communication style fares well in collectivistic cultures, individualistic cultures, such as the United States and most European cultures, generally prefer a more direct communication style. Good and competent communicators are expected to say what they mean and mean what they say. A person who speaks dubiously or evasively about an important matter is likely to be perceived unreliable, if not dishonest. A high degree of social approval is given to those who are capable of expressing ideas and feelings in a precise, explicit, straightforward, and direct fashion.

### **2.2 Gender**

Brody and Hall (2008) stated that women are typically more expressive nonverbally than men when in public or social settings, and their expressions are read more accurately by others, therefore in settings which are more female dominant, there would be a tendency to rely more heavily on nonverbal communication. Females had more knowledge of nonverbal cues and greater nonverbal decoding accuracy (J.C. Rosip & J. Hall, 2004). Although, a likely explanation for the gender difference in decoding accuracy was offered by Ickes, Gesn, and Graham (2000), who argued that differential motivation rather than

differential knowledge may account for females' advantage over their male counterparts on tests of interpersonal sensitivity. It was suggested that females try harder to do well at things involving interpersonal skill because it is often seen as docile and gender stereotypic to do so and therefore, not their knowledge, leads females to do better than males in this aspect. Power and status also play out in a gender conformed manner through nonverbal behavior in the most basic of workplace environments. For instance, in the scenario of an office elevator, both men and women tend to avoid violating personal space whenever possible. However, both genders are less likely to encroach a male individual's space, and men in particular would rather violate a female's space than that of another male.

### **2.3 Situation**

Nonverbal behavior is contextual and situationally variable. People do not show the same eating behavior in fast food restaurants that they do in elegant restaurants, they would not give information to a mechanic as they would to an employer (C Mayo & N.M. Henley). Although more related to the workplace environment than a situation, attire too is an influencer in nonverbal cues. In his experimental study, Sanchez Burks (2002), proclaimed that individual were less sensitive to nonverbal cues in language when wearing formal business attire compared to Hawaiian print shirts. In fact if employees feel that their attire is role appropriate, they feel that their clothing improves their performance in that role (Solomon & Schopler, 1982).

Sometimes situation and gender conformities go hand in hand, such is the case in the situation of an interview. Young, Beier and Beier (1979) stated that use of eye contact, smiling and head movements were more significant than attractiveness in assessing whether female applicants deserved a job. This suggests that in a given workplace situation, like an interview, the interviewers not only cared about the applicants appearance, but also about the interpersonal cues. In fact, in organizations with masculine cultures and work roles, women who seemed less attractive were usually sought after over women who were relatively more attractive (Cast et al., 1977).

In a study done by Semnani and Adair (2011), they found that during negotiations, negotiators from collectivistic societies like China, would express dominance through the manipulation of their environment, rather than their bodies. Where they would spread out their belongings and occupy more space on the negotiation table. In a manner similar to the way in which Japanese negotiators seat the most senior executive at the head of the table, facing the door (Hodson, Sano and Graham 2008), Chinese negotiators in order to express dominance, would do so through the manipulation of their environment, rather than their body. As negotiation tends to be a more male dominated field, women who engage in negotiation, in order to fit in with the norms, might try to exhibit more masculine dominant behaviors (Kray, Thompson, and Galinsky 2001) Also, given that women negotiated with



other women, it may have been relatively easy for them to display dominant behaviors as there are fewer social risks than negotiating with men (Deaux and Major 1987).

It is needless to state that relying on nonverbal cues to get a clearer idea of the message might not always assist in translating an accurate idea of the message being inferred. For instance, a number of nonverbal behavior are in some circumstances intentionally manipulated, it could be for either deceptive purposes, or it could arise from a situation when an individual or individuals who are mindful of their image act in a scrupulous manner to suppress behavior that could cast a negative outlook. (Burgoon, Guerrero, & Floyd, 2016).

### **3. Methodology**

The content of this research, in following the principles of systematic literature (Hart, 1998), primarily employs a theory based model, where theory forms the backbone of the articles evaluation (often termed as a conceptual analytical model), and then goes about the collation of data in a library based methodology. Prior to looking up for theories and data sources, the perception held by the author originated from observation at workplaces of how nonverbal communication when either ignored or unidentified not only hinders effective communication but also creates misunderstandings that get in the way of workplace relationships. As a result of residing in Japan for 4 years and being a resident and employee in Sri Lanka, substantial differences were noticed on how dependence on nonverbal communication differs based on culture and gender, such as that of the eye contact example of the Arabs, created an interest in researching into whether culture and gender influences interpretations of nonverbal cues. Having read and assessed multiple literature on nonverbal communication, besides the cultural and gender factors, a third commonly recurring factor was identified as situation. Thus formulating the 3 focal points would be discussed in the course of this paper. In reviewing literature that relates to these three factors, it is then illustrated how hypothetically it would impact a Sri Lankan workplace context.

#### **3.1 Research design**

This paper, defined as a fundamental research based on quantitative methods, utilizes a cultural research methodology interpreting cultural texts of already existing research that employ content analysis, semiotics and discourses analysis, which aim at relating nonverbal cues with culture, gender and situation. The paper first introduces communication, highlighting nonverbal cues and how it transcends beyond apparent facial gesture, and then introduces culture, gender and the situation as the three focal points of assessing whether to be alert of and the need to translate nonverbal cues to better interpret a message being communicated. It then moves on to introducing cultural approaches that influence communication, with focus on value dimensions like that of Edward Halls Low context and High context cultures and Geert Hofstede's cultural dimensions. Before moving onto how situations influence nonverbal cues, the gender aspect is assessed in that of how differently

men and women interpret and watch out for nonverbal cues and to what extent in a more female dominant workplace or vice versa would these gender roles affect reliance on nonverbal cues to better understand the message being relayed. In order to organize the findings, it was instrumental to draw up a table. Finally relationship between the situation and nonverbal cues are brought into focus. In having understood these three aspects, a fundamental basis can be drawn up as to when one should be more aware of the nonverbal cues that incur during communication.

### **3.2 Data Collection method**

Data collection was executed primarily through secondary source analysis. In the course of this paper, as a library based research methodology was employed, consequently the secondary sources utilized mainly covers already existing research on nonverbal communication. This paper integrates finding from sources that were generated through keyword searches such as “Knowledge on nonverbal behavior”, “Gender conformity on communication”, “Communication accommodation” “Cultural influences on nonverbal communication” and “Nonverbal communication in the workplace” on (1) Google scholar, (2) online databases available to Graduate students (of Ritsumeikan APU) such as Ebsco Host and (3) other online databases such as Elsevier, Emerald Insight, Science Direct and Springer, over the course of the 4 month period between May and August in 2018, generating search results with articles that have been published in the Journal of Nonverbal Behavior, Journal of cross cultural Psychology, American Psychological Association and book segments that revolve around nonverbal communication dating back to the early 1970’s. The keyword “Nonverbal communication” musters up over 300,000 search results on Google scholar alone, therefore in order to facilitate systematic collation of data articles that had been cited by 1000 articles or papers relating to nonverbal communication or similar fields were chosen. By the comprehensive collection in data, this research aims to identify whether it is a necessity or futility to identify and decipher nonverbal cues.

### **4. Data Analysis and Interpretation**

Although there are many types of nonverbal cues, the book “Communication in the Real World” (2013) identifies 6 main forms of nonverbal cues (Figure 1.) David Matsumoto relates culture to these cues; namely Kinesics and Proxemics in his research to show how culture plays a vital role in molding ones nonverbal behaviors.

Figure 1. Types on Nonverbal Communication

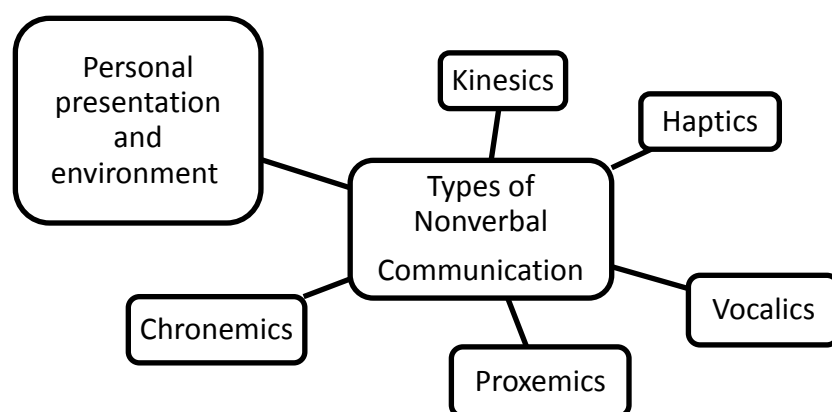


Table 2 below aims to relate the different types of components of nonverbal communication with the types mentioned in Figure 1 to present much clearly the forms of nonverbal communication that could occur within an organizational context.

Table 2

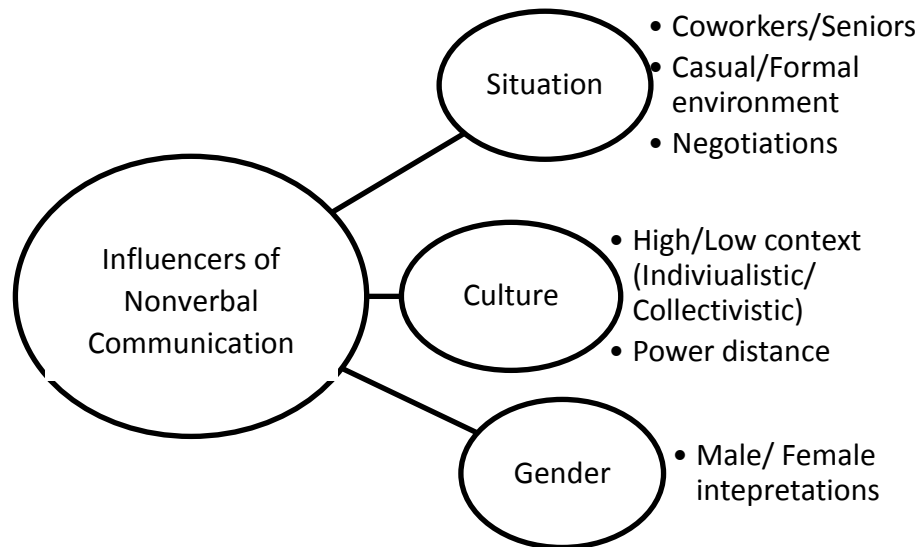
*Integration of Nonverbal communication components and types*

<i>Component</i>	<i>Example at a work place</i>	<i>Nonverbal cue type</i>
Appearance	The choice of heels worn by a pharmaceutical sales representative to a meeting with a physician.	Personal presentation and environment
Movement	The sweeping gesticulations of a visionary CEO presenting a keynote address	Kinesics
Facial Behavior	The slight furrowing of an advertising copywriter's brow up receiving critical feedback	Kinesics
Vocal Behavior	The tone of an interviewer's voice while telling the candidate, "we'll get back to you"	Vocalics
Space	The distance between two standing co-workers when they collaborate on a project	Proxemics
Touch	The firmness with which a supplier shakes a buyer's hand after the two sign a contract	Haptics
Time	The speed with which an account executive responds to a client's email	Chronemics

Source: Adapted from Richmond, McCroskey, & Hickson,

Whilst Table 2 exists to

show the types of nonverbal communication in effect within the context of a workplace, there isn't much, if not any literature that shows how much reliance different cultures have on the types of nonverbal cues.



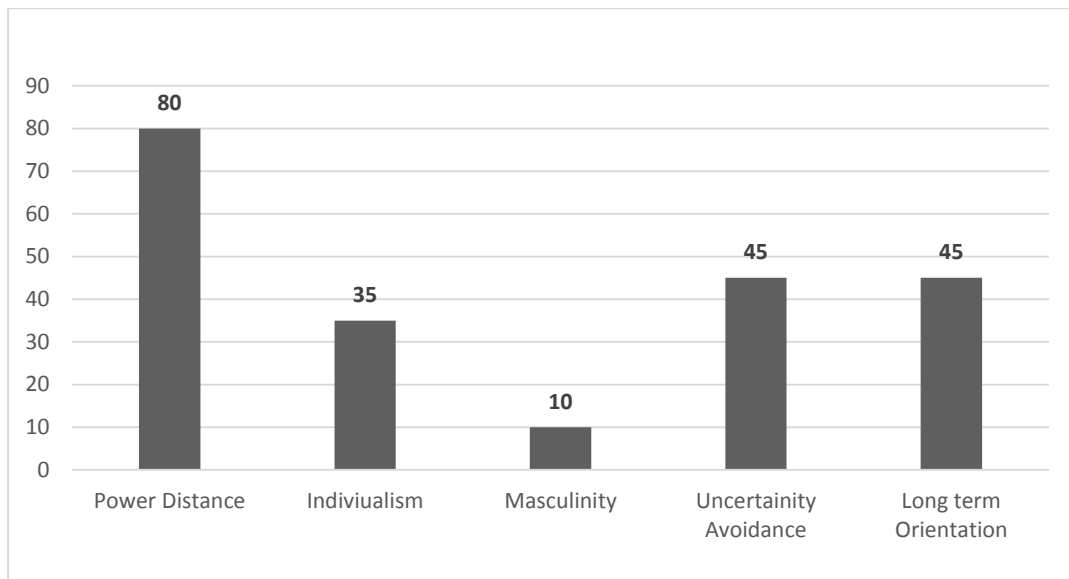
*Figure 2. Influencers of Nonverbal Communication*

Whilst multiple factors affect an individual's decision to express themselves through nonverbal cues rather than verbally stating them out, this paper revolves around culture, gender and situation. Figure 2 (refer above) outlines the scope at which the paper looks at in terms of assessing when to watch out for nonverbal means of communication. The three prominent situations nonverbal cues come into play are during the interactions between seniors (those with more power) and juniors (subordinates with less power/ dominance), within casual and formal contexts and during negotiations. Nonverbal cues are more prominent in High context cultures which exist within collectivistic societies/ countries, and also when there's high power distance. While gender plays a role in how nonverbal cues are interpreted, women tend to rely more on nonverbal cues when communicating, and are also seemingly better than men at picking them up too. This factor comes into play in workplaces that are more dominated by one particular gender.

## 5. Discussion of findings

In order to facilitate and understand the findings accumulated through the literature review, the discussion section will look at nonverbal cues through the lens of the Sri Lankan culture. Shining light on its importance at a workplace in a Sri Lankan context. When looked into its cultural dimensions, Sri Lanka with a slightly high score of 80, is a relatively hierarchical society. And a low score of 35 in the dimension of individualism means that Sri Lanka is considered a collectivistic society. Sri Lanka, with a very low score of 10, can be considered a Feminine society where the country's focus is on "working in order to live", managers strive

for consensus, people value equality, solidarity and quality in their working lives. The relatively intermediate score of 45 in uncertainty avoidance indicates that Sri Lanka does not indicate a strong preference in either of the two dimensions (refer to Figure 3).



*Figure 3. Cultural Dimensions of Sri Lanka*

Source: Retrieved from Geert Hofstede

With extensive research drawing conclusions with Individualism and Collectivism with Nonverbal cues, in analyzing if attention should be paid to Nonverbal cues in a Sri Lankan context too, the focus will be placed on the 35 that Sri Lanka scores in the Individualism dimension, deeming it a more collectivistic society. Prior research has already concluded that societies that are collectivistic are considered to be high context communication cultures. As a result of this, it's fair to reach the conclusion that individuals, in an attempt to maintain social harmony, and in an effort to not express themselves in a negative manner, would result in depending on nonverbal cues to express themselves. However, simply being a collectivistic society which relies on indirect communication styles alone wouldn't justify the need to observe and identify nonverbal cues. Gender and the situation plays significant roles in assessing its importance (Figure 2). Especially in the context of long term oriented countries, like that of Sri Lanka, which tend to place more distinction on gender roles, gender would be considered an influencing factor when assessing the importance of nonverbal cues.

In the service industry in Sri Lanka (Labour Demand survey, 2017), particularly with job roles involving management assistants and clerks and teaching which are more female dominant, there once again arises a need for attention to be paid with nonverbal cues, as the work environment is more female dominant, there would be a tendency to rely more heavily on nonverbal communication.

As a society with high power distance, people are expected to show positive emotions to superiors, and confine expression of negative emotions to people with lower status. This could also be complementary with what was previously discussed, that when denied overt power or in scenarios that present less social control to an individual, making them appear socially weak, the individual/s tends to read more into the nonverbal cues of the more powerful in order to predict their behavior and plan appropriate responses. With more importance placed on the hierarchical aspect of power distance, leaders at workplaces should be more conscious about how they communicate, as their subordinates would be reading into the body language, with more prominence on nonverbal cues than what is being verbally communicated. Similarly, superiors should also be more aware of the nonverbal cues displayed by those at a lower status, especially in times which require honest input from subordinates, as it can be expected for them to avoid explicit direct messages in order to avoid unnecessary or face threatening messages.

However, in situations which are more informal, not much observance is required over nonverbal cues. For instance, in work environments which allow for more freedom (one with no such code of conducts or strict policies), it would be the case that employees would be less sensitive to nonverbal cues as the environment in itself has created a place for the employees to express themselves. Within the negotiation context, silence may be used as a persuasive tactic to elicit concessions or as an indirect way of saying “no”. However, this can only be applied in the context of individuals in a similar level of power, like that of two males/two company representatives of similar stature. Whilst only a limited number of scenario’s can be introduced to challenge the statement of there not being a necessity to decipher nonverbal cues, existing literature shows that identification and the need to interpret nonverbal cues depends on multiple factors, with culture, gender and the situation being a few.

## **6. Conclusion**

This paper first goes about explaining Nonverbal communication in a general sense, bringing into the reader’s attention that nonverbal cues go beyond mere gestures, to include aspects such as the surrounding environment. To further elaborate on this, the paper then mentions the different types of nonverbal cues and examples that illustrate these within a workplace environment. It then draws relationships between nonverbal communication and culture (through the value concept of Hofstede’s cultural dimension and Edward Hall’s High and Low context theory), in order to bring to attention that fathoming a nonverbal cue could be only a necessity depending on cultural context. However, culture isn’t necessarily the only determinant in assessing whether to look out for nonverbal cues, therefore, two other factors, gender and situation were introduced. It brought into perspective that all these factor relate to each other and has to be looked upon when deciding whether to be aware of nonverbal cues. In a Sri Lankan context, although a collectivistic society, it isn’t deemed an obligation to interpret and react to nonverbal cues, at all times. However, it must also be

noted that culture, gender and the situation aren't the only influencers of nonverbal cues. And once again, while conclusions have been drawn base on what theory suggests, it still remains untested, thereby urging the need for some form of quantitative research to be done to support these statements.

Another substantial limitation of this paper is the absence of a quantitative methodology and the fact that no survey has been carried out to collect much more accurate insight into this area. What this paper also fails to identify, and opens up possibility for further research into is what types of nonverbal cues (refer to Figure 1) are more prominent in a specific culture. For example, a few researches states that individuals from individualistic cultures maintain more space and distance between each other, however in the best knowledge of the writer no specific literature exists in showing the relationship between a culture and types of nonverbal cues.

## 7. Practical Implications

Since nonverbal sensitivity appears to be an asset, perhaps our educational programs should include training in identifying nonverbal cues as well as verbal communication skills. It would prove to be detrimental to leaders in organizations, especially in high context societies, to be more aware of nonverbal cues, in order to effectively communicate with staff and maintain healthy work relationships. Human Resource manager sand Corporates in general could educate its employees on nonverbal cues to help both superiors and subordinates to coexist with more awareness, in turn converting them into competent human capital.

## References

- Akimoto, S., & Sanbonmatsu, D. (1999). Differences in self-effacing behaviors between European and Japanese Americans. *Journal of Cross-Cultural Psychology*, 30, 159–177.
- Andersen, P. A., Hecht, M. L., Hoobler, G. D., & Smallwood, M. (2003). Nonverbal communication across cultures. *Cross-Cultural and Intercultural Communication*, , 73-90.
- Andersen, P. A., Hecht, M. L., Hoobler, G. D. & Smallwood, M. 2002. Nonverbal communication across cultures. In Gudykunst, W. B. & Mody, B. (ed.) *Handbook of international and intercultural communication*. 2. edition. Thousand Oaks: Sage Publications, Inc., 89-106.
- Andersen, P. A., (1999) *Nonverbal Communication: Forms and Functions* (Mountain View, CA: Mayfield, 1999), 36.
- Barnlund, D., & Yoshioka, M. (1990). Apologies: Japanese and American styles. *International Journal of Intercultural Relations*, 14, 193–206.
- Barnum, C., & Wolniansky, N. (1989). Taking cues from body language. *Management Review*, 78(6), 59-61.

- Bavelas, J. B., & Chovil, N. (2006). Hand gestures and facial displays as part of language use in face-to-face dialogue. In V. Manusov & M. Patterson (Eds.), *Handbook of nonverbal communication* (pp. 97-115). Thousand Oaks, CA: Sage.
- Bernstein, B. (1966). Elaborated and restricted codes: An outline. *Sociological Inquiry*, 36, 253–261.
- Branham, L. (2005). The 7 hidden reasons employees leave. *American Management*, New York, 172
- Brody, L. R., & Hall, J. A. (2008). Gender and emotion in context. *Handbook of Emotions*, 3, 395-408.
- Bryman, A. (2016). *Social research methods* Oxford university press.
- Buller, D. B. and Judee K. Burgoon (1986) "The Effects of Vocalics and Nonverbal Sensitivity on Compliance," *Human Communication Research* 13: 126–44.
- Burgoon, J. K., Guerrero, L. K., & Floyd, K. (2016). *Nonverbal communication* Routledge.
- Deaux, K. and Major, B. (1987). "Putting Gender into Context: An Interactive Model of Gender Related Behavior." *Psychological Review* 94, 369–389
- Dunn, C. D. (2011). *Formal forms or verbal strategies? Politeness theory and Japanese business etiquette training* doi:<https://doi.org/10.1016/j.pragma.2011.06.003>
- Erez, M., & Earley, P. (1993). Culture, self-identity, and work. Oxford, U.K.: Oxford University Press.
- Graham, J.L. (1985). "Influence of Culture on the Process of Business Negotiations: An Exploratory Study." *Journal of International Business Studies* 16, 81–96.
- Gudykunst, B. W. (2003). In Gudykunst William B. (Ed.), *Cross-cultural and intercultural communication*. Minnesota: SAGE. doi:0761929002, 9780761929000
- Hall, E. T. (1976). Beyond culture/Edward T. hall. *New York: Garden City*, , 79.
- Hall, E. T. (1968) "Proxemics," *Current Anthropology* 9, 83–95.
- Hargie, O. (2011) *Skilled Interpersonal Interaction: Research, Theory, and Practice*, 5th ed. London: Routledge, 63.
- Hartley, P. (2002). *Interpersonal communication* Routledge.
- Heine, S., & Lehman, D. (1999). Culture, self-discrepancies, and self-satisfaction. *Personality and Social Psychology Bulletin*, 25, 915–925.
- Hinkin, T. R., & Tracey, J. B. (2000). The cost of turnover: Putting a price on the learning curve. *Cornell Hotel and Restaurant Administration Quarterly*, 41(3), 14-21.
- Hofstede, G. (2001). Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations (2d ed.). Thousand Oaks, CA: SAGE.
- Hofstede, G., & Bond, M. H. (1988). The Confucius connection: From cultural roots to economic growth. *Organizational Dynamics*, 16, 5–21.
- Kita, S. (2003). *Pointing: Where language, culture, and cognition meet* Psychology Press.
- Knapp, M. L., Hall, J. A., & Horgan, T. G. (2013). *Nonverbal communication in human interaction* Cengage Learning.
- Kray, L.J., Thompson, L. and Galinsky, A. (2001). "Battle of the Sexes: Gender Stereotype Confirmation and Reactance in Negotiation." *Journal of Personality and Social Psychology* 80, 6: 942– 958



- Martin, J. N., & Nakayama, T. K. (2013). *Intercultural communication in contexts* McGraw-Hill New York: NY.
- Matsumoto, D., & Kudoh, T. (1987). Cultural similarities and differences in the semantic dimensions of body postures. *Journal of Nonverbal Behavior*, 11, 166–179.
- Mehrabian, A. (2017). *Nonverbal communication* Routledge.
- Muthukutti, A. (2015). Skilled employee retention still biggest issue for companies. *Daily Mirror* Retrieved from <http://www.dailymirror.lk/71491/skilled-employee-retention-still-biggest-issue-for-companies>
- Nathan, J. (2004). Japan unbound. *Boston and New York: Houghton Mifflin Company* Publication Preview
- Pollick, S. A., Jeneson, A., Waal, F. M. B. (2008) Gestures and Multimodal Signaling in Bonobos
- Rajapaksha, U. (2015). Analysis of factors affecting to employee turnover in medium scaled apparel industry in sri lanka.
- Riggio, R. E. (2005). Business applications of nonverbal communication. In: R. E. Riggio and Robert S. Feldman (eds.), *Applications of Nonverbal Communication*, Mahwah, NJ: Erlbaum.
- Smidts, A., Pruyn, A. T. H., & Van Riel, C. B. (2001). The impact of employee communication and perceived external prestige on organizational identification. *Academy of Management Journal*, 44(5), 1051-1062.
- Sri lanka labour demand survey 2017*. (2017). (Statistics). Colombo, Sri Lanka: Ministry of National Policies and Economic Affairs. Retrieved from [http://www.statistics.gov.lk/industry/Labour\\_Demand\\_Survey\\_2017\\_Report.pdf](http://www.statistics.gov.lk/industry/Labour_Demand_Survey_2017_Report.pdf)
- Tiersma, P. M. (1993). Nonverbal communication and the freedom of speech. *Wis.L.Rev.*, 1525.
- Vrij, A., & Winkel, F. W. (1991). Cultural patterns in Dutch and Surinam nonverbal behavior: An analysis of simulated police/ citizen encounters. *Journal of Nonverbal Behavior*, 15, 169–184.

## **Extroverted Personality Traits of Leaders and OCB of Followers: A Moderating Effect of Leader-Member Relationship**

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### **Abstract**

Research on the relationship between personality and leadership supports the notion that individual differences may be the predictors of leadership effectiveness in contemporary organizations. Previous studies indicated that each of the Big-Five broad personality dimensions is related to leader criteria. In general, the main differences between effective leaders and less effective ones are that effective leaders describe themselves from their personality traits and the relationship building with followers. However, relatively few studies have tested how and why a leader's personality traits relate to follower behaviors, and if so, the mechanisms through which a leader's personality traits relate to follower behaviors. Accordingly, the main aims of the present study are to examine whether the extroverted personality traits of leaders affect the organizational citizenship behavior of followers and to examine the role of leader-member relationship as a moderator in social exchange process in the relationship between leader personality and organizational citizenship behavior of followers. To advance the understanding of these, simple regression analysis and moderator regression were used to test hypotheses in the present study with the sample size of 58 extrovert managers as leaders and 116 subordinates as their followers. The study found that there is no negative direct effect of extroverted traits of leaders on organizational citizenship behavior of followers. Yet, leader-member relationship moderates the relationship between extroverted personality traits of leaders and organizational citizenship behavior of followers. The present study makes several theoretical and managerial contributions to make organizations success.

**Keywords.** Extroverted personality traits, Organizational Citizenship Behavior, Leader-Member relationship

### **1. Introduction**

Research on the relationship between personality traits and leadership supports the notion that different outcomes of individuals may be the predictors of leader behaviors (Hao & Yazdanifard, 2015). Therefore, it is vital for an organization to identify factors of its success which can measure from organizational performances and employee behaviors. Effective leader personality and extra role behavior of followers are two main factors that have been

regarded as fundamental for organizational success. Contemporary organizations underline that employees should perform the work tasks and extra role behaviour for the long term survival of the organization (Neuman & Kickul, 1998). This can be defined as Organizational Citizenship Behavior (OCB) a behavior at an individual's discretion that was not directly or explicitly rewarded but that will help the fulfillment of the organization's objectives (Rauf, 2016 as cited Organ, 1988 in).

Previous studies indicated that each of the Big-Five personality traits namely conscientiousness, extraversion, agreeableness, openness to experience and emotional stability are related to leader criteria (Kahya & Sahin, 2018). Emphasizing introversion-extroversion as the main trait of big-five model, introverts prefer close relationships as they prefer more close interactions with small groups (Prakash, Singh, & Yadav, 2016) whereas extroverts would like to address large group which results shallow relationship among members (Hills & Argyle, 2001). Moreover, extroverts are more competitive and mainly focusing for reward achievements whereas introverts are more corporative and directing to facilitate more relationships. Hills and Argyle (2001) stated extraverts need many people around them, introverts be more selective and focus on establishing individual affiliative relationship with a few special people around them. Further, it illustrated that introverts prefer greater intimacy as they involve with fewer people compared to extraverts. As a result, extroverts not develop a long-term employee organizational association that emphasis trust, mutuality and shared aspirations (Neuman & Kickul, 1998) even though they get to know each other quickly (Prakash et al., 2016). Therefore, it is evident that personalities of individuals result in various organizational outcomes.

Yet, it is evident from contemporary organization behaviors that they are struggling to create required OCB among employees due to the work tasks and primary objectives of the organization. And it may not perform well in an environment where stable, unchanging, centralized decision-making, written rules and procedures, and standardization of tasks (DeGroot & Brownlee, 2006). To facilitate OCB employees prefer more cooperativeness, close relationships and friendly working environment. Hence this study focuses on 'whether extroverted personality traits of leaders influence the OCB of followers?'. This relationship will be more strengthen or weaken due to the relationships among leaders and followers which is evident from contemporary organizational behavior. With this background potential relationships between extroverted personality traits of leaders and OCB of followers moderates by leader-member relationship which is not explored in the previous literature and called for more research. The present study make several contributions to research in this area. In support, it measures the impact of extroverted personality traits of leaders on OCB of followers which measures the direct impact and measures the moderating effect by examining whether the leader-member relationship (LMX) moderates the relationship between introverted personality traits and OCB of followers.

The remainder of this paper is organized as follows. Section two briefly reviews the literature pertaining to extroverted personality traits of leaders, Organizational citizenship

behavior and leader-member relationship. In section three, research method is outlined. Section four presents the study's empirical results. The last section presents a discussion of the research findings, followed by a presentation of the research limitations and direction for future research.

## 2. Literature review

Leader personality which is a part of the leader traits explains a minimum of 31% of the variance in leadership effectiveness at large in an organization context (Derue, Hahrgang, Wellman, & Humphrey, 2011). The concept of personality has begun to attract a great deal of interest in behavioral ecology and human psychology. Personality differ from person to person (Nettle & Penke, 2010) based on the nature, environment, situation they face and the designation they held in the organization. Moreover, leadership became the core area of most of the organizations to achieve its objectives in resourceful and operative manner. Besides, leadership leads to more positive outcomes of an organization such as job satisfaction, manage diversified workforce, organizational citizenship behavior and high employee commitment (Voegtlin, Patzer, & Scherer, 2012).

Apart from the studies that have focused on leadership effectiveness (Derue et al., 2011; Judge, Bono, Ilies, & Gerhardt, 2002), several attempts were made to provide evidence on traits and behaviors of leaders (Hogan et al., 1994; Kirkpatrick & Locke, 1991). According to Emanuelsson and Lindqvist (2014) extroversion, self-confidence, and courage are the traits that could potentially be linked to great leaders. Moreover, the study illustrated that introverted leader commonly use a leader-member exchange leadership style leading to both engagement and empowerment which will cause to organizational citizenship behavior of followers. Leader traits has a long and controversial history where some literature supports for the extroversion and some into introversion. It is true that extroversion shows the leadership characteristics which shows an outgoing, dominant and talkative personality (Sieff, 2006; Nana, Jackson, & Burch, 2010; Judge et al., 2002). Conversely, introverts will also act as leaders in different scenarios through building close relationships and carefully listening to others. Literature on such association reveals that introvert leaders have been brought organization success (Atamanik, 2013; Hudson & Ferguson, 2016; Gio & Yazdanifard, 2015) same as extrovert leaders. Therefore, it is very interesting to assess the extroverted personalities traits of leaders and different outcomes result on that as it provides both positive and negative results.

As Larsen, Olsen, and Emanouilov (2018) there are the sub-traits of extraversion, which is only a broad summary of one personality trait. They are warmth, gregariousness, assertiveness, activity, excitement seeking and positive emotions. This further illustrated from NEO personality inventory developed by Costa and McCrae in 1989. Warmth is the friendliness and showing interest in other people. Extroverts with gregariousness enjoy and prefer the company of others rather than loneliness. Assertive extroverts prefer to be to be popular and expresse themselves forcefully. Activity level of extroverts flourishe in large

social gatherings such as parties and more disposed to boredom when alone. Excitement seeking is a characteristic of extroverts who seek novelty and need external stimuli. Lastly, positive emotions of extroverts have a higher tendency to experience positive emotions, even when alone easily pleased and attracts more life circumstances which leads to more positive effects (Larsen et al. , 2018).

Culturally, extroverts are seen as individuals that are achievement-oriented, seek action, and like working with others (Clack, 2017). According to Farrell (2017) extroverts build up energy and ideas externally through developing social interactions. Judge et al.(2002) explained that extraversion is strongly related to social leadership where leaders would like to address a large crowd. Further, they illustrated that extraversion is the most important trait as both sociable and dominant people are more likely to assert themselves in group situations. Nevertheless, dominance may discourage others to build up strong relationships with group members including the leader. Further, it may discourage others to commit more on mutual trust among group members that will cause to reduce the performances in the long run as there is no autonomy for others to work leisurely. Further, extroverted leaders may not be successful in organizational performances where the leader is too busy being outgoing to listen to or act upon them. Farrell (2017) brought up the failures of extroverted leaders as they are arrogant, bossy and self-centered. Therefore, it is evident that there is a contraversion between the personality traits of leaders which no one was able to give an exact identification of leaders personality. More interestingly, contemporary organizations talk about a leader who has both introvert and extrovert personality traits together which will vary based on the situation. According to Hudson and Ferguson (2016) ambiverts provide the team with the leader who can adjust the mix of the introvert and extrovert personality over time as needed.

Out of all the leadership outcomes one of the imperative leadership outcome for an organization is 'organizational citizenship behaviour' which is significant to gain sustainable competitive advantage through human psychological engagement. With little research it is evident that OCB facilitates team performances, relationships between individuals, leader behaviors and personality traits (Harper, 2015; Neuman & Kickul, 1998; Elanain, 2007). This is a series of voluntary and optional actions that are not part of the person's official duties, but nonetheless done by him/her, and causes improvement in the functions and roles performed by the organization (Shoaeshargh & Dadashi, 2013 as cited in Alotaibi, 2009). However, a little research has carried on to measure the impact of leader personality on OCB of followers (Bernerth , Armenakis, Feild, Giles, & Walker, 2008).

Extroverted leaders are willing to dominate the context as employees will take it as forceful reaction from leader and not contribute to OCB. As Power (2017) even though extroverts prefer more interactions they can get burned out quickly when trying to impress others or earn their respect through over commitment. Further, Grant, Gino, and Hofma (2011) illustrated that although extraverted leadership enhances group performance when employees are passive, this effect reverses when employees are proactive, because

extraverted leaders are less receptive to proactivity. Therefore, the below hypothesis can be developed to investigate the direct effect between the extroverted personality traits of leaders and OCB of followers.

Hypothesis 1: Extroverted personality traits of leaders negatively affect the OCB of followers.

Further, as Owen, Pappalardo, and Sales (2000) Organizational Citizenship Behaviour may relate at the smaller work-group, rather than the organization-wide level which facilitates more interactions and relationships. As a result, extroverts not develop a long-term employee organizational association that emphasis trust, mutuality and shared aspirations (Neuman & Kickul, 1998) even though they get to know each other quickly (Prakash et al., 2016). This study further illustrated that extroverts are not concentrate on mutual trust and an open-ended commitment which represents from the covenantal relationship between an employee and an organization. Moreover, extroverts are more competitive and mainly focusing for reward achievements whereas introverts are more corporative and directing to facilitate more relationships. According to Podsakoff, MacKenzie, Paine, and Bachrach (2000) perception of leader supportiveness ranked as the highest antecedent on OCB out of other leadership behaviours. Similarly, supervisor-subordinate relationships characterized by high levels of trust, support, liking, and attention were also associated with increased OCB.

Therefore, it is worthwhile to understand how leader-member relationship affects on different personalities of leaders and OCB of followers. Moreover, below hypotheses can be developed to measure the moderating effect of leader-member relationship on personality traits of leaders and OCB of followers.

Hypothesis 2: Relationship between extroverted personality traits of leaders and OCB of followers is moderated by Leader-Member relationship.

Based on the literature, below conceptual framework is developed.

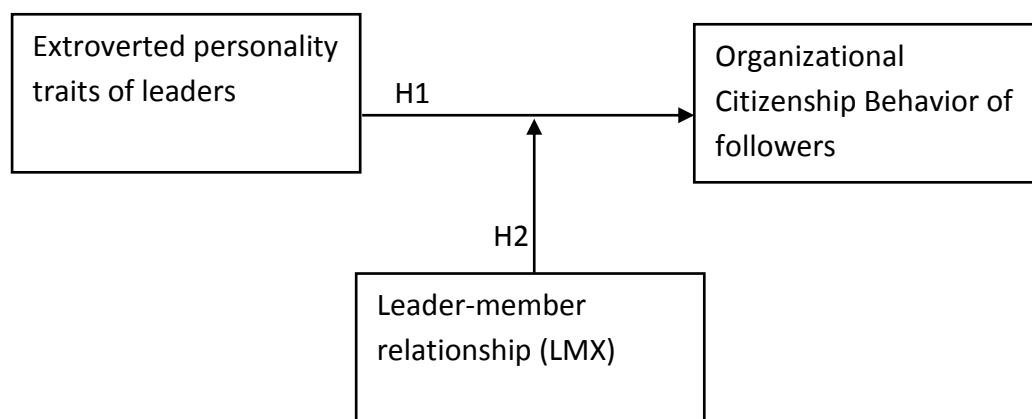


Figure 1. Conceptual Framework

### 3. Method

To find the answers for the research questions and objectives posed above, this research uses in survey strategy as it explains causal relationship among variables with large number of data which supports for the generalization. Moreover, quantitative method uses as the best method due to the nature of this study and data collects under cross-sectional time horizon in a one given time period from both managers and subordinates which witness dyad relationship.

#### 3.1 Sample and data collection

The sample of this study consisted of 58 extroverted leaders and 116 followers of these leaders from various industries such as, garment, banking, telecommunication, educational, manufacturing and information technology in Sri Lanka. Due to having a hierarchical structure and because the responsibilities of leader-follower dyadic relations in these selected industries are easy to identify and that the leader-follower relationship can be tested reliably, this sample was chosen. The self-administered questionnaires were delivered based on survey strategy to managers to measure extroverted personality traits of leaders and subordinates to measure OCB and leader-member relationship.

#### 3.2 Variables and model

Organizational Citizenship Behavior is the dependent variable of the present study. This was measured using five dimensions: altruism, civic virtue, conscientiousness, courtesy and civic virtue using 24-items of OCB measurement scale developed by Podsakoff and Mackenzie (1990). The independent variable introverted personality traits of leaders were measured using NEO PI-R scale of personality developed by Costa and McCrae (1989). This study used one moderator variable; leader-member relationship which was measured using 7-items LMX reported by Scandura and Graen (1984).

### 4. Results and findings

Table 1 shows the descriptive statistics and correlations of the variables.

*Table 1.*

Means, Standard deviations, and Pearson correlation coefficients of variables

	Mean	SD	IEPTL	OCB
<b>IEPTL</b>	3.3022	.21156	-	-
<b>LMX</b>	3.2630	.57482	-0.349**	0.498**
<b>OCB</b>	3.7398	.32797	-0.071	-

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

Note. (1) Between .1-.3: Small Effect. (2) Between .3-.5: Medium Effect. (3) Above .5: Large Effect

IEPTL- Introverted and extroverted personality traits of leaders, OCB- Organizational Citizenship Behavior, LMX- Leader-Member Exchange/Relationship

An examination of correlations revealed significant association among the variables. Overall, the patterns of the correlations were much deviated from the expected results as the direct effect of independent and dependent variables were not significant in correlation matrix. However, with the LMX moderating effect it became more significant than operating as an independent variable.

Before testing hypotheses, the study examined between-groups components of the variables on extroverted personality traits of leaders. Extroverted personality traits of leaders group (N=116) was associated with numerically larger OCB of followers  $M = 3.5088$  ( $SD = 0.121$ ). To test the hypothesis, the extroverted personality traits of leaders were associated with statistically significantly different mean of OCB of followers, an independent sample t-test was performed. Extroverted personality traits of leaders' distribution were sufficiently normal for the purpose of conducting a t-test (skewness 0.615 and kurtosis 0.70, between +2.00 to -2.00; Garson, 2012). Accordingly, the assumption of homogeneity of variance was tested and satisfied via Levene's F test,  $F(212) = , p = 0.888$ . The independent samples t-test was associated with a statistically significant effect,  $t(212) = 22.185, p = 0.000$ . Thus, the extroverted personality traits of leaders associated with a statistically higher mean of OCB. The results of the regression used to test the hypotheses are shown in table 2.

Table 2.

Regression results for Extroverted personality traits, OCB and Leader-Member Relationship

	Model 1	Model 2	Model 3
Intercept	4.190 (4.562)	2.781 (18.600)	2.756 (18.447)
Beta Value	-0.049 (-0.528)	-0.043 (-0.529)	-0.048 (-0.595)
LMX		0.508* (6.285)	0.522* (6.459)
Extro traits X LMX			-0.128** (-1.586)
R	0.049	0.511	0.526
R <sup>2</sup>	0.002	0.261	0.277
Adjusted R <sup>2</sup>	-0.006	0.248***	0.258***
R <sup>2</sup> change	0.002	0.261	0.277
F change	0.279	19.936	14.307

Dependent variable: OCB

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Note: Data are standardized regression weights. Extro traits= Extroverted Traits of leaders; LMQ= Leader-Member Exchange/ Relationship



Hypothesis 1 (b) Extroverted personality traits of leaders negatively affect the OCB of followers is not supported as statistics shown in the above table there is a negative impact of extroverted personality traits if leaders on OCB of followers which represents from beta value of -0.049. But, the significance level of 0.598 indicates the relationship is not significant. Adjusted  $R^2$  value of -0.006 reveals -0.6% impact on OCB of followers and the model is not significant as the sig. F change is 0.598 which did not meet the significance level assumptions. Accordingly, there is no statistically significance value for the negative relationship identified.

Hypothesis 2: Relationship between extroverted personality traits of leaders and OCB of followers is moderated by Leader-Member relationship is marginally supported with  $p < 0.01$ . Adjusted  $R^2$  value of 0.248 represents the overall impact of extroverted personality traits of leaders with leader-member relationship on OCB of followers with the sig. F value of 0.000 which is significant for  $<0.05$  level. The direct relationship with the moderator variable is significant to the overall model. Further, beta value of 0.508 shows a significance level of 0.033 which is significant in 95% confidence level and purely a positive relationship.

Further, beta value of 0.207 shows a positive impact with the significance level of 0.000 which is significance in 99% confidence level. But, the relationship indicates a positive effect from positive result of the beta value. With the interaction effect model became more prominent by showing the adjusted  $R^2$  value of 0.248. Extroverted personality traits of leaders and leader-member relationship together affect 24.8% to organizational citizenship behavior of followers. Based on the results, there is a positive moderation effect from leader-member relationship to extroverted personality traits of leaders and OCB of followers. However, the interaction effect between extroverted personality traits of leaders and leader-member relationship shows a negative relationship with the beta value -0.128, sig. value of 0.115 which is marginally significant from 90% confidence level.

## 5. Discussion and Conclusion

The findings of the present study open up several insights to discuss. This study partially replicates but also extends previous research on the moderating effect of leader-member relationship on the relationship between the personality traits of leaders and OCB of followers. First, the study examined the impact of extroverted personality traits of leaders' effect on OCB of followers. Findings of hypotheses testing of the study show that there is no negatively statistically direct effect of extroverted personality traits of leaders on OCB of followers. Nonetheless, there was an impact of individual personality behaviors of leaders on different leadership outcomes (Hogan et al., 1994; Kirkpatrick & Locke, 1991). As Harper (2015) extroversion is more strongly related to benefits of organization than individuals which negatively affect on individual behavioural outcomes. Moreover, extroverts are likely to engage mainly on altruistic behaviour than the other dimensions of OCB which fulfills only a part in the long run (Neuman & Kickul, 1998 as cited in Krebs, 1970).

Even though previous research findings show that there is a negative direct effect of extroverted personality traits and OCB (Shoaeshargh & Dadashi, 2013; Chiaburu, Oh, Berry, Li, & Gardner, 2011) the present study was not supported with that argument. This is mainly due to the operating environments and the organizational culture of the industries the data were gathered. As Mooney (2018) the nature of a company's culture influences; if there is a strong culture employees will be motivated and well-trained. A majority of respondents from IT industry and they were in the operations department. IT professionals include dependability and the ability to adapt to a changing work environment, such as the need to come on weekends to address critical systems issues (Long, n.d.). Further, individuals should also feel comfortable working as part of a larger team. These are the traits of extroverts as Emanuelsson and Lindqvist (2014) and Chauhan and Chauhan (2006). As Leonard (n.d.) type of the work task affecting on the leadership behaviors of individuals. Managers should look at the normal tasks of daily operation and determine what behaviors work best for what situations and develop methods and processes that can be implemented to alter dominant leadership qualities. According to Robertson, Healey, Hodgkins, Flint-Taylor, and Jones (2014) the negative effects of leader personality are mediated via working conditions. The situation is another factor affecting to leader effectiveness and change the leadership role (Sogunro, 1998). Therefore, it is evident that situation also affected in contradictions between the findings and the existing literature.

This study not only replicates but also extends previous research on the moderating effect of leader-member relationship on the relationship between introverted and extroverted personality traits of leaders and OCB of followers. First, the moderating results of this study replicate earlier findings (Owen et al., 2000; Buchanan, 1998; Neuman & Kickul, 1998; Prakash et al., 2016; Hills & Argyle, 2001) establishing leader-member relationship as a main reason to OCB. Similarly, the results of this study are in line with the findings of previous studies (Owen et al., 2000; Buchanan, 1998; Neuman & Kickul, 1998; Prakash et al., 2016; Hills & Argyle, 2001) and indicate that the quality of the leader-member relationship is a significant determinant of a negative direct effect on extroverted personality traits of leaders and OCB of followers. First, it provides empirical support for leader-member relationship regarding the tendency of high quality relationship between manager/leader and subordinate/follower to enhance follower organizational citizenship behavior. Findings of this study also provide empirical support for the extrovert's relationship behavior suggested by Hills and Argyle (2001) and Neuman and Kickul (1998). The findings, suggested that extroverted leader personality trait is not a foundational leader characteristic about the OCB of followers of social exchange relationships with their leader that, depending on its long term relationship and mutual trust, either enhances or inhibits their performance.

In conclusion, despite the importance of leadership characteristics in organizations, this research examining the promising mechanisms through which leader personality influences followers' effective performance has been lacking. The present study makes an important contribution by examining how leader personality traits (extroverted) influence follower

attitudes and behaviors by displaying the importance of leader-member relationship. Hence, this study provides a better understanding of how leader personality influences follower organizational citizenship behavior.

Theoretically, the findings of this study provide understandings for two bodies of work. First, the direct effect of personality traits of leaders and OCB of followers was not supported which rationalized from path-goal theory with the support of theory of trait leadership and five factor model of personality. It further, revealed that leader behavior is important for the follower motivation and goal achievement identified by previous research (House & Mitchell, 1975; Malik, Aziz, & Hassan, 2014; Ng, Ang, & Chan, 2008) and will not generate OCB by leader behavior and motivation. Second, the moderating effect of leader-member relationship revealed by this study and previous research (Uusi-Kakkuri & Brandt, 2015; Harris, Harris, & Eplion, 2007) supports the theoretical argument and make contributions to the social exchange theory.

### 6. Limitations and Avenues for Future Research

Selection of participants largely from one industry at a given period of time was a potential limitation of this present study. Nevertheless, future research might consider a longitudinal research design examining perceptions of introverted and extroverted personality traits, OCB and leader-member relationship multiple times over a long period of time. The present study encourages future researchers to carry out the same study again with the change of research design to a qualitative research as respondents have not given the assured answers based on questionnaire method. The researchers would be able to observe and understand reactions of respondents if they can conduct the study through interview method as the data collection tool. There will be more interesting answers with the close monitoring methods between the researcher and respondent.

### References

- Asgiri, A., Silong, A. D., Ahmad, A., & Samah, B. A. (2008). The relationship between leader-member exchange, organizational inflexibility, perceived organizational support, interactional justice and organizational citizenship behavior. *African Journal of Business Management*, 2(8), 138–145.
- Atamanik, C. (2013). The introverted leader: Examining the role of personality and environment. *Center for Leadership Current Research*, 2( 1–9).
- Bernerth, J. B., Armenakis, A. A., Feild, H. S., Giles, W. F., & Walker, H. J. (2008). The influence of personality differences between subordinates and supervisors on perceptions of LMX. *Group & Organizational Management*, 33(2), 216–240.
- Buchanan, L. B. (1998). *The impact of big five personality characteristics on group cohesion and creative task performance* (Doctoral dissertation). Blacksburg, VA: Faculty of Virginia Polytechnic Institute and State University.
- Chauhan, D., & Chauhan, S. P. (2006). Personality at workplace. *Indian Journal of Industrial Relations*, 41(3), 357–375.

- Chiaburu, D. S., Oh, I. S., Berry, Li, & Gardenr. (2011). The five-factor model of personality traits and organizational citizenship behaviors: A meta-analysis. *Journal of Applied Psychology*, 96(6), 1140–1166.
- Clack, L. A. (2017). Examinaton of leadership and personality traits on the effectiveness of professional communicaton in healthcare. *Journal of Healthcare Communications* , 2(2), 1–4.
- DeGroot, T., & Brownlee, A. L. (2006). Effect of department structures on the organizational citizenship behavior-department effectiveness relationship. *Journal of Business Research*, 59(10-11), 1116–1123.
- Derue, D. S., Hahrgang, J. D., Wellman, N., & Humphrey, S. E. (2011). Trait and behavioural theories of leadership: An integration and meta-analytic test of their relative validity. *Personnel Psychology*, 64(1), 7–52.
- Elanain, H. A. (2007). Relationship between personality and organizational citizenship behavior: Does personality influence employee ctizenship? *International Review of Business Research papers*, 3(4), 31–43.
- Emanuelsson, A., & Lindqvist, S. (2014). *Leadership of introverts- An exploratory study of how introvert managers lead in Sweden* (Master's dissertation). Sweden: Bleking Institute of Technology, School of Management.
- Farrell, M. (2017). Leadership reflections: Extrovert and introvert leaders. *Journal of Library Administration*, 57(4), 436–443.
- Gio , T. H., & Yazdanifard , R. (2015). The unconventional leadership of corporate leaders in the 21st Century. *Global Journal of Management and Business Research*, 15(4), 77–81
- Grant, A. M., Gino , F., & Hofma, D. A. (2011). Reversing the extraverted leadership advantage: The role of employee proactivity. *Academy of Management*, 54(3), 528–550.
- Hao , M. J., & Yazdanifard, R. (2015). How effective leadership can facilitate change in organizations through improvement and innovation. *Global Journal of management and Business Research: A Administration and Management* , 15(9), 1–7.
- Harper , P. J. (2015, February). Exploring forms of organizational citizenship behaviors (OCB): Antecedents and outcomes. *Journal of Management and Marketing Research*, 36(1), 1–16.
- Harris, K. J., Harris , R. B., & Eplion, D. M. (2007). *Personality, leader-member exchanges, and work outcomes*. Southeast: Institute of Behavioral and Applied Management.
- Hills, P., & Argyle, M. (2001). Happiness, introversion-extroversion and happy introverts. *Personality and Individual Differences*, 30(4), 595–608.
- Hogan, R., Curphy, G. J., & Hogan, J. (1994). What we know about leadership. *Effectiveness and Personality*, 49(6), 493–504.
- House, R. J., & Mitchell, T. R. (1975). *Path-goal theory of leadership*. Toronto: Faculty of Management Studies, University of Toronto.

- Hudson, S. W., & Ferguson, J. C. (2016). Leadership personalities: Extrovert, introvert or ambivert? *International Journal of Management and Economics Invention*, 2(9), 999–1002.
- Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*, 87(4), 765–780.
- Kahya, M., & Sahin, F. (2018). The effect of leader personality on follower behavior: The mediating role of leader-member exchange. *Leadership and Organizational Development Journal*, 39(1), 14–33.
- Kirkpatrick, S. A., & Locke, E. A. (1991). Leadership: do traits matter? *Academy of Management Executive*, 5(2), 48–60.
- Larsen, E., Olsen, K. B., & Emanouilov, V. (n.d.). *Life potentials: Define extroversion peronality*. Retrieved April 24, 2018, from: <http://www.theworldcounts.com/life/potentials/define-extraversion-personality>
- Leonard, K. (n.d.). *Factors influencing leadership styles*. Retrieved April 23, 2018, from : <http://smallbusiness.chron.com/factors-influencing-leadership-styles-45181.html>
- Long, N. (n.d.). *Personalities that do well in the IT industry*. Retrieved April 24, 2018, from: <http://smallbusiness.chron.com/personalities-well-industry-10591.html>
- Malik, S. H., Aziz, S., & Hassan, H. (2014). Leadership behavior and acceptance of leaders by subordinates: Application of path goal theory in telecom sector. *International Journal of Trade, Economics and Finance*, 5(2), 170–175.
- Mooney, L. (2018). *Factors influencing leadership styles*. Retrieved April 5, 2018, from azcentral.com website: <https://yourbusiness.azcentral.com/factors-influencing-leadership-styles-9263.html>
- Nana, E., Jackson, B. & Burch, G. S. J. (2010). Attributing leadership personality and effectiveness from the leader's face: An exploratory study. *Leadership & Organization Development Journal*, 31(8), 720–742.
- Nettle, D., & Penke, L. (2010). Personality: bridging the literatures from human psychology and behavioural ecology. *Philosophical Transactions: Biological Sciences*, 365(1560), 4043–4050.
- Neuman, G. A., & Kickul, J. R. (1998). Organizational citizenship behaviors: Achievement orientation and personality. *Journal of Business and Psychology*, 13(2), 263–279.
- Ng, K.-Y., Ang, S., & Chan, K.-Y. (2008). Personality and leader effectiveness: A moderated mediation model of leadership self-efficacy, job demands and job autonomy. *Journal of Applied Psychology*, 93(4), 733–743.
- Owen, F. A., Pappalardo, S. J., & Sales, C. A. (2000). Organizational citizenship behaviour: Proposal for a new dimension in counsellor education. *Canadian Journal of Counselling*, 34(2), 98–110.
- Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, 26(3), 513–563.

- Power, R. (2017, December 12). *People: inc.* Retrieved April 23, 2018, from inc Web Site: <https://www.inc.com/rhett-power/effective-management-extroverts-vs-introverts.html>
- Prakash, S., Singh, A., & Yadav, S. K. (2016). Personality (introvert, and extrovert) and professional commitment: Effect among B.Ed teacher educator students. *The International Journal of Indian Psychology*, 3(2), 43–49.
- Rauf, A. (2016). Two sides of the same coin: Harmful or helpful? A critical review of the consequences of organizational citizenship behavior . *International Journal of Business and Management Review*, 4(2), 60–77.
- Robertson, I., Healey, M. P., Hodgkins, G. P., Flint-Taylor, J., & Jones, F. (2014). Leader personality and employees' experience of workplace stressors. *Journal of Organizational Effectiveness: People and Performance*, 69(1), 281–295.
- Scandura , T. A., & Graen, G. B. (1984). Moderating effects of initial leader-member exchange status on the effects of a leadership intervention. *Journal of Applied Psychology* , 69(3), 428–436.
- Shoaeshargh, F., & Dadashi, M. A. (2013). Analyzing the relationship between personality type (extrovert-introvert) and organizational citizenship behavior in Shoa e Shargh Concrete Company. *Technical Journal of Engineering and Applied Sciences*, 3(18), 2159–2162.
- Sieff, G. (2006). The relationship between personality type and leadership focus. *SA Journal of Human Resource Management*, 4(1), 52–62.
- Sogunro, O. A. (1998). Leadership effectiveness and personality characteristics of group members. *The Journal of Leadership Studies*, 5(3), 26–40.
- Uusi-Kakkuri, P., & Brandt, T. (2015). Preferred leadership behavior by different personalities. *International jornal of Business and Globalization* , 15(4), 461–474.
- Voegtlin, C., Patzer , M., & Scherer, A. G. (2012). Responsible leadership in global business: A new approach to leadership and Its multilevel outcomes. *Journal of Business Ethics*, 105(1), 1–16.

**Organizational Culture and User Adoption of ERP Systems:  
The Case Study of a Leading Food Manufacturing Company in Sri Lanka**

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**Abstract**

The aim of this study is to explore how organizational culture has influenced the ERP system implementation at one of the food manufacturing companies in Sri Lanka and what factors have caused the lower user adoption of the system. It was revealed that the current usage of the ERP system is about 30% and the company has not leveraged its full potential attributable to many reasons. The research philosophy adopted in this study is interpretivism. The study follows the qualitative methodology and single case study strategy to investigate the research problem. The researcher carried out in-depth analysis of the problem and gained rich understanding of the sources of the lower user adoption of the ERP system. In-depth semi structured and unstructured interviews and documentary evidence were used as data collection instruments to collect data. The researcher used the thematic analysis as the method of analysing data qualitatively helped answering the research questions. Hofstede's six-dimensional organizational culture model and Davis' Technology Acceptance Model (TAM) have been deployed as the theoretical lenses in this study to examine the research findings critically. The quality and trustworthiness of the findings of this qualitative study were ensured by adopting the four qualitative trustworthiness criteria which have been suggested by Lincoln and Guba (1985). In addition, the research findings were compared with literature review and the theoretical explanations to find similarities and differences pertaining to the research problem. The findings of the study revealed twenty-two critical influences which have caused the lower user adoption of the ERP system.

**Keywords.** Interpretivism, Case Study, Thematic Analysis, Theoretical Lenses, Literature

**1. Introduction**

**1.1 Background of the study**

Why do companies choose to implement an ERP system? At present Enterprise Resource Planning (ERP) systems have become a solution for many organizations in the world. ERP systems are used to integrate internal and external management information across organizations and it incorporates entire business practices of the company into one platform. Adopting of an ERP system will help an organization to be competitive in the global business and also to streamline and collaborate all business processes. ERP is

generally viewed as necessary infrastructure and is also a strategic weapon in automating business processes while providing visibility to those processes throughout the enterprise. An ERP system allows a company to manage its business with potential benefits of improved process flow, reduced inventories, better data analysis, better customer service, and improved profit margins (Fang & Patrecia, 2005 as cited in Dezdar & Ainin, 2011). In addition, ERP system facilitates to achieve a long-run sustainable competitive advantage in the challenging economic environment whilst providing efficient and effective customer service. ERP system enables organizations to adopt global business practices by regulating their business processes. Transparency of all business transactions through business process integration and reliable and accurate information flow to upper level management and mobility and flexibility are the most significant business drivers that ERP system can provide (Dezda & Ainin, 2011).

### ***1.2 pilot study and identification of the problem***

However, it is worthwhile to carry out a research on the factors which influence ERP implementation success because, in general, implementation of ERP systems can be considered as quite difficult and many scholars have revealed substantial failures of ERP implementation projects. The organization which was chosen for the purpose of this study is one of the Fast-Moving Consumer Goods (FMCG) - food category companies in Sri Lanka (Referred as ABC company) and it has also implemented ERP system in 2015 but pilot study revealed that the usage of the system is very low and it is below 30%. They have not exploited full potential of the system due to lower user adoption. Users are reluctant to adhere to systems and procedures due to several reasons (CFO - ABC Company, 2017). The researcher identified cultural misfit, lack of senior management commitment, change management related issues and inadequate organizational readiness to adopt ERP system have influenced primarily to trigger this problem. The extant literature has identified organizational culture as one of the critical factors for the success of ERP system implementation project, but it is very hard to find a detailed study on how the cultural aspects influence user adoption of ERP system in the food manufacturing company. Hence, the researcher understands that there is a theoretical gap and intended to carry out in-depth study on cultural and other factors which have caused the lower user adoption of ERP system at ABC Company.

Based on the above described preliminary study and the findings of literature the researcher articulates the research problem as follows. ***“How culture of ABC company responded to the ERP system implementation and what aspects caused the lower user adoption of ERP system in ABC company?”***.



### ***1.3 Objectives of the Study***

The main objective of this research paper is to present the cultural and other aspects which caused the lower user adoption of ERP system in ABC company and how cultural aspects of ABC company influenced its ERP system implementation. The researcher articulated the following objectives.

1. To identify and analyse cultural and other aspects of ABC company that caused the lower user adoption of ERP system
2. To investigate the influence of cultural aspects of ABC company on the implementation of ERP system

### ***1.4 Significance of the study***

In the current context, small scale to large scale organizations are radically changing their information technology strategies by adopting ERP systems (Turton, 2010). Hence, evaluating and focusing on ERP implementations is a timely and a necessary task.

It is widely accepted from empirical observations that the benefits are getting from ERP systems are phenomenal (BooYoog, 2007). It will streamline and integrate all the business processes of an organization. However, due to the complexity of ERP implementation it is needed to plan ahead and focus on the factors which influence the successful implementation. Further, ERP implementations are generally considered as high cost and high risk projects that consume a significant portion of a company's capital budget and it carries a high level of risk and uncertainty (BooYoung, 2007). As stated by many researchers ERP failure rate is very high and over 50% of ERP implementations have been identified as failure. Hawari and Richard (2010) stated that between 50% and 75% of firms have experienced some degree of ERP project failure.

It is a widely accepted fact that organizational culture plays a significant role in terms of the success of ERP implementation as well as user adoption of the system. ERP implementation has a significant impact on company's culture and its organizational structure. Change management is one of the most important factor having influence on a successful ERP implementation (Zabjek, Kovacic, & Stemberger, 2009). Hence, identification of significant cultural elements of ERP system implementation is vital and that in turn will help to minimize future ERP projects failure. Considering above mentioned facts the researcher understands it is worthwhile to carry out research on ERP implementations and this will help ERP service providers, consultants and firms to take appropriate decisions about the ERP implementation. Further, this research paper will be useful for researchers, scholars and policy makers who intend to carry out research on ERP system implementations and its

success. It may also be a source of reference material for researchers conducting research in other related topics.

## **2. Literature review**

The researcher has done comprehensive literature review on how the cultural aspects of the organization influence the user adoption of ERP system and how other factors impact the success of ERP implementation. The researcher has critically analysed ideas and viewpoints derived by different scholars in relation to the ERP system implementation with the findings. Further, the researcher describes the theoretical lenses which were deployed to examine the research findings in this chapter. The researcher used Hofstede's six Dimensions of Organizational Culture Theory and Technology Acceptance Model (TAM) to analysis the findings.

### ***2.1 The influence of organizational culture on ERP system implementation***

Rajapakse and Seddon (2005) stated that ERP systems have been heavily adopted in developed countries but it depicted a low adoption of ERP systems in developing countries of Asia and they have experienced many problems. Further, they mentioned high cost, culture, integration, and lack of knowledge are the four most important factors that make ERP unsuitable for many organizations in Sri Lanka. ERP systems have been developed in western world and cultural aspects embodied in ERP systems may be at odds with the prevailing cultural mores, values and norms in developing country contexts (Rajapakse & Seddon, 2005). Cultural resistance to change and a lack of trust will cause ERP implementation failure and there are certain behavioural components within organizations that impact the overall success of ERP implementation (Schniederjans & Yadav, 2013). The lack of structured and disciplined business environments in developing countries in Asia creates severe operational level problems in ERP implementations (Rajapakse & Seddon, 2005). In terms of organizational culture, there should be a fit between ERP and the organizational culture. Thus, organizational culture plays a vital role in implementing ERP systems. The culture of western countries and developing countries is totally different hence, it may require to customize ERP systems to suit their requirement (Ramayah & Annamalai, 2013). National cultures of Asian countries are quite different to the cultures of the Western world where the birth place of ERP systems. It has significantly impacted on the adoption of ERP systems (Rajapakse & Seddon, 2005). A strong commitment to use the system for achieving business aims would aid in implementation efforts of ERP success (McCredie & Updegrave, 1999 as cited in Ramayah & Annamalai, 2013). As stated by Abdinnour-Helm et al. (2003) ERP implementation success or failure mainly depends on employees' attitude. As several studies have revealed, a common reason for ERP failures can be attributed to users' reluctance and unwillingness to adopt and use the implemented ERP system (Sternad & Bobek, 2013). The lack of appropriate culture and organizational readiness can be identified as the most important factor contributing to failure of ERP

implementation (Samaranayake & Jagoda, 2017). Business practices embedded in ERP systems reflect western national cultures so when such systems are implemented in Asian organizations problems may be experienced due to the mismatch (Rajapakse & Seddon, 2005). ERP implementations usually trigger profound changes in the organizational culture and business practices hence, top management commitment is a vital ingredient in ERP implementation (Wickramasinghe & Gunawardena, 2010). Further, they highlighted the importance of change management and understanding of cultural context in implementing ERP systems. Wickramasinghe and Gunawardena (2010) stated that the existing organizational structure, culture and processes found in some organizations may not be compatible with the structure of the ERP system. Several Asian organizations have experienced problem of misfit due to different social context (Liang et al., 2004 as cited in Dezdar & Ainin, 2011). Culture signals areas of strong consensus wherein values, assumptions, and behaviours are shared. The effective implementation of an ERP system requires the organization to take stock of their structural, technical, organizational, and cultural maturity (Haider & Pishdad, 2013). ERP system creates a significant impact on organization's culture and its organizational structure. Successful implementation requires that people, processes, departments, and organizations change (Zabjek, Kovacic, & Stemberger, 2009).

The organizational culture can significantly affect the ERP implementation. Culture of the company is a set of beliefs and values shared by a group of people and attitude and behaviour of people. Hence, organization's culture needs to be well-thought-out and it can inhibit or support ERP implementation (Fang & Patrecia, 2005). Furthermore, cultural diversity among customers, consultants, vendors and even cultural difference in countries also need to consider and it can have positive or negative results in ERP implementation (Fang, 2005).

It is an imperative that one addresses an organizational culture as part of the transformation journey since behaviour of people of an organization is governed by shared assumptions, values, and beliefs. It enforces rules, values and practices at the organizational and individual levels (Panga, 2014). Cultural values embedded in ERP system need to be fit into the organizational culture and to their prevailing norms. There is clear potential for a cultural clash when these do not fit the adopting culture's norms. ERP success depends on congruence between the host culture and the ERP system culture (Molla & Loukis, 2005 as cited in Panga, 2014). Cultural issues are at the root of many failed ERP implementations, yet most organizations do not assign explicit responsibility for culture in these kinds of transformational initiatives. Culture is the "Life Line" of any organization and if that is not right then what-ever you do will remain unsuccessful (Group CIO, 2013).

As portrayed above, many researchers have highlighted organizational culture as a key component of ERP system implementation nevertheless, it is difficult to find a detailed study

on how cultural aspects influence on ERP implementations in the food manufacturing industry. Hence, the researcher intends to carry out in-depth analysis on ERP implementation from an organizational cultural perspective by selecting a FMCG-food category company.

## ***2.2 The Other Factors which Influence the Success of ERP System Implementation***

It is a widely accepted fact that top level management support, change management, effective communication, user training and education, project management, clearly defined scope and objectives and project team competence are the key success factors for a success of ERP implementation (Basu, Upadhyay, Manik, Das, & Pran, 2012). Garg and Garg (2013) has highlighted poor user involvement and resistance to change, lack of top management commitment, poor project management, unrealistic project scheduling and ineffective organizational change management as some of the significant failure factors of the ERP system implementation.

### ***2.2.1 Top Management Commitment And Support on ERP Implementation***

Prepping up an organization for a successful adoption of ERP system requires support from everyone in the organization, including leadership to the front-liners. Top management support has been emphasized as a crucial factor in successful ERP implementation by many researchers (Panga, 2014). According to Zhang et al. (2005), top management support has two major aspects in ERP implementation projects. One is to provide the necessary resources and other one is to provide proper leadership. Top management is supposed to communicate the company strategy to all members of the organization, developing an understanding of the restrictions and abilities, demonstrating commitment, and establishing rational objectives for the ERP implementation (Umble et al., 2003 as cited in Panga, 2014). Senior management of an organization needs to explicitly support to secure the employee acceptance of the changes brought by the ERP implementation project and that leads to the success of the whole project (Aladwani A. M., 2001). Panga (2014) stated that the support and commitment from top management are part of the social factors that can improve the ERP system usage of employees in the company and the top management influences can facilitate the user acceptance of new system. Top management support is vital for the success of ERP implementation projects in organizations because of their influence and role in providing financial resources and relevant guidelines (Dong, 2001 as cited in Panga, 2014). Top management involvement is critical to harmonize any conflicts between internal and external parties (Nah et al., 2001 as cited in Panga, 2014) and ERP implementation projects should be spearheaded by a highly-respected, executive-level project champion (Panga, 2014).

Ramayah and Annamalai (2013) explicate that the top management support includes financial support, employee motivation, communicating strategic goals and solving conflicts.

Furthermore, Schelin (2004) argues that senior management commitment is essential for fostering end-user adoption of new technologies.

### **2.2.2 User Training and Education on ERP System**

The researcher describes that team cohesion is a significant factor which positively influences a success of ERP implementation. Before launching of ERP implementation project, it is needed to reinforce and educate all concern employees of an organization and describe benefits which bring in from the new system.

As mentioned by Correa and Cruz (2005) ERP systems are relatively complex to learn hence, adequate training and development on ERP systems need to be provided to enable the users to use them efficiently and effectively. User training and development will enhance the users' level of competency and proficiency. As a result, it will increase productivity and performance of the user, reduce risk of acceptance of new ERP system and finally it will increase organizational performance as a whole (Correa & Cruz, 2005 as cited in Dezdar & Ainin, 2011). Most probably organization needs to embrace best practices by way of changing their existing business processes with ERP implementation and it can be a remarkable change process. However, proper user training will help users to accept the change taking place due to new system implementation. In addition, proper user training increases ease of use the system and it reduces user resistance, which, in turn, increase the probability of ERP system usage. In contrast, implementing an ERP system without providing sufficient training the project will end up with drastic consequences (Dezdar & Ainin, 2011).

A proper training plan has to be prepared by considering users' know-how, their needs, and technology competency etc. in addition, it is important to get operational staff involvement during the setting up of the system. ERP consultants have to make use of business users' domain knowledge in areas where the project team lacks expertise (Françoise & Bourgault, 2009). Stratman and Roth (2002) have posited that ERP training should encompass the development of IT skills and it needs to be hands-on (Stratman & Roth, 2002 as cited in Rabaa'i, 2009). By giving proper training and education in ERP system to end users they will understand how the system works and how it can help them to perform their daily tasks.

### **2.2.3 Clearly Defined Scope for ERP Implementation**



**Figure 1 - Triple constraints**  
Source adopted from - Project Management Body of Knowledge (2012)

A Project scope defines exactly what is in the process. Scope, Cost and Time are known as triple constraints in ERP implementation from a project management perspective. Project success is normally evaluated in terms of time, cost and scope. If one of these parameters changed it would affect other two parameters automatically (Project Management Institute, 2012). It is a widely accepted fact

that scope will control cost and time of the project and controlling the scope and defining and evaluating project milestones will avoid schedule and cost overrun. In ERP implementation projects the scope defines the functional modules and processes that need to be implemented. And also it is important to define the limitation of the scope and implementing of business functions. This should be agreed by both implementation partner and customer. It is vital that ERP adopting companies need to clearly establish the ERP implementation project scope and monitor it throughout the project (Dezdar & Ainin, 2011). However, scope changes may be encountered while implementation is going on. Uncontrolled changes are often referred as project scope creep. But those changes need to be assessed and approved by the change control board of the organization before undertaking any work since scope modification can result in additional time and cost.

Scope of the ERP implementation project should designate a detailed project plan with clear objectives, deliverables, realistic project milestones, due dates and resource allocation for each activity and it needs to be finalized at the beginning of the project. As Françoise and Bourgault (2009) stated the organization needs to formally evaluate the scope of the change in order to control its impacts and risks. 'Having a well-defined and written scope of work can mean that the difference between a failed project with disastrous results, and a highly successful project with huge benefits' (Gray, 2010).

#### ***2.2.4 Effective Communication in ERP Implementation***

The success of ERP system implementation depends on effective communication within the entire organization during the implementation process. Effective communication allows the organization's stakeholders to understand the goal and the expected benefits of the project as well as to share the progress of the project (Al-Mashari et al., 2003 as cited in Panga, 2014). Dezdar and Ainin (2011) stated that communication across all the functional departments and levels of a company is significant for successful implementation of ERP system. It is critical to have proper communication with all stakeholders of the project from the initiation to the system acceptance phases and it is considered as an essential critical success factor for ERP implementations. Effective communication helps the ERP implementing company to minimize user resistance due to changing in processes and systems (Dezdar & Ainin, 2011). It has mentioned that both internal and outward communication among all relevant stakeholders is very essential. Panga (2014) stated that suitable communication plans should be set up to keep senior management informed on the subject of ERP project impact, challenges, risks, and progress.

Nah et al. (2007) has mentioned that most challenging and challenging task in ERP implementation project is communication. Employees need to be informed about the scope, objectives, reason for the implementation and how new system supports for the progress of business activities in advance to make ERP implementation more efficient (Nah et al., 2007 as cited in Dezdar & Ainin, 2011). In addition, effective communication plan will assist customers and vendors be frequently updated on what is going on with ERP system

implementation and also the communication plan explains logic for the ERP implementation and details of business process change (Dezdar & Ainin, 2011). Interdepartmental communication and collaboration can help to resolve some technical issues in relation to ERP system implementation that in turn would facilitate the overall project success. (Panga, 2014).

Turton (2010) stated that there would be a better chance of achieving ERP project success if companies pay attention to develop employees and communicating future changes to the company and clear strategic goals. Proper communication about benefits which company would gain from the system will make users to feel that they own the system.

### ***2.2.5 Change Management Strategies for ERP Implementation***

As mentioned by Aladwani (2001) change management strategies plays crucial role in ERP implementation projects. The project must be strategically aligned to support the organizations business strategy. Change management process is a major challenge which the project team has to address and need to take a more pragmatic approach to resolving problems during and after the project. Many ERP implementations fail or face difficulties because of users' resistance despite benefits what ERP system provides. Changing of existing business processes (business process reengineering) and convincing the core users of the company on benefits and value additions which would gain from the new system would be a major effort. Hence, responsiveness to customers is vital for an organization to avoid the difficulties associated with this change.

As Hala (2011) stated that organizations need to change their structures, objectives, processes, and technologies continuously to sustain their competitive advantage. In order to achieve this many organizations have adopted ERP systems. However, implementing of an ERP system may cause a huge change in current processes which needs to be managed carefully. And also it has found that high rate of ERP implementation failure and most of implementations have failed to provide promised benefits to the customer. The failure rate has been estimated as 60–90% (Hala & Al-Shamaln, 2011). It has been identified that a major reason for this is the resistance of the users to change. Hence, change management is a primary concern for ERP implementation projects.

As mentioned by Rabaa'i (2009) it is impossible to implement an ERP system without considering change management strategies. Hence, change management is essential for organization to adapt ERP systems to accomplish desirable results. ERP implementation project is not just changing of software and it enables the company to obtain a higher level of performance and improved productivity through restructured business processes. To adapt best industry practices by implementing an ERP system the organization may need to re-engineer existing business processes. This may result generating resistance and uncertainty among users of the new system and it might cause increasing employees'

turnover of the company. Therefore, it is needed to consider major conflicts between the organization and its technology during the change process whilst effectively managing its employees (Rabaa'i, 2009).

In Sri Lankan context, Rajapakse and Seddon (2005) stated that prohibitive cost, culture, integration, and lack of knowledge are the four most salient factors that make major hindrance for many of Sri Lankan organizations to adopt ERP systems. The two case studies done by them have revealed that enormous user resistance to change due to ERP implementation. *"Passion to change is the key for innovation"* however, most of Sri Lankan companies don't illustrate such a passion (Rajapakse & Seddon, 2005, p. 15).

### 2.3 Theoretical Framework

The researcher uses two theoretical models i.e. Hofstede's six-dimensions of organizational culture model and Technology Acceptance Model (TAM) pertaining to the research topic. It provides a context for examining the problem. These theoretical models articulate the concepts of organizational culture and user adoption of ERP systems. The theoretical frameworks reinforce the study and they permit to evaluate the empirical research findings critically. However, these theoretical models connect the researcher to the existing knowledge but new knowledge may arise from the research findings.

#### 2.3.1 Hofstede's Six-Dimensional Model

The researcher used the organizational culture dimensions (Refer Figure 2) developed by Hofstede (2001) to explore the different cultural settings which exist among the users of the selected food manufacturing company in Sri Lanka. The researcher has explored why the organizational cultural factors influence on the lower user adoption of ERP system in ABC company using the Hofstede's six-dimensional model. In 2010, the organizational culture model was further developed by Bob Waisfisz in collaboration with Geert Hofstede. They added two more dimensions, Degree of acceptance of leadership style and Degree of identification with your organization. A theoretical explanation of each dimension is described below.

Means-oriented	vs.	Goal-oriented
Internally driven	vs.	Externally driven
Easy-going work discipline	vs.	Strict work discipline
Local	vs.	Professional
Open system	vs.	Closed system
Employee-oriented	vs.	Work-oriented
Degree of acceptance of leadership style (Low/High)		
Degree of identification with your organization (Low/High)		

Figure 2. Hofstede's Six Dimensions of Organizational Culture Theory

Source: Adopted from Hofstede's cultural dimensional theory (2001)



**Means-oriented vs. Goal-oriented**

In a means oriented culture the key feature is the way in which work has to be carried out and importance on **how** work gets done. The focus is on the way people do work and an emphasis on avoiding risk. In a **very** means-oriented culture people perceive themselves as avoiding risks (risk averse) and making only a limited effort in their jobs.

On the opposite end of the spectrum, a goal-oriented culture identifies with **what** work gets done. There is a strong focus on achieving an end result. In a **very** goal-oriented culture, the employees are primarily out to achieve specific internal goals or results, even if these involve substantial risks.

**Internally vs. Externally Driven**

Employees within an internally driven culture see themselves as experts. They feel that they know what is best for the client and customer and act accordingly. But it may not be the thing that customer needs.

Employees who are working in an externally driven culture are very customer-oriented and will do whatever the customer wants. They say, “the customer is always right” and their favorite metric is customer satisfaction.

**Easygoing vs. Strict Work Discipline**

Work discipline refers how someone to obey rules and code of behaviour and the amount of structure and control. In an easy-going culture, the approach to work is informal, loose, unpredictable, and these characteristics facilitate a high level of innovation. A **very** easy-going culture reveals loose internal structure, a lack of predictability, and little control and discipline.

In a strict culture, there is a fair amount of planning (planning in advance) which leads to efficiency and productivity. People take punctuality seriously and delegate work with detailed instructions.

**Local vs. Professional**

Local oriented organizations do not care about the outside environment. They are scared of it. In addition, loyalty between the members and with the organization itself is important and critical attitudes towards superiors or the organization will be sanctioned. The loyalty is more required among subordinates to their superiors. Moreover, they focus on the present without worrying about the future goals, and subordinates are identified with the superiors or the department they work, not with the profession or the content of the job.

In a professional organization the identity of an employee is determined by his profession and/or the content of the job. They are externally focused and long-term oriented. They delegate responsibilities among subordinates.

### **Open vs. Closed System**

This dimension relates to the accessibility of an organization. In a very open culture newcomers are made immediately welcome, one is open both to insiders and outsiders, and it is believed that almost anyone would fit in the organization. In closed organization it is the reverse where newcomers have to prove themselves. Employees are scared of outsiders and new staff. Consequently, they keep secrets and try to maintain the distance towards newcomers.

### **Employee vs. Work-centered**

This aspect of the culture is most related to the management philosophy per se. Leaders take responsibility for the happiness, well-being, and satisfaction of their employees. This is true even if it is at the expense of productivity. In a work-centred culture, a focus on high task performance can come at the expense of employees. In this environment, there is a low level of empathy for personal problems. In very work-oriented organizations, there is heavy pressure to perform the task even if this is at the expense of employees.

### **2.3.2 Technology Acceptance Model (TAM)**

In addition to the Hofstede's six-dimensional model the researcher used the Technology Acceptance Model (TAM) as well which was originally developed by Davis et al. (1989) to examine users' adoption of ERP systems. The TAM proposed by Davis has been the most widely-used model for researching user acceptance and usage of information technology/information systems (Sternad & Bobek, 2013). The TAM provides a foundation to find out the impact of external variables on internal values, attitudes, and intent (Panga, 2014). As exemplified in the technology acceptance model, if the influence of external factors is high it will impact the usage of the ERP system.

TAM posits two beliefs, perceived usefulness (PU) and perceived ease of use (PEOU) which are of primary relevance for acceptance behavior (Davis et al., 1989 as cited in Sternad & Bobek, 2013). PU is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance". This refers capable of being used the system advantageously (Davis, 1989, p. 320). In contrast, PEOU refers to "the degree to which a person believes that using a particular system would be free of effort". This refers freedom from difficulty or great effort. This enables a person to accomplish more work for the same effort (Davis, 1989, p. 320). Further, TAM states that PU and PEOU positively influence an individual's attitude about a technology which in turn influences his or her intent and actual use of the technology. TAM also predicts that PEOU positively influences

PU, as Davis et al. (1989) have explained. As depicted in the Figure 3 the grey area within the dotted line denotes the original TAM which was derived by Davis et al. (1989).

As Sternad et al. (2011) stated that several researchers have examined the antecedents of PU and PEOU and there are a large number of external factors which potentially influence attitudes and behavior of people regarding ERP use in the operational phase of the ERP lifecycle. Those external factors have been combined into three groups such as personal characteristics and information literacy (PCIL); system and technological characteristics (STC) and organizational-process characteristics (OPC).

Individual factors of PCIL group consists of computer experience, self-efficacy, prior experiences, management and external support, perceived resources, technological innovativeness and computer anxiety. External factors in the STC group includes data quality, ERP system functionality, ERP system performance, and user manual helpfulness. OPC group consists of social influence, fit with business processes, training and education in the ERP system, ERP support and ERP communications (Sternad, Gradisar & Bobek, 2011).

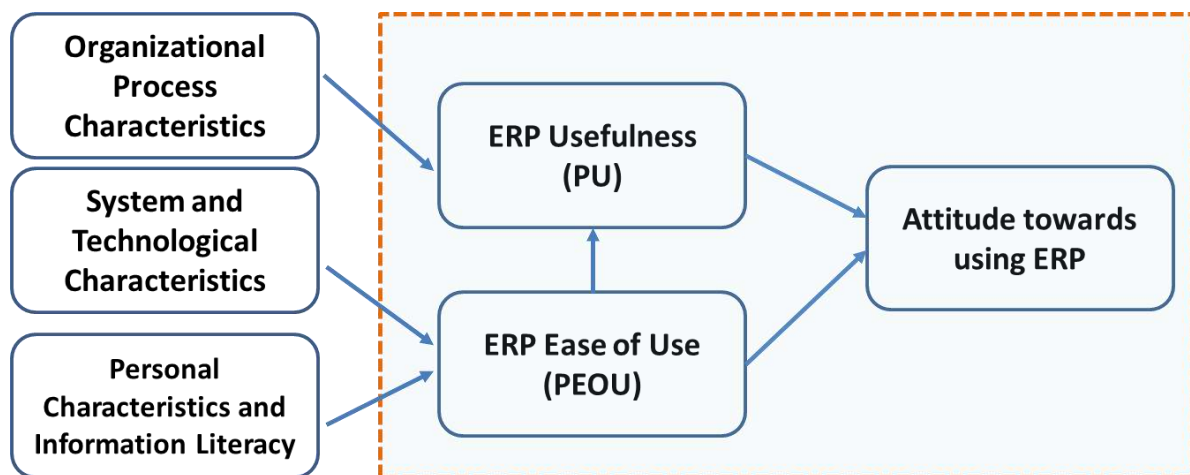


Figure 3. Technology Acceptance Model (TAM)

Source: Adopted from – Davis et al. (1989)

### 3. Research Design

Research design is the general plan of how the research questions need to be answered. The process of research design consists of three layers which are research strategies, research choices and time horizons (Saunders, Lewis, & Thornhill, 2016).

#### 3.1 Research Philosophy

The research philosophy adopted by a researcher contains important assumptions about the way in which how you view the world. These assumptions guide the research strategy and methods to conduct the study further. Ontology refers to the assumptions about the nature

of reality where the assumptions govern by the social reality exist externally. Epistemology refers to the general assumptions that reality is represented by the objects that are considered to be real. The research philosophy adopted in this study is interpretivist philosophical stance of the natural scientist. Interpretivism advocates that it necessary for the researcher to understand differences between human as social actors (Saunders, Lewis, & Thornhill, 2016).

### ***3.2 Research Methodology / Approach***

This research follows an inductive and qualitative research approach with an interpretive case study method. Case study research is an appropriate strategy for answering “how” and “why” questions that investigate a contemporary phenomenon within its real-life context especially when the boundaries between these two concepts are not clearly evident (Eisenhardt, 1989; Yin, 2009).

### ***3.3 Research Strategy***

The researcher employs case study as a strategy for doing this research which involves an empirical investigation of a particular contemporary phenomenon. Case study strategy facilitates to carry out in-depth analysis of the problem and to gain a rich understanding of the context of the research and the processes being enacted (Saunders, Lewis, & Thornhill, 2016). The case study strategy helps the researcher to generate answers to the research questions.

### ***3.4 Research Method***

The researcher chose the multi-methodqualitative study to collect data. As articulated by Saunders, Lewis and Thornhill (2011) the multi-method refers to those combinations where more than one data collection technique is used but this is restricted to either a quantitative or qualitative. The researcher selected to collect qualitative data using in-depth interviews and documentary analysis.

### ***3.5 Data Collection Method (Instrument), Data Sources, Population and Sampling***

The study was carried out in two stages namely, the pilot study and the main study. Data collection methods are in-depth interviews and document analysis. The researcher uses primary data for analysis and primary data refers to information obtained first-hand by the researcher through in-depth interviews and document analysis. The researcher selected ABC company for the purpose of this study and sample was selected based on the purposive sampling. Senior managers and ERP system users of said organization were selected for interviews. The researcher conducted individual interviews with senior management and focus group discussions with tactical and operational staff. Discussion groups consisted of 6 to 10 employees representing different grades and occupations. The researcher validated and reconfirmed data gathered through interviews. The researcher referred some of the

documents which are in relation to the ERP implementation project such as As-Is and business blueprint documents and Standard Operating Procedure (SOP) manuals.

The interviews were conducted with a heterogeneous sample in ABC company. The entire population consists of 10 senior management staff, 20 middle management staff and 106 tactical and operational staff representing Finance, Sales, Production, Procurement, Supply chain, Engineering and Quality assurance departments. The researcher selected the purposeful sample from above mentioned population which is 20% of management category and 2 focus groups in which one focus group consisted of 6 employees from the tactical and operational staff. 12 participants were selected out of 106 tactical and operational staff of ABC company for focus group interviews. This in turn reduced the researcher bias in the selection of participants of focus groups. The researcher conducted 8 interviews with 2 sets of organizational members which consisted of minimum 18 employees. The first set included senior and middle managers of ABC company (Group CEO, CFO, GM – Exports, GM-Production, Head of Sales and Head of Information Technology). The second set included focus groups which consisted of tactical and operational staff mainly middle managers and accountants representing Finance, Sales, Production, Procurement, Supply chain, Engineering and Quality assurance departments.

Interview guide was used to conduct semi-structured interviews with senior management of the organization and unstructured interviews were conducted with tactical and operational staff. Emergent questions were asked for further understanding during the interview sessions. All interviews were audio recorded with permission. Semi-structured interviews allowed the participants to elaborate and answer questions more on their own terms than the standardized interview permits. The transcripts of the interviews have been enclosed in the Appendix 04.

### ***3.6 Unit of Analysis***

“The unit of analysis refers to the level of aggregation of the data collected during the subsequent data analysis stage” (Sekaran & Bougie, 2016, p. 104). Unit of analysis of this study is the research organization and its individuals and focus groups are members of the organization.

### ***3.7 Technique for Data Analysis***

Qualitative data refers to non-numeric data gathered through in-depth interviews that have not been quantified and can be a product of all research strategies. Audio recorded data were transcribed into written form for the analysis purpose. After producing a transcript of an interview, the researcher developed a summary of meanings, categorize it and structure it (Saunders, Lewis, & Thornhill, 2016). Initial coding was done by identifying aspects of data that relate to the research questions. A code is a brief phrase extracted from the dataset which is useful to look for broader patterns across the dataset. The researcher worked

systematically through the entire dataset giving full and equal attention to each data item and identified interesting aspects in the data items in relation to the research questions that formed the repeated patterns (themes) across the dataset. Then, different codes with similar meaning were combined and formed overarching themes. The researcher mainly used the thematic analysis as the method of analysing data qualitatively. Thematic approach produces an insightful analysis that answers the research questions (Please refer Appendix 05 for the detailed coding structure). This helped substantially to accomplish the two research objectives in line with the categorized themes with respect to the case study. Finally, the researcher identified the relationship between themes and developed the overall story by comparing cases.

#### **4. Data Analysis and Findings**

This chapter will draw upon the main themes and present the findings which arose out of the interview process and subsequent data analysis. First, it provides an understanding of what has caused the lower user adoption of ERP system at ABC company. The key themes that emerged from interview process in relation to user adoption of ERP system implementation are organizational cultural aspects and leadership style of a family owned traditional organization, how the change management strategies play a vital role in ERP implementation, importance of user training on ERP system, impact of poor senior management commitment on ERP project activities, user resistance to change and adopt industry best practices and scope of work agreed between the service provider and the client.

##### ***4.1 Organizational Culture and ERP Implementation***

All the participants who were interviewed have commented on organizational culture and how it impacts on ERP system implementation. They have mentioned that cultural aspects of the organization have a direct impact on user adoption of ERP system. Based on the analysis it has been revealed that there is a strong relationship between organizational culture and the ERP system implementation. Further, the findings elucidate that organizational change in light of the style of the organizational culture that is attributable to organizational leadership.

The Group Chief Executive Officer (GCEO) stated that Factory staff's disbelief in adopting the industry best practices with the ERP system implementation and unwillingness to submit information to setup the system have caused the lower usage of the system.

The Chief Financial Officer (CFO) stated that decision making power is more centered around the owners of the company and formal decisions are made by the senior management of the company can be overridden by family members based on their judgment which may not be the right decision. Further, he highlighted that personal

relationship between family owners and some employees of the company has influenced the ERP implementation. As he explained some employees in the ABC company believe that there would be a barrier to maintain the relationship with family members due to the system implementation.

Similarly, Head of Sales also stated that senior employees' relationship with the owners of the company has impacted the ERP implementation. Further, Head of Sales mentioned that indirect communication channels with the owners of the company and weak corporate practice and improper discipline have hindered the smooth flow of ERP implementation.

The researcher reveals that four participants have strongly stated that the personal relationship between senior management and family owners of ABC company has negatively impacted the ERP system implementation and it has caused the lower usage of the system. Lack of belief in the ERP system and employees' attitude towards the system has influenced the lower user adoption of the system. The CFO stated that some employees started rejecting the system in the middle of the implementation due to their unacceptable belief and attitude pertaining to the system.

#### ***4.2 Change Management Strategies in ERP Implementation***

GCEO emphasized the importance of change management activities in ERP system implementation. He stated that change management processes should have been executed by ABC company before, during and post ERP system implementation. However, GCEO explained that ABC company could not implement change management processes properly. He stated that user resistance was triggered against the ERP system implementation due to the change management strategies had not been implemented properly at ABC company.

CFO explicated that there were changes in existing processes, systems and organizational structure with the ERP system implementation. Head of IT also mentioned that there were changes in people, process and technology due to ERP implementation. Further, CFO described that change management techniques will lead to the success of the ERP implementation project and mitigate user resistance.

Four participants have mentioned about the changes in business processes, employees' job roles, current systems and even organizational structure due to the ERP system implementation. Hence, careful consideration is needed to manage these changes with the ERP system implementation since it has direct impact on people of the organization and it creates user resistance to accept the change. General Manager Exports (GME) also said change management techniques can address user resistance and change users' mindset. He further stated that ABC company has not looked at the change management strategies to get buy-in from the employees during and post implementation.

### ***4.3 User Resistance to Accept the Change***

One of the most baffling and recalcitrant of the problems which senior management of ABC company has faced is employee resistance to change and accept the new ERP system. Group GCEO and CFO stated that people's undesirable belief and attitude created resistance towards adopting industry best practices with the ERP system implementation. Further, GCEO stated that business transparency and lost controls of some operational and senior management staff caused user resistance.

Five participants have experienced that the level of resistance to use the system varies based on departments. It was revealed that production and engineering departments have resisted the ERP implementation project higher than the other departments of the company. The reason is due to their wrong belief and attitude, lack of training and fear of job. They have emphasized that some of the crucial production related information have not been submitted to the service provider to setup the system during the implementation. As a result, the system could not be configured to run certain production related functions. This has triggered the lower usage of the system.

### ***4.4 Top Management Involvement and Leadership towards ERP Implementation***

All participants acknowledged that commitment and support of top management is essential for successful ERP system implementation. Top management commitment is one of the critical success factors which affects every stage of ERP implementation life cycle. Every interviewee implied significance and necessity of strong leadership towards the successful ERP implementation.

### ***4.5 Training and Awareness of the ERP System***

GCEO emphasized the importance of training and raising awareness about the ERP system and mentioned about consequences which occurred due to a lack of training provided to the ERP users of ABC company. He cited that competency level of some of the ERP system users is also not up to the expected standard which is one of the reasons for the lower user adoption of the system. Further, he stated that increasing users' know-how of the ERP system will help to reduce resistance to accept the change.

CFO highlighted that IT literacy and competency level of most of employees are low in a traditional company and lack of training on modern technology compromises user productivity, effectiveness and efficiency.

Focus group 1 and Focus group 2 stated that proper training increases the competency level of users and it helps users to accept the system. They mentioned that time allocation for the training depends on the competency level of users since understanding power of users



varies person to person. It was mentioned that service provider has not allocated sufficient time for user training during the ERP system implementation.

## **5. Discussion of Findings**

The main purpose of the discussion chapter is to achieve the objectives by answering the research questions. This chapter critically discusses the findings captured through a comprehensive interview process with the support of prior research findings and the theoretical frameworks. The findings of previous scholars are also analysed in this chapter to reveal the similarities and differences in relation to the cultural aspects and other factors which caused the lower user adoption of the system.

### ***5.1 Influence of Cultural Aspects on ERP System Implementation***

All the participants reported that organizational culture of ABC company has impacted the ERP system implementation project. It was revealed that disbelief and negative attitude of some employees of ABC company have stalled the ERP system implementation. Difficulty to change the mindset of factory staff also has created the lower user adoption of the ERP system. One participant stated that major lapses of the ERP system implementation project occurred due to the people's mindset and how they perceived the change. Some of the production related information has not been disclosed during the ERP system implementation due to a lack of trust in the system and false perception of the factory staff. This has created a hindrance to use certain functions of the system. The previous studies have also stated that organizational cultural fit is essential to implement ERP system for any organization. ERP system implementation success mainly depends on employees' attitude and belief in it (Abdinnour-Helm et al., 2003). In contrast, Rajapakse and Seddon (2005) pointed out that ERP systems have originally been designed and developed in western countries and there would be a misfit in implementing it for Asian organizations due to the cultural differences.

The one of the key factors which was highlighted during the interview process is the personal relationship between family owners and some of the senior employees of ABC company and how it impacted the ERP system implementation. It was revealed that critical decisions are made by the owners of the company but those decisions are taken merely on gut feelings and not based on the information available in the system. Hence, the decisions which are made by the management of the company can be interfered by some of the senior staff on the grounds of personal relationship they are having with the family owners. This in turn has resulted the lower usage of the system. Further, some employees believed that they lose the personal relationship with family members due the new ERP system implementation. 50% of the participants have explicated that the personal relationship between family owners and some senior employees of the company have critically impacted

the smooth implementation of the ERP system. The extant literature has not depicted this kind of a problem and it is one of the knowledge gaps that the researcher identified.

Two participants have articulated that a performance driven culture is needed to adopt the changes and best practices come with the ERP system. A performance driven culture is akin to organizational culture in which the entire organization is driven by a motivation to perform and achieve the organizational goals (Swamidass, 2013). As they stated there was no proper performance driven culture existence at ABC company hence, it had become a barrier to implement the ERP system. Further, they stressed that if the company needs to increase the usage of the ERP system it should be a part of the employees' performance appraisal. And also it was mentioned that users' discipline in adhering to the new processes with ERP implementation was not up to the expected standard.

### ***5.2 Factors which Caused the Lower User Adoption of the ERP System***

All the participants emphasized that failing to implement proper change management activities during the ERP implementation caused the lower user adoption of the system. Top management of the company has encountered user resistance during the ERP implementation project due the changes occurred in business processes, job roles, organizational structure and existing technology that in turn resulted the lower user adoption of the system. Hala (2011) stated that implementing an ERP system would be a huge change to the organization and it should be managed carefully. However, the authority of ABC company had not taken proper actions to mitigate user resistance attributable to these changes. One participant highlighted some of the reasons for user resistance as fear of job security and fear of losing their dominance power. Previous studies also have pointed out reasons for user resistance in a similar manner. Woodward (1968) has stated that some of the influences such as shock of the new, job security, uncertainty and competency fear are the main root causes for user resistance and the company needs to implement proper change management strategies to overcome those. Implementing the change management strategies before starting the ERP system implementation is a crucial part of the project (Aladwani, 2001). Further, another participant described that if the change management strategies had been implemented during the system implementation the senior management of ABC company could have addressed user resistance and change their mindset to adopt the ERP system. One interviewee described that some of the change management activities such as delegation of power, reward and recognition, objective driven culture which help to reduce user resistance and it will make easier to accept the change. User resistance will reduce the usage of the ERP system. Five participants have confirmed that implementing the change management strategies during the ERP system implementation will reduce user resistance. However, the management of ABC company has not much concerned about the change management activities which has resulted the lower user adoption of the system. Rajapakse and Seddon (2005) stated that it is important to setup the background i.e. streamlining existing business processes, enhance users'

competency level etc. before starting the ERP system implementation in order to reduce user resistance.

User resistance encountered during and post implementation of ERP system is the major factor for the lower user adoption of the system. Five participants explained that some of factory users objected to use the information available in the system. Because, they know that decisions are made purely based on the information provided by the system thus, they were reluctant to disclose some of important production related data to setup the system. This resulted the lower usage of the system. In addition, it was noticed that the level of resistance to use the system varies based on departments. Mostly, employees of the production and engineering departments have showed resistance to use the system due to a fear of job security, lack of confidence in the system and flawed belief. Further, three participants stated that business process reengineering carried out during the ERP system implementation created the user resistance.

All participants accepted that the top management support, guidance and commitment is an essential part of the ERP implementation project. Literature review also depicts top management support is very essential for ERP implementation. Ideally top management needs to provide proper leadership and required resources, monitoring and tracking the project progress, manage user resistance, critical decision making and risk management (Zhang et al., 2005). However, it was revealed that owners and some senior managers of ABC company have not tendered their fullest support for the ERP implementation project. Many participants reported that weak leadership style of the senior management and their lack of commitment to the ERP implementation project caused the lower user adoption of the system. Even though strong leadership required for ERP implementation project to get project objectives accomplished weak leadership of the company became a hindrance to achieve the prime objective of the ERP system implementation. It was mentioned that senior management of the company needs to encourage users to utilize the ERP system maximum to achieve their operational tasks. But it has not happened as expected. In view of previous studies, Aladwani (2001) elucidates that the success of ERP system implementation project depends on the senior management explicit support for users to accept the change. Panga (2014) also stated that top management involvement in ERP system implementation project can facilitate users to accept the system. In contrast, as mentioned in the findings, lack of senior management involvement in the ERP system implementation at ABC company resulted poor support extended by the core team. Another participant mentioned that lack of top management commitment has reduced the confidence level of users towards the senior management of the company that eventually affected the user adoption of the system. It is clear from the findings and literature review that the senior management can foster positive attitude among key users of the ERP system which in turn will help reduced the user resistance and increase the usage of the system (Aladwani, 2001).

Correa and Cruz (2005) posited that ERP systems are complex to learn compared to other IT systems hence, adequate training on ERP systems need to be provided to enable the users to use them efficiently and effectively. Proper training on ERP system helps to reduce user resistance and increase the usage of the system (Dezdar & Ainin, 2011). All participants highlighted that ERP users of ABC company have not been trained properly to handle business functions in the system that has caused the lower user adoption of the system. The interviews also highlighted that some users are not conversant enough to use the system and lack of knowledge of them has become a showstopper to use the system which in turn has resulted the lower user adoption of the system. McAlary (1999) stated that successful ERP implementation will depend on properly defined user training.

### ***5.3 Explaining the Findings in Relation to the Theoretical Lenses***

In this section, the researcher attempts to examine the research findings using two theoretical models. The researcher critically analyses and finds how the theoretical explanations are relevant to the research findings. As depicted in Table 1 the researcher has found twenty-two critical factors which have influenced the lower user adoption of the system.

Table 1  
*Mapping the Theoretical Relationship*

Reasons for the Lower User Adoption of the ERP System - Mapping the Theoretical Relationship					
#	Key Findings	Valued	Valued %	Hofstede's Cultural Dimensions	Technological Acceptance Model (TAM 3)
1	Factory staff's disbelief and attitude in adopting the industry best practices with the ERP system - Short-term horizon	5	63%	Local oriented	PCIL-Self-efficacy
2	Unwillingness to submit information to setup the system	5	63%	Closed system	PCIL-Computer anxiety
3	Personal relationship between family owners and some employees (Mainly factory staff) - Internal loyalty	4	50%	Local oriented	OPC-Social influence
4	Weak leadership style	4	50%	Low acceptance of leadership style	OPC-Social influence
5	Decisions made by owners of the company	2	25%	Strict Work Discipline	OPC-Social influence
6	People's mindset and how they perceived the change	5	63%	Local oriented	PCIL-Self-efficacy
7	Fear of capability and job security	4	50%	Work centered	PCIL-Computer anxiety
8	Lack of objective driven culture	2	25%	Mean oriented	OPC-Fit with business processes
9	Lack of discipline of users	2	25%	Easygoing work discipline	OPC-Fit with business processes
10	Failure to implement change management activities	8	100%	Local oriented	OPC-Fit with business processes
11	User resistance to change	8	100%	Local oriented	PCIL-Computer anxiety
12	Lack of readiness for ERP implementation - Poor planning	2	25%	Easygoing work discipline	OPC-ERP support
13	Loss of power and controls	4	50%	Local oriented	PCIL-Computer anxiety
14	Changes in business processes, job roles, structure and technology (Reengineering)	4	50%	Easygoing work discipline	OPC-Fit with business processes
15	Lack of training	8	100%	Work centered	OPC-Training
16	Lack of confidence in the system	3	38%	Work centered	OPC-Training
17	Poor responsibility of staff	1	13%	Easygoing work discipline	PCIL-Self-efficacy
18	Familiarization of current system	3	38%	Mean oriented	PCIL-Prior experiences
19	Lack of top management support and commitment	6	75%	Low acceptance of leadership style	PCIL-Management support
20	Poor monitoring and tracking	3	38%	Easygoing work discipline	OPC-ERP support
21	Impractical design and system limitations (Customer satisfaction)	2	25%	Internally driven	STC-System functionality
22	Weak practicing of corporate governance	2	25%	Easygoing work discipline	OPC-Fit with business processes

### **5.3.1 Relationship with Hofstede's Organizational Culture Model**

As described in Table 1 above, a considerable number of participants have mentioned that the reason for the lower user adoption of the ERP system is due to some employees' familiarization of the current system and lack of objective driven culture of the company. Based on theoretical explanation, the researcher considers that these characteristics are associated with mean-oriented culture.

Fifty percent of the participants mentioned that business process reengineering which means changes in existing business processes, job roles and systems carried out with the ERP implementation has caused the lower user adoption of the system. And also 38% of the participants have mentioned that poor monitoring and tracking have created the lower usage of the system. The researcher understands that these characteristics are associated with easygoing work discipline in relation to the Hofstede's culture dimension.

Over fifty percent of the participants emphasized that factory staff's disbelief and attitude in adopting the industry best practices with the ERP system, personal relationship between family owners and some employees of the company, people's mindset and how they perceived the change, failure to implement change management activities, user resistance to change and loss of power and controls have generated the lower user adoption of the system. Fear of job security, losing control over business transactions and lack of competency are some of the reasons for user resistance. The researcher realizes that these characteristics are associated with local oriented organizational culture.

Sixty three percent of the participants stated that unwillingness to submit information to setup the system has caused the lower user adoption of the system. It was revealed that production related information was not disclosed by the factory staff to configure the system. On the contrary, most of factory staff don't have trust in the system. By analyzing the above mentioned facts, this is noted as a typical characteristic of closed system organization.

Hundred percent of the participants mentioned that lack of training has resulted the lower user adoption of the system. 50% of the participants stated that fear of capability and job security has created the lower usage of the system. These characteristics are associated with work centered culture.

Over 50% of the participants stated that lack of top management commitment and weak leadership style of them has created the lower user adoption of the system. This illustrates how far subordinates accept their bosses' leadership style. Considering the Hofstede's organizational culture dimensions this is low degree of accepting the leadership style and it is not in line with the subordinate's preferences.

### **5.3.2 Relationship with Technology Acceptance Model**

Over 50% of the participants indicated that unwillingness to submit information to setup the system, fear of capability and job security, user resistance to change and loss of power and controls have affected the lower user adoption of the system. Pursuant to TAM theory these factors are antecedents of perceived ease of use (PEOU) and can be categorized as 'computer anxiety'. In general, these are the external factors which belong to the personal characteristics and information literacy (PCIL) group which influences ERP ease of use (PEOU) that positively and directly affects attitude toward the ERP system acceptance.

Seventy five percent of the participants emphasized that lack of top management support and commitment created the lower user adoption of the ERP system. According to TAM theory this factor is an antecedent of perceived ease of use (PEOU) and can be demarcated as 'management support'. As defined, this is an external factor which belongs to the personal characteristics and information literacy (PCIL) group which influences ERP ease of use (PEOU) that has a strong correlation with user acceptance of the system.

Over 60% of the participants pointed that factory staff's disbelief and attitude in adopting the industry best practices with the ERP system and people's mindset and how they perceived the change have triggered the lower user adoption of the system. Based on TAM theory these factors are antecedents of perceived ease of use (PEOU) and can be categorized as 'self-efficacy'. In general, these are the external factors which belong to the personal characteristics and information literacy (PCIL) group which influences ERP ease of use (PEOU) that positively affects attitude toward the ERP system usage.

Over 50% of the participants indicated that failure to implement change management activities and business process reengineering have created the lower user adoption of the system. Based on TAM theory these factors are antecedents of perceived usefulness (PU) and can be categorized as 'fit with business processes'. According to TAM theory these are the external factors which belong to the organizational-process characteristics (OPC) group which influences ERP usefulness (PU) that has a strong correlation with the ERP system acceptance.

Over 50% of the participants stated that personal relationship between family owners and some employees of ABC company and weak leadership style have affected the lower user adoption of the system. Based on TAM theory these factors are antecedents of perceived usefulness (PU) and can be categorized as 'social influence'. In general, these are the external factors which belong to the organizational-process characteristics (OPC) group which influences ERP usefulness (PU) that has a strong correlation with the user adoption of ERP system.

Hundred percent of the participants stated that lack of training caused the lower user adoption of the system. 38% of the participants stated that lack of confidence in the system has affected the lower user adoption of the system. Based on TAM theory these factors are antecedents of perceived usefulness (PU) and can be categorized as 'training'. In general, these are the external factors which belong to the organizational-process characteristics (OPC) group which influences ERP usefulness (PU) that positively and directly affects attitude toward the ERP system adoption.

## **6. Conclusion**

The research questions were examined through a qualitative approach in the form of semi-structured and unstructured interviews. The research findings allowed the researcher to find more in-depth knowledge of how organizational culture of ABC company and other factors influenced the lower user adoption of ERP system. The researcher was able to achieve the two research objectives through the empirical research findings.

The main cultural aspects which caused the lower user adoption of the ERP system are identified as below.

- Factory staff's disbelief and attitude in adopting the industry best practices with the ERP system
- Unwillingness to submit information to setup the system – Lack of belief in the system
- Dependency nature of personal relationship between family owners and some employees
- People's mindset and how they perceived the change – Negative mindset and attitudes
- Fear of capability and job security – Lack of self confidence in their capabilities
- User resistance to change
- Feeling of loss of power and controls
- Changes in business processes, job roles, structure and technology – Fear of formalization and losing traditions
- Lack of confidence in the system – Losing confidentiality
- Familiarization of current system – Lack of need for change and believe that existence is better



The other aspects which caused the lower user adoption of the ERP system are identified as below.

- Weak leadership style – Laissez-Faire style of leadership
- Failure to implement change management activities – Inadequate preparation of people for the change
- Lack of training
- Lack of top management support and commitment
- Poor monitoring and tracking
- Lack of discipline of users
- Lack of objective driven culture
- System limitations

Finally, based on the research findings and the two theoretical models deployed in this study, the researcher states that the culture of ABC company has not supported for the ERP system implementation. And it reveals that there are many other factors also have affected the lower user adoption of the ERP system.

### **6.1 Contribution to the Theoretical Lenses**

The effects of organizational culture and other influencing factors on the user adoption of ERP systems are well illustrated in the cultural dimensions defined in the Hofstede's organizational culture model and external factors defined in technology acceptance model. The theoretical explanations are matching with the research findings and same conditions defined in the theory prevail in ABC company. Accordingly, the main argument described in both the theories is supported by the researcher's findings. In conclusion, these two theories can be suggested as suitable lenses to explore the issues in relation to the user adoption of ERP systems.

### **References**

- Aladwani, A. M. (2001). Change management strategies for successful ERP implementation. *Business Process Management Journal*, 7(3), 266-275. doi:10.1108/14637150110392764
- Al-Hadab, A., & Al-Jabri, I. M. (2008). End user acceptance of ERP system: investigation of four beliefs. *International Journal of Computer and Information Technology*, 4(3), 1-15.
- Amoako-Gyampah, K. (2004). ERP implementation factors: A comparison of managerial and end-user perspectives. *Business Process Management Journal*, 5(1), 86-120. Retrieved from Emerald.

- Armstrong, M. (2012). *Human Resource Management Practice*. (12th ed.). Philadelphia: Saxon Graphics Ltd, Derby.
- Baral, R., & Rajan, C. A. (2015). Adoption of ERP system. *IIMB Management Review-ScienceDirect*, 1(1), 105 - 117. Retrieved from [www.elsevier.com/locate/iimb](http://www.elsevier.com/locate/iimb)
- Basu, R., Upadhyay, p., Manik, c., Das, & Pran. (2012). An approach to identify issues affecting ERP implementation. *Journal of indusrtial engineering and managemet*, 5(1), 133-154. Retrieved from <http://dx.doi.org/10.3926/jiem.416>
- BooYoung, C. (2007). *An analysis of success and failure factors for ERP systems*. Doctoral Thesis, The University of Maryland, Faculty of the Graduate School.
- CFO - ABC Company. (2017, 08 10). User adoption of ERP system. (S. Matharaarachchi, Interviewer) Colombo, Western , Sri Lanka .
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319-340.
- Dezdar, S., & Ainin, S. (2011). Examining ERP implementation success from a project environment perspective. *Business Process Management Journal*, 17(6), 919-939. doi:10.1108/14637151111182693
- Doom, C. (2009). Critical success factors for ERP implementations in Belgian SMEs. *Business Process Management Journal*, 23(3), 378-406. doi:10.1108/17410391011036120
- Fang, L., & Patrecia, S. (2005). *Critical success factors in ERP implementatios*. Retrieved from Jonkopin University: <http://hj.diva-portal.org/smash/get/diva2:3922/FULLTEXT01>
- Françoise, O., & Bourgault, M. (2009). ERP implementation through critical success factors. *Business Process Management Journal*, 15(3), 371-394. doi:10.1108/14637150910960620
- Garg, P., & Garg, A. (2013). An empirical study on critical failure factors for enterprise resource planning implementation in Indian retail sector. *Business Process Management Journal*, 19(3), 496-514. doi:10.1108/14637151311319923
- Golafshani, N. (2003). *Understanding reliability and validity in qualitative research*. University of Toronto, Department of Curriculum, Teaching and Learning. Retrieved from <http://nsuworks.nova.edu/tqr/vol8/iss4/6>
- Gray, S. (2010). *How effectively scope ERP project*. Retrieved from Sage ERP: <http://blog.sageerpsolutions.com/how-to-effectively-scope-your-erp-project/>
- Haider, A., & Pishdad, A. (2013). ERP institutionalization: exploring the influential factors. *Enterprise Information Management*, 26(6), 642-660. doi:10.1108/JEIM-07-2013-0046
- Hala M. Al-Shamaln. (2011). The change management strategies and processes for successful ERP. *International Journal of Computer Science Issues*, 8(2), 431-435.
- Hawari , A., & Heeks , R. (2010). Explaining ERP failure in developing countries. *Enterprise Information Management*, 23(2), 135-160. doi:10.1108/17410391011019741
- Hossain, L., & Patrick, J. (2002). *The evolution of ERP systems*. Idea Group Publishing. Retrieved from <https://faculty.biu.ac.il/~shnaidh/zooloo/nihul/evolution.pdf>

- Ke, W., & Wei, K. (2008). Organizational culture and leadership in ERP implementation. *Decision support systems*, 45(2), 208-218. doi:10.1016/j.dss.2007.02.002
- Kronbichler, S. A. (2009). A review of critical success factors for ERP-projects. *The Open Information Systems Journal*, 3(1), 14-25. Retrieved from <https://benthamopen.com/contents/pdf/TOISJ/TOISJ-3-14.pdf>
- Maditinos, D., & Chatzoudes, D. (2011). Factors affecting ERP system implementation effectiveness. *Enterprise Information Management*, 25(1), 60 - 78. doi:10.1108/17410391211192161
- Maguire, S., Ojiako, U., & Said, A. (2010). ERP implementation in Omantel. *Industrial Management & Data Systems*, 110(1), 78-92. doi:10.1108/02635571011008416
- O'Leary, D. E. (2004). ERP systems: An empirical analysis of benefits. *Emerging Technologies in Accounting*, 1(1), 63-72. Retrieved from <http://www-bcf.usc.edu/~oleary/Papers/Empirical%20Benefits.pdf>
- Panga, A. (2014). *Factors influencing implementation of enterprise resource planning in firms*. University of Nairobi.
- Project Management Institute. (2012). *Project Management Body of Knowledge* (4th Edition ed.). University of Nairobi, USA: PMI USA.
- Rabaa'i, A. (2009). *Identifying critical success factors of ERP systems*. Retrieved from QUT Digital Repository: <http://eprints.qut.edu.au/29841/1/29841.pdf>
- Rajapakse, J., & Seddon, P. (2005). *ERP adoption in developing countries in Asia: A cultural misfit*. Information Systems. The University of Melbourne-Australia.
- Ramayah, T., & Annamalai, C. (2013). Does the organizational culture act as a moderator in Indian enterprise resource planning (ERP) projects?:. *Manufacturing Technology Management*, 24(4), 555-587. doi:10.1108/17410381311327404
- Rao, S., & Venugopal, C. (2011). Learning from a failed ERP implementation: a case study research. *Managing Projects in Business*, 4(4), 596 - 615. doi:10.1108/17538371111164038
- Samaranayake, P., & Jagoda, K. (2017). An integrated framework for ERP system implementation. *International Journal of Accounting & Information Management*, 25(1), 91-109. doi:10.1108/IJAIM-04-2016-0038
- Saunders, M., Lewis, P., & Thornhill, A. (2016). *Research Methods for Business Students* (5th ed.). Noida, India: Pearson India Education Services pvt Ltd.
- Schniederjans, D., & Yadav, S. (2013). Successful ERP implementation: an integrative model. *Business Process Management Journal*, 19(2), 364-398. doi:10.1108/14637151311308358
- Sekaran, U., & Bougie, R. (2016). *Research Methods for Business - A Skill Building Approach* (6th ed.). New Delhi, India : Wiley India.
- Shenton, A. K. (2004). *Strategies for ensuring trustworthiness in qualitative research projects*. Newcastle: Northumbria University.

- Soja, P. (2006). Success factors in ERP systems implementations: Lessons from practice. *Journal of Enterprise Information Management*, 19(4), 418-433. doi:10.1108/17410390610678331
- Soja, P. (2008). Examining the conditions of ERP implementations: lessons learnt from adopters. *Business Process Management Journal*, 14(1), 105 - 123. doi:10.1108/14637150810849445
- Sternad, S., & Bobek, S. (2013). Impacts of TAM-based external factors on ERP acceptance. *ScienceDirect*, 9(1), 33 – 42. doi:10.1016/j.protcy.2013.12.004
- Sternad, S., Gradisar, M., & Bobek, S. (2011). The influence of external factors on routine ERP Usage. *Industrial Management & Data Systems*, 111(9), 1511-1530. doi:10.1108/02635571111182818
- Turton, J. (2010). *A managers view of critical success factors necessary for the successful implementation of ERP*. University of Chester. Retrieved from <http://chesterrep.openrepository.com/cdr/bitstream/10034/121745/1/james%20w%20turton.pdf>
- Uyangoda, J. (2015). *Writing Research Proposals - In the Social Sciences and Humanities* (1th ed.). Colombo, Sri Lanka: Social Scientists' Associaton.
- Wickramasinghe, V., & Gunawardena, V. (2010). Critical elements that discriminate between successful and unsuccessful ERP implementations in Sri Lanka. *Enterprise Information Management*, 23(4), 466 - 485. doi:10.1108/17410391011061771
- Yin, R. K. (2009). *Case Study Research Design and Methods* (4th ed., Vol. 5). California , USA: SAGE Inc.
- Zabjek, D., Kovacic, A., & Stemberger, M. (2009). The influence of business process management and some other CSFs on successful ERP implementation. *Business Process Management* , 15(4), 588-608. doi:10.1108/14637150910975552

## **International Business, Marketing, Tourism and Hospitality Management**

## The Relationship between Ethnocentrism and Impulsive Buying Behaviour: A Case of the Sri Lankan Dairy Market

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### Abstract

The purpose of this study is to analyze the Impact of Consumer Ethnocentrism on Consumer Impulsive Buying Behavior; in the dairy product market of Sri Lanka. This sector is highly competitive and a few years ago the dairy industry faced an unexpected and serious crisis regarding the Dicyandiamide (DCD) factor. With this serious issue the main players of the dairy market, lost their market share and currently are trying to rebuild the brands, focusing on the Ethnocentrism application. Identifying whether Ethnocentrism really impacts the buying behavior patterns of the consumers, especially in impulsive situations is a key issue explored in this study. This is a quantitative study empirically done in the Sri Lankan dairy product market. In this study, the main concepts that researchers have examined were Consumer Ethnocentrism and Consumer Impulsive Buying Behavior. The researchers have empirically tested the conceptual model to examine the impact of ethnocentrism on impulsive buying behavior of the dairy consumers. Hypotheses were formulated to verify the relationship between the variables; in order to answer the research questions. The data collection was done with a sample of 350 dairy product consumers from the dairy consumer population in Sri Lanka. The survey strategy was used as the data collection method and as the instrument a questionnaire were used. The questionnaire was developed using the Consumer Ethnocentrism Tendency Scale (CETScale) developed by Shimp and Sharma in 1987 and the measurement was adjusted according to the Sri Lankan context. The impulsive buying behavior was measured using the scale developed by Irem Gure in 2012. The data was analyzed using the SPSS 19 version. The key findings were that the Sri Lankan dairy users have a medium level tendency of Ethnocentrism and the consumers who have the ethnocentrism trait most of the time purchase with a planned manner and not on impulse. Therefore, it is recommended that the local and multinational companies not only focus on the Ethnocentrism angle to promote and rebuild the brands within dairy users, because they are not motivated for impulse buying in the dairy products based on ethnocentric appeals.

**Keywords.** Consumer Ethnocentrism, Impulsive Buying Behavior, Dairy Product Market, Sri Lanka

## 1. Introduction

The dairy market is a very complex and competitive market in Sri Lanka where domestic brands and international brands operate in a competitive manner. The domestic dairy industry has the capability of producing a substantial amount of quality milk and milk products to the prevailing market at affordable prices while keeping reasonable profit margins to all stakeholders in the production marketing chain and government policy is encouraging the local milk production and fresh milk consumption (Mangaleswaran, Gnanaseelan, & Morais, 2010). But currently the international dairy brands play a bigger role in the Sri Lankan market. The marketing of milk in Sri Lanka is complex and varied (Ranaweera, 2010). The dairy product marketing practices are more focused on the customers and their buying behavior patterns due to the growing demand (Bogahawatte & Herath, 2006).

The dairy industry has a great potential to contribute to the Sri Lankan economy (Jayaweera, et al., 2007). In the dimension of supply, the total monthly milk production in Sri Lanka in the year 2017 was 33,016,500 liters and annual milk production was 396,198,000 liters (Department of Census and Statistics, 2017). Compared to the 2016 statistics the monthly (32,000,700 liters) and annual (384,008,400 liters) productions has increased by 3.17 percent. In 2014 the fresh milk production was 282,000 MT, powdered milk local production was 12,530 MT and 86,320 MT imports, condensed milk local production was 7,680 MT and 20 MT imports, milk food local production was 11,210 MT and 30 MT as imports (Department of Census and Statistics, 2017).

The buying patterns are more impacted by the customer psychological factors such as perception, cognition, attention, emotion, phenomenology, motivation, brain functioning, interpersonal relationship and personality. In the buying behavior patterns the impulsive buying behavior is a special situation. For impulsive buying behavior, the same factors which impact the general buying behavior is influencing. However in impulsive buying behavior patterns, personality is very important factor (Wanninayake & Chovancova, 2012). According to consumer personality, the customer is willing to do their purchasing.

Currently there is a high competition in the dairy market and the industry faced a real crisis regarding milk powder quality. Basically dairy products can be identified as local and foreign brands. Some local and foreign brands focus on the ethnocentric appeals and come up with the brand activations and other marketing activities. With the special DCD factor crisis in the market, the foreign brands had to face a huge problem in the Sri Lankan market. Especially with the milk powder crisis, the personality trait of impulsiveness was aroused in consumers. Therefore in the dairy market the buying type of impulsive buying pattern can be seen in a huge manner due to the aroused impulsiveness.

Though marketing activities are more focused towards the ethnocentrism implication, there is no such proof that ethnocentrism is impacted on the buying patterns of the customers in the dairy market in Sri Lanka. Therefore this research is focused on assessing the impact of Consumer Ethnocentrism on Impulsive Buying Behavior: with special reference to Dairy Products in the Sri Lankan Market.

The objective of this study is; to identify the impact of ethnocentrism on consumer impulsive buying behavior in the dairy product market in Sri Lanka. The research question of this study is that, what is the impact of ethnocentrism on consumer buying behaviour. Primary data was used for the research study using the survey strategy to identify the impulse buying patterns and the personality trait of ethnocentrism.

## **2. Literature Review**

### **2.1. Consumer Ethnocentrism**

Ethnocentrism is a personality trait which can be defined as “the beliefs held by consumers about the appropriateness, indeed morality of purchasing foreign-made product and the loyalty of the consumers to the products manufactured in their home country”(Shimp & Sharma, 1987). The concept of consumer ethnocentrism has been derived from the general concept of ethnocentrism, which was firstly introduced in 1906 by sociologist William Sumner. According to Shimp and Sharma (1987), consumers refuse to buy foreign products because they are harmful to the national economy and cause unemployment. Shoham and Brenetic (2003), reported that consumer ethnocentrism had a significant impact on consumers’ intentions to purchase locally produced goods. Many other studies have examined the impact of consumer ethnocentric tendencies on purchase intentions. However, the results are different from country to country and the characteristics of the consumers. Kaynak and Kara (2002) have noted that significant population growth and increasing purchasing power of consumers in such developing countries offer market opportunities to foreign companies whose domestic markets have already reach maturity.

The measurement of consumer ethnocentrism was made possible with the development of the Consumer Ethnocentrism Tendency Scale (CETScale). Shimp and Sharma (1987) were the first to develop an effective instrument for measuring the ethnocentric tendencies of consumers’ buying decisions. The CETS scale has become the most commonly used instrument for measuring consumer ethnocentrism (Renko, Karanovic, & Matic, 2012). This includes 24 questions regarding the ethnocentrism that can measure the tendency of the customer towards ethnocentrism. Finally, consumer ethnocentrism must be considered as an influential factor that is used to understand the consumer behavior in order to determine the impact to impulsive buying of the consumers. In this study also the researchers have used the CETS scale adjusting the measurement according to the Sri Lankan context.



## **2.2. Impulsive Buying Behavior**

Impulse buying behavior is an unplanned decision to buy a product or a service, made just before a purchase. Rook and Gardner(1993),defined impulse buying as an unplanned behavior involving quick decision making and tendency for immediate purchasing of the product. According to Beatty and Ferrell (1998), impulse buying refers to immediate purchase which is without any pre-shopping objective either to purchase the specific product category or to fulfill a specific need. Rook (1987) argued that during impulse buying, the consumer experiences an instantaneous, overpowering and persistent desire. He characterized the impulse buying as unintended, non-reflective reaction, which occurs soon after being exposed to stimuli inside the store. According to Engel and Blackwell (1982), impulse buying is an action undertaken without previously having been consciously recognized or a buying intention formed prior to entering the store (Engel & Blackwell, 1982). Based upon the different description, researchers conclude that impulse buying involves hedonic purchase decisions which are made inside a store and excludes the reminder purchasing activities (Muruganantham & Kaliyamoorthy, 2005).

The classification of whether a purchase is planned or done on impulse began with the Stern (1962) study where he provided the basic framework of impulse buying by categorizing a buying behavior as planned, unplanned or impulse. Planned purchases involve time consuming, information searching with rational decision making; whereas unplanned buying refers to all shopping decisions made without any advance planning. Impulse buying is distinguished from the unplanned buying in terms of quick decision making. In addition to being unplanned, an impulse purchase also involves experiencing a sudden, strong and irresistible urge to buy. Pure impulse buying is novelty or escape purchase which a shopper breaks the trend of usual shopping (Stern, 1962). Han et.al, (1991) described fashion oriented impulse as a type of suggestion impulse where the purchase is motivated by self-suggestion to buy the new fashion product. In case of fashion oriented impulse buying, shopper has no previous experience with the new and fashionable product. Mattila and Enz (2002) later argued that fashion oriented impulse buying can be influenced by shopper's own positive emotions when shopping. According to Rook and Hoch (1985), buying impulses actually begin with a consumer's sensation and perception driven by the external stimulus, and are followed by a sudden urge to buy. Mattila and Wirtz (2008) found that store environmental stimuli positively affect impulse buying behavior especially when the store environment is perceived as over-stimulating. Stimuli in the retail store environment are likely to affect consumer emotions (Donovan, Rossiter, & Marcoolyn, 1994), which are other variables that have been found to affect the impulse purchases (Rook, 1987; Zhou and Wong, 2003).

Dave (2011) explored retail stores in Indian setting and found that all of the in-store measures taken by the retailer affects the impulse stimuli of the customer and therefore

contributes towards conversion, but overall the promotional mix can act as base for differentiating a store from others and attracting customers to it. Dawson and Kim (2009) observed that impulse buying is linked to up and cross-selling strategies. Yu and Bastin (2010) studied the effect of in-store Point of Purchase (POP) posters in supermarkets and found them to induce impulse purchase behaviors and cost-effective. In-store stimuli are promotional techniques employed to increase impulse buying of products. Some examples of these techniques include in-store settings, on-shelf positions, price-off promotions, sampling, and point of payment (POP) displays, coupons, and in-store demonstration. Today with technology innovations not only the shopping environment but also the online buying environment can also be seen. Currently online impulse buying is also a new area for the researchers.

### ***2.3. The Association Between Ethnocentrism and Impulsive Buying Behavior***

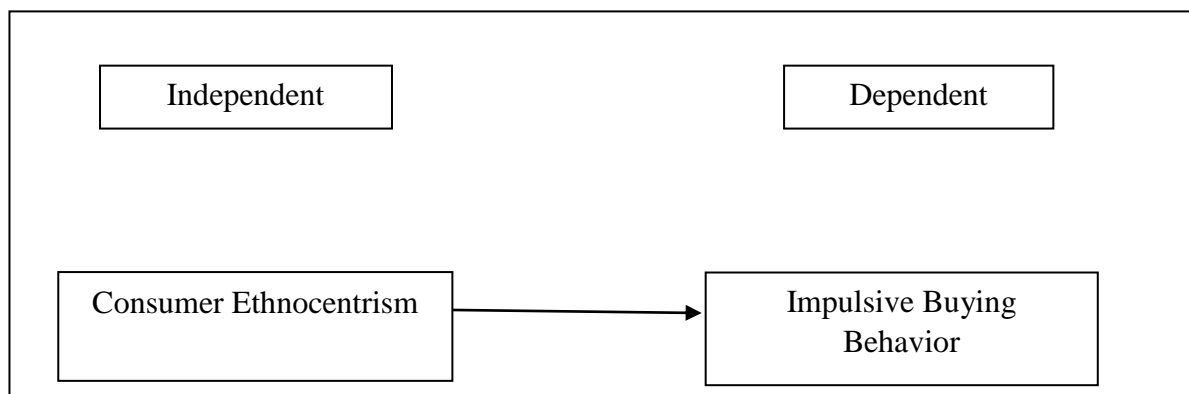
According to the objectives of this study, identifying the association between Ethnocentrism and Impulsive Buying Behavior is very important. With the DCD factor issue, lots of consumers suddenly changed and switched to different dairy brands. Therefore many of the multinational brands which were the main players in the market lost their market share. Currently they are trying to rebuild the brands using many brand activations and promotions using the Ethnocentrism application. Therefore there can be a considerable association between Ethnocentrism and Impulsive Buying Behavior in the dairy product market.

Previous researchers have empirically studied the impact of Ethnocentrism on Impulsive Buying Behavior of customers. Most of researchers (Youn and Faber (2000); Wanninayake & Chovancova, 2012) noted that the intensity of Impulsive Buying intention can vary in different contexts. On the other hand only few researchers investigated the association between consumer ethnocentrism and impulsive buying behavior. However there is no consensus by previous researchers regarding these phenomena. When it comes to the Sri Lankan context Impulsive Buying Behavior can be seen commonly in dairy products due to rapidly changing macro factors. In the crisis situation most customers rejected some international dairy brands due to DCD context. However, strategically some marketers promote their brands to the consumers based on Ethnocentric appeal. However there is no sufficient empirical evidence to say their efforts are successful. As a result there is a significant literature gap relating to the Sri Lankan context. Therefore the present study is designed to address that literature gap.

### 3. Methodology

#### 3.1. Conceptual Model and Hypotheses

The conceptual model for this study is designed as follows. Consumer ethnocentrism is the independent variable and the impulsive buying behavior of the consumer is the dependent variable. Consumer behavior may change according to the changes of the ethnocentrism trait of the consumer.



*Figure 1. Conceptual framework*

Previous studies about ethnocentrism tendencies have revealed many factors about customer behavior. One study says that the concept of consumer ethnocentrism can improve understanding of how consumers and corporate buyers compare domestic with foreign made products and how and why their judgments may be subject to various forms of bias and error (Nisbett & Ross 1980; Jhon, Scott, & Bettman 1986). One study says that highly ethnocentric consumers are probably most prone to biased judgments by being more inclined to accentuate the positive aspects of local products and to discount the virtues of the foreign made products (Shimp & Sharma, 1987). Especially the research done in the Sri Lankan market, reveals that young educated customers in Sri Lanka are willing to buy local brands of consumer products (Wanninayake & Chovancova, 2012). Kollat & Willett (1967) argued that customer's characteristics and demographics influence the impulse purchase. Ethnocentrism is a trait inside the person and it may impact the impulse buying of the customers. Therefore, in this study how the ethnocentrism impacts on the impulsive buying situation was tested on following hypothesis that was developed based on the previous researches.

H1: There is an impact of ethnocentrism on consumer impulsive buying behavior in the dairy product market of Sri Lanka

#### 3.2. Research Design

The research study is quantitative and a field survey was conducted among the selected sample of dairy product consumers. They were asked about their personality trait tendency

using popular and different researcher developed models for the variables of Ethnocentrism and Impulsive Buying Behavior.

Data collection was done through a survey strategy by using a questionnaire. A questionnaire is a set of questions which is an efficient data collection method (Sekaran & Bougie, 2016). Since the population was large and the population is scattered all over the country, the questionnaire was the best way of collecting data. For the research survey the population was considered to be all the dairy product users in the Sri Lankan market. From that population 350 people were selected using a non probability convenient sampling method and as its name implies, convenient sampling involves collecting information from member of the population who are conveniently available to provide this information (Sekaran & Bougie, 2016). Both male and female dairy product users were included in the sample. The respondents were handed a self-administrative questionnaire for data collection. No uncompleted or rejected questionnaires were found. Accordingly, the sample consisted with 123 males and 227 females.

The questionnaire consisted with questions regarding ethnocentrism and impulsive buying behavior mainly and also a few relevant demographic factor testing questions. Consumer Ethnocentrism Tendency Scale (CETScale) developed by Shimp and Sharma (1987) was used to measure the consumer ethnocentrism of the sample. The impulsive buying behavior was measured using the scale developed by IremGure (2012), which consists 6 measurement items on the construct. All the scales were scored on a five point likert scale ranging 1 (strongly disagree) to 5 (strongly agree).

100 percent accuracy was checked when feeding the data to the SPSS format. Before analyzing the data, in the data screening process the factor analysis was done. Then the reliability was checked using the Cronbach's Alpha and validity was assured through the measurements that are already validated by other researchers. Data analyzing was done using the SPSS 19 package, to find out the relationship between the ethnocentrism and impulsive buying behaviour.

#### **4. Discussions and Findings**

The factor analysis was run by the researcher in order to test the internal consistency of the variables. Fourteen items from the Ethnocentrism Tendency Scale and four items from the impulsive buying behaviour scale were removed due to weak loading and loading in other components columns. As per the KMO and Barlett's test the selected sample was adequate, since the value is 0.593 which is more than 0.5 and the value is significant (.000).

Table 1  
*KMO and Bartlett's Test*

Kaiser-Meyer-Olkin Adequacy.	Measure of Sampling	.593
Bartlett's Test of Sphericity	Approx. Chi-Square	1.244E3
	df	91
	Sig.	.000

Source: Survey data

The factor loading cutoff mark was decided as 0.5 which is commonly used by the researchers. The factor loadings were as follows;

Table 2  
*Factor Loadings*

	Component	
	Ethnocentrism	Impulsive Buying Behaviour
Buy Sri Lankan made products. Keep Sri Lanka working	.895	
We should buy from foreign countries only those products we cannot obtain within our own country	.525	
Sri Lankan products first, last and foremost	.838	
I carefully plan most of my purchases		.830
Even when I see something I really like, I do not buy it unless it is a planned purchase		.821

Source: Survey data

Further reliability analysis was done to measure the internal consistencies of the total scores for each scale through Cronbach's Alpha Coefficient.

Table 3.  
*Reliability statistics*

Scale	Cronbach's Alpha	No of Items
Ethnocentrism (CETScale)	.793	3
Impulsive buying Behavior	.730	2

Source: Survey data

The analyzed data was reliable according to the Cronbach Alpha coefficient as all the values were above 0.7 for all the variables of Ethnocentrism and Impulsive Buying Behaviour.

According to the collected primary data the mean values for measurement items and the average were as follows.

Table 4

*Descriptive statistics of Ethnocentrism trait*

Item	N	Mean	Std. Deviation
Buy Sri Lankan made products. Keep Sri Lanka working	350	3.40	1.137
Sri Lankan products first, last and foremost	350	3.35	.997
We should buy from foreign countries only those products we cannot obtain within our own country	350	3.52	.942
Average	350	3.42	0.8649

Source: Survey Data

According to descriptive statistics shown in Table, the Consumer Tendency Scale gets the average mean value of 3.42 (in the range of 2.33-3.67) which reveals that in Sri Lankan context the ethnocentrism tendency is in medium level.

Table 5

*Descriptive statistics of Impulsive Buying Behaviour*

Item	N	Mean	Std. Deviation
I carefully plan most of my purchases	350	3.73	0.719
Even when I see something I really like, I do not buy it unless it is a planned purchase	350	3.79	0.821
Average	350	3.762	0.685

Source: Survey data

According to the descriptive statistics of impulsive buying behavior scale shown in the table, the average mean value is 3.76. In the Sri Lankan context the consumer impulsive buying behavior is more towards the middle level.

Sri Lankan customers are motivated to buy dairy products impulsively at a moderate level. When 35 percent disagree on impulsive buying another 42 percent is involved in impulsive buying behavior. Especially consumers are more concerned about the situations in the dairy market. For the impulsive dairy purchases the dairy market issues are impacted as; for 20 percent of people issues are not much of an impact, for 35 percent it is neutral and for 45 percent the issues in the dairy product market has impacted for impulsive purchases.

Therefore the impulsive buying behavior of the Sri Lankan customers are at a moderate level.

Pearson Correlation and Multiple Regression methods were used to test the hypothesis of the study. Hypotheses are tested for possible rejection or acceptance in order to answer the research questions. Hypotheses testing is used to provide solution to research problem.

Table 6  
*Correlation statistics*

Item	Value
Pearson Correlation	-0.157
Significance	0.013
Number	350

Source: Survey data

According to the above table there is a negative relationship (-0.157) between Consumer Ethnocentrism and Consumer Impulsive Buying Behavior that is significant at the level of 0.013. With the analyzed data, the relationship between ethnocentrism and impulsive buying behavior can be assured at 95 percent.

According to the analysis 35 percent were males and 65 percent were female respondents. A majority of them (55 percent) are in the age range of 15 to 30 years and 25 percent of the respondents are in the age range of 31 to 45 years. These age ranges are the decision makers of the family and the heavy users of dairy products in the market.

According to Wanninayake & Chovancova (2012), it is proved that the Sri Lankan consumers have the medium level of ethnocentric ideas in their buying patterns. In this study also the descriptive analysis gives Ethnocentrism an average mean value of 3.42. This gives the idea that in the Sri Lankan dairy product market, consumers have medium level of Ethnocentrism personality traits when they buy the dairy products. Sri Lankan people are not so concerned about the ethnocentric ideas when they decide on the impulsively purchases at the dairy market.

Correlation analysis reveals that the relationship between variables. According to the analysis, Consumer ethnocentrism and consumer impulsive buying behavior has a negative relationship (-0.157). The impulsive buying behavior of the consumers is not highly impacted by the consumer ethnocentrism trait. This reveals that the consumers who have the ethnocentrism trait most of the time purchase with a planned manner and not on impulse.

Table 7  
*Model Summary*

Item	Value
Adjusted R Square	0.021
F value	6.279
Df	1
Beta	-0.157
Significance level	0.013

Source: Survey data

According to the regression analysis, the significance level is 0.013 that the relationship between the Ethnocentrism and the Impulsive Buying Behaviour is significant at the confidence level of 95 percent.

## 5. Conclusion

This research study focused on identifying the impact of ethnocentrism on consumer impulsive buying behavior in the dairy product market in Sri Lanka. According to the findings, the hypothesis of; 'There is an impact of ethnocentrism on consumer impulsive buying behavior in the dairy product market of Sri Lanka' is accepted since there is an impact from the ethnocentrism personality trait of the Sri Lankan dairy product consumers.

Sri Lankans are not so concerned about the ethnocentric ideas when they decide on the purchasing of dairy products. But for a certain extent Sri Lankans think that they should buy Sri Lankan products rather than foreign products. Though consumers have the idea of those consuming foreign brands, is not meant that it is un-Sri Lankan. Rather than being more concerned about ethnocentrism, consumers are more concerned about other factors that happen in the market. Sri Lankans think that they should buy Sri Lankan products and limit imports. But according to the analysis in the Sri Lankan dairy market, ethnocentrism impacts on the consumer buying behavior at a medium level.

The impact of ethnocentrism ( $R^2$ ) value is 0.021 that shows the impact of the ethnocentrism trait on the impulsive buying behavior for the dairy product market is only 2.1 percent. Consumers buy the local dairy products more, not because they are more ethnocentric, but because they are concerned about other factors that are happening in the dairy market such as the DCD crisis and health issues.



The multinational companies who have lost their market share are trying to come up with ethnocentric ideas with promotional activities. But according to the study customers are not very concerned about ethnocentrism when they make purchasing decisions in the dairy market. The dairy product market is growing and is a competitive market. The local and multinational companies should not only focus on the Ethnocentrism angle to promote and develop brands among the dairy users.

This research study has managerial implications that are useful for the stakeholders of the dairy industry. For the domestic company marketers this research may help to provide the idea of the personality traits of ethnocentrism. Some local brands are promote their brands focusing on the ethnocentrism. But they do not know whether there is a real impact from ethnocentrism. Therefore from this research the local company marketers can get the idea whether there is any effectiveness of promoting the dairy products focusing on ethnocentrism or not. Also, the marketers can get to know the impulsive buying behavior patterns in the dairy market for their branding and promotional plans. For multinational dairy companies this research gives information on how ethnocentrism impacts and the competitiveness of the dairy product market with local brand promotions done with ethnocentrism. To give a counter attack of the local branding activities, multinational companies should know the market behavior. Multinational companies also can get the idea of how the personality trait of ethnocentrism impacts to identify the impulsive buying behavior patterns of the customers in the dairy market and to come up with promotional activities. This research is connected to sociology, marketing anthropology, psychology etc. Therefore for the researchers who are seeking for interesting and important areas, this research may give a guidance to do research on dairy market in new areas. Especially for the prevailing dairy product which was in a crisis, more research needs to be done. For the academics such as undergraduates this research may provide good guidance on how the customers' behaving in the dairy market, especially on subjects like consumer behavior. Academics can get the idea of whether with recent issues in dairy market, customer attitudes and mind set has changed, and how personality traits impact on consumer buying behavior. From this research customers can get their own evaluation on their buying patterns, how their personality traits impact on the purchasing and especially how far impulsive purchasing is done on dairy products.

For the newly coming researchers there is more research to be done in the dairy market with recent issues that have occurred. Researchers can do research on what are the factors affecting to rebuild brand trust, what is the main criteria that customers concern when buying dairy products, what are the major factors that impact on impulsive buying in the dairy market etc. focusing on such research areas may help marketers and companies to get idea about what, how and where they should promote their brands in a successful way.

### ***5.1. Limitation of the research***

The limitations of this study were identified as sample size was 350 compared to a huge population of all the dairy consumers in Sri Lankan market, the selected area for the study

was not represented all the areas of Sri Lanka and only the impact of ethnocentrism personality trait is considered for the impulsive buying pattern, other factors are not considered.

## References

- Beatty, S., & Ferrell, M. (1998). Impulse buying: modeling its precursors. *Journal of Retailing*, 74(2), 169-191.
- Bogahawatte, C., & Herath, J. (2006). Factors Affecting Import Shares of Powdered Milk and Other Milk Products and Their Implications in Sri Lanka. *Sri Lankan Journal of Agricultural Economics*, 8, 21-30. doi:10.4038/sjae.v8i0.1827
- Dave, S. (2011). An empirical analysis of the determinants of customer conversion: A cross sectional study of organized retailers in Chattisgarh. *Journal of Retail & Leisure Property*, 9(5), 465-475.
- Dawson, S., & Kim, M. (2009). External and internal trigger cues of impulse buying online: direct marketing. *An International Journal*, 3(1), 20-34.
- Department of Census and Statistics. (2017). *Agriculture and Environment Statistics Division*. Retrieved from Department of Census and Statistics, Sri Lanka.: <http://www.statistics.gov.lk/agriculture/Livestock/MilkProduction.html>
- Donovan, R., Rossiter, J., & Marcoolyn, G. (1994). Store atmosphere and purchasing behavior. *Journal of retailing*, 70(3), 283-294.
- Engel, J., & Blackwell, R. (1982). *Consumer Behavior*. Chicago: Chicago: Dryden Press.
- Gure, I. (2012). *Understanding consumer's impulse buying behaviour*. The Republic of Turkey: Graduate School of Social Sciences.
- Han, Y., Morgan, G., Kotsiopulo, A., & Kang -Park, J. (1991). Impulse buying behavior of apparel purchasers. *Clothing and Textiles Research Journal*, 9(3), 15-21.
- Jayaweera, T., Ruwandeepika, H., Kendaragama, K., Fernando, W., Jayarathne, H., & Thotawaththe, T. (2007). *Analysis of cost of milk production in Ratnapura district*.
- John, Scott, A. C., Deborah, R., & James, R. (1986). Sampling Data for Covariation Assessment: The Effect of Prior Beliefs on Search Patterns. *Journal of Consumer Research*, 13, 38-47.
- Kaynak, E., & Kara, A. (2002). Consumer perceptions of foreign products. *European Journal of Marketing*, 36(7/8), 928-949. Retrieved from <http://dx.doi.org/10.1108/02651330810887477>
- Kollat, D., & Willett, R. (1967). Customer Impulse Purchasing Behavior. *Journal of Marketing Research*, 4(1), 21-31.
- Mangaleswaran, J. (2010). Dairy market trends in Vavuniya: identifying potentials and challenges in a post-conflict setting. *ICBI University of Kelaniya*, (p. 21). Sri Lanka.
- Mangaleswaran, T., Gnanaseelan, J., & Morais, N. (2010). Dairy Market Trends in Vavuniya: Identifying Potentials and Challenges in a Post-Coflict Setting. *ICBI University of Kelaniya*, (p. 21). Sri Lanka.

- Mattila , A., & Enz, C. (2002). The role of emotions in service encounters . *Journal Of Service Research*, 4(4), 268-277.
- Mattila, A., & Wirtz, J. (2008). The role of store environmental stimulation and social factors on impulse purchasing. *Journal of Services Marketing*, 22(7), 562-567.
- Muruganantham, G., & Kaliyamoorthy, S. (2005, June). Retail Revolution, Marketing Mastermind. 15-21.
- Nisbett, Richard , & Ross, L. (1980). *Human inference strategies and shortcomings of social judgment*. Englewood cliffs, NJ: Prentice-Hall, Inc.
- Ranaweera, N. C. (2010). *Smallholder dairy development- Lessons learned in Asia*. FAO Corporate Document Repository.
- Renko, N., Karanovic, B. C., & Matic, M. (2012). Influence of consumer ethnocentrism on purchasing intentions: case of Croatia . *Ekon Misao Praksa Dbk*, 529-544.
- Rook, D. W. (1993). 'In the mood: impulse buying's affective antecedents. *Research in consumer behavior*, vol. 6, no.7, pp.1-28.
- Rook, D., & Hoch, S. (1985). Consuming impulses . *Advances in Consumer Research*, 7(1), 23-27.
- Sekaran, U., & Bougie, R. (2016). *Research methods for Business* (6th ed.). New Delhi: Wiley India Pvt.Ltd., 4435-36/7, Anasari Road, Daryaganj, New Delhi.
- Shimp , T., & Sharma, S. (1987). Consumer ethnocentrism: construction and validation of the CETScale. *Journal of Marketing Research*, xxiv, 280-289.
- Shoham , A., & Brencic, M. (2003). Consumer ethnocentrism, attitudes and purchase behaviour: a Israeli study. *Journal of International Consumer Marketing*, 15(4), 67-86.
- Stern, H. (1962, April). The significance of impulse buying today. *Journal of Marketing*, 59-62.
- Sumner, W. (1940). *Folkways: the sociological importance of usages, manners, customs, mores, and morals*. New York: NY: Harper &Row, 1906.
- Wanninayake, W., & Chovancova, M. (2012). Exploring the impact of consumer ethnocentrism on impulsive buying decisions: with evidence from Sri Lanka. *Advances in Economics, Risk Management, Political and Law Science*, 247-251.
- Youn, S., & Faber, R. (2000). Impulse buying: its relation to personality traits and cues. *Advances on Consumer Research*, 27, 179-185.
- Yu, C., & Bastin, M. (2010). Hedonic shopping value and impulse buying behavior in transitional economies: Asymbiosis in the Mainland China marketplace. *Journal of Brand Management*, 18(2), 105-114.
- Zhou, L., & Wong, A. (2004). Consumer impulse buying and in-store stimuli in Chinese supermarkets. *Journal of International Consumer Marketing*, 16(2), 37-53.

## The Impact of Using English in Print Advertisements on Consumers' Attitudinal Responses

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### Abstract

The influence that the language used in advertisements has on consumers has been a topic of scholarly interest in the past few decades. Within this area, the role played by the English language has been given prominence due to its worldwide popularity. However, findings regarding the effect of using English in advertisements have been somewhat contradictory and appears to differ depending on socio-cultural context. This study analysed, in the context of Sri Lanka, consumers' attitudinal responses to advertisements and the brands advertised when English language is used in the advertisement vis-à-vis a native language (Sinhala). The study was a cross sectional, between subjects experimental study which involved 45 respondents divided into two groups. The responses to advertisements (English and Sinhalese) for three fictitious products were analysed utilising non-parametric Man-Whitney U statistical procedure. The results indicate that, similar to the findings of some previous studies in several Western European and East Asian studies, there is no significant impact of using English language as opposed to the native language.

**Keywords.** Advertising ,Print advertisements, Language, English

### 1. Introduction

Rise of global brands as an outcome of globalization is a common phenomenon that has been occurring in the last few decades. One of the factors scholars have highlighted in those global brands' promotional strategies is use of the 'lingua franca' of the world which is the English language (Bhatia & Ritchie, 2004). English is deemed to be the international code of business even among the non-native speakers (i.e. in meetings, negotiations, emails and letters) and is also used increasingly to communicate about the business to mass targets groups (including consumers) around the globe (Planken, Meurs, & Radlinska, 2010). This is where the role of English usage in advertisements comes in. The extent to which consumers' attitudes towards the brand and the advertisements themselves are influenced by the use of English language in advertisements has been studied over the past few decades where the findings are somewhat contradictory. In the Asian region, a Taiwanese study has discovered that using English in advertisements or mixing it with native language could positively impact on consumers' attitudes towards the advertisements as well as on the brand (Hsu, 2008; 2013). However there is another set of studies in Western Europe and Hong Kong have identified that there is no impact of using English in advertisements on

consumers' attitudes towards the advertisements or brand image (Gerritsen et al., 2010; Planken et al., 2010; Hooft & Truong, 2012). Other studies in the Asian context, namely India (Krishna & Ahuwalla, 2008) and Taiwan (Lin & Wang, 2016; Lin, Wang & Hsieh, 2016) have found that usage of English gets more favourable responses for foreign products. These contradictory findings indicate a possibility of difference in responses to English in advertisements based on socio-cultural contextual differences. In order to understand consumers' possible response to English in advertisements in the Sri Lankan context, an interview based preliminary study was done with experts working in advertising agencies as well as a marketing executive. The key question posed at them was whether using English in advertisements in Sri Lanka has any special impact on consumers' response to the advertisement. All participants believed that English language is associated with a specific social class by the consumers. Another common comment was that English language plays an important role when implying premium quality of locally produced products which helps to compete with imported product in a same market. This comment gives the understanding that all the imported product carrying global brands with English language has an influence on consumers with the idea of premium quality. Another important comment was made by one advertiser who stated that at some cases use of English language can cause a consumer to perceive a product unachievable. These comments indicate that Sri Lankan consumers are likely to respond positively to advertisements when English is used; although they might consider it as unachievable, which could impact negatively on purchase intention. Literature states that the Sri Lankan community has a unique bond with English language due to being a British colony for more than century. It has resulted in distinctive social characteristics such as a class system where some classes associate English and an anglicised way of life as socially superior (Fernando, 1977). In this context, the main purpose of this study was to identify whether there is a difference in Sri Lankan consumers' attitudinal responses to advertisements as well as brands promoted in advertisements when English is used in advertisements vis-à-vis when the native language, Sinhala is used. This resulted in formation of the following research problem: "Does using English in advertisements have an impact on consumers' attitudinal responses towards the advertisement and the brand image?". The remainder of the paper will first present a review of literature on the use of English language in advertisements, followed by a section on the conceptualisation and operationalization of variables of the study. The methods followed are presented next, followed by findings of the study and the discussion of findings. The paper concludes with the implications for knowledge, practice and future research.

## **2. English in advertisements**

Advertisements are mainly used to convey information about products and services, attract customers and enhance brand image (McCarthy, 1978). It has long been established that the influence exerted by advertisements on consumers' brand choice, brand attitudes and purchase intentions are linked to consumers' attitude towards the advertisements (Mitchell

& Olson, 1981; Shimp, 1981). Consumers' attitudes towards the advertisements refers to thoughts and emotions of a consumer related to the advertisements (Kirmani & Campbell, 2009). In these studies it has been identified that the content of advertisements such as pictorial components (Mitchell & Olson, 1981; Percy & Rossiter, 1983), verbal components (Mitchell & Olson, 1981) and price information (Burton & Lichtenstein, 1988) can impact consumers' attitude towards the advertisement and in turn their attitude towards the brand. Language, or specifically English, is one of the components of advertisements that has been investigated in relation to its ability to influence consumer attitudes.

### ***2.1 Why English? the advertisers' expectations***

According to Bhatia and Ritchie (2004), English is the most popular language of advertisers and marketers. They state,

There is no doubt that the question of language choice is practically resolved. English is the choice of global advertisers and marketers. English has effectively dethroned its competitor languages, such as French and Russian, in this arena and continues to do so with more vigour and dynamics, thus becoming the single most important language of globalization. (p. 514)

It is worth examining why English has become a preferred language of advertisers. Kuppens (2009) identified three categories of reasons for why advertisers use English as a medium of communication in advertisements: ability to standardise advertising campaigns globally, creative purposes, and cultural connotations. English enables advertisements to be used in large marketing campaigns. When a multi-national company does a promotion targeting customers worldwide, English language helps to develop consistent advertisements which cut costs. This is because English serves as the 'lingua franca' globally. This is the standardisation approach (Gerritsen et al., 2010) where advertisements are developed using the same language and concepts which saves translation, adaptation, and registration costs. English is also used due to creative linguistic reasons. For instance, it is often used in the case of filling a lexical gap (Lee, 2006) i.e. when there is no equivalent for a word or phrase in the host language English comes in to fill the void. Also, English is used by the advertisers because phrases are shorter than the equivalent phrases in the host language. Finally English is used due to cultural connotations such as values and stereotypes associated with it, such as internationalism, future orientation, success and elitism, sophistication, fun, youth and maleness (Piller, 2001).

The third category of reasons is also referred to as the image enhancing ability of English when it is used in advertisements (Bhatia & Ritchie, 2004; Gerritsen, et al., 2010; Takashi, 1990). Piller (2001) has identified image enhancing factors like authority, authenticity and truth as some stereotypes link to the English language. According to Cheshire and Moser (1994) English is a 'bicultural' language as it symbolizes values associated with both USA

(freedom) and Great Britain (class and traditionalism). One way in which English has been used in advertisements for symbolic purposes is in the construction of the identity of intended customers. Piller (2001) identified five identity constructions signalled by English in advertisements. They are (1) international orientation, (2) future orientation, (3) success orientation, (4) sophistication, and (5) fun orientation. In addition to these Lee (2006) identified modernity as a sixth identity symbol connoted by English. In the Sri Lankan context Wijetunga (2010) identified an identity in advertisements that was labelled 'Westernized trendy youth' which was constructed partly by using monolingual English in advertisements bringing in Western connotations to the reader. Wijetunga (2010) noted that English language plays an assisting role (along with other elements such as pictorial elements of the advertisement) to portray a Western image of the intended user.

Bhatia and Ritchie (2004) label this third category of reasons which prompts advertisers to use English in advertisements as the "Mystique Factor" (p. 536) associated with English. They note that even in instances where standardisation of advertising is not a goal, and it is possible to find equivalent terms in other languages, use of other languages "does not yield the socio-psychological effects which only English is capable of transmitting" (Bhatia & Ritchie, 2004, p. 537). These authors classify these socio-psychological effects into what they call "threshold (seed-like)" features that they consider as "general, but core features" and more specific "subsets of threshold features" which they call "proximity zones" (Bhatia & Ritchie, 2004, p. 537). These threshold and proximity features are presented in Table 1. These authors contend that once the threshold effects are achieved in an advertisement, they trigger further, more specific proximity effects.

Table 1.  
*Socio-psychological effects of English*

Threshold Triggers	Proximity Zone
American or English culture	limited Westernization, Christianity, values such as independence, freedom, modernization
Internationalism and standardizations	certification, standards of measure, authenticity
Rationality and objectivity	Scientific appeal, problem solving
Competence	efficiency, organization, quality, safety, protection, functionality, pragmatism
Sophistication	elegance, style, rarity

Source: Bhatia and Ritchie (2004)

Of the three categories of reasons why advertisers use English in advertisements, it is the third one, image enhancing ability of English, that is most important to this study. Because these cultural connotations of English, which enhance the image are assumed to appeal to the reader of the advertisement (Lee, 2006; Piller, 2001) and thereby reflect positively on the product (Martin, 2002).

## **2.2 Impact of English on consumers**

The previous section discussed the reasons why advertisers use English in advertisements. Another group of studies have examined whether the intended outcomes mentioned above have been achieved in terms of consumers' attitudinal responses to these advertisements. This is the marketing effectiveness of using English in advertisements. These studies have been conducted in different geographical locations of the globe and their findings seem to be conflicting. The main reason for this may be the cultural differences between countries.

For consumers in several non-English speaking countries in Western Europe – Belgium, France, Germany, the Netherlands and Spain – the use of English in advertisements does not appear to have had any impact on image and price of the product (Gerritsen, et al., 2010). Another study in Poland (Planken et. al, 2010) identified that the use of English (vs. Polish) does not seem to have led to consistent, significant differences in the Polish consumer group's attitudes towards the product/brand, towards the advertisement, and their behavioural intention (purchasing intentions). Thus, a similar pattern can be identified in above two studies indicating that the advertisers' expectations discussed in the previous section are not delivered by the use of English in advertisements.

Literature relating to the Asian region provides somewhat mixed outcomes. In a study in Taiwan, Hsu (2008) found that English as a language is overwhelmingly popular in Taiwan even with English illiterate, monolingual Chinese speakers. Even though English illiterate speakers have shown a slight negative response towards English mixed advertising, such respondents have been identified to be in a minority group. A second study by the same author (Hsu, 2013) has also identified that English mixed advertisements are positively received. This study has also identified that using English in advertisements has some socio-psychological effects on consumers, such as a sense of British and American culture, internationalism and promoting confidence in imported products. These findings sharply contrast with the findings of Gerritsen et al. (2010) and Planken et al. (2010) studies. Two other studies in the same country, Taiwan, have identified that use of English slogans in advertisements with a mix of English and the local language, Chinese, (code-switching) has a favourable effect on foreign products (Lin & Wang, 2016; Lin et al., 2016). In relation to local products, use of English slogans was found to have a favourable effect only for luxury goods (Lin & Wang, 2016). In India, English slogans have been found to be more effective for foreign (i.e. products marketed by multinational companies) luxury products, whereas Hindi



or Hindi mixed slogans have featured better for foreign essential products; for local products, use of English slogans have yielded no special impact at all (Krishna & Ahuwalia, 2008).

In contrast to Taiwan and India, which have indicated some positive responses towards the use of English, a Hong Kong study (Hooft & Truong, 2012) has yielded different findings. In this research, language (Cantonese – a Chinese dialect vs. English) used in advertisements has not led to significant differences in Hong Kong's respondents' attitudes towards the product or purchase intentions. Authors of the paper surmise that this could be because the Hong Kong society perceives both languages, Cantonese and English, at the same level, and English is not regarded as 'special' since English has been an official language in Hong Kong for a long time; the country has been a British colony for 150 years from 1847 until 1997 (British Broadcasting Corporation, 2017). This may have made English similar to a 'native language' in Hong Kong, which may account for the difference in the findings relating to Hong Kong (Hooft & Truong, 2012), Taiwan (Hsu, 2008, 2013; Lin & Wang, 2016; Lin et al., 2016) and India (Krishna & Ahuwalia, 2008). It should be noted that although India has been a British colony, it became independent in the mid-20<sup>th</sup> century whereas Hong Kong remained a colony almost until the 21<sup>st</sup> century.

As discussed above, studies conducted in the Asian context have not yielded similar findings. While one indicates similarities with studies done in Western countries – no effect of English (Hooft & Truong, 2012), others have arrived at contrasting findings – there is an influence (Hsu, 2008, 2013). Still others have findings indicating some influence of English for different categories of products (Lin & Wang, 2016; Lin et al., 2016; Krishna & Ahuwalia, 2008). It should also be noted that all the studies that were discussed have used products existing in the market, which means existing perceptions about the brands might have caused biases in the responses. Both the above raise the need of further empirical knowledge on the impact of English language in advertisements, especially in the Asian context. This paper addresses that gap in knowledge. The next section provides a brief overview of the socio-cultural position of English in the study context, Sri Lanka since it was noted above that socio-cultural differences in the context could be a reason for the different responses to English in advertisements.

### ***2.3 English in the Sri Lankan context***

Fernando (1977) described the role played by English in Sri Lanka. After setting up British colonial civil administration in Sri Lanka, English became the administrative language in 1802, and it became the major language of law, of secular education and of commerce. Within the colonial period (1802 to 1956) rapid socio-cultural adaptations took place in the Sri Lankan society. For some, English became a virtual 'mother tongue' in this adaptation process, which appears to be more pronounced in the middle class. Anglicization (Fernando,

1977), and knowledge in English (Punchi, 2001) made it possible for these people to access material advantages such as better education and, as a result, better employment. Further, it has been noted that English education was limited to a small elite segment of society, and that “English educated Sri Lankans began to look down upon their own people who did not speak English.” (Punchi, 2001, p. 367). This privileged social position of English has not undergone any significant changes over time, and even today, those who have English knowledge enjoy a socially advantageous position (Kandia, 1984; Punchi, 2001). Thus, it appears that in Sri Lanka English has been accorded a higher status compared to local languages for many years. This prestige enjoyed by English could have an impact on how advertisements presented in English are perceived by consumers in comparison to local language advertisements.

It should also be noted that the historical context of Sri Lanka is significantly different to two Asian countries, Taiwan and Hong Kong, where previous research on the impact of using English in advertisements has been studied. Unlike Sri Lanka, Taiwan has never been a British colony, although it has been under other European powers (Ministry of Foreign Affairs, Republic of China (Taiwan), 2017). On the other hand, Hong Kong has been under British rule much longer than Sri Lanka and, as previously noted, English has almost assumed a status of a local language with no special prestige attached to it (Hooft & Truong, 2012). Although there are some similarities between India and Sri Lanka in terms of being British colonies, India is a much larger, more culturally diverse country greater linguistic variety. Given these differences, this study could enrich the knowledge on how consumers of different countries in the Asian region respond to advertisements presented in English.

### **3. Conceptualisation and Operationalisation**

Previous research (Gerritsen et al., 2010; Planken, 2010) that have directly studied influence of English on consumers’ attitudes in terms of attitude towards the advertisement, attitude towards the brand, and purchase intentions have not found that use of English in advertisements has a significant impact on these variables. However, there is literature support for the argument that using English could have a positive impact on the above three attitudinal constructs although the language based studies cited below have not directly used these constructs in the research.

In relation to the impact of English in advertisements on the consumers’ attitude towards the advertisement, one study has identified that consumers have considered the use of English as “trendy”, “attention getting”, “creative”, “lovely” and “cute” (Hsu, 2013, p. 100). Further, in a more recent study, it has been identified that advertising slogans in English were more favourably evaluated compared to the local language, Chinese, especially when the products advertised were luxury products (Lin & Wang, 2016). Both these studies indicate that use of English has led to positive attitudes about the advertisement. It has also

been identified that when a foreign language (especially English) is mixed with a local language (code-switched) in advertisements, there is a positive response to the code-switched advertisement when the exposure of foreign language is high (Lin et al., 2016). This gives some suggestion that when an advertisement is completely in English, it may get a more favourable response than an advertisement that is completely in the local language. Thus, the first hypothesis of this study was developed as follows:

H<sub>1</sub>: Consumers have a more positive attitude towards the advertisement when the language is English than when the language is Sinhalese

In the study by Hsu (2013), a fairly large number of consumers have also expressed the view that when English is used in advertisements, they convey a sense of “future and innovation”, “competence” and “rationality and objectiveness” (p. 100) of the advertised products, indicating a positive attitude towards the product advertised. Further, it is well established that a positive attitude towards an advertisement could impact positively on attitude towards the brand (Shimp, 1981). This too provides support for the second hypothesis of the study, since (as previously noted) literature does suggest that using English can lead to positive attitudes towards the advertisement. Therefore, the second hypothesis is:

H<sub>2</sub>: Consumers have a more positive attitude towards the brand advertised when the language is English than when the language is Sinhalese

There is less literature evidence that use of English in an advertisement could have an impact on purchase intention. However, based on the Theory of Reasoned Action, it has long been established in advertising literature that manipulating advertising content can have an impact on not only brand beliefs, but also on purchase intentions (Mitchell & Olson, 1981) and also that a favourable attitude towards an advertisement could, in turn, impact purchase intention (Shimp, 1981). Thus, given the previous arguments that using English could have a positive impact on consumers’ attitude towards the advertisement and the brand, it can be suggested that use of English could also impact on the purchase intentions. Hence the third hypothesis:

H<sub>3</sub>: Consumers have a higher purchase intention towards the product/ brand advertised when the language is English than when the language is Sinhalese

In addition to the above three hypotheses that test the general attitudinal responses, a fourth hypothesis was developed to identify whether use of English language in advertisements lead to specific socio-psychological effects, since this has been proposed by several scholars (Bhatia & Ritchie, 2004; Cheshire & Moser, 1994; Lee, 2006; Piller, 2001):

H<sub>4</sub>: English advertisements communicate specific socio-psychological effects that are not communicated through Sinhalese advertisements

Since this study adopted an experimental design, the independent variable was operationalized through manipulation of the language adopted in advertisements used as test material (explained under methods). In operationalizing the dependent variables, measurement instruments used in previous studies were utilized in order to ensure validity and reliability. In so doing, the researchers examined linguistic studies that have researched the impact of the use of English in advertisements on consumer responses to advertisements, as well as a substantial body of advertising literature that have produced well established instruments for measuring attitudinal responses to advertisements.

In operationalising 'attitude towards the advertisement', measurements used by Planken et al. (2010) in a linguistic study examining the impact of language on consumer responses, as well as those used in advertising literature (Burton & Lichtenstein, 1988; Homer, 1990; Mackenzie & Lutz, 1989; Mitchel, 1986) were considered to ensure that that measures of this attitude captured an overall attitude towards the advertisement as well as the cognitive and affective elements of the attitude as prescribed by Burton and Lichtenstein (1988). Combining the measures most commonly used by the above scholars, this study operationalised attitude towards the advertisement using five items namely, 'informative/uninformative', 'effective/ineffective', 'interesting/uninteresting', 'pleasant/unpleasant' and 'favourable/unfavourable', which were measured using seven-point semantic differential scales.

A similar procedure was adopted in operationalising 'attitude towards the brand'. Most previous studies that had measured attitude towards the brand in advertising literature had used measures of overall brand attitudes (Homer, 1990; Mackenzie & Lutz, 1989; Mitchel, 1986). Following these previous scholars, this study also used one overall brand attitude measure – 'good'. In addition, from two linguistic studies focusing on language used in the advertisement (Gerritsen et al., 2010; Planken et al., 2010), the items 'trendy', 'innovative', 'old fashioned' (reverse) and 'high quality' were adopted since they have been used in these studies as specific characteristics that are said to be conferred upon a brand by the use of English in the advertisement. Thus, in total, there were five items utilising seven-point Likert scales to measure brand attitudes.

In operationalising 'purchase intention' two items were used based on Gerritsen et al. (2010) and Planken et al. (2010) – 'I would consider buying' and 'I would definitely buy'. These were very similar in nature to the items used in advertising literature) – likely/unlikely and probable/not probable (Homer, 1990). The two purchase intention items were also measured using seven-point Likert scales.

Operationalisation of the final variable, socio-psychological effects, was based on the “threshold” (p. 537) features identified by Bhatia and Ritchie (2004). After comparing those features with cultural connotations of English that have been identified by other scholars (Bhatia & Ritchie, 2004; Cheshire & Moser, 1994; Lee, 2006; Piller, 2001), four threshold features that were similar to the connotations identified by other scholars were selected to be used in the present study. These features were ‘sense of Internationalism’, ‘sense of American or British culture’, ‘sense of competence’ and ‘sense of sophistication’. Since the original work of Bhatia and Ritchie (2004) is conceptual in nature it was not possible to identify multiple items for measuring these concepts. Therefore, following Hsu (2013), the authors decided to use a single item for each of the threshold features. The statements used by Hsu (2013) were used with slight modifications for this purpose: ‘The advertisement conveys a sense of internationalism’; ‘the advertisement conveys a sense of American or British culture’; ‘advertised product/ service has a sense of competence in terms of efficiency, problem solving and functionality’; ‘advertised product/ service conveys a sense of sophistication such as elegance, style and rarity’. It should be noted that compared to the other instruments used in the study operationalization of this final variable is not as robust since only a single previous study appeared to have measured it and that study has used only one item for each concept. The measurement used was a seven-point Likert scale.

#### **4. Methods**

This was a positivistic quantitative research following a strategy of ‘between subjects’ experiment. The study comprised two groups, one group being ‘treatment group’ (exposed to English advertisements) and other being the ‘control group’ (exposed to Sinhalese advertisements).

##### **4.1 Materials**

Test materials for the study (advertisements) were based on fictitious products in order to prevent any pre-determined attitudes towards products that are already in the market (See Appendix 1). Three product concepts mainly targeted towards youth, especially university students, were developed specifically for the study. Thus, a multiple message design (three advertisements) was used to ensure that the results would be more generalizable than in a design involving only a single message (one advertisement) as a stimulus (Jackson, 1992). The three concepts consisted of one product (soft drink – Fandu) and two services (a web-based book store – Bookaroo and a leadership training institute – Apexo).

Using the product concepts three print advertisements were developed and were converted into two versions (English monolingual and Sinhalese monolingual). First, the English versions of the advertisements were created by a professional in the advertising industry and then translated to Sinhalese by the same person who has a good command of English

and uses Sinhalese as his mother tongue. The advertisements were reproduced in colour on A4 size papers to be used as stimuli for the experiment.

#### **4.2 Respondents**

The research utilized a cross sectional data collection strategy. The population was university students (ages of 20 to 25). University students were used since it facilitated conducting an experimental research in a controlled environment. Undergraduate samples have commonly been used in previous experimental research examining the impact of language in advertisements (Krishna & Ahuwalla, 2008; Lin & Wang, 2016; Lin et al., 2016; Planken et al., 2010). It should also be noted that findings from this undergraduates sample are generalizable to similar consumers in different parts of Sri Lanka since it comprised students from various regions of the country. Data was collected from 48 respondents. These respondents were following degree programmes of Marketing Management, Hospitality and Leisure Management, and Human Resource Management which are conducted in English medium. Out of all the responses two questionnaires had to be discarded because one questionnaire was not completed fully and one questionnaire was not returned. Of the other 45 respondents, used in the final data analysis, 32 were female students and 13 were males. Of these, the first language of 43 respondents was Sinhalese and the first language of the other two was Tamil.

#### **4.3 Procedure**

Questionnaire method was used to collect data from the experimental and control groups. Questionnaire was in English language. Data collection was carried out by the researchers in the university premises in two group settings during two lecture sessions of a Research Methods course. The true purpose of the experiment was not informed to the participants at first in order to avoid biases in responses. In each setting, the class was divided in half and one side of the class was given English advertisements (23 respondents) while the other side of the class was given the Sinhala version of the advertisements (22 respondents). Each respondent was given a pack comprising the three advertisements and three copies of the questionnaire, following the method used in a previous research (Planken et al., 2010). The order of the advertisements was changed for respondents seated in adjacent seats in order to minimise the effect of peer opinion. The researchers requested respondents to first look at the first advertisement presented in the pack and respond to the questionnaire with respect to that advertisement. After allowing some time to complete the questionnaire, the procedure was repeated for the second and the third advertisements.

#### 4.4 Analysis techniques

The collected data was analysed using the statistical computer package SPSS 16. To check the internal consistency (reliability testing) of multi item variables where composite means were necessary for the analysis, Cronbach's alpha was used (Field, 2009). Since data analysis was separately done for the three advertisements, reliability tests were also performed separately. Table 2 presents the Cronbach's alpha values; all are at acceptable levels of above 0.6 (Malhotra, 2010)

Table 2  
*Cronbach's alpha values*

Variable	Advertisement	Cronbach's alpha
Attitudes towards the advertisements	APEXO	0.863
	FANDU	0.856
	BOOKAROO	0.837
Attitudes towards the brand	APEXO	0.761
	FANDU	0.790
	BOOKAROO	0.678
Purchase intentions	APEXO	0.781
	FANDU	0.916
	BOOKAROO	0.828

To test the hypotheses initially it was decided to use Student's t-tests for two independent samples. However, probability distributions of the collected data did not meet the normality assumptions of the t-test, which is a parametric test. Therefore, the non-parametric equivalent of the t-test for two independent samples, Mann-Whitney U test (Field, 2009), was used.

#### 5. Findings and discussion

Following the practises of previous research (Planken et al., 2010) in testing each hypothesis, test advertisements were separately considered as different cases to identify the relationship between advertisement language and each dependent variable. Thus, each hypothesis test has three results relating to the three advertisements.

The first three hypotheses of the study tested whether consumers responded differently to advertisements presented in English and Sinhalese languages, in terms of their attitude towards the advertisement, attitude towards the brand and the purchase intentions. The statistical findings of these first three hypotheses are presented in Table 3.

Table 3  
Consumer responses to English vs. Sinhalese in advertisement

Consumer Response	Advertisement	Mann-Whitney U	Z	Exact Sig. (1-tailed)
Attitudes towards the advertisements	APEXO	190	-1.433	0.077
	FANDU	182	-1.618	0.054
	BOOKAROO	231.5	-0.489	0.316
Attitudes towards the brand	APEXO	246	-0.16	0.439
	FANDU	234	-0.433	0.336
	BOOKAROO	247.5	-0.125	0.453
Purchase intentions	APEXO	218	-0.8	0.216
	FANDU	230.5	-0.513	0.307
	BOOKAROO	241	-0.275	0.395

As shown in Table 3, no significant differences were identified in consumers' attitudinal responses to advertisement or brand when advertisement was in Sinhalese or English languages. Similarly, there was no significant difference in purchase intention.

The fourth hypothesis was intended to test whether using English in advertisements results in certain specific socio-psychological effects on consumers. This was in terms of transferring a sense of internationalism, American or British culture, competence and sophistication. Table 4 presents the findings relating to this hypothesis.

Table 4. Socio-psychological effects of English

Socio-psychological Effect	Advertisement	Mann-Whitney U	Z	Exact Sig. (1-tailed)
Sense of Internationalism	APEXO	225	-0.648	0.263
	FANDU	166	-2.024	0.022
	BOOKAROO	123	-3.005	0.001
Sense of American or British culture	APEXO	214	-0.909	0.182
	FANDU	248	-0.115	0.457
	BOOKAROO	134	-2.757	0.003
Sense of Competence	APEXO	232.5	-0.477	0.322
	FANDU	236.5	-0.387	0.353
	BOOKAROO	141.5	-2.575	0.005
Sense of Sophistication	APEXO	173.0	-1.855	0.032
	FANDU	242.5	-0.243	0.407
	BOOKAROO	219.5	-0.779	0.222



As shown in Table 4, the findings related to socio-psychological effects communicated through English are somewhat different to the previous two hypotheses in that the results were significant for some advertisements. In the case of sense of internationalism, the hypothesis was supported for two out of the three advertisements (FANDU and BOOKAROO). For sense of British or American culture and sense of competence, the hypothesis was supported for only one out of the three advertisements: BOOKAROO. For sense of sophistication also the hypothesis was supported only for advertisement: APEXO. Thus, based on overall results, it appears that the English language in advertisements does not result in the proposed psychological effects, with the possible exception of a sense of internationalism.

### **5.1 Discussion**

The findings of the present study were such that there were no significant positive differences found in consumers' attitudinal responses when the advertisements were in English language compared to advertisements in Sinhalese in relation to any of the variables 'Attitude towards the advertisement', 'Attitudes towards the brand', Purchase intentions' and 'Socio-psychological' effects.

These findings are consistent with the with European studies of Gerritsen et al. (2010) and Planken et al. (2010), as well as Hong Kong study by Hooft and Truong (2012) and contrasts with the Taiwan study of Hsu (2013). The key reason for this study to hypothesize that English may have an impact on the attitudinal and behavioural response to advertisements is the prestigious social position historically accorded to English in Sri Lanka (Kandia, 1984; Punchi, 2001), which is different to the European (Gerritsen et al., 2010; Planken et al., 2010) and Hong Kong (Hooft & Truong, 2012) contexts. However, findings suggest that, the privileged position enjoyed by English notwithstanding, Sri Lankan consumers do not respond in a particularly favourable way to English in advertisements.

Literature suggests three possible explanations for these findings. First, it has been noted that English is so widespread in the advertising world that it is no longer regarded or perceived as "special" (Planken et al., 2010, p.239). Although English is accorded a prestigious position in the Sri Lankan society, the observation of Planken et al. (2010) is also true for Sri Lanka. Sri Lankan consumers are accustomed to seeing the same advertisement in both Sinhalese and English. Therefore, it is possible that the consumers do not perceive anything special about English being used in an advertisement. Second is respondents' knowledge of English. In explaining their results in the Hong Kong study Hooft and Truong (2012) commented "It seems that highly educated bilinguals perceive their two languages and therefore the use of [these two languages] in the advertisements as almost having the same status" (p. 17). It has also been noted in research based on language mixing (code-switching) in advertisements that language does not make a significant difference in

advertising evaluation when the consumers are bilingual (Krishna & Ahuwalia, 2008). In the current study, all the participants were undergraduates following a degree programme conducted in English; i.e. they are bilinguals. Thus, it is possible that these respondents did not perceive use of English in an advertisement to be of special significance due to their familiarity with the language. Third, previous research has also found that using English in code-switched advertisements has an impact when advertising foreign products, but not for local products (Krishna & Ahuwalia, 2008; Lin & Wang, 2016; Lin et al., 2016). Since the products used in the advertisements in this study were fictitious products/services, they could be construed by respondents as local products/services; the lack of difference between local language and English may be due to this reason.

In the case of different socio-psychological effects imparted by English language in advertisements, much of the studies appear to have studied the content of the advertisements, rather than consumers' responses to them (e.g. Bhatia & Ritchie, 2004; Cheshire & Moser, 1994; Lee, 2006; Piller, 2003; Ustinova, 2008). Although these studies contend that English conveys specific socio-cultural connotations about the product being advertised, the current study identified a significant difference in consumer perception between advertisements using English or Sinhalese with respect to conveying a sense of internationalism, American or British culture, competence or sophistication only in relation to one or two of the advertisements. Only one study (Hsu, 2013) appears to have examined consumer opinions on the socio-psychological effects conveyed by the use of English in advertisements. In this study, about 30% of the responses have identified that a sense of internationalism is conveyed through English. Approximately another 20% of the responses have identified English to be conveying a sense of American or English culture. However, no hypotheses have been tested in this study, which limits the generalisability of these findings. Therefore, it is difficult to gauge whether the 30% and 20% responses in Hsu (2013) could be considered as significant. As such, it is difficult to clearly establish whether socio-psychological effects are conveyed to consumers based on the current study or previous research.

It should also be noted that in an advertisement language is not the only element that could convey specific socio-psychological meanings. The fact that visual elements could also convey different meanings to consumers has been long established in literature (e.g. Mitchell, 1986; Percy & Rossiter, 1983). Thus, it is possible that, even though English does convey certain socio-psychological meanings, it may be masked by similar meanings conveyed by the pictorial elements of the advertisements used as test material which had the same pictures for both English and Sinhalese advertisements. For example, the APEXO advertisement depicted a young woman in formal Western dress, which could easily communicate as sense of British or American culture as well as a sense of Internationalism. Further, it has been identified that larger pictorial content tend to have a greater impact compared to smaller pictorial content (Percy & Rossiter, 1983). Thus, the influence of the

pictorial elements, which are fairly large in the APEXO and FANDU advertisements, may have heightened the masking effect. It is noteworthy that the English version of the BOOKAROO advertisements, which was a text only advertisements without any pictorial elements, was found to elicit a significantly higher sense of internationalism, American of British culture and a sense of competence than the Sinhalese advertisement.

## 6. Conclusion

The main intention of this study was to identify the impact of using English in advertisements on consumers' attitudinal responses towards the advertisements and the product. The paper contributed to knowledge by enriching empirical literature in relation to this topic by examining the issue in a new socio-cultural context. The study found that English usage in advertisements does not have a significant positive impact on consumers' attitudinal responses towards the advertisements and the brand when compared to Sinhalese advertisements, although English does appear to convey some socio-psychological meanings to a limited extent. These findings of the study confirm findings of the majority of prior research conducted in different countries with different socio-cultural contexts. Thus, from a practical perspective, it appears that businesses would have a very slight change in consumer responses if they shift the language to English in the context of Sri Lanka.

The study has some limitations which have implications for further research. First, it utilized a sample of university undergraduates whose greater familiarity with English may have reduced a more favourable impression of the language compared to Sinhala. Thus, research utilising Sri Lankan respondents with a different level of education (Planken et al., 2010) and thereby a different level of familiarity with English might yield different results. Second, advertisements indicating clear differences in terms of local vs. foreignness of the product could be used as test materials in order to see whether the differences observed in India (Krishna & Ahuwalia, 2008) and Taiwan (Lin et al., 2016) would be observed in Sri Lanka as well.

The findings in relation to socio-psychological connotations of English usage are intriguing since the hypothesis was supported to a limited extent. However, in operationalizing the socio-psychological effects, the paper had to use a slightly modified version of statements used Hsu (2013) to measure the 'threshold' features (Bhatia & Ritchie, 2004). In the absence of any previously developed scales other than the one used by Hsu (2013) a single item had to be used for measuring each feature. This reduces the robustness of the instrument. Future studies, broader in scope, could develop more comprehensive scales for measuring this variable. Such a study might present clearer indications of whether these specific socio-psychological meanings are conveyed to consumers through English. Further, it was noted above that effect of the pictorial content shared by the English and Sinhalese advertisements might have masked the socio-psychological meanings transferred through

the use of English language. Future studies could reduce this effect by reducing the pictorial content and including more prominent verbal content.

## References

- Bhatia, T. K., & Ritchie, W. C. (2004). Bilingualism in the global media and advertising. In T. K. Bhatia & W. C. Ritchie (Eds.), *The handbook of bilingualism* (pp. 512-546). Chichester, UK: Blackwell.
- British Broadcasting Corporation. (2017, April 6). *Hong Kong profile - Timeline*. Retrieved from BBC: <http://www.bbc.com/news/world-asia-pacific-16526765>.
- Burton, S., & Lichtenstein, D. R. (1988). The effect of ad claims and ad context on attitude toward the advertisement. *Journal of Advertising*, 17(1), 3-11.
- Cheshire, J., & Moser, L. M. (1994). English as a cultural symbol: The case of advertisements in French-speaking Switzerland. *Journal of Multilingual & Multicultural Development*, 15(6), 451-469.
- Fernando, C. (1977). English and Sinhala bilingualism in Sri Lanka. *Language in Society*, 6(3), 341-360.
- Field, A. (2009). *Discovering statistics using SPSS*. London: Sage Publication.
- Gerritsen, M., Nickerson, C., van Hooft, A., van Meurs, F., Korzilius, H., & Nederstigt, U. et al. (2010). English in Product Advertisements in Non-English-Speaking Countries in Western Europe: Product Image and Comprehension of the Text. *Journal of Global Marketing*, 23(4), 349-365.
- Homer, P. M. (1990). The mediating role of attitude toward the ad: Some additional evidence. *Journal of Marketing Research*, 78-86.
- Hooft, A. V., & Truong, T. (2012). Language choice and persuasiveness. The effects of the use of English in product advertisements in Hong Kong. *The Language Factor in International Business Linguistic Insights: New perspectives on research, teaching and practice*. Bern: Peter Lang, 175-198.
- Hsu, J. L. (2008). Globalization and English mixing in advertising in Taiwan: Its discourse domains, linguistic patterns, cultural constraints, localized creativity, and socio-psychological effects. *Journal of Creative Communications*, 3(2), 155-183.
- Hsu, J. L. (2013). English mixing in advertising in Taiwan: A study of English-literate readers. *Concentric: Studies in Linguistics*, 39(1), 91-122.
- Jackson, S. A. (1992). *Message effects research: Principles of design and analysis*. New York: Guilford Press.
- Kandiah, T. (1984). Kaduwa: Power and the English language weapon in Sri Lanka. In P. Colin-Thome & A. Halpe (Eds.), *Honoring E.F.C. Ludowyk: Felicitations essays* (pp. 117-154). Dehiwala, Sri Lanka: Thisara Prakasakayo.
- Kirmani, A., & Campbell, M. C. (2009). Taking the target's perspective: The persuasion knowledge model. In M. Wänke (Ed.), *Social Psychology of Consumer Behavior* (pp. 297-316). New York: Psychology Press.
- Krishna, A., & Ahluwalia, R. (2008). Language choice in advertising to bilinguals: Asymmetric effects for multinationals versus local firms. *Journal of Consumer Research*, 35(4), 692-705.
- Kuppens, A. H. (2009). English in Advertising: Generic Intertextuality in a Globalizing Media Environment. *Applied Linguistics*, 31(1), 115-135.

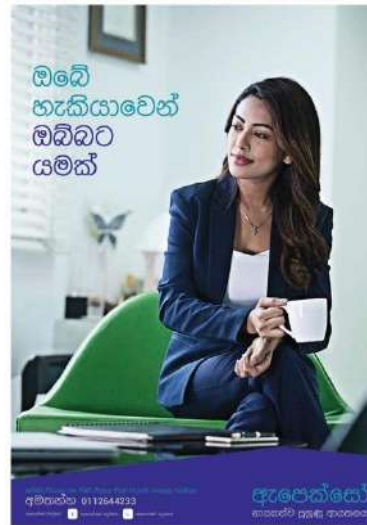
- Lee, J. S. (2006). Linguistic constructions of modernity: English mixing in Korean television commercials. *Language in Society*, 35(01), 59-91.
- Lin, Y., & Wang, K.. (2016). Language choice in advertising for multinational corporations and local firms: A reinquiry focusing on monolinguals. *Journal of Advertising*, 45(1), 43-52.
- Lin, Y., Wang, Y., & Hsieh, J. (2016). Creating an effective code-switched ad for monolinguals: The influence of brand origin and foreign language familiarity. *International Journal of Advertising*, 36(4), 613-631
- MacKenzie, S. B., & Lutz, R. J. (1989). An empirical examination of the structural antecedents of attitude toward the ad in an advertising pretesting context. *American Marketing Association*, 53(2), 48-65.
- Malhotra, N. K. (2010). *Review of marketing research*. Bingley: Emerald Group Publishing Limited.
- Martin, E. (2002). Mixing English in French advertising. *World Englishes*, 21(3), 375-402.
- McCarthy, E. J. (1978). *Basic marketing: a managerial approach*. Homewood (Illinois): RD Irwin.
- Ministry of Foreign Affairs, Republic of China (Taiwan). (2017). History. Retrieved from: [https://www.taiwan.gov.tw/content\\_3.php](https://www.taiwan.gov.tw/content_3.php)
- Mitchell, A. A. (1986). The effect of verbal and visual components of advertisements on brand attitudes and attitude toward the advertisement. *Journal of Consumer Research*, 13(1), 12-24.
- Mitchell, A. A., & Olson, J. C. (1981). Are product attribute beliefs the only mediator of advertising effects on brand attitude? *Journal of Marketing Research*, 18(3), 318-332.
- Percy, L., & Rossiter, J. R. (1983). Effects of picture size and color on brand attitude responses in print advertising. *Advances in Consumer Research*, 10, 17-20. Retrieved from <http://www.acrwebsite.org/search/view-conference-proceedings.aspx?Id=6071>
- Piller, I. (2001). Identity constructions in multilingual advertising. *Language in society*, 30(2), 153-186.
- Planken, B., Meurs, F., & Radlinska, A. (2010). The effects of the use of English in Polish product advertisements: Implications for English for business purposes. *English for Specific Purposes*, 29(4), 225-242.
- Punchi, L. (2001). Resistance towards the language of globalisation: The case of Sri Lanka. *International Review of Education*, 47 ( 3/4), 361-378.
- Shimp, T. A. (1981). Attitude toward the ad as a mediator of consumer brand choice. *Journal of advertising*, 10(2), 9-48.
- Takashi, K. (1990). A sociolinguistic analysis of English borrowings in Japanese advertising texts. *World Englishes*, 9(3), 327-341.
- Ustinova, I. P. (2008). English and American culture appeal in Russian advertising. *Journal of Creative Communications*, (3)1, 77-98.
- Wijetunga, D. (2010). A consumer culture perspective on the social shaping of an 'unstable' technological artefact: A Sri Lankan study of the mobile telephone (Unpublished doctoral dissertation). The University of Melbourne, Melbourne.

## Appendix 1: Advertisements

- APEXO English



- APEXO Sinhalese



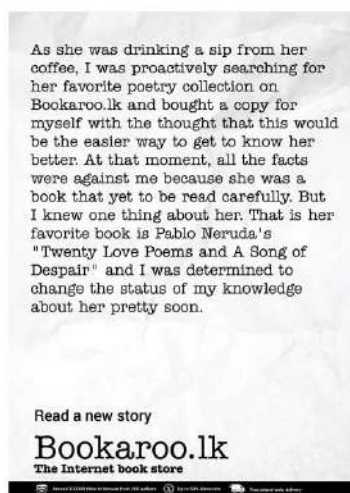
- FANDU English



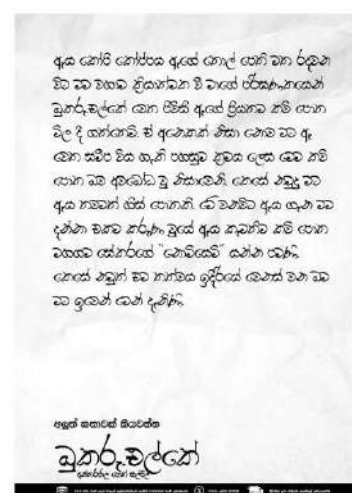
- FANDU Sinhalese



- BOOKAROO English



- BOOKAROO Sinhalese



## Influence of Deceptive Advertising on Parents' Decisions in Purchasing Children's Food

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### Abstract

This study examines the influence deceptive advertisements have on parents when they select food products for their children. Although there is literature that discusses deceptive advertisements and their influence on purchasing decisions, the role played by deceptive food advertisements in parents' food selection has not been studied previously. Thus, this research focused on this specific area since children's nutrition and parents' concern regarding children's nutrition is a sensitive area of consumer behaviour. 'Deception' was examined using the framework proposed by Hastak and Mazis (2011). The study utilized an interpretive qualitative approach and was conducted in two stages. First, advertisements of two brands of milk powder were analysed using semiotic analysis; this was followed by in depth interviews of 21 parents from the Colombo district. The findings indicate that several types of deceptive claims – semantic confusion, intra attribute misleadingness and inter-attribute misleadingness – appear in food advertisements and they influence the purchasing intention of parents when they select the food products for their children. Semantic confusion was identified as the strongest form of deception and it appears that semantic confusion is created in more complex ways than it has been suggested by Hastak and Mazis (2011).

**Keywords.** Advertisements, Food purchasing, Children's food, Deceptive advertising

### 1. Introduction

Children comprise one of the attractive market segments and many commercials are developed to reach children each year (McNeal, 1999). This practice is becoming increasingly popular among Sri Lankan marketers as well, (Samaraweera & Samanthi, 2010). Based on data collected by Center for Policy Alternatives (2009), 17% of all advertisements targeted at children in Sri Lanka are food advertisements, which indicate that food related advertisements make up a substantial number of the advertisements targeting children. Further, many advertising companies focus on parents when promoting food products for children and advertise in a manner which can attract parents (Samaraweera & Samanthi, 2010). Chan, Leung and Tsang (2013) have identified that 54% of food advertisements use persuasive techniques such as nutritional and health related claims. Such claims are used in advertisements to gain the attention of parents since parents select food products which have health benefits for their children (Bui, Kaltcheva, Patino, & Leventhal, 2013).

However, Moon (as cited in Chan et al., 2013) has stated that food advertisements relating to children's food present deceptive and misleading claims. Further, a nutritionist interviewed in this study to gain an understanding of the background of food advertising in the Sri Lankan context stated that health claims used in Sri Lankan advertisements do not comply with the stipulations of the Food Act of Sri Lanka (1980). A preliminary study conducted using 10 parents indicated that in addition to other sources such as doctors' and family members' recommendations, advertisements also influence the food choices of parents. Seven out of the 10 parents interviewed stated that they were influenced by advertising claims about the milk powder they were purchasing for their children. This information indicates that deceptive claims are used in the advertisements of food products for children and there is a possibility for these claims to mislead parents. Therefore, this study explored the influence of deceptive food advertisements on food selection of parents for their children. In doing so, the research was guided by three objectives: 1) to identify the different forms of deception present in food advertisements targeting parents, 2) to identify the extent to which parents are deceived by these advertisements and the ways in which they are deceived, and 3) the extent to which the parents' purchase intentions are influenced by the mislead perceptions of the benefits of products advertised. As the theoretical framework of the study, the typology of deceptive advertisements developed by Hastak and Mazis (2011) was used to understand the types of deceptive claims in advertisements and their influence on parents when they select food products for their children. Empirically, this study focused on the advertisements of two brands of milk powder and parents who have children less than six years old within the Colombo district.

The next section presents an overview of the literature which provides an understanding about the deceptive health and nutritional claims in food advertisements and the influence of deceptive food advertisements in parents' decisions. Then, the theoretical framework and research methods used are explained. These are followed by description of findings and a discussion referring to the theoretical lenses and previous literature. The paper concludes with practical implication and directions for further research.

## **2. Deceptive advertising and its influence on parental choices**

Advertisements are used as an effective communication tool by organizations to increase the demand for products by creating trust among the consumers (Samaraweera & Samanthi, 2010; Shamila, n.d). However, advertisements are also criticized for being untruthful, deceptive, manipulative, creating stereotypes, playing on people's fears and insecurities and creating a negative impact on consumer autonomy (Shabbir & Thwaites, 2007). Gardner (1975) defines deception as : "If an advertisement (or advertising campaign) leaves the consumer with an impression(s) and/or belief(s) different from what would normally be expected if the consumer had reasonable knowledge, and that impression(s) and/or belief(s) is factually untrue or potentially misleading, then deception is said to exist" (p. 4). Craswell (1985) states that few advertisements have expressly false claims and that most of the advertisements have implied claims. This view has been endorsed by other



scholars who claim that advertisements that present truthful information in a literal sense may still deceive consumers by the implicit messages they communicate (Hastak & Mazis, 2011).

Although deceptive advertisements are said to have a strong impact on consumers (Sayed, 2014) it is difficult to analyse the impact of advertisements since it is complex and consumers' reactions to advertisements vary (Daugeliene & Liepinyte, 2012). Craswell (1985) states that the advertisements influence customers by changing beliefs of the customers and the advertisements tend to be deceiving when they form false beliefs. When a consumer forms a belief about a product which tends to be deceptive or false, then it would be difficult to alter the formed beliefs. Olson and Dover (1978) state that even experience with the product will not entirely eliminate the influence of deception. Further, the experimental findings of Russo, Metcalf and Stephens (1981) show that even after corrected versions of deceptive advertisements are shown to customers, their original belief formed by deceptive advertisements are not altered for some products and the reason suggested for this is that consumers ignore the corrections.

The cues acquired from deceptive advertisements are encoded and stored in the long term memory of customers and these deceptive cues will have dysfunctional effects on consumer purchase decisions (Olson & Dover, 1978). Thus the deceptive claims tend to have a negative effect on the purchasing and economic decisions of the consumer. This impact of misleading advertisements on consumer decision making has been identified in the Sri Lankan context as well (Gunaratne, 2009). This literature indicates the strength of impact that deceptive advertisements could have on consumers.

### ***2.1 Food advertisements and their influence on food choices made by parents***

Although children have increasing influence over household purchases today, it still the parents (since they have the purchasing power) who usually make the final decision, especially when it comes to purchasing food (Kelly, Turner, & McKenna, 2006). Parents are also the key socialising agents of children, and therefore, their beliefs and opinions tend to have an influence even when children make purchases for themselves (Kelly et al., 2006). When purchasing food for children, parents do give in to children's taste preferences (Noble, Stead, Jones, McDermott, & McVie, 2007). However, children's health and providing them with proper nutrients are the key criteria when making food choices (Kelly et al., 2006; Russell, Worsley, & Liem, 2014). In fact, providing healthy food to children is considered as an important aspect of "good parenting" by the parents (Noble et al., 2007, p. 387). When looking for food with the desired nutritional and health benefits, parents are often influenced by advertisements (Harris, Thompson, Schwartz, & Brownwell, 2011).

Advertisements related to food are a common feature in the daily lives of present day consumers. It has been estimated that the average European consumer receives 30,000 advertising messages per year from the food industry (Csorba, 2011). These advertisements

use different types of promotional claims in order to persuade consumers (Soni & Vohra, 2014). Among these different claims, Hasler (2008) has identified that health claims and nutrient content claim as the main two claims which are used in the advertisements of the food product in the USA. A health claim is the “representation that states, suggests, or implies that a relationship exists between a food or a constituent of that food and health” (Food Act of Sri Lanka, 1980, p. 12) and a nutrition claim is “representation which states, suggests or implies that a food has particular nutritional properties” (Food Act of Sri Lanka, 1980, p.13). For instance, claiming that specific product will promote bone health is a health claim and claiming that the specific product will contain calcium is a nutritional claim.

Findings of Roe, Levy and Derby (1999) show that the customers view products advertised with such claims as healthier products than the other products and there is a high likelihood of forming a positive attitude and purchasing of that product. Further Ford et al. (as cited in Roe et al., 1999) have noted that consumers often don’t understand nutritional or health claims made by the product and sometimes they rely on health claims while ignoring the nutritional claims. This indicates that there is a possibility for the customers to make incorrect inferences based on nutritional and health claims made by advertisements.

Most parent-directed food advertisements for children feature a nutritional or health message (Emond, Smith, Mathur, Sargent, & Gilbert-Diamond, 2015). Further, in some instances marketers utilize deceptive nutritional and health claims in advertisements. For example, an advertisement for formula milk in UK has been banned for misleading parents about its ability to boost babies' immune systems since there was no evidence to support the claim (Borland, 2009). Therefore, reliance on marketing messages related to nutritional and health claims could be potentially misleading. Although parents claim that they are not strongly influenced by food advertisements related to children (Russell et al., 2014), it has been noted that persistent use of health claims and emotional appeals in the marketing of food products mislead parents and reduce their capacity to make healthy choices for their children Glayzer and Mitchell (n.d). For example, Harris et al. (2011) state that marketing information that claim products to be nutritional in the USA are questionable and their research findings indicate that nutritional claims on cereal packages mislead parents in two ways. First, the deception in relation to nutritional claims which means parents assume that the products that make explicit nutritional claims are more nutritious than other similar products. Second, the deception in relation to health claims which means the parents interpret nutritional claims in a much broader manner than their literal meaning. Other scholars have noted that marketers also omit important information, because of which, parents cannot make informed decisions (Soni & Vohra, 2014).

In summary, the above literature indicate that there is a possibility that for nutritional or health claims made in advertisements to deceive consumers. There is a possibility for parents to be deceived by advertisements that make deceptive nutritional and health claims since parents prefer to buy nutritious and healthy food for their children. This area which has not been investigated in currently available research is the focus of this study.

### 3. Theoretical framework

The typology of deceptive advertisements developed by Hastak and Mazis (2011) is used as the theoretical framework in this study. The typology developed by the Hastak and Mazis (2011) focus on the truthful but deceptive claims which appear in advertisements and package labelling. According to Hastak and Mazis (2011), there are five types of deceptive claims:

*Omission of material facts:* where marketers omit a material fact or facts in their advertisements. For example, an advertisement or label might omit the fact that over consumption of the product above the recommended level might create some health problems, or terms and conditions regarding the eligibility for a special offer may not be mentioned in the advertisement. It was noted before that omission of material facts is prevalent in food advertising (Soni & Vohra, 2014).

*Misleadingness due to semantic confusion:* where marketers use confusing language or symbols in the advertisements through which the consumers might get misled. For example, an advertisement might feature men in white coats, even though the advertisement doesn't claim the men are doctors or scientists, consumers will create misleading inferences that those men are doctors or scientist due to the white coat.

*Intra attribute misleadingness:* where a claim about an attribute leads to misleading inferences about the same attribute. In a product there could be two types of misleading intra - attribute claims. First is attribute uniqueness claim, where marketers misleadingly imply that a particular attribute is uniquely associated with the brand. Consumers may infer that the brands which claim or mention the attribute possess the attribute and the brands which do not claim or mention the attribute do not possess the attribute. In the previous discussion of literature it was noted that this type of deception has also been identified in relation to nutritional claims made by marketers (Harris et al., 2011). The second type is attribute performance claim, where consumers incorrectly infer about the performance of a specific brand based on the attribute claimed by the marketers. For example, if brand A claims that it contains protein then the consumers might create inferences that the product has a substantial amount of protein whereas brand A possess only a small amount of protein.

*Inter attribute misleadingness:* where consumers may depend on the claims made by marketers about one attribute to form inferences about another attribute. For example, if brand A claims that their product contains protein consumers might infer that the product will facilitate the growth of the body. This too has been identified in relation to nutritional claims made by marketers (Harris et al., 2011)

*Source based misleadingness*: where marketers might use endorsements by expert individuals, organization or customer testimonials that lead to biased inferences about the brand.

The typology developed by Hastak and Mazis (2011) is used in this study to identify types of deception presented in the food advertisements and how these deceptive claims influence the parents in their selection of food products. This framework is especially suitable for this analysis because, as shown above, findings of some of the previous studies on promoting food can be linked to different categories of the typology.

#### 4. Methods

This was an interpretative research that utilized a qualitative approach and a purposive sampling strategy to select the sample because this strategy facilitated the process of obtaining rich information on the research problem. Two types of samples were used to obtain information in this research. The first sample comprised television and newspaper advertisements of two brands of milk powder which were selected based on the preliminary study conducted with parents, where it was identified that these two brands are popular among parents. The second sample comprised 21 parents who have children aged less than 10 years old since the products advertised in the selected advertisements are targeted at children of this age. Of the parents, 02 were fathers and 19 were mothers. Parents belonging to the Socio Economic Classification strata A, B and C (Survey Research Lanka, 2017) were used where they had educational qualifications of G.C.E Ordinary Level or higher and were in occupations such as manager, business person, teacher, or skilled workers since an advertisement can be considered as deceptive only if it creates the false belief among the reasonably knowledgeable customers (Carson, Wokutch, & Cox, , 1985).

Data collection and analysis was done in two stages. In the first stage, Semiotic analysis was utilized to analyse the television and print advertisements of two the selected brands since the semiotic study is the study of signs through which the meanings of visual materials can be extracted (Rose, 2007). In this stage of the study, different signs comprising signifiers – animations, actions, images, sounds and texts were used in the advertisements – and the meanings signified through the signifiers were identified (Rose, 2007). This analysis focused on two types of signs through which signifiers signify their meanings. First one is denotation where the signified is a simple description of the signifier (Penn, 2000). For an example, an image of baby signifies the meaning as baby. The second one is connotation where a higher level meaning is carried out by the signifier (Penn, 2000). For an example, an image of a baby could signify the meaning of future. Following the identification of signifiers and the signified communicating different nutritional and health claims, they were analyzed in relation to various categories of deception presented in the theoretical framework to obtain an understanding about the forms of deception in the advertisements.

In the second stage, data was collected from the parents through interviews using an interview guide which was prepared based on thematic and dynamic dimensions (Kvale, 2007). The thematic dimension was based on the theoretical framework – i.e. the typology of deceptive advertising and packaging of Hastak and Mazis (2011) as well as the findings of the semiotic analysis. Each parent was shown all three of the three advertisements and asked to comment. Initially they were asked to comment on different kind of nutritional and health related information they perceived from the advertisements and the elements in the advertisement that provided this information. In instances that they didn't refer to specific elements of the advertisements identified in the semiotic analysis, they were prompted by drawing attention to those elements and asked what they understood from those elements. Finally, they were asked whether they currently purchase the brand of milk powder advertised and if not, whether they would like to purchase it. Interviews were conducted in Tamil language, the mother tongue of participants of the first author, and relevant excerpts included in this paper were translated to English after the data analysis process. data analysis was done using thematic analysis (Braun & Clarke, 2013), where the interviewees were transcribed verbatim and then coded and categorized into themes, which were then used to identify patterns.

## 5. Findings

### 5.1. *Semiotic analysis of advertisements*

In this section, findings of the semiotic analysis of the television and newspaper advertisements are presented.

#### 5.1.1. *Television advertisement of brand A*

The advertisement begins showing a mother and her child playing happily using building blocks. Then the mother turns to the camera and says 'As a mother, I'm aware that the choices I make today determine my child's future'. In the next scene, she prepares and provides a glass of milk using brand A for her child, stating 'I know brand A's essential nutrition and probiotic are scientifically designed to..'; at which point the scene transitions into one where small orange cubes with names of nutrients form a circle around the child, and in the background, an audio of 'to reinforce his immunity' could be heard in the mother's voice. Next, the scene transits into small blue cubes with names of nutrients forming an arrow facing upwards next to the child, and in the background an audio of 'encourage normal growth' could be heard. Then the scene changes into small orange, blue and yellow cubes with names of nutrients orbiting around the child and in the background, there is an audio of 'and support long term health'. After that, the scene changes and those blue, yellow and orange cubes with names of nutrients combine to form the brand A package. In the next scene, the child completes a rocket using blocks that has some resemblance to the previously shown cubes and mother hugs her child with joy. Then the next scene shows a visual text of 'Great start to a great life' next to the brand A's package.

Finally, the advertisement ends with the child running forward from his mother and mother looking at the child with happiness.

In this advertisement, a number of signifiers of different nature are used to present the image of brand A as a product which provides nutritional and health benefits (see Table 1 for a summary).

In terms of nutritional claims, the animation of blue, yellow and orange cubes, which are the brand colours presented in the package, with nutrition names on them forming the brand A package signifies (connotatively) the nutritional claim through the mode of deception of intra-attribute misleadingness (Hastak & Mazis, 2011) implying that brand A uniquely possesses those nutrients.

The majority of signifiers either directly claim or imply health benefits. The dialogues such as 'to reinforce his immunity', 'encourage normal growth' and 'and support long term health' in the advertisement are denotative signifiers that directly establish health claims such as immunity development, growth development and long term development. It should be noted that the advertiser has made clever use of words such as 'reinforce', 'encourage' and 'support' in order to preserve the literal truthfulness of the claims, in that the advertisement doesn't claim that the milk causes these benefits. Nevertheless, the link established between the brand and these health benefits is clear.

In addition, the advertisement employs a range of connotative signifiers to imply many health claims. The animation of small cubes forming into a circle and orbiting the child signifies immunity and the arrow signifies growth. The action of the child completing a rocket using building blocks after drinking the milk prepared using brand A signifies that children will become smart and intelligent after consuming brand A. Textually, the health inference that consumption of brand A will enhance the future developments of child has been signified through using the dialogues 'As a mother, I'm aware that the choices I make today determine my child's future', and 'by supporting his blocks of life today I'm preparing him to be his best tomorrow', and the visual text 'Great start to a great life'; this meaning is supported by the visual of the child moving forward at the end of the advertisement. All these deceptions are different forms of semantic confusions (Hastak & Mazis, 2011).

#### *5.1.2. Newspaper advertisement of brand A*

In comparison to the television advertisement, the newspaper advertisement of brand A (Figure 1) has utilized fewer deceptive signifiers to signify health and nutrition related claims. The signifiers used in this advertisement have been furnished with English translation for the understanding of the readers.

Brand A has utilized the text ‘உங்கள் குழந்தையின் எதிர்காலத்திற்கு சிறந்த ஆரம்பம். இயற்கையான வளர்ச்சியை ஊக்குவிப்பதற்கும், நோய் எதிர்ப்புச்சக்தியை அதிகரிப்பதற்கும், நலமான வாழ்விற்கும் அவசியமான விஞ்ஞானரீதியாகத் தயாரிக்கப்பட்ட புரோபயோட்டிக்ஸ் மற்றும் போஷாக்கு நிறைந்தது- [Translation: ‘Good start for your child’s future.



Contains essential nutrients and probiotics which are scientifically designed to increase the natural growth, enhance the immunity and are essential for healthy life]. This denotatively makes nutritional claims as well as directly claims health benefits of brand A. Once again words such as ‘increase’ and ‘enhance have been used to maintain the literal truthfulness of the message.

The advertisement also uses the text ‘சிறந்த வாழ்க்கைக்கு சிறந்த ஆரம்பம் [Translation: ‘Great start to great life’] to convey the health benefit that brand A will provide future development. Further ‘சிறந்த ஆரம்பம் [Translation – ‘Great start’] has been given prominence through enlarged text, highlighting the inference that brand A is the best option for the children. In this text, the advertisement leads to semantic confusion (Hastak & Mazis, 2011) of consumers.

Figure 1. Newspaper advertisement of Brand A

### 5.1.3. Television advertisement of brand B

This advertisement starts with showing a mother and her child reading a book. Mother teaches the names of horse and zebra by showing their pictures in the book to her child. After a week, the child is shown dressing up for a costume party as a white horse. At the (outdoor) party, the child accidentally gets a black paint mark on his costume from a freshly painted fence. The child thinks for a moment, then rubs his body against the fence so that the white costume gets black stripes, thus converting the horse costume into a zebra costume. Then he happily shouts ‘Zebra’. After watching the act of this child, a lady standing next to the mother says “your child is so bright”. The mother replies “Kids learn fast. Proper nutrition and stimulation is important for overall growth and development. Brand B is enriched with more nutrition than regular milk formulated with vitamins minerals and important nutrients for 1- 3 year olds” and hands over the brand B packet to the lady.

Three coloured circles in blue, purple and yellow spring out from the package in the mother's hands. Then the scene changes where the three circles become enlarged to fill the screen and become converted to three turning cogwheels that support each other. The words 'minerals', 'vitamins' and 'essential nutrients' are seen on the three cogwheels that are turning. Then the wheels recede into the background and once again form the circles on a brand B package. In the next scene, the lady who had been talking to the mother is seen replacing a packet labelled 'Full Cream Milk' on her shelf with a brand B pack. Then the scene transitions to a visual of brand B package in a blue coloured background accompanied by a voice-over: "start smart with brand B". In the blue background there are a number of shady white shapes. One is a DNA strand, and others are connected pentagon shapes that resemble the structure of DNA.

In this advertisement, the nutritional claims are being made in two ways. First, the mother's statement "Brand B is enriched with more nutrition than regular milk with vitamins, minerals and important nutrients for 1 – 3 year olds" is a direct claim. A second direct claim is made with the visual of the tree cogwheels depicting the words 'minerals', 'vitamins' and 'essential nutrients'. Both of these are denotative signifiers. In this advertisement too there is a clever use of words in the phrase "enriched with more nutrition than regular milk". The words 'regular milk' establishes the literal truth – i.e. the comparison is with ordinary full cream milk. However, the phrase "enriched with more nutrition" creates the impression that Brand B has a greater nutritional content than other brands in the market, whereas there are other brands of milk powder in the market that have been fortified with nutrients (e.g. Brand A). This is a form of intra-attribute misleadingness, namely uniqueness (Hastak & Mazis, 2011).

Health claims are made both through denotative and connotative signifiers. One such denotative signifier is in the dialogue "Kids learn fast. Proper nutrition and stimulation is important for overall growth and development. Brand B is enriched with more nutrition than regular milk formulated with vitamins minerals and important nutrition for 1- 3 year olds". Here the advertisement cleverly juxtaposes the nutritional claim of the brand with a general statement on the importance of nutrition for growth, development and 'learning fast', creating a misleading health claim related inferences that brand B will facilitate the learning skills and overall growth of children since it contains the essential nutrition. This claim is strengthened with the use of a number of connotative signifiers. The action of child converting the horse costume into zebra costume creates inferences about the intelligence of the child. Further, the dialogue "your child is so bright" also implies the child's intelligence. Finally, the images of the DNA strand and structure implies unspecified health effects. Although the advertisement makes no direct claim of increasing intelligence, when all these connotative signifiers are juxtaposed with the brand in the advertisement, they convey the impression that brand B causes the child to become more intelligent. This can be considered as a form of semantic confusion (Hastak & Mazis, 2011). The advertisement is creating further semantic confusion by establishing the misleading implied idea that



consuming brand B from small age will enhance the future development of children through the dialogue 'Start smart with brand B'.

The semiotic analysis of television advertisements of brands A and B and the newspaper advertisement of brand A indicates that these advertisements have utilised a number of denotative and connotative signifiers to make both nutritional and health claims. These claims can result in deception through direct claims, semantic confusion and intra attribute misleadingness. The summary of these findings are presented in Table 1.

Table 1

*Semiotic analysis of advertisements*

Signifier	Claim	Mode of deception
Brand A television advertisement		
The small cubes in brand colours with nutrition names forms into a Brand A packet (Animation)	Brand A is rich in nutrition and only brand A contains that nutrition (Connotative nutritional claim)	Intra attribute misleadingness (uniqueness)
'To reinforce his immunity' (Dialogue)	Provide protection from diseases (Denotative health claim)	Direct claim
'Encourage normal growth' (Dialogue)	Helps to grow (Denotative health claim)	Direct claim
'and support long term health' (Dialogue)	Provides future health benefits (Denotative health claim)	Direct claim
Cubes orbiting the child (Animation)	Immunity (Denotative health claim)	Semantic confusion
Vertical arrow (Animation)	Growth (Denotative health claim)	Semantic confusion
Child builds a rocket using the cubes. The final finishing cube similar to the cube mother gave in beginning (Action)	Smartness of the child has improved (Denotative health claim)	Semantic confusion
'As a mother, I'm aware that the choices I make today determine my child's future. By supporting his blocks of life today, I'm preparing him to be his best tomorrow' (Dialogue)	Future development (Denotative health claim)	Semantic confusion

'Great start to a great life' (Dialogue and visual text)	Future development (Denotative health claim)	Semantic confusion
The child takes his hand away from the mother and runs forward towards the camera (Action)	Future development (Denotative health claim)	Semantic confusion

#### Brand A newspaper advertisement

உங்கள் குழந்தையின் எதிர்காலத்திற்கு சிறந்த ஆரம்பம். இயற்கையான வளர்ச்சியை ஊக்குவிப்பதற்கும், நோய் எதிர்ப்புச்சக்தியை அதிகரிப்பதற்கும், நலமான வாழ்விற்கும் அவசியமான விஞ்ஞானரீதியாகத் தயாரிக்கப்பட்ட புரோபயோட்டிக்ஸ் மற்றும் போஷாக்கு நிறைந்தது.	Contains nutrients and probiotics (Denotative nutritional claim)	Direct Claim
[Translation: Good start for your child's future. Contains essential nutrients and probiotics which are scientifically designed to increase the natural growth, enhance the immunity and are essential for healthy living.] (Text)	Protection from illness, helps in the growth and facilitates the overall health development ( Denotative health Claim)	Direct Claim
'சிறந்த வாழ்க்கைக்கு சிறந்த ஆரம்பம் [Translation: 'Great start to great life'] (Text)	Future development (Connotative health claim)	Semantic confusion

#### Brand B Television Advertisement

'Brand B is enriched with more nutrition than regular milk formulated with vitamins minerals and important nutrients for 1- 3	Contains more important nutrients than other milk (Denotative nutritional claim)	Intra attribute misleadingness (uniqueness)
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year olds’  
(Dialogue)

Cogwheels with the words mineral, vitamins and essential nutrients (Animation and visual text)	Contains important nutrients (Denotative nutritional claim)	Direct claim
‘Kids learn fast. Proper nutrition and stimulation is important for overall growth and development. Brand B is enriched with more nutrition than regular milk formulated with vitamins minerals and important nutrients for 1- 3 year olds’ (Dialogue)	Brand B facilitate learning skills, growth and development (Denotative health claim)	Juxtaposition of the nutritional claim with importance of ‘proper nutrition for growth
The child making black paint marks on the horse costume and saying ‘zebra’ (Action and dialogue)	Intelligence of the child (Denotative health claim)	Semantic confusion
‘Your child is so bright’ (Dialogue)	Child is comparatively smarter the other children (Denotative health claim)	Semantic confusion
DNA strand and structure seen in the background (Animation)	Enhancement of health of the child (Denotative health claim)	Semantic confusion
‘Start smart with brand B’ (Dialogue)	Future development (Denotative health claim)	Semantic confusion

## 5.2. Influence of the deceptive claims on parents

The analysis of interviews with parents indicates that they are deceived by the advertisements in the ways that were identified in the semiotic analysis.

### 5.2.1. Nutritional claims deceptively perceived by the parents

It was witnessed in the interviews that the parents make positive inferences about the brand based on the intra attribute misleading claims.

“Of course brand A has unique features... compared to other brands, they have special nutrition... In the beginning I was using another brand for my child, then I saw this same advertisement and now I’m using brand A. I think brand A has more nutrition than the previous brand which I was using” (Respondent 4 - Brand A television advertisement)

The above response of the parent indicates that based on the nutritional claims the parent has made an inference of unique nutrition which only belongs to brand A. Interestingly, the parent compares brand A with another brand and create an inference that the nutrition is unique to brand A compared to the other brand even though the advertisement doesn't make any comparative claims. According to Hastak and Mazis (2011), this is considered as unique attribute claim which comes under intra attribute misleadingness.

In addition to the above intra attribute claim, parents have also perceived other nutritional benefits through another form of deception which was not identified in the semiotic analysis of the advertisements.

"This product has probiotics which is not available in other milk powder. I don't know much detail about probiotics but I think it as an additional unique nutrition which is good for the health of children." (Respondent 5 - Brand A television advertisement)

Even though probiotics are available in many other food product brands such as Lactogen and Cerelac in Sri Lanka, the parent has made a misleading inference that probiotics are only available in brand A because probiotics have been claimed in the advertisement of brand A.

Parents also make broader interpretation that go beyond the literal meaning for the nutritional claims which appear in the advertisements.

"Advertisement shows that this brand has balanced diet. It is good for children who are fussy eaters. Because it gives them a balanced diet." (Respondent 5 - Brand B television advertisement)

"Children will get more nutrition by consuming this product when compared to eating the regular meals." (Respondent 18 - Brand A television advertisement)

Above responses indicate that the respondent 5 and respondent 18 have created inferences that brand A has the same nutritional value as a balanced diet and brand B contains more nutrition than regular meal respectively. Neither brand A nor brand B has made these claims shown in the advertisements, however parents have created broader positive inferences for the nutritional claims. This is a form of inter-attribute misleadingness where "consumers may rely on a claim for one attribute ... to infer a claim on another attribute" (Hastak & Mazis, 2011, p. 163).

### *5.2.2. Health claims deceptively perceived by parents*

Parents of the study unquestioningly accepted the direct health claims made in the advertisements. Respondent 7 and Respondent 15 below have respectively made the inferences that brand A facilitates immunity development and growth, based on the direct claim made on the newspaper advertisement of brand A.

“They have said that brand A contains immunity system development... therefore it will protect the children from diseases... so this product is good for the children.” (Respondent 7- Brand A newspaper advertisement)

“I think this product will facilitate the growth of the children because they have mentioned it in the advertisement” (Respondent 15- Brand A newspaper advertisement)

Parents’ beliefs about health benefits of the advertised brands are not limited to the claims directly made in the advertisements. The findings discussed below indicate that the denotative health claims implied in the advertisements have clearly resulted in perceptions of benefits that are beyond those claimed directly in the advertisement. Following are two quotes that bear evidence for this.

“They are highlighting about growth and height can be better than other children if they consume this product” (Respondent 1 - Brand A television advertisement)

“I have seen this advertisement before and I’m using this product now. I’m giving this product to my children to enhance the growth and immune system development.” (Respondent 11 - Brand B television advertisement)

The advertisement of brand A does not make any claim about comparative height of children drinking the brand A milk. Similarly, brand B advertisement makes no claims about growth or immunity. However, it is clear that the participants have made those inferences regarding these performance aspects of the two brands based on the implied messages of the advertisements. In the semiotic analysis it was identified that such messages are communicated by the advertisements through connotative signifiers such as the upward directed arrow and DNA strand.

Similar to the inferences created regarding the growth, parents create positive inferences about the intellectual development of children based on the advertisements.

“If children drink this product, it will develop the intelligence of the children. I gave brand A to my first daughter. Now she is five years old. Based on my observation, when compared to other children my daughter seems to have better memory power.” (Respondent 16 - Brand A television advertisement)

“I think that this milk powder will enhance the creative knowledge of children because the child in the advertisement changed his horse costume into zebra costume. I have given this milk powder to my elder children and I’m planning to continue this product to my younger child also.” (Respondent 13 - Brand B television advertisement)

The responses above indicate that the parents create inferences about the intellectual benefits such as memory power, intelligence and creative thinking based on the advertisements. The findings of the semiotic study indicates that the actions of child completing the rocket and child changing horse costume to zebra costume signify the

intellectual development and similarly the parents have made the inference related to intelligence. Further, parents have created the inference about the health benefit of protection from diseases based on advertisements.

“Looking at the cubes rotating around the child, it means that the child is protected from new viruses and other unwanted things.” (Respondent 21 - Brand A television advertisement)

In the above response, it is clear that the parent had formed an inference that the product protects children from illness based on the animation which was used in the advertisement. All these inferences made by parents based on conative signifiers can be considered as different forms of semantic confusion (Hastak & Masiz, 2011).

Interestingly, some of the responses of participants indicated that they have formed broader inferences about a number of health benefits that are not claimed in the advertisements either through denotative or connotative signifiers. For example, respondent 3 and respondent 5 below have inferred from the advertisement that brand B is healthy and that it facilitates to gain healthy weight respectively. Neither of these claims are made in the advertisements.

“This product seems to be healthy product for children.” (Respondent 3 - Brand B television advertisement)

“This product will help the children to gain healthy weight especially for the fussy eaters.” (Respondent 5 - Brand B television advertisement)

These responses of respondent 3 and respondent 5 indicate that the parents have formed these extended inferences based on an overall meaning gleaned from advertisement as whole rather than specific signifiers. This appears to be a form of Inter-attribute misleadingness (Hastak & Masiz, 2011) which seems to have resulted from semantic confusion created by the combination of signifiers in the advertisements.

In summary, the perceptions of parents regarding the messages communicated by the advertisements mirror, the findings to a great extent, of the semiotic analysis of the advertisements. Similar to the findings of the semiotic analysis, it was identified that parents form erroneous perceptions of nutritional value of the advertised brands through intra attribute misleadingness (unique attribute) and erroneous perceptions of health benefits primarily through semantic confusion. However, the parents also form deceived impressions in ways that cannot be identified through an external semiotic analysis of advertisements because they appear to expand their interpretations beyond what is explicitly or implicitly claimed in the advertisements. These expanded interpretations of nutritional and health claims appear to be forms of inter-attribute misleadingness.

### **5.3. Purchase decision of the parents**

The third objective of this study was to examine the extent to which parents' purchase decisions are influenced by the deceived perceptions they form through advertising messages. The first indication of this influence is in the positive beliefs that the advertisements have created in the parents' minds.

"They say it contains good vitamins and all minerals and it could help the child for their growth... Could be... I believe in that" (Respondent 1- Brand A television advertisement)

"I feel like this product is good for children... I think the details mentioned in the advertisement are correct" (Respondent 15- Brand B television advertisement)

The responses of other parents were similar to the above responses. These responses provide evidence that the parents believe the claims which appear in the advertisement. Further, the responses of the parents also indicate that these beliefs about health and nutritional claims create strong purchase desires in the minds of a parent.

"Yes, when I look at these advertisements I feel like buying this product" (Respondent 7 – For both brand A and B advertisements)

"This product seems to be good for children... no harm in buying this product" (Respondent 9 – Brand B Television advertisement)

The above responses clearly indicate that the parents have got the desire to purchase after watching the advertisements which were shown to them. The belief of the respondent 9 regarding health and nutritional value of brand B has positively affected the purchase desire. Most of the parents responded in a similar manner after watching the advertisement. Further, the parents who were already using brand A or brand B had bought the product based on the advertisements.

"I'm using this product. I bought this after watching the advertisement... I bought this product for growth and immune system development." (Respondent 2 – Brand A Television advertisement)

"In the beginning I was using another brand. I saw the advertisement of this brand B. It was very catchy and I liked that advertisement. After that only I started giving this brand B for my son." (Respondent 14 – Brand B Television advertisement)

When analysing the responses of the parents regarding the purchase desire, it is clear that the parents prefer to purchase or have purchased the brand A or brand B because they have been influenced by the health or nutritional claims used in the advertisement. Therefore it is clear evidence that the parents' purchase decisions have been positively influenced by the deceptive health and nutritional claims which have appeared in the advertisement.

There were mixed responses from the participants when it was explained to them that the health claims made in the advertisement were deceptive since it has not been clinically tested and proved according to the Food act of Sri Lanka (1980). Some parents immediately changed their mind about the brands:

“Definitely not... if it hasn’t been tested and ensured to a certain standard I will definitely not purchase the product.” (Respondent 1)

“Really? That’s why we shouldn’t believe everything they show in the advertisement. I will ask the doctor before giving anything to my daughter” (Respondent 18)

The above response came mostly from parents who had not previously purchased the brands, but expressed a willingness to purchase. However the purchase intention of a few parents who were already purchasing the product for their children did not change even after the revelation that the health claims which are used in the advertisement were deceptive.

“I’m using brand A for three years for my daughter... I have even used this same brand for my elder daughter too. I’m satisfied with the product. Actually my first daughter seems to be active and intelligent compared to girls of the same age. I never had any issue with brand A milk. I can’t change the milk powder since I’m afraid that it might create some issue... like loose motion. I don’t mind continuing brand A” (Respondent 2)

The response of respondent 2 indicates that once the parents have formed a favourable opinion based on deceptive claims of a brand and acted on it, they are reluctant to change the opinion even when facts are presented to the contrary. This shows the power of deception the advertisements possess.

Overall, the findings of the semiotic study and interview with the parents indicate that 1) brands use deceptive nutritional and health claims in their advertisements, 2) parents tend to make positive inferences and beliefs about health and nutritional benefits based on these claims, and 3) these positive inferences and beliefs based on the deceptive health and nutritional claims have positive impact on the purchase intention of the parents. Although the purchase intention could change when they realize that the claims used in the advertisement are deceptive in nature, parents who had acted on the mistaken beliefs prefer to continue to purchase the product even after realizing that the claims used in the advertisement are deceptive in nature.

## **6. Discussion**

The findings of this study are in line with several characteristics identified in previous research in relation to food advertising and purchasing habits of parents when buying food for their children. From the interview findings it is clear that parents consider nutritional and health benefits when purchasing food for their children, as indicated by previous



research (Kelly et al., 2006). As identified in the semiotic study, it is also clear that marketers target this tendency of parents when advertising food products (Hasler, 2008).

In addition, the findings also indicate that parents assume that the brands which utilize health and nutritional claims in the advertisements uniquely contain those claims and are healthier than the brands which do not advertise their product. These findings are similar to the findings of Roe et al. (1999) which indicate that the customers view the products which have claims as healthier products than the other products. Harris et al. (2011) state that the parents interpret health and nutritional claims, in a much broader manner than the literal information presented in advertisements. The findings of the analysis indicate that parents create broader inferences to the nutritional claims which appear in the advertisement in a similar manner.

McNeal and Ji (as cited in Kelly et al., 2006) state that marketers advertise the product in a manner which can gain the trust of the parents. The signifiers used in the advertisements create trust among the parents by portraying a parent to be recommending the brand similar to the literature evidence. Further the findings of thematic analysis indicate trust and beliefs formed by parents about the health and nutritional claims utilized in advertisement create a purchase intention among the parents. Literature evidence also indicates that advertisements are used as a tool to increase the demand for products by creating trust among the consumers (Samaraweera & Samanthi, 2010; Shamila, n.d).

Findings indicate that some parents didn't change their purchase intention even when it was revealed to them that the health claims which were used in the advertisement were deceptive since they have not been clinically tested and proven according to the Food act of Sri Lanka (1980). This is similar to the experimental findings of Russo et al. (1981) which indicate that even after corrected versions of deceptive advertisements were shown to customers, their original belief formed by deceptive advertisements were not altered.

### ***6.1. The deceptive advertising typology***

In addition to being in line with previous literature, the findings also indicate that the parents have formed misleading inferences about health and nutritional claims which appear in the advertisements that can be classified under three of the five types identified by Hastak and Mazis (2011), namely, semantic confusion, intra attribute misleadingness and inter-attribute misleadingness.

The semiotic study of the advertisements indicates that brands use different kinds of signifiers in a manner as to create the misleading inferences through semantic confusion. Further, it indicates that most of the brands use signifiers such as animations, actions, dialogues or texts to imply the health benefits of the products rather than directly claim the health benefits. It is noteworthy that the advertisements make clever use of words to imply nutritional and health benefits while maintaining literal truthfulness of their claims. Based on Hastak and Mazis's (2011) definition of semantic confusion, "the use of confusing

language or symbols in advertisements or on packages” (p. 160), this wordplay could be considered as a form of semantic confusion. Interviews with parents confirm that the parents form misleading inferences about the health benefits of brands such as facilitation of growth, immune system development, intellectual development and future development which were implied through the signifiers in the advertisement due to semantic confusion.

In their description of semantic confusion, Hastak and Mazis (2011) provide a somewhat narrow explanation as “a promotional claim [that] uses a word or phrase that is similar to a more familiar word or phrase” (p. 160). But, the word play found in advertisements creates confusion in more complex ways. Advertisements include qualifying phrases that maintain literal truthfulness of the claims, but these are ignored by the consumers. This is a form of semantic confusion that is not discussed by Hastak and Mazis (2011). Further, semantic confusion is also enhanced through the combination of words and pictures. Many pictorial devices have been employed to suggest health benefits such as growth and superior intellect. Many of these, (e.g. a child performing a smart act), are indexical signs (Rose, 2007) that have inherent relationships to the meaning it signifies (e.g. smart child). However, by combining these in the advertisement with the brand being advertised this indexical meaning is transferred to the brand so that an arbitrary relationship is created between the meaning (e.g. smart child) and the brand. This meaning is then intensified with suggestive words (e.g. “your child is so smart”) that make no direct references to the brand. This is how meanings are usually constructed for brands in advertisements: through the arbitrary combination of signs abstracted from external referent systems with the brands (Williamson, 1978). Thus, it appears that semantic confusion could occur in more complex ways than it is proposed by Hastak and Mazis’s (2011). When various signs are presented within the frames of the advertisements together with the brand, even though the advertisement doesn’t explicitly connect the meaning with the brands, the viewer or reader transfers the meanings of the signs to the brand (Williamson, 1978). Thus, semantic confusion, viewed more broadly than explained by Hastak and Mazis’s (2011) is a powerful means of deceiving consumers through advertisements while being literally truthful.

In addition to semantic confusion, there are also other ways in which the findings provide empirical evidence for the deceptive advertising typology. Findings of the semiotic analysis indicate that the signifiers used in advertisements create a misleading inference that the advertised brand is the only brand possessing the nutrients stated in the advertisement. Parents’ interpretations of the advertisements confirmed that they believed this implied uniqueness. Hastak and Mazis (2011) state that when a brand features an attribute that is not discussed in other brands’ advertisements, it will lead to an inference to the customer that this brand uniquely possesses that attribute. Similarly, the findings of the analysis indicate that the parents have made inferences that the considered brands uniquely contain nutrition and probiotics although there are other brands in the market which contain those nutrients and probiotics. This type of claim falls into the category of intra-attribute misleadingness in the typology.

The findings indicate that the parents extrapolate the nutritional and health claims made in the advertisements to form inferences regarding nutritional and health benefits that are not claimed either explicitly or implicitly in the advertisements. According to Hastak and Mazis (2011) this is inter-attribute misleadingness since consumers create inference about one attribute based on another attribute because of their prior knowledge or expectation of association between nutrition and health benefits. Given the fact that many of the nutritional and health claims in the advertisements were presented somewhat deceptively through various forms of semantic confusion, it appears that this inter-attribute misleadingness has resulted from the semantic confusion created in the advertisements. This interplay between different forms of deception is not identified in the original work of Hastak and Mazis (2011).

Even though Hastak and Mazis (2011) identified five types of misleading claims which appear in advertisement through their typology, the above mentioned three types of misleading claims are the ones that were mostly reflected in the research findings. The above discussion indicates that the findings obtained based on analysis are in line with these three categories of deception the theoretical framework although the dynamics within and between different categories appears to be more complex than originally claimed by the developers of the framework.

## **7. Conclusion**

Deceptive food advertisements and their influence on the parents was the focus of this paper. Findings indicate that advertisements make both nutritional and health claims using various forms of deception, and the claims made are literally truthful. Further, these deceptive claims not only lead parents to make erroneous inferences, but also influence their purchase intentions. This influence is such that once the parents act on the mistaken inferences, they are reluctant to change their beliefs even after becoming aware of the deceptive nature of the advertising claims.

This paper contributes to the literature on deceptive advertisements in two ways. First, it examines deception and its consequences in an important area that has not been researched before, namely, the purchase of food by parents for their young children. Second, it not only provide empirical evidence for the deceptive claims typology of Hastak and Mazis (2011), which doesn't appear to have been empirically tested before, but also indicates ways in which the typology could be improved. From a practical perspective, the paper provides useful insights for regulators by showcasing the different ways in which advertisers deceive consumers while being literally truthful when advertising food. It indicates the necessity for more rigorous regulatory oversight of advertising in the area of children's food advertising. It also provides information to consumers to become more vigilant in interpreting advertising claims.

One limitation of the study is that it utilized a basic form of semiotic analysis. There are sophisticated semiotic techniques to analyse audio-visual content which could be used to study television advertisements. Thus, future studies could utilize more sophisticated approaches for a more fine grained analysis of deceptive advertising. A second area of future studies is a more comprehensive empirical investigation of the deceptive advertisement typology. Since the focus of this study was a specific area of consumption behaviour, the findings were limited to only three categories of the typology. However, a more broad based study of a wider spectrum of products and services could empirically demonstrate the impact of all the categories of deception identified in the typology on consumers' behaviour.

## References

- Borland, S. (2009, July 22). Formula milk ad banned for 'misleading parents' over immunity boosting claims. *Daily Mail*. Retrieved from <https://www.dailymail.co.uk/health/article-1201307/Formula-milk-ad-banned-misleading-parents-immunity-boosting-claims.html>
- Braun, V., & Clarke, V. (2013). Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. *The Psychologist*, 26(2), 120-123.
- Bui, M., Kaltcheva, V. D., Patino, A., & Leventhal, R. C. (2013). Front-of-package product labels: influences of varying nutritional food labels on parental decisions. *Journal of Product & Brand Management*, 22(5/6), 352-361. doi:10.1108/jpbm-05-2013-0298
- Carson, T. L., Wokutch, R. E., & Cox, J. E. (1985). An ethical analysis of deception in advertising. *Journal of Business Ethics*, 4(2), 93-104. doi:10.1007/bf00383562
- Center for Policy Alternatives. (2009). *Children in advertising in Sri Lanka a media study* (Rep.). Retrieved from <http://www.cpalanka.org/wp-content/uploads/2009/8/Children%20in%20Advertising%20-%20A%20Media%20Study.pdf>
- Chan, K., Leung, V., & Tsang, L. (2013). Health information and advertising appeals in food commercials: A content analysis. *Journal of Nutritional Therapeutics*, 2(3), 137-144.
- Craswell, R. (1985). Interpreting deceptive advertising. *Boston University Law Review*, 65(4), 657-732.
- Csorba, L. M. (2011). Deceptive and subliminal food advertising. *Mediterranean Journal of Social Sciences*, 11, 138-150
- Daugeliene, R., & Liepinyte, M. (2012). *Interrelation of misleading advertising and solutions of consumers: Legal regulation and institutional background in Lithuania*. (Unpublished master's thesis). Kaunas University of Technology, Institute of Europe, Lithuania. Retrieved from <http://dx.doi.org/10.5755/j01.eis.0.6.1584>

- Emond, J. A., Smith, M. E., Mathur, S. J., Sargent, J. D., & Gilbert-Diamond, D. (2015). Children's food and beverage promotion on television to parents. *Pediatrics*, 136(6), 1095-1102. doi:10.1542/peds.2015-2853
- Food Act No. 26 of 1980. Retrieved from <http://www.health.gov.lk/enWeb/FOODWEB/files/regulations/Food%20Act,%20No.%2026%20of%201980/Food%20Act,%20No.26%20of%201980%20-%20E.pdf>
- Gardner, D. M. (1975). Deception in advertising: A conceptual approach. *Journal of Marketing*, 39(1), 40 - 46. doi:10.2307/1250801
- Glazer, A., & Mitchell, J. (n.d.). *How parents are being misled* (Rep.). Retrieved [http://image.guardian.co.uk/sys-files/Guardian/documents/2008/12/15/G449\\_How\\_parents\\_are\\_being\\_misled\\_report.pdf](http://image.guardian.co.uk/sys-files/Guardian/documents/2008/12/15/G449_How_parents_are_being_misled_report.pdf)
- Gunaratne, S. (2009). Advertising freedom and customer decision making. *Sri Lankan Journal of Management*, 14(2), 41-55.
- Harris, J. L., Thompson, J. M., Schwartz, M. B., & Brownell, K. D. (2011). Nutrition-related claims on children's cereals: What do they mean to parents and do they influence willingness to buy? *Public Health Nutrition*, 14(12), 2207-2212. doi:10.1017/s1368980011001741
- Hasler, C. M. (2008). Health claims in the United States: An aid to the public or a source of confusion? *The Journal of Nutrition*, 138(6), 1216-1220. doi:10.1093/jn/138.6.1216S
- Hastak, M., & Mazis, M. B. (2011). Deception by implication: A typology of truthful but misleading advertising and labeling claims. *Journal of Public Policy & Marketing*, 30(2), 157-167. doi:10.1509/jppm.30.2.157
- Kelly, J., Turner, J. J., & McKenna, K. (2006). What parents think: Children and healthy eating. *British Food Journal*, 108(5), 413-423. doi:10.1108/00070700610661376
- Kvale, S. (2007). *Doing interviews*. Thousand Oaks, CA: Sage.
- McNeal, J. U. (1999). *The kids market: Myths and realities*. Ithaca, NY: Paramount Market Publishing.
- Noble, G., Stead, M., Jones, S., McDermott, L., & McVie, D. (2007). The paradoxical food buying behaviour of parents: Insights from the UK and Australia. *British Food Journal*, 109(5), 387-398. doi: 10.1108/0070700710746795
- Olson, J. C., & Dover, P. A. (1978). Cognitive effects of deceptive advertising. *Journal of Marketing Research*, 15(1), 29 - 38. doi:10.2307/3150398
- Penn, G. (2000). Semiotic analysis of still images. In M. W. Bauer & G. Gaskell (Eds.), *Qualitative researching with text, image and sound: A practical handbook* (pp. 227-245). London: Sage
- Roe, B., Levy, A. S., & Derby, B. M. (1999). The impact of health claims on consumer search and product evaluation outcomes: Results from FDA experimental data. *Journal of Public Policy & Marketing*, 18(1), 89-105.
- Rose, G. (2007). *Visual methodologies: An introduction to the interpretation of visual materials*. London: Sage.

- Russo, J. E., Metcalf, B. L., & Stephens, D. (1981). Identifying misleading advertising. *Journal of Consumer Research*, 8(2), 119. doi:10.1086/208848
- Russell, C. G., Worsley, A., & Liem, D. G. (2014). Parents' food choice motives and their associations with children's food preferences. *Public Health Nutrition*, 18(6), 1018-1027. doi: 10.1017/S1368980014001128
- Samaraweera, G. R. S. R. C., & Samanthi, K. L. N. (2010). *Television advertising and food demand of children in Sri Lanka: A case study from Galle District* (Unpublished master's thesis). University of Kelaniya, Sri Lanka.
- Sayed, I. (2014, July). An empirical research on misleading advertisements and its impact on consumer buying behaviour. Presented in International Conference on Global Business, Economics, Finance and Social Sciences, Chennai, India.
- Shabbir, H., & Thwaites, D. (2007). The use of humor to mask deceptive advertising: It's no laughing matter. *Journal of Advertising*, 36(2), 75-85. doi:10.2753/joa0091-3367360205
- Shamila, D. L. (n.d.). *The impact of advertisements on consumers: A comparative analysis of consumer laws in Sri Lanka*. (Unpublished master's thesis). Department of Commercial Law, Faculty of Law, University of Colombo, Sri Lanka.
- Soni, P., & Vohra, J. (2014). Advertising foods to Indian children: what is the appeal? *Young Consumers*, 15(2), 178-192. doi:10.1108/yc-06-2013-00380
- Soni, P., & Vohra, J. (2014). Targeting the young food consumer. *Marketing Intelligence & Planning*, 32(5), 630-645. doi:10.1108/mip-04-2013-0072
- Survey Research Lanka. (2017). *Socio-Economic Classification (SEC) of Households*. Retrieved from <http://www.srl.lk/factfile/socio-economic-classification-sec-of-households/>
- Williamson, J. (1978). *Decoding advertisements: Ideology and meaning in advertising*. London: Marion Boyars

## **Entrepreneurship and Small Business Management**

## Becoming an Entrepreneur after Retirement: Entrepreneurial Intention of Technically and Vocationally Trained Military Personnel in Sri Lanka

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### Abstract

The research was conducted to study the entrepreneurial intention (EI) of military personnel who are getting ready for their retirement and identify the key determinants of entrepreneurial intention. They were undergoing a Technical Vocational Education and Training (TVET) organized by the military authorities for supporting their second career. Data were collected from 70 soldiers via questionnaire and Step wise regression analysis was used to evaluate the effects of variables. Self-efficacy, perceived environmental support and vocational education and training are significant predictors of entrepreneurial intention. In addition to the direct influence, vocational education and training has indirect influence on entrepreneurial intention through self-efficacy. Attitude toward entrepreneurial career, subjective norm and family background are not significantly contribute for developing entrepreneurial intention among retiring military personnel. The findings contribute to a fuller understanding of EI and the factors that precede the formation of this intention among vocationally trained military personnel.

**Keywords.** Entrepreneurial intention, Military personnel, Subjective Norm, Technical Vocational Education and Training (TVET)

### 1. Introduction

Entrepreneurship provides numerous benefits to society such as economic growth, reduction in unemployment, and development of economies (Yaghmaei & Ghasemi, 2015). According to many scholars, entrepreneurship is a process and entrepreneurial intention (EI) is the first step of venture creation. Intention can be defined as “a state of mind leading a person’s attention toward a specific object or a path in order to achieve something” (Schwarz, Wdowiak, Almer-Jarz, & Breitenacker, 2009). Decision to become an entrepreneur is a conscious decision that mainly depends on intention.

Most of the past studies on entrepreneurial intention have studied entrepreneurial intention by using students’ samples; quite a few studies focused on EI of individuals who



are preparing for retirement from permanent salaried employment with pension benefits (Miralles & Riverola, 2012; Nishantha, 2009). The main contribution of this study is to provide a deeper understanding of entrepreneurs' behavior through the study of one kind of nascent entrepreneurs; retiring military personnel.

Sri Lanka is a country that faced a thirty years long civil war which ended in 2009. Hiring young individuals for the army increased significantly in the war period. After the war ended, internal promotions were limited and many officers had to wait for a long period for next promotions. The entire army consists of 225,000 soldiers belonging to twelve regiments. Soldiers in service are provided with training, mainly in three stages. The continuous, ongoing military training which caters to the military skills of the soldiers are foremost in his early years of a soldier's military career. In addition, soldiers are providing professional training that support special tasks that are enrolled in their respective regiments.

An average 2,500 soldiers are retiring annually from a regiment after completing 22 years' service. As many of them join army around 18 to 20 years old, their age of the retirement is around 44 years, which obviously is a stage full of stamina and capacity to work. As a support for starting a second career, military authorities in Sri Lanka have started vocational training in specially-designed vocational courses, like wood crafting, rubber product manufacturing, science of laying power cables (domestic), aluminum fabricating process, building construction etc. This training starts one year prior to their retirement which lays the foundation for a sound civil life after retirement. They will have two career options; working in private organization as salaried employee or becoming an entrepreneur by starting their own firms.

It is worth to study why some intend to start their own business, whereas others do not. Military experience uniquely prepares military personnel to lead others, work collaboratively, and adapt to frequently changing and unpredictable circumstances (Heinz, Freeman, Harpaz-Rotem, & Pietrzak, 2017). As emphasized by Kerrick et al (2014), military personnel are "natural" candidates for starting business ventures but empirical research on this population is limited. The

aim of the present study is to understand the current level of entrepreneurial intention and explore the factors that influence entrepreneurial intention among military personnel who are undergoing vocational education and training prior to their retirement.

Military personnel, being well disciplined, undergone rigorous military training and having multiple options may typically choose entrepreneurial career because they feel pulled towards it, rather than being pushed into it. Finally, early retiring people form a very important clientele for vocational training institutions. So in order to serve their training needs well, it is important to know what determines their career choices and intentions. Therefore, this study provides a new insight to the analysis of entrepreneurial intention.

After this introduction, the paper is composed of the following four parts: (a) conceptual background, (b) methodology, (c) results and discussion, and (d) conclusions.

## 2. Literature Review and Hypothesis Development

Purposeful actions of individuals depend on intentions (Liguori, Bendickson, & McDowell, 2018). Therefore, intentions are critical to understand human behaviour. Entrepreneurial intention is the state of the mind and prompts people to take up self-employment instead of being employed (Gelaidan & Abdullateef, 2017). Majority of the previous studies had been focused on entrepreneurial intention of different kinds of students and only limited studies focused on other samples such as retiring individuals.

The theory of planned behaviour (TPB) provides the basic framework to determine the influencing factors for entrepreneurial intention and behaviour. Attitudes towards the behaviour, subjective norm and perceived behavioural control are the determinants of the theory of planned behaviour (Ajzen, 1991). Perceived desirability (attitudes and social norms), perceived feasibility (self-efficacy) and propensity to act (stable personal characteristics) have been identified as necessities for developing entrepreneurial intention.

### *Attitudes towards the entrepreneurship*

Generally the attitudes are referred as to how people believe about the attributes of any object. The attitude towards entrepreneurship explains the certain beliefs of the individual towards the entrepreneurship behavior based on the attributes of it. The successful attributes pertaining to the entrepreneurship behavior forms the positive beliefs (or attitudes) vice versa (Ajzen, 1991). Therefore, the attitudes have direct impact over the entrepreneurial intention (Kruger & Carsrud, 1993). More specifically, the entrepreneurial intent of the technical students is strongly affected by their attitudes towards the entrepreneurship (Buli & Yesuf, 2015; Luthje & Franke, 2003). Therefore, the first hypothesis can be developed as follows.

H1. Personal attitudes have a positive influence towards the entrepreneurial intention of retiring military personnel.

### *Subjective norms*

Subjective norms accounts for approval of decision to become an entrepreneur by "reference people" (Miralles & Riverola, 2012). Retiring military personnel are concerned about their post retirement life and they are finding out their career choice preferences. The opinions of friends, family members and important others might be influential in this process.

H2. Retiring military personnel whose subjective norms towards self-employment are more positive are more likely to have intentions of becoming an entrepreneur.

### *Self-efficacy*

Self-efficacy can be identified as a strong personal belief in skills and abilities to initiate a task that leads to success (Pihie, 2009) and it is central to intentions toward entrepreneurship that specifically influences the perceived feasibility of starting a business (Dehghanpour Farashah, 2013). It has been considered as a key construct associated with entrepreneurs (Maritz & Brown, 2013). As Segal's (2005) opinion, people with a sense of entrepreneurial self-efficacy may be drawn to self-employment's desirable opportunities and benefits, compared to the availability of these benefits obtained through working for others.

H3. Self-efficacy has a positive influence on entrepreneurial intention among retiring military personnel.

According to contingency theory of entrepreneurship, situation forces individuals to choose entrepreneurship out of necessity. In the present study, the situational factors that will be tested as determinants of entrepreneurial intention are perceived environmental support and perceived technical vocational training support.

### *Perceived environmental support*

Environmental support refers to the overall economic, sociocultural, and political factors that influence people's willingness and ability to undertake entrepreneurial activities (Gnyawali & Fogel, 1994). As discussed by ukongdi, V., & Lopa, N. Z (2017), environment that is favourable to starting a new business, including availability of incentives and training for entrepreneurs, loans at low interest rates, and special awards, may make engagement in entrepreneurship an attractive occupational option. Therefore it is predicted that:

H4. Perceived environmental support would have a positive effect on entrepreneurial intention.

### *Technical Vocational Training support*

The next important factor in the evaluation of entrepreneurial intention is the effect of Technical Vocational Education and Training (TVET) support. TVET is form of education that primarily concern the development of occupational skills needed in an individual as a preparation for work (Maigida, Saba, & Namkere, 2013). A combination of entrepreneurship skills and occupation specific skills act as major tool for creating opportunities for for self-employments (Badawi, 2013). According to Pihie (2009) self-efficacy is affected by contextual factors such as education and past experiences. Two hypotheses can be derived as follows;

H5. Technical Vocational Education and Training Support has a positive effect on entrepreneurial intention.

H6. Technical Vocational Education and Training Support has a positive influence on self-efficacy

### 3. Conceptual Framework

The conceptual framework for the study shown in Figure 1 predicted that individual factors (attitudes, subjective norms family background and self-efficacy) and environmental factors (Perceived environmental support, TEVT support) as independent variables will have an influence on entrepreneurial intention, the dependent variable.

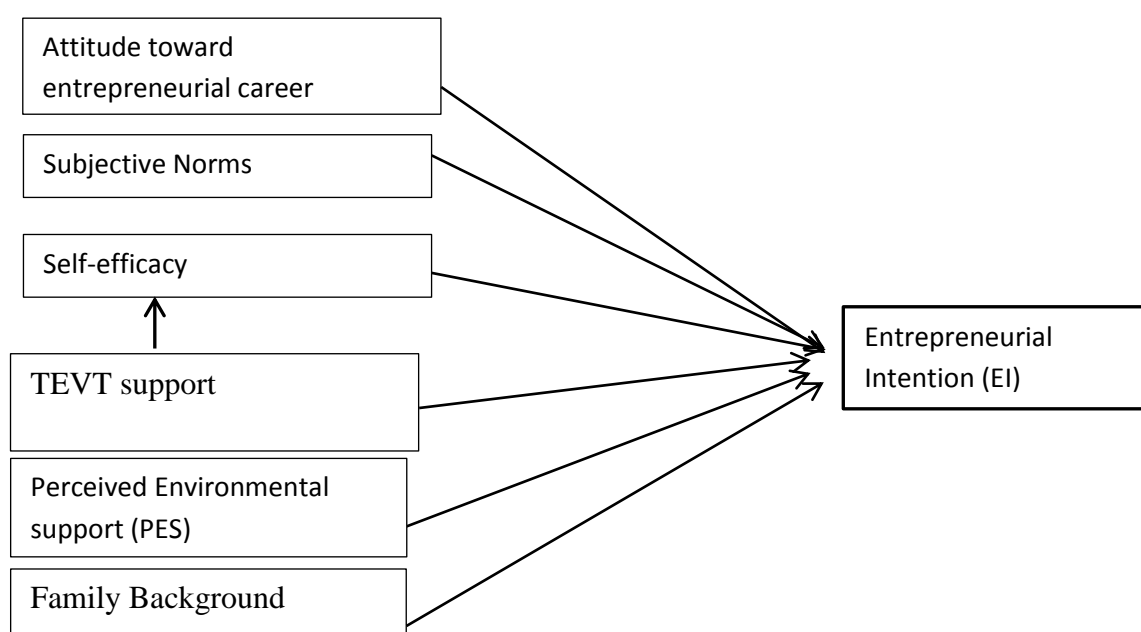


Figure 1. Conceptual framework

### 4. Methodology

#### 4.1 Sample and data collection

The retiring military personnel who were participating in pre-retirement vocational training programme course at Vocational Training Centre, Rathmalana, Sri Lanka, were selected as population for this research. There are more than fifteen regiments in the Sri Lanka army and the researcher selected one regiment for the current study as all regiments contain the same features as others. Using the random sampling method, the researchers personally distributed 100 questionnaires among retiring military military personnel on pre-retirement vocational training programme course at the Center.

Data was collected through structured questionnaire and personally distributed by the research team. A total of 70 out of 100 questionnaires distributed were collected, thus, yielding a response rate of 70 % which is considered adequate for the analysis in the present

study. Gay and Diehl (1992) indicated that in correlation research, at least 30 participants are required to establish a relationship. However, 30 of the 100 questionnaires were unusable because a large part of those questionnaires were not completed, thus makes the remaining 70 useable questionnaires available for further analysis.

## 4.2 Measures

### *Dependent variable*

Retiring military personnel's entrepreneurial intention was measured by six items (e.g. I will make every effort to start and run my own firm) adopted from (Gelaidan & Abdullateef, 2017). Reliability analysis of the scores on the items showed an acceptable Cronbach's  $\alpha$  coefficient of 0.877.

### *Independent variables*

The model includes six independent variables. The first independent variable is attitude toward the behavior. Military personnel were presented with five statements relating to attitudes towards their behaviour. With reference to each statement, a five-point scoring system was employed, whereby a score of 1 suggested "strongly disagree", 3 suggested "neither agree nor disagree", and a score of 5 suggested "strongly agree". Sample items include "A career as entrepreneur is attractive for me" and "If I have opportunity and resources I would like to start a firm".

The second independent variable is entrepreneurial self-efficacy, which was measured by six items designed to assess an individual's self confidence in his or her ability to perform the tasks and activities necessary to become an entrepreneur. Sample items include "Being able to solve problem" and "Being creative". This measure had a Cronbach's  $\alpha$  coefficient of 0.88. Perceived Environmental Support for starting and running a business was measured on the basis of five items. Respondents were asked about their perception about government support to starting and running small ventures. Sample items include "Government organizations assist individuals in starting their own business" and "Local & national government have supported for the individuals starting a venture". Reliability analysis of the scores on the items showed an acceptable Cronbach's  $\alpha$  coefficient of 0.87.

The perception of the support of TVET environment refers to the degree to which the technical college is perceived as a supporting organization to start a new venture. The construct was measured by a set of four statements (eg. The education in technical college encourages the researcher to develop creative ideas for being an entrepreneur). Family background includes parents' entrepreneurial experience as entrepreneur. The present study considers the father's job.

### 4.3 Data analysis

Data were analyzed using correlation, analysis of variance and step wise multiple regression analysis. Correlation analysis was undertaken to examine the relationship among the variables. Step wise multiple regression analyses were employed to test the effect of six predictor variables on the dependent variable, entrepreneurial intention.

## 5. Results

### *Profile of the respondents*

The sample comprises of soldiers belonging to four ranks; private (9%), corporal (37%), sergeant (34%) and warrant officers (20%). In terms of age, the average age of the respondents was 40.75 years and their average service period was 20.24 years.

### *Validity and reliability*

Factor analysis using principal component analysis with Varimax rotation was performed to assess construct the validity of each measure. According to Andy (2005) if the test result is 0.5 and it is a bare minimum, values between 0.7 and 0.8 are good and values between 0.8 and 0.9 are great predictors of each measures. Cronbach's were examined in order to evaluate the internal consistency (reliability) of the proposed scales. Therefore, all the constructs in the hypothetical model identified values over 0.683 for Cronbach's alpha (Table 2). Thus, the evaluation of Cronbach's alpha indicates that the construct reliability of all the reflective constructs' items has been established as satisfactory.

Table 1

*Factor analysis on individual construct*

Scale	Factor loading	collinearity Tolerance level	VIF
<i>Attitude toward entrepreneurial career</i>		0.877	1.14
Being an entrepreneur implies more advantages to me	0.920		
Among various options I would rather, being an entrepreneur	0.864		
A career as entrepreneur is attractive for me	0.853		
If I have opportunity and resources I would like to start a firm	0.724		
Being an entrepreneur would entail great satisfaction for me	0.645		
<i>Subjective norm</i>		0.404	2.48
If you decided to create a firm, would your close colleagues approve of that decision	0.855		
If you decided to create a firm, would your close friends approve of that decision	0.837		
If you decided to create a firm, would your family approve of that decision	0.759		
<i>Self-efficacy</i>		0.564	1.77
Making decisions	0.912		
Managing money	0.902		
Being a leader	0.881		
Being able to solve problem	0.789		
Being creative	0.745		
Getting people to agree with you	0.631		
<i>Perceived environmental support</i>		0.624	1.60
Govt organizations assist individuals in starting their own business.	.803		
Govt sets aside government contracts for new and small venture.	.875		
Local & national govt have support for the individuals starting a venture	.831		
Govt sponsors organizations that help new venture develop	.853		
Even after failing government assist entrepreneurs starting again	.710		
<i>TVET support</i>		0.604	1.66
The education in technical college encourages me to develop creative ideas for being an entrepreneur.	.807		
My technical college provide the necessary knowledge about starting a own business	.926		
Technical college develops my entrepreneur skills & abilities	.884		

Mean, Standard Deviation (SD) and the correlation matrix are presented in table 3. Retiring military personnel who participated in technical training have relatively high entrepreneurial intention (M=4.18). Majority of them believe that vocational and technical training support is necessary for developing entrepreneurial intention (M= 4.32). A positive and significant first-order correlation exists between the predictor and dependent variable, yet it varies in

magnitude and extent. Except family background other five constructs have strong significant association with entrepreneurial intention.

Table 2  
*Composite Reliability*

Construct	EI	ATT	TES	PES	SN	SE
Conbach's Alpha	0.877	0.860	0.844	0.872	0.752	0.887

Table 3  
*Mean, standard deviation and correlation among the Constructs*

Variables	Mean	SD	EI	PATT	TVTS	PES	SN
Entrepreneurial Intention (EI)	4.18	0.64					
Attitudes toward Entrepreneurial Career			0.35**				
TVET Support	3.89	0.74					
Perceived Environmental Support (PES)	4.32	0.59	0.66**	0.25*			
Subjective Norm (SN)	3.94	0.69	0.68**	0.15	0.52**		
Perceived Self-Efficacy(SE)	3.96	0.77	0.68**	0.25*	0.46**	0.74**	
Family Background	4.19	0.56	0.72**	0.34**	0.59**	0.57**	
	0.06	0.23	0.04	0.07	0.07	-0.01	-0.07

*Correlations among entrepreneurial intention and predictor variables*

The results of the correlation analysis indicated that the relationship between entrepreneurial intention and the predictor variables have a significant relationship among five of the six variables. Entrepreneurial intention and perceived self-efficacy had a strongest relationship ( $r=0.722$ ), followed by the correlation between perceived environmental supports ( $r=0.684$ ). Subjective norms was significantly correlated with entrepreneurial intention ( $r = 0.678$ ). Two other variables that showed significant relationship with entrepreneurial intention are technical educational support ( $r=0.663$ ) and attitude towards entrepreneurial career ( $r=0.349$ ). Technical vocational training support has a significant positive relationship with self-efficacy ( $r=0.585$ ). However, family background was not significantly related to entrepreneurial intention.

The influence of predictor variables on entrepreneurial intention were tested as previously described in figure 1. The step wise regression analysis was used to assess the ability of the



model to explain entrepreneurial intentions, and the dependent variable. As researchers test the model using regression, the appropriate comparative diagnostic is the Adjusted  $R^2$ . The results of the regression are presented in table 2. According to the model 3, the Adjusted  $R^2$  for the regression was 0.662 ( $p < 0.001$ ).

Table 4

*Results of Step Wise Multiple Regression Analysis*

Model	Variable	Adjusted $R^2$	$R^2$ change	F change	Standardized coefficients	t	Sg
1	(Constant)	0.514	0.521	74.016		1.875	0.065
	Self-efficacy				0.722	8.603	0.000
2	(Constant)	0.621	0.111	20.227		1.014	0.314
	Self-efficacy				0.493	5.481	0.000
	Perceived						
	Enviro: Support				0.404	4.497	0.000
3		0.662	0.044	9.062		-	
	(Constant)					0.211	0.833
	Self-efficacy				0.377	4.048	0.000
	Perceived						
	Enviro: Support				0.328	3.703	0.000
	TVET support				0.271	3.01	0.004

Dependent Variable: Entrepreneurial Intention

Personal attitude has not significantly influenced entrepreneurial intention among retiring military personnel. Therefore, H1 is rejected. In the case of subjective norms, the regression result has not confirmed the significant influence of subjective norms on entrepreneurial intention. Hence, H2 also rejected. Self-efficacy appears as the most relevant predictor of entrepreneurial intention among military personnel ( $\beta=0.377$ ,  $t$ -value= 4.048,  $p<0.01$ ). Therefore, H3 is supported. External factors also predict entrepreneurial intention. Perceived environmental support has a positive influence on entrepreneurial intention ( $\beta = 0.328$ ,  $t = 3.703$ ,  $p<0.01$ ). Thus, H4 is supported. As respondents have vocational education and training H5 assumed that TEVT support influence on entrepreneurial intention. The results confirmed the positive significant influence of TEVT support for entrepreneurial intention ( $\beta = 0.271$ ,  $t = 3.01$ ,  $p<0.05$ ). Therefore, H5 is supported. The last hypothesis (H6) related with family background of the respondents but regression result has not confirmed the significant influence of family background on entrepreneurial intention.

The influence of technical and vocational training support on perceived self –efficacy was tested by using linear regression analysis and results are shown in table 3. Technical and vocational training support explained 0.33 percent of variance in self-efficacy,

$F(1,68)=35.416$ ,  $p < 0.000$ ). It was found that TEVT support significantly predicted self-efficacy ( $\beta=0.58$ ,  $p < 0.001$ ).

Table 5

*Result of regression analysis: Effect of TVET support on Self-efficacy*

Model	Variable	Adjusted $R^2$	Standardized coefficients	t	Sg
1	(Constant)	0.333		4.276	0.000
	TEVT support		0.585	5.951	0.000

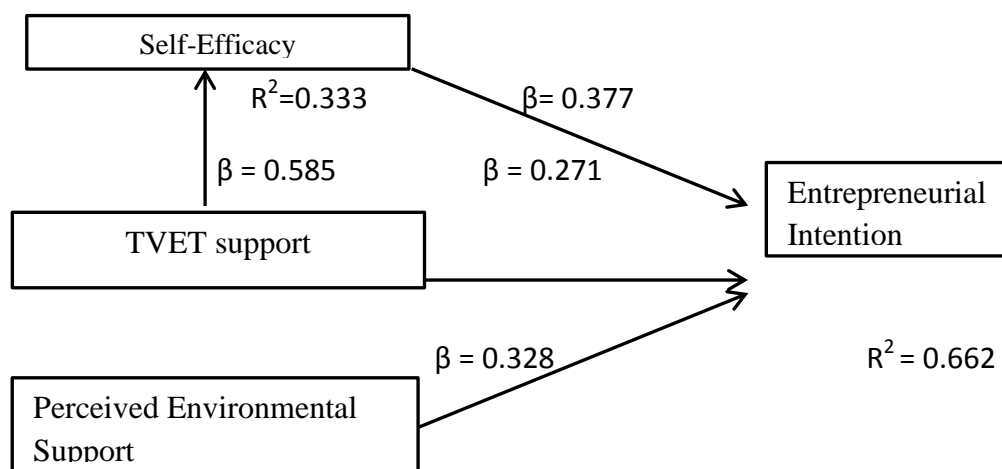


Figure 2. Results for the entrepreneurial intentions model

## 6. Discussion

This study contributes to the study of entrepreneurial intention of retiring military personnel in Sri Lanka. The study found that retiring military personnel have higher entrepreneurial intention may be due to their early age retirements. In addition to their retirement benefits, they have only a few career options. As their age is beyond 40 they are not eligible for government jobs again and have to consider private sector employment or enter into an entrepreneurial career. Similar studies conducted with sample of business undergraduates in Sri Lanka have found a very low entrepreneurial intention compared to the current study and they preferred organizational employment than self-employment (Nishantha, 2009).

Among the four personal factors considered, only self-efficacy has a significant positive influence on entrepreneurial intention and it is the most influencing factor for entrepreneurial intention. The results indicated that attitude toward entrepreneurship did not have a significant influence on entrepreneurial intention. While correlation analysis

indicated that attitude toward entrepreneurship was positively correlated with entrepreneurial intention, attitude was not a predictor of intention to become an entrepreneur and had a positive  $\beta$  coefficient, although non-significant. This finding may be inconsistent with prior research suggesting attitude as an influencing factor for entrepreneurial intention but most of those studies were based on student samples (Schwarz et al., 2009; Yaghmaei & Ghasemi, 2015). The current result may be due to the uniqueness of the sample. Throughout their military career they may not have enough time and opportunities for understanding the importance of entrepreneurial career.

The study failed to find significant influence of subjective norms on entrepreneurial intention due to characteristics of the study population. As a matter of fact since all the individuals that were interviewed are soldiers, there should be a number of household heads. It would be relevant to think that these military personnel are able to take their post career decisions without their entourage's influence. On the other hand, they had limited time to spend with their family members and most of the time they were living with their military colleagues who didn't have a business background. Similarly, Krueger et al. (2000) Autio et al. (2001) and Liñán and Chen (2009) also found subjective norms to be a non-significant factor.

Family background was predicted to have a significant effect on entrepreneurial intention (H6). The result failed to support the prediction of H6. Perceived environmental support was found to have a significant positive impact on entrepreneurial intention. The evidence is consistent with previous research that found several environmental conditions to influence intention to become entrepreneurs.

One of the most significant findings of this study was the statistical support for TVET support for forming entrepreneurial intention. Respondents are currently undergoing training in their chosen technical fields and they may realize the possibilities for starting a businesses in their field of vocational training after retirement. As shown in table 1, TVET support has substantial significant positive relationship with self-efficacy. This has interesting implications for military authorities. Technical and vocational training will be supported to increase awareness, enthusiasm, relevant skills and confidence among the retiring military personnel. In this sense, this research offers an accurate relationship of patterns influencing entrepreneurial intention by analyzing retiring military personnel.

The  $R^2$  for this model was 0.662; such strong explanatory power is rare in literature explaining entrepreneurial intention. Many of the earlier researchers who have studied entrepreneurial intention on students sampling typically explain less than 40% of variance in entrepreneurial intention.

## 7. Limitations and future research

It is important to consider some potential limitations of this study and future lines of research. Common method bias is the first limitation as independent and dependent measures were derived from the same source. Second, though the researcher considered environmental support as predictor of entrepreneurial intention, researchers have not evaluated environment conditions themselves and relied on respondents' subjective judgments. Third, to improve generalizability of the observed relationship, future work should aim to replicate findings among more diverse samples of military personnel including those who worked in different ranks, and particularly ones that offer better representation of females and veterans with disabilities. Fourth, as large body of literature on entrepreneurial intention focused on students and very limited research could be found in other areas. Future research should place more emphasis on other samples including knowledge workers and retiring professionals.

## 8. Conclusion

The aim of this study was to examine the entrepreneurial career intention level and its determinants of retiring military personnel undergoing vocational training prior to their retirement. The result of multiple regression indicated that three predictor variables have a significant positive impact on entrepreneurial intention; self-efficacy, perceived environmental support and TVET support. In addition to the direct influence, TVET support has a positive indirect influence on entrepreneurial intention through self-efficacy.

The results have important implications for military authorities who are designing programs for retiring military personnel to help them to design their post retirement career. They have to focus first on developing self-efficacy. In addition to the TVET support, military authorities can offer courses on entrepreneurship and small business management, as well as incubators located on training centers could play a central role in waking soldiers' enthusiasm and interest in business ownership. Policy makers' further attention should be directed to creating a supportive environment for potential entrepreneurs, such as retiring military personnel.

## References

- Andy, F. (2005), *Discovering Statistic Using SPSS*, 2nd ed., Sage Publications, London.
- Badawi, A. A. (2013). TVET and entrepreneurship skills. *Revisiting global trends in TVET: Reflections on theory and practice*, 275.
- Dehghanpour Farashah, A. (2013). The process of impact of entrepreneurship education and training on entrepreneurship perception and intention: Study of educational system of Iran. *Education+ Training*, 55(8/9), 868-885.
- Gay, L. R., & Diehl, P. (1992). *Research methods for business and management*: Macmillan Coll Div

- Gelaidan, H. M., & Abdullateef, A. O. (2017). Entrepreneurial intentions of business students in Malaysia: The role of self-confidence, educational and relation support. *Journal of Small Business and Enterprise Development*, 24(1), 54-67.
- Gnyawali, D. R., & Fogel, D. S. (1994). Environments for entrepreneurship development: key dimensions and research implications. *Entrepreneurship: theory and practice*, 18(4), 43-63.
- Heinz, A. J., Freeman, M. A., Harpaz-Rotem, I., & Pietrzak, R. H. (2017). American Military Veteran Entrepreneurs: A Comprehensive Profile of Demographic, Service History, and Psychosocial Characteristics. *Military psychology: the official journal of the Division of Military Psychology, American Psychological Association*, 29(6), 513.
- Liguori, E. W., Bendickson, J. S., & McDowell, W. C. (2018). Revisiting entrepreneurial intentions: a social cognitive career theory approach. *International Entrepreneurship and Management Journal*, 14(1), 67-78.
- Maigida, J. F., Saba, T. M., & Namkere, J. U. (2013). Entrepreneurial skills in technical vocational education and training as a strategic approach for achieving youth empowerment in Nigeria. *International Journal of humanities and social science*, 3(5), 303-310.
- Maritz, A., & Brown, C. (2013). Enhancing entrepreneurial self-efficacy through vocational entrepreneurship education programmes. *Journal of Vocational Education & Training*, 65(4), 543-559.
- Miralles, F., & Riverola, C. (2012). *Entrepreneurial intention: An empirical insight to nascent entrepreneurs*. Paper presented at the ISPIM Conference Proceedings.
- Nishantha, B. (2009). Influence of personality traits and socio-demographic background of undergraduate students on motivation for entrepreneurial career: The Case of Sri Lanka. *Ryukoku Journal of Economic Studies*, 49(2), 71-82.
- Pihie, Z. A. L. (2009). Entrepreneurship as a career choice: An analysis of entrepreneurial self-efficacy and intention of university students. *European journal of social sciences*, 9(2), 338-349.
- Schwarz, E. J., Wdowiak, M. A., Almer-Jarz, D. A., & Breiteneker, R. J. (2009). The effects of attitudes and perceived environment conditions on students' entrepreneurial intent: An Austrian perspective. *Education+ Training*, 51(4), 272-291.
- Yaghmaei, O., & Ghasemi, I. (2015). Effects of Influential Factors on Entrepreneurial Intention of Postgraduate Students in Malaysia. *International Letters of Social and Humanistic Sciences*, 51, 115-124.

## Determinants of Entrepreneurial Intentions: Technical Vocational Education and Training (TVET) Students in Sri Lanka

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### Abstract

This study has explored the determinants of entrepreneurial intention of Technical Vocational Education and Training (TVET) students in Sri Lanka. The research model is comprised of seven independent variables i.e. entrepreneurial attitude, perceived self-efficacy, social capital, demographic factors, perceived financial support, perceived regulatory support and perceived technical vocational education and training and dependent variable of entrepreneurial intention. The primary data was collected through administering structured questionnaire among hundred twenty eight TVET students represented by three TVET sector institutions in Sri Lanka. Linear regression was applied to test the hypotheses. Findings of the study revealed a positive and significant impact of the variables of entrepreneurial attitudes and perceived technical vocational education and training on entrepreneurial intention of TVET students of Sri Lanka. TVET student attitudes pertaining to entrepreneurship intention are positive since they perceive that TVET enhance their entrepreneurship education and this is very important to the policy makers in entrepreneurship development to initiate effective strategies to foster entrepreneurship for TVET students.

**Keywords.** Entrepreneurial Intention, TVET sector, Self-efficacy, Entrepreneurial attitude

### 1. Introduction

Fostering entrepreneurship is a key prerequisite for economic development and it is important in knowledge creation for policy makers and decision makers pertaining to the field of entrepreneurship. It is widely accepted that behaviour of entrepreneurship as a planned behaviour and intention is referred as the best predictor of planned behaviour (Kruger et al, 1993). Although entrepreneurial intention and its determinants have been widely discussed, only few studies have been done regarding the entrepreneurial intention of TVET students. However technical students have much potential for fostering entrepreneurial skills and development of entrepreneurship is the key objective of the TVET sector (Buli & Yesuf, 2015)

The significant improvements in macro-economic conditions in the world, especially in the European markets, had favourably influenced the Sri Lankan economy. According to the statistics of Central Bank of Sri Lanka (2015) there is a 7.8% economic growth which generates favourable opportunities for the Sri Lankan industries, locally as well as internationally. The growth momentum of the country's economy is also reflected by the lower unemployment rate of 4% and the inflation rate around 6%. Moreover, infrastructure development is continuously taking place which is also a favourable condition for entrepreneurship development. Even though the economy is growing and the industries are expanding, young individuals are still struggling to find job opportunities that best fit with their qualifications. It is critical among young educated individuals since they make up the third highest unemployment category in the country. Referring to the annual report in labour force survey (Department of Census and Statistics, 2015), the majority among unemployed are the new entrants to job market or new job seekers, who are in the age group 15 – 24. This is known as youth unemployment and the all Island youth unemployment rate is 20.3 %. Moreover, young individuals in the informal employment category also account for a third of the total workforce (Department of Census and Statistics, 2015).

The Technical and Vocational Education and Training (TVET) sector is one of the major areas which contribute to develop and enrich the competencies in the young generation, not only to make them technicians, but also to make competent entrepreneurs. The Technical and Vocational Education and Training (TVET) sector in Sri Lanka comprises of 417 TVET centers in 2015, including both private and public owned and accredited in Tertiary and Vocational educational commission. In 2015, the total number of students registered in TVET institutions are 173,421 for 1128 courses (National Skills development report, 2015).

Entrepreneurship development and entrepreneurial intention are the areas that have been discussed extensively in the academic sector and it has been discussed in various aspects regarding the relationship between the factors of influencing in entrepreneurial intention (Kruger & Carsrud, 1993; Buli & Yesuf, 2015; Turker & Selcuk, 2008). The intention based models becomes more helpful in understanding the practical insight of any planned behaviour such as entrepreneurship behaviour than individual or situational variables (Kruger et al, 2000). Luthje & Frank (2003) & Schwarz et al, 2009) have emphasised the prominent role of attitude in cultivation entrepreneur intention among the students. Kruger and Carsrud (1993) have directed researches about intentionality with more potential and testable antecedents such as demographic, social, cultural and financial support in future researches in entrepreneur intention. Various intention based models have been developed by the researchers from different perspectives. Furthermore, Theory of Planned behaviour (Ajzen, 1991) and Model of the Entrepreneur Event (Shapero & Sokol's, 1982) are the most common models used. Some other researchers also had proposed models during the past few years (Luthje and Frank, 2003; Urban & Kujinga, 2017; Marques et al, 2012; Schwarz et al, 2009). However the model which has been developed in current research is comprehensive with psychological, social and environmental factors towards the

entrepreneurial intension. Therefore, the present research captures this gap by identifying antecedents of entrepreneurial intension in a more comprehensive manner including psychological, social and environmental context.

Therefore, the purpose of this research is to examine the determinants of entrepreneurial intensions of TVET students in Sri Lanka.

### *Research Objectives*

1. To examine the current entrepreneur intension of the technical students of Sri Lanka
2. To understand the influence of personal factors related to entrepreneurs on entrepreneurial intention among the technical students of Sri Lanka.
3. To understand the influence of environmental related factors on entrepreneur intension among the technical students of Sri Lanka.

## **2. Literature review**

### **2.1 Entrepreneurial Intension**

Entrepreneurship is mostly a psychological process which entails creativity and conceptualization. It is the way of thinking towards identifying opportunities. Therefore, it is so, that is clearly an intentional process and therefore it is important to understand the entrepreneurial intentions in order to understand, explain and predict the entrepreneurial process.

Kruger et al (2000) have identified intentions as the single best predictor of any planned behaviour, including entrepreneurship. Bird defines intentionality more clearly as a state of mind of a particular person's attention towards a specific goal or path in order to achieve something (Misra & Kumar, 2000). Therefore an intention depicts how hard people are willing to try, or how much of an effort they are planning to exert, in order to perform the behaviour. Entrepreneurial intention is the initial step of the long journey of the process of entrepreneurship and this can be described as the individual's conscious state of mind which stimulate the person to make a firm and strong decision to become an entrepreneur (Lee and Wong, 2004; Liñán and Chen, 2009; Moriano et al., 2012). Consequently, entrepreneurial behavior is planned or intentional and it is best predicted by intentions towards the behavior not by other factors either personal or demographic (Ajzen, 1991; Kruger et al., 2000).

### **2.2 Determinants of entrepreneurial Intension**

Theory of planned behaviour provides the basic framework to determine the influencing factors for entrepreneurial intension and behaviour. Attitudes towards behaviour, subjective norm and perceived behavioural control are the determinants of the theory of planned behaviour (Ajzen, 1991). According to the Model of Entrepreneurial behaviour presented by Misra & Kumar (2000), two main factors which influence entrepreneur behaviour are named as background factors which include demographic characteristics and



psychological characteristics of the entrepreneur. Family background, birth order, age, educational level of the parents, sex, marital status, previous work experience are the variable of demographic characteristics and achievement motive, locus of control, risk taking and values are the psychological characteristics. As explained by the Misra & Kumar (2000), entrepreneurial intension is influenced by the attitude towards the entrepreneurship which is mediated by situational factors.

As per the theory of planned behaviour, attitudes have a significant and direct impact on intension (Ajzen.1991) and attitudes towards the entrepreneurship become the key factor that contributes to the entrepreneurial intention in technical students (Luthje & Franke, 2003). Furthermore, the model of entrepreneurial intension concludes the positive causal relationship among the entrepreneurial experiences to attitudes and for entrepreneurial intention (Devonish et al, 2010). Luthje & Franke,(2003) further elaborate the relationship between the attitudes towards the entrepreneurship and entrepreneurial intent, with four constructs to predict the propensity to start a new venture; namely risk taking propensity, the locus of control, the environmental support and the contextual barriers. The first two constructs have been identified as the personality traits which indirectly impact entrepreneurial intention through the attitude towards the entrepreneurship. Other two constructs were identified as contextual factors that have a direct impact on entrepreneurial intent. It is observed that student's personality structure also impact the students entrepreneurial attitudes i.e, more positive response from the students with a propensity to high risk taking and an internal locus of control. The technical students with personality features of high risk taking and internal locus of control have higher probability to start-up new venture, which is found in the research done among MIT engineering students (Luthje & Franke, 2003).

Another important constructs of the entrepreneurship intension is the entrepreneurial self-efficacy pertaining to personal factors. Which becomes one aspect of the human personality and it involves the individual's beliefs regarding their capabilities for attaining success and controlling cognitions for successfully tackling challenging goals during the business start-up process (Drnovsek at el, 2010). This is one of the major socio-cognitive factors which determine entrepreneur's behaviour. Self-efficacy is the construct with the assessment of how individual confidence regarding his/her personality and opportunities, threats or the external environment. This relates with the entrepreneur intension. How individual perceives particular situation as the opportunity or a threat, and the action on it greatly depends on the self-efficacy of his/her (Boyd & Vozikis, 1994).

Social cognitive theory (Banduraa, 1999) has emphasised the interdependence of personal agency and social structure. The model has identified the reciprocal causality between the internal factors and the social factors of the human being. In this model of reciprocal causality internal personal factors in the form of cognitive, affective and biological events;

behavioural patterns, and environmental events all operate as interacting determinants that influence one another bi-directionally.

Although that psychological and socio-structural theory are in different directions pertaining to human behaviour, there should be an integrated approach between these in order to get a full understanding about it. Therefore the human behaviour is the outcome of the socio-structural influences through the psychological mechanisms. Consequently these socio-structural and psychological factors are considered as the co-determinant of human behaviour within a unified causal structure (Bandura, 1999). This delineates the significance of the association in psychological and social dimensions for human behaviour analysis.

Therefore Social capital is one of the significantly important factors which have an impact over the entrepreneur intension and behaviour. Social capital can be described in different ways and most simply, it is the “goodwill available to individuals or groups” (Adler & Kwon, 2002). It is the return obtained by business through the development and maintenance of effective relationships with various business stakeholders. These relationships allow individuals to access more information, reduce transaction cost through greater coordination between people, easy access to the skilled human capital, improve the trust, self-confidence and facilitate for collective decision making etc. (Linan & Santos, 2007). Including the opinions of family members, friends & colleagues there is a significant impact from social capital or the social norms of network members towards the intension of new business creation (Krueger & Carsrud, 1993).

However the demographic factors are also very significant determinant criterion in entrepreneurial behaviour, as most of the studies discussed (Linan and Chen, 2009). The research done by Marques et al (2012) has been highlighted the relationship between demographic factors such as age, gender, education, family background and entrepreneurial intension. It has been revealed that the individual differences such as gender, education level and family background are positively associated with entrepreneurial intension as according to the study done with the MBA students (Chant, 1996). Gender, family background and the education level are the mostly related determinants of demographic factor discussed below.

The above discussion concerned the two main determinants of entrepreneurial intension pertaining to the psychological, social and personal aspect of the individual. Other than the psychological, social and personal factors, the environment based factors also play a significant role in determining entrepreneurial intent, especially in terms of environmental barriers and support factors (Schwarz *et al.*, 2009; Luthje & Franke, 2003). Entrepreneurial environment is the combination of factors related to the development of entrepreneurship and this is comprised of all economic, socio cultural & political factors that have an impact on the development of entrepreneur intention among people. As per the study conducted by Ibrahim (2016), it has been found that there is a positive relationship between the

environment factors and entrepreneurial intension. Gnywali & Fogel, (1994) have grouped these environmental impacts into five dimensions as the government policies and procedures, socio economic conditions, entrepreneurial and business skills, financial assistance and Non- financial assistance. As being similar to the personal factors, perceived environmental support also becomes a key factor which determines the entrepreneurial behaviour of the individual.

Although government policies and procedures have become a critical factor in determining the entrepreneurial intention, there have been only few studies conducted about this aspect in entrepreneurship. Government can formulate entrepreneurial friendly atmosphere within the country through securing patents & copyrights, institutional support for the business start-up, lifting out the rules and regulations to encourage the SME sector and enhance the business infrastructure etc. Effective support of the government for the new business start-up is very important, since new entrepreneurs usually begin their business with lack of capital, entrepreneurial etc (Fatoki, 2010). Government's regulatory mechanism of the country is a key factors which affect the expansion of business and simple and speedy response regulatory process induces the intension of business start-up. It has been proved that countries that have less credit regulations reflect positive entrepreneur intension (Ghosh, 2017). Availability of entrepreneurial family background, availability of successful entrepreneurial role models, higher social recognition of entrepreneurship as the profession and resource availability are the favourable conditions for entrepreneurship development in terms of socio-economic aspect.

In addition to the regulatory environment, another key environmental factor of entrepreneurial intension is the perceived financial support. Although it is not much discussed, low interest rates, favourable credit conditions and availability of specified financial support schemes for the entrepreneurs are the important aspects of financial environment (Schwarz *et al*, 2009) which helps to create positive perception among the individuals towards the entrepreneurial intension.

Furthermore, entrepreneurship development had suggested that the education plays a vital role in entrepreneur intension of the individual and there is a positive relationship among the entrepreneurial education and entrepreneurial intention (Bae *at el*, 2014). Generally, it is believed that the formal education which begins from early years, have an impact on development of Technical vocational education and training (TVET). Biavaschi *at el*, (2012) identifies five types of TVET models in different degrees, starting with the general academic based education and progress up to the dual vocational education and training, School based vocational education and finally towards the apprenticeship in countries of sub-Saharan Africa. In contrast to the general academic education, technical education offers practical competencies to the students but not in the business or entrepreneurial aspects. Therefore it is suggested that TVET Curricula should be developed with a more integrative approach, including the competencies of technical vocational and

entrepreneurial competencies such as opportunity seeking, strategic and innovative thinking to enhance the entrepreneurial skills in TVET students (Sandirasegarane et al, 2016; Buli & Yesuf, 2015 ). Although several researchers had concluded about the positive relationship between the entrepreneurial intention and entrepreneurial education (Bae et al, 2014; Turker & Selcuk, 2008), very limited number of researches have been carried out regarding technical-vocational education and training (Buli & Yesuf, 2015). However it is perceived that the people who are qualified in technical sector perform much higher in dynamic and innovative; therefore they can contribute significantly to encourage entrepreneurship (Roberts, 1991). Technical-vocational education and training in Sri Lanka is focused to enhance the entrepreneurial culture among the youth and entrepreneur development. Hence it is clear that Technical and vocational education of Sri Lanka is one of the key sources of entrepreneurial education in Sri Lanka (Ministry of Youth affairs and skills development, 2013; Balasundaram, 2010). Buli & Yesuf (2015) have identified three independent determinants of entrepreneurial intention at study of the entrepreneurial intention of Technical-vocational education and training students in Ethiopia as Personal attitudes toward behavior, Subjective Norms and Perceived behavior control being followed by the Ajzen's (1991) Theory of Planned Behavior.

### ***2.3 Model of Entrepreneurial Intension***

Based on the previous literature, the following model was developed by encapsulating the key important determinants of entrepreneurial intention. An important factor that has been established is that interaction among all personal, social and environmental factors develop the intension towards entrepreneurship (Bird, 1988).

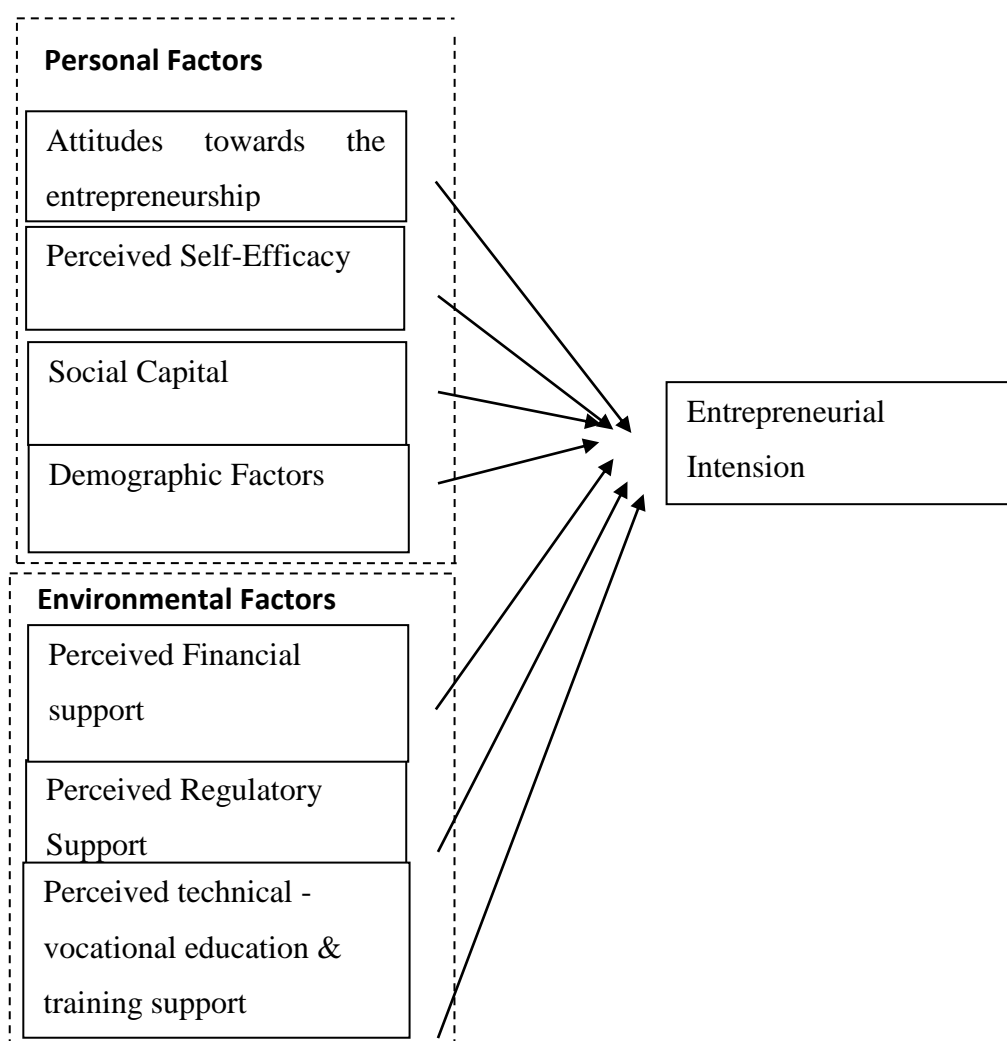


Figure 1. Conceptual framework

As illustrated in figure 1, this study attempts to examine the impact of five independent variables to the single dependent variable, which is called entrepreneurial intension. The seven independent variables are the individual attitudes towards the entrepreneurship, perceived self-efficacy, social capital, demographic factors, and perceived financial support, perceived regulatory support and the perceived technical -vocational education and training

## 2.4 Hypothesis development

### Attitudes towards the entrepreneurship (AE)

The attitude towards the entrepreneurship explains certain beliefs of the individual towards the entrepreneurship behavior based on attributes. The successful attributes pertaining to the entrepreneurship behavior forms the positive beliefs (or attitudes) vice versa (Ajzen, 1991). Therefore the attitudes have a direct impact over the entrepreneurial intention (Kruger & Carsrud, 1993). More specifically the entrepreneurial intent of the technical

students is strongly affected by their attitudes towards entrepreneurship (Buli & Yesuf, 2015; Luthje & Franke, 2003). Therefore the first hypothesis can be developed as follows.

**H1:** Personal attitudes of entrepreneurship have a positive influence on the entrepreneurial intension of TVET Students.

### **Perceived Self Efficacy (PSE)**

In social cognitive theory, perceived self-efficacy plays a pivotal role and it affects not only directly and throughout the other determinants of individual's social cognition. How individual belief or confidence about their competency level to perform a particular activity successfully to achieve intended outcome is usually referred as the self-efficacy (Bandura, 1989, 1997). This has emphasized much relevance of self-efficacy towards the field of entrepreneurship and it's become a salient factor towards the formation of entrepreneurial intension to become entrepreneur (Bandura, 1982, 1997, 2001). Entrepreneurial self-efficacy can be defined as the individual's beliefs regarding their capabilities to attain goals and control positive and negative cognitions that an entrepreneur has during the process of starting-up a business (Drnovsek *et al*, 2010). It has been intensively employed the individual self-efficacy as a key Scio cognitive factor which influence career intension (Bandura *et al*, 2001). The same ideology could be applied towards the entrepreneurial intension as the individual should have strong self-confidence about his or her competences to initiate and further develop the entrepreneurial concept into the actual enterprises, since starting up a business is associated with uncertainties, complexities and higher dedication (Wilson, Kickul & Marino, 2007). This has been further postulated by Dissanayake (n.d.) as per the research done regarding the entrepreneurship intension and the factors affect in to it. It has clearly concluded the significant impact of self-efficacy towards the entrepreneurial intension among the undergraduates. Therefore the following hypothesis can be developed.

**H2:** Perceived Self-efficacy has positive influence on the entrepreneurial intension of TVET students of Sri Lanka.

### **Social Capital (SC)**

Social capital refers to all positive outcomes obtained by individuals from all kinds of relationships such as friendship, colleagues, relatives and other general contracts (Burt, 1992). Social capital can be defined as the capital which has been captured from various social relationships by the entrepreneur (Lin, 2003) pertaining to the perspective of entrepreneurship. Carolis & Saporito (2006) suggest that social capital networks have a positive influence towards the new idea creation. This is because relationships transmit information and those can impact entrepreneurial intension to start a firm (Linan & Santos, 2007). Therefore social capital has on a positive impact towards the entrepreneur intention (Bosma *et al*, 2002). This is much similar in the local context and Premaratne (2002) concludes that social networks has become an important nonmaterial resource in various

aspects, especially in obtaining financial resources. The third hypothesis is developed upon as follows.

**H3:** Social capital of the individual has a positive influence on entrepreneurial intention of TVET students of Sri Lanka

### **Demographic factors**

In addition to the psychological and social factors, empirical evidence suggests that demographic factors of the individual are also influenced by entrepreneurship intention (Marques et al., 2012). Although several factors are available among the demographic factors which have an impact on entrepreneurial intention, it has specifically selected the most highlighted two factors i.e., since gender and family background have significant behavioral influences over the people. Linan & Chen (2009), have identified the significant relationship between the demographic features and the entrepreneurial intention. It has been identified that gender has become a significant factor towards the entrepreneurship intention and females have additional constraints in obtaining financial support from the formal sector as per the latest research findings in the Sri Lankan context (Kuruppu, 2015). Some researchers have concluded there is no relationship between family background and entrepreneurial intention (Hatak, Harms & Fink, 2015), but most of others (Mohamed et al., 2012; Chaudhary, 2017; Gamage, Cameron & Woods, 2003) concluded the impact of family background towards entrepreneurship intention. Much research has been conducted on gender and entrepreneurship intention. It is a very common phenomenon that male entrepreneurship is predominant in most of the countries in the world and woman entrepreneurship is comparatively low due to the various barriers perceived by woman and therefore, it negatively impacts entrepreneurial intention (Wilson, Kickul & Marino, 2007; Marlow & Patton, 2005). The following two hypotheses can be developed initially pertaining to the above discussion regarding demographic factors.

**H4:** Gender has a significant impact on entrepreneurial intention of TVET students of Sri Lanka.

**H5:** A family background of the TVET students has a positive influence on their entrepreneurial intention.

### **Perceived Financial Support (PFS)**

Individual's perception of availability of equity & debt capital sources, easy access & convenience of obtaining financial facilities are referred to as the perceived financial support (Pennings, 1982). It is difficult for small entrepreneurs to obtain financial facilities from the formal debt market due to the lack of limited assets availability which are suitable for the collateral, lack of strong relationship with the financial institutions and lack of credit history (Bruder, Neuberger & Rathke –Doppner, 2011). In other words, it is believed that

perception of financial barriers are negatively associated with the business startup decision (Roper & Scott, 2009). Although some researchers do not accept financial constraints as a barrier for the business start-up and survival (Cressy, 1994) most of the researches had emphasized constraints to the financial capital as the barrier for the new venture creation. This has become the most significant issue in Sri Lanka and most of the Sri Lankan entrepreneurs depend on their own personal funds than the external funds, including the debt funds due to many issues. Difficulties of providing collaterals, higher interest rates, lack of strong relationships with the financial institutions, complex and lengthy procedures are the most highlighted issues that Sri Lankan entrepreneurs are faced in relation to the financial environment (Kuruppu, 2015). Based on the above discussion the following hypothesis can be developed.

**H6:** Perceived financial support positively influence to the entrepreneurial intension of the TVET students of Sri Lanka

#### **Perceived Regulatory Support (PRS):**

Government is the main institutional body which enjoys the constitutional power to regulate the business practices and the market mechanism. Most importantly the government is the main influencer towards the economic and business system of the country in various ways. Doing Business (2017) concludes that unnecessary regulations hinder the entrepreneurship development and therefore the governments need to engage with more regulatory reforms to bring smarter regulations which specially encourage the private sector or the individual's entrepreneur intension. Government can influence in various ways such as determining the business rules and regulation system, development of business infrastructure, and deciding on the fiscal & financial policy etc. It is expected to assess the students' perception on government influence towards entrepreneurial intension (Gnyawali & Fogel, 1994). As per t Guerrero, Rialp & Urbano (2008), the regulatory environment has a positive influence on new venture creation.

**H7:** Perceived regulatory support positively influences entrepreneurship intension of the TVET students of Sri Lanka.

#### **Perceived Technical- Vocational Education and Training (PTVET) support:**

Generally it is considered that Technical-vocational education and training (TVET) provides students technical skills and practical skills which are usually neglected by the general academic curricula in secondary schools. But traditional TVET programs are not imparting the students entrepreneurial and business skills and directly focus on the creation of skilled employees (Biavaschi *at el*, 2012). However, the well-established non-school based independent TVET institutions successfully integrate technical and vocational skills with entrepreneurial education in their curricula. These dual aspects i.e., vocational training skills and entrepreneurial education and training foster the entrepreneurial intension



behaviour (Onstenk, 2003). Buli & Yesuf (2015) also found the positive relationship between personal attitudes and entrepreneurial intention via the research carried out in TVET students in Ethiopia. The performance report of Ministry of Youth Affairs and Skills Development (2013) of Sri Lanka, which controls and inspects all public TVET institutions, had identified entrepreneurial development as a main objective and function. The TVET institutions such as NAITA conduct specific programs to enhance the entrepreneurial intention of technical students (NAITA, 2017). The following hypothesis can be developed as the above discussion pertaining to the Technical education and training of the TVET students.

**H8:** Perceived Technical & Vocational Education and Training positively influence the entrepreneurship intention of TVET students of Sri Lanka.

### **3. Research Methodology**

#### **3.1 Population**

This research is dedicated to investigate about the entrepreneurial intension of technical students of Sri Lanka. It aims to study the factors that have influenced the entrepreneurial intension of the technical students of Sri Lanka. All the students studying in the institutions under the purview of the Ministry of Youth Affairs and Skills Development represent this population. There are 10 institutions established under the Ministry of youth affairs and Skills development; namely, TVEC, DTET, UNIVOTEC,VTA, NAITA, CGTTI, NIBM, NSBM, NIFNE,SLIOP .

#### **3.2 Sample Selection**

The study draws on a sample of students at technical institutions in Sri Lanka and is carried out by using a sample of hundred and thirty students selected from three technical institutions belonging to the above population.

The most appropriate research method, given time and cost constrain, is the survey method. Questionnaire was distributed among the students to collect primary data and it consisted 8 Pages and 19 questions. The research instrument is employed with including multiple choice questions and question statements based on the five-point Likert scale with levels 1="strongly disagree" to 5= "strongly agree". All elements includes in the questionnaire pertain to the research constructs are listed in following table.

#### **3.3 Operationalization**

Whenever reliable and valid measures were available in e literature, they were used for current study. Entrepreneurial attitude was measured by adopting scale developed by Buli &

Yesuf ( 2015) and Marques et al (2012). Sample items include 'A career as entrepreneur is attractive for me' and 'Being an entrepreneur implies more advantages to me'.

The measure of perceived self-efficacy was taken from Wilson, Kickul & Marlino, (2007), as it is specific to the situation of starting a business and has been shown to be reliable in their research. It comprised of six items including problem solving ability, creativity, ability to managing money, decision making ability and leadership ability. By following Turker & Selcuk( 2008) and Perez et al(2014) measured social capital by using three indicators that focused on availability of emotional support family members, close friends and colleagues.

The perception of the technical vocation and education and training support refers to the degree to which the technical college is perceived as a supporting organization to start a new venture. The construct was measured by a set of three statements and a similar scale has been used by Schwarz et al in 2009. The perception of possible support from regulatory environment and financial support relates to the degree to which external conditions to start a business, particularly financing factors are perceived positively. The measures were adopted from Schwarz et al ( 2009).

For measuring the TVET students' entrepreneurial intentions to new venture creation, the researcher adopted the set of questions proposed by Buli & Yesuf (2015). This instrument consists of six items aimed at unveiling the respondents' intentions to start their own businesses in the future. The items were built as five-point Likert-type scale, being 1 'strongly disagrees' and 5 'strongly agree'. Sample items include 'I will make every effort to start and run my own firm' and 'My professional goal is to become an entrepreneur'.

#### **4. Data Presentation and Analysis**

##### ***Profile of the sample***

Respondent's age has been distributed among the 16 to 31 years and the mean value becomes 20.5 years. Therefore the data sample is appropriate to assess the youth entrepreneurship. Mean value of the Education levels of the respondents is 3.085 and it reveals the higher percentage of the students who belong to the categories of over the O/L passed and A/L passed. Another significant feature is the father's profession. Most of the respondents' fathers are not entrepreneurs and only 19.5% of respondent fathers are entrepreneurs.

##### ***Reliability and validity of scales***

The most common measure of scale reliability, Cronbach Alpha, was applied to assess the reliability or the internal consistency of each variable. According to the Merchant (1985), the lowest acceptable reliability of the Cronbach alpha is 0.5 and the value is over the 0.7 means the acceptable reliability (Nunnally, 1978). The six variables are successfully over the

Cronbach Alpha value of 0.7 (>0.7), and remaining two variables attained 0.650 and 0.690. The highest reliable value is 0.892, which is available with the construct of “Entrepreneurial intension”. All the variables of current research are ranged between the Cronbach’s Alpha value of 0.690 and 0.892, i.e. within the acceptable range.

Table 1  
*Demographic characteristic of the respondents*

Personal Information	Variables	Frequency	Percentage (%)
Gender	Male	108	84.4
	Female	20	15.6
	<b>Total</b>	<b>128</b>	<b>100.0</b>
Education	Less than O/L	3	2.3
	Up to O/L	36	28.1
	O/L Passed	36	28.1
	A/L Passed	53	41.4
	<b>Total</b>	<b>128</b>	<b>100.0</b>
Religion	Buddhist	117	91.4
	Hindu	1	0.8
	Islam	2	1.6
	Other	8	6.3
	<b>Total</b>	<b>128</b>	<b>100.0</b>
Father’s profession	Others	103	80.5
	Entrepreneur	25	19.5
	<b>Total</b>	<b>128</b>	<b>100.0</b>

Table 2  
*Reliability Statistics of the research constructs*

Variables	No. of Items	Cronbach's Alpha
Attitudes Towards the Entrepreneurship	05	0.781
Perceived Self-Efficacy	06	0.705
Social Capital	03	0.690
Perceived Financial support	03	0.715
Perceived regulatory support	05	0.780
Perceived TVET	03	0.774
Entrepreneurial Intension	06	0.892

### Descriptive Statistics of Research constructs

The following discussion pertained to the analysis of descriptive statistics of each research construct. The descriptive statistics of all these constructs are summarized in table 3. When summarized the descriptive statistics of the research constructs discussed above pertaining to Technical & Vocational Education & Training, entrepreneurial attitudes and self –efficacy reflects higher mean value, while perceived financial and regulatory support have the lowest mean value among all the constructs (see table 4.11). The respondents indicated that they have mostly agreed with perceived technical education and support (Mean= 4.2943), entrepreneurial attitudes (Mean=4.0484), perceived Self-Efficacy (Mean= 4.0482), and Entrepreneurial intention (Mean= 3.9609). And moderately agreed with the constructs of social capital (Mean=3.8828) and perceived regulatory environment (Mean= 3.3891). On the other hand, the respondents mostly had not agreed with the perceived financial environment and which is reflected from the low value of mean (Mean=2.4219).

Table 3

*Summary of the descriptive statistics of research constructs*

Variables	Minimum	Maximum	Mean	SD
Attitudes Towards the Entre:	1.60	5.00	4.0484	0.6162
Perceived Self-Efficacy	2.50	5.00	4.0482	0.4766
Social Capital	1.00	5.00	3.8828	0.6461
Perceived Financial Support	1.00	4.67	2.4219	0.7842
Perceived Regulatory Support	1.00	4.60	3.3891	0.6907
Perceived Technical Edu: & Sup:	3.00	5.00	4.2943	0.5998
Entrepreneurial Intention	2.00	5.00	3.9609	0.7675

### Correlation among the research constructs

This section analyses the correlation between the research constructs and the correlation among the elements of the each research construct.

**Correlation among the research constructs**

Table 4

*Correlation results among the research constructs*

	ATE	PSE	SC	Gender	Fath: Job	PFS	PRS	PTET	EI
ATE	1								
PSE	0.456**	1							
SC	0.353**	0.372**	1						
Gender	0.069	0.119	-0.011	1					
Fath:									
Job	0.006	0.151	0.049	-0.114	1				
		-							
PFS	-0.159	0.268**	-0.116	-0.025	-0.039	1			
PRS	0.163	0.100	0.124	0.037	0.082	0.045	1		
						-			
PTET	0.215*	0.363**	0.304**	0.032	-0.067	0.246**	0.138	1	
EI	0.506**	0.406**	0.310**	0.091	0.060	-0.162	0.205*	0.406**	1

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

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

Table 4 presents the correlations coefficients of dependent and independent variables. It indicates the results of correlations coefficient between the dependent variable of EI and independent variables of ATE, PSE, SC, Gender, Fathers Job, PFS and PRS. The highest positive correlation was obtained between the dependent variable of Entrepreneurial intention and the independent variable of Attitudes towards the entrepreneurship ( $r = 0.506$ ). Although it does not reflect much strong correlation, there is a significant and positive correlation among the student's attitudes and their entrepreneur intension. However, that negative and much weak correlation is depicted from the perceived financial support ( $r = -0.162$ ), with the entrepreneurial intention and weak but positive correlation is indicated by the regulatory environment ( $r = 0.205$ ).

*Regression analysis*

Table 5

*Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.506a	0.256	0.250	0.66445
2	0.591b	0.349	0.339	0.62418

a. Predictors: (Constant), Entrepreneurial attitude

b. Predictors: (Constant), Entrepreneurial attitude, Educational Support

Table 6  
ANOVA Table

ANOVA <sup>c</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.177	1	19.177	43.436	0.0000
	Residual	55.628	126	0.441		
	Total	74.805	127			
2	Regression	26.104	2	13.052	33.501	0.0000
	Residual	48.700	125	0.390		
	Total	74.805	127			

a. Predictors: (Constant), Entrepreneurial attitude

b. Predictors: (Constant), Entrepreneurial attitude, Educational Support

c. Dependent Variable: Entrepreneurial Intention

Table 7  
Regression results of the research coefficients

Variables	B	t (F-value)	p	Corr:
Attitudes towards the Entrepreneurship	0.439	5.943	0.000	0.506
Perceived Self-Efficacy	0.130	1.529	0.129	0.406
Social Capital	0.073	0.919	0.360	0.310
Demographic Factors:				
• Gender	0.051	0.698	0.487	0.091
• Father's Job	0.078	1.080	0.282	0.060
Perceived Financial support	-0.017	-0.227	0.821	-0.162
Perceived Regularity support	0.093	1.272	0.206	0.205
Perceived technical education & training	0.312	4.217	0.000	0.406

The correlation table indicates the positive association among the dependent variable of Entrepreneurial Intention and all independent variables, except the perceived financial support. Although it indicates the association between the dependent variable among the intendant variables, it does not reflect the strength and direction of the relationship. Regression is the statistical methodology which investigates the which intends to find out the strengths direction of the relationship between two variables, i.e. dependent variable and the independent variables (Buli & Yesuf, 2015) as per the overall analysis, the model

successfully predicts the 33.9% of the variation in Entrepreneurial intention ( $R^2 = 0.339$ ) in the 99% significance level; Therefore, the model assesses the impact of independent variables on dependent variable (see table 5).

As per the information of regression analysis given in table 4.22, there is a considerable positive impact of TVET student's attitudes towards the entrepreneurship ( $\beta = 0.439$ ,  $t$ -value = 5.943,  $p = 0.000$ ) for entrepreneurial intention. The beta value is positive and acceptable with  $F$ -value ( $t = 5.943$ ) at significant level  $P = 0.000$ . But the statistical result ( $\beta = 0.130$ ,  $t = 1.529$  &  $p = 0.129$ ) shows the low impact of the independent variable of Self efficacy towards the dependent variable of Entrepreneurial Intension (Table 7).

Similar to this, the regression result reflects low association between the predictor variable of Social capital and the outcome variable entrepreneurial intension. The regression model has given  $F$  is as 0.919 and it is significant at  $p = 0.360$ . The very low value of beta ( $\beta = 0.073$ ) shows the insignificant impact of social capital towards the entrepreneurial intention. More importantly, the regression results ( $\beta = -0.017$ ,  $t = -0.227$ ,  $p = 0.821$ ) are illustrated in table 7, the very weak and negative impact among the students entrepreneurial intension and perceived financial support.

The regression information reflect the impact of regulatory support towards the entrepreneurial intension with  $\beta = 0.093$  and 1.272  $F$  value ( $p = 0.206$ ), the impact is positive but weak among the perceived regulatory support and entrepreneurial intension of the TVET students of Sri Lanka.

However the regression results are significant and it indicates that student's perceived Technical & Vocational Education & Training has a positive influence on entrepreneurial intention ( $\beta = 0.312$ ,  $t = 4.217$ ,  $p = 0.000$ ).

Furthermore, table 7 articulates the statistics of regression and which indicates the conclusion of hypothesis, whether is supported or. The statistical relationship between the entrepreneurial attitude and entrepreneurial intention and Perceived technical education and entrepreneurial intension are positive and significant, supports to accept *H1* and *H8*. However, it is not supported by the statistical results in table 7 pertaining to other hypothesis in the research model.

### *Hypothesis testing*

**Hypotheses 1:** Personal attitudes of entrepreneurship have a positive influence on the entrepreneurial intension of TVET Students.

Higher agreed mean value (4.0484) of the construct, significant positive correlation with the entrepreneurial intension (0.506) and also the regression analysis highlight the potential

impact of the attitudes of TVET students towards the entrepreneurial intension. These statistical findings are supported not to reject null hypothesis, i.e. Personal attitudes of TVET students have the positive influence towards the entrepreneurial intension.

**Hypothesis 2:** Perceived Self-efficacy has a positive influence on the entrepreneurial intension of TVET students of Sri Lanka.

Although the mean value of the construct is much higher (4.0482), the positive correlation is noticed with the dependent variable which is not significant. Regression analysis reflects less impact towards the change in dependent variable although it is positive. Positive but very weak beta value ( $\beta = 0.130$ ) at the significance level of  $P = 0.129$  reflects this weak interrelationship and all above statistical information support to reject the null hypothesis; therefore, Self-efficacy has a positive influence towards the entrepreneurial intension of TVET students of Sri Lanka.

**Hypothesis 3:** Social capital of the individual has a positive influence on entrepreneurial intension of TVET students of Sri Lanka.

The slightly above average mean value reflects the considerable level of respondents does not have a positive response towards the entrepreneurial intention. The correlation is positive but not material impact and therefore the regression analysis had excluded the impact of social capital towards the entrepreneurial intension of the TVET students. Hence, the null hypothesis is rejected and there is no positive influence from social capital towards the entrepreneurial intension of TVET students of Sri Lanka.

**Hypothesis 4:** Gender has a significant impact on entrepreneurial intension of TVET students of Sri Lanka.

**Hypothesis 5:** Family backgrounds of the TVET students positively influence their entrepreneur intension.

According to the statistical analysis of the research study, it is evident that the research constructs of gender and father's job do not significantly impact the entrepreneurial intension of the TVET students. The regression analysis had excluded both constructs of gender and father's job and therefore, null hypothesis of both gender and fathers are rejected.

**Hypothesis 6:** Perceived financial support positively influences the entrepreneurial intension of the TVET students of Sri Lanka

Negative correlation can be noticed among perceived financial support and the entrepreneurial intension. The Beta value of the regression analysis also depicts the negative and non-significant impact towards the entrepreneurial intension. Hence all these statistical figures exemplify the insignificance of the perceived financial support towards the entrepreneurial intension and null hypothesis is rejected.



**Hypothesis 7:** Perceived regulatory support positively influences the entrepreneurship intension of the TVET students of Sri Lanka.

Nearly 3.3 mean value, positive but less significant correlation and very low impact of beta value ( $\beta=9.3\%$ ) towards the entrepreneurial intension exemplify the statistical insignificance of perceived regulatory support towards the entrepreneurial intension of the TVET students.

**Hypothesis 8:** Perceived Technical & Vocational Education and Training positively influences the entrepreneurship intention of TVET students of Sri Lanka.

As per the regression analysis, the construct of perceived Technical and Vocational Education & Training has been included and it has 31.2% of impact towards the dependent variable. Also it is exemplified that the correlation coefficient between the technical education & training, with the entrepreneurial intension, is the acceptable level.

All these statistical findings disclose that all dimensions are significant in explaining the entrepreneurial intension of TVET students of Sri Lanka and this analysis helps to accept the null hypothesis of Perceived Technical & Vocational Education & Training is positively correlated with the entrepreneurship intention of TVET students of Sri Lanka.

#### 4. Discussion

##### *Personal Factors*

The statistical analysis is supported to accept the first hypothesis and therefore it concludes the impact of TVET student's attitudes towards their entrepreneurial intension. The variable of entrepreneurial attitudes had obtained the highest beta value of the model and all the statistical details display positive and significant impact towards the entrepreneurial intension. This exemplify that Sri Lankan TVET students attitudes have a considerable impact towards the development of entrepreneurial intension and mostly if they have opportunities and resources they mostly intend towards the entrepreneurship. Most of the previous researchers had concluded the impact of attitudes towards the intension (Ajzen, 1991; Kruger et al, 2000) and more specifically, the theory of planned behaviour specifies three types of attitudinal impact towards the intension (Krueger & Carsrud, 1993). Furthermore, it was observed that the attitudes towards the entrepreneurship is the strongest variable among all other variables in this research model and this has similar to the findings of the Luthje & Franke (2003) pertaining to the entrepreneurial intension of the technical students of MIT and the study in regarding the TVET students in Ethiopia (Buli & Yesuf, 2015). Similar studies also have concluded that attitudes of the entrepreneurship becomes the most powerful variable which explains the entrepreneurial intension of TVET students.

The null hypothesis pertaining to the perceived self-efficacy is that "Perceived self-efficacy has the positive influence towards the entrepreneurial intension of TVET students of Sri

Lanka". However the research data does not provide enough statistical evidence to accept this hypothesis. In other words, the students of TVET students of Sri Lanka do not reflect the potential positive influence in terms of perceived self -efficacy towards the entrepreneurial intension. Although the model reflects higher mean value and positive correlation between self-efficacy and entrepreneurial intention, it does not confirm the significant impact of self-efficacy on entrepreneurial intension as per the results of regression analysis. Sri Lankan TVET students positively think about their abilities and competencies to start a business and become entrepreneurs, but still they lack confidence in leading others and getting people to agree with them. In contrast to this, some researchers had revealed the positive relationship between the self-efficacy and entrepreneurial intension (Boyd & Vozikis, 1994; Kruger et al, 2000). Elali & Al-Yacoub (2016) also had concluded self- Efficacy as one of the key personal factor which has a positive impact towards the entrepreneurial intension in Kuwait. As per the Bausch & Michel (2014), the gender & age effects on self –efficacy and concluded that older woman reflect more positive development with higher self –efficacy than the older men. Also the research study carried out with the nursing students in Northeast Ohio had revealed that seniority or the experience increases the self-efficacy of the students, since those seniors are much confident about them (Wilson & Byers, 2017). The average age level of the research respondents of the current research is 20 years and 84% is male, this also has a considerable impact on the research results pertaining to self-efficacy.

The previous researchers such as De Carolis & Saporito (2006) had emphasized the impact of social capital in entrepreneurial intension and importance of further studying with empirical researches. Bosma et al (2004) had also concluded the strong relationship between the investments in enhancing the social capital and developments of entrepreneurial intension. Moreover, the recent empirical research done in Kuwait regarding the factors that affect entrepreneurial intension had concluded the significant positive relationship among variable of social capital and the entrepreneurial intension (Elali & Al-Yacoub, 2016). However the research result of the present study do not reveal the significant impact of social capital towards the entrepreneurial intention of TVET students in Sri Lanka. As per the statistical analysis, most of the students responded in "no idea" and comparatively positive but not significant correlation among the social capital and entrepreneurial intension. This is somewhat different than what can be expected from the Sri Lankan context. Since the relationship among the family members and friends are much strong when compared to the western context, and they are strongly impacted by the family members and friends. However these findings are compatible with the research done by the Turker & Selcuk (2008), regarding the factors which affect the entrepreneurial intension of University students.

As per the findings of Wilson, Kickul & Marino (2007), entrepreneurship intension is still dominated by the male and most of women believed that they have not enough potential to be entrepreneurs and therefore they have comparatively low intension towards the entrepreneurship. Research conclusions of Marlow & Patton (2005) forward the same

notion as females have a specific set of barriers due to gender and therefore this impact is negatively towards the entrepreneurship intentions of woman. These perceived barriers associated with gender can negatively impact on the entrepreneurial intention of women. Higher entrepreneurial intention is associated with male than female (Crant, 1996). However, Yukongdi & Lopa (2017) & Hatak, Harms & Fink, (2015) have concluded that there is no difference between the entrepreneurial intention among the men and woman based on their researches done in recently. The statistical analysis of the present study also brings similar conclusion, i.e. “no impact of gender towards the entrepreneurial intention”. The random selected sample of TVET students are represented in both males and females, but more than the 84% (see table 4.1) of them are males and this reflects more closely the actual gender composition of males and females in the population. However the sample is not reliable in terms of gender and therefore it is required to do further studies with more reliable sample in terms of gender in order to assess the impact of gender towards entrepreneurial intention.

#### *Environmental Factors*

The randomly selected sample of TVET students of Sri Lanka consisted of only 19.5% of respondents who have entrepreneurial family background and this reflects the low percentage of TVET students in Sri Lanka with entrepreneurial family background. As according to the statistical analysis, there isn't sufficient evidence to accept the above hypothesis and null hypothesis is rejected. Chaudhary (2017) has identified that the greater impact towards the entrepreneurial intention is parent's professional role and family background has a significant influence on entrepreneur intention (Amos & Alex, 2014; Crant, 1996; Marques et al, 2012). The current research sample contained only 25 students whose father is a businessman among the 128 total samples of students. These mix results emphasizes the importance of conducting further researches in this area, with stronger sample base and a higher number of sample units from the entrepreneurial family background.

Similar to the importance of human capital, financial capital is also considered as the most basic type of resource required for the business start-up and therefore it has an impact on entrepreneurial intention of the individual (Neuberger and Rathke, 2009). Therefore, perceived financial support of TVET students has been identified as a variable of the current study; however, the statistical analysis of the respondents does not support to accept the null hypothesis called “Perceived financial support of TVET students positively relates with the entrepreneurial intention”. This conclusion is confirmed by Turker & Selcuk (2008), through their study carried out regarding the factors that affect the entrepreneurial intention of the university students in Austria. Although financial support is emphasized as the important requirement for the new business creation (Gnyaweli & Fogel, 1994), majority of the respondents in current study responses reflect the “no idea” relating to the perceived financial support. It shows that the lack of understanding about the financial support

towards the business among the TVET students in Sri Lanka. This is a very important implication for the authorities in TVET sector and also emphasizes the requirement of further study regarding this matter.

Although positive, there is no significant impact of perceived regulatory support on the entrepreneurial intension of the TVET students of Sri Lanka. This is reflected from the information derived from the statistical analysis of the data set. Therefore, the null hypothesis is rejected and the research conclusion can be derived is “no significant impact of the perceived regulatory support towards the entrepreneurial intension of TVET students of Sri Lanka”. The mean values and correlation coefficients of the dimensions of perceived regulatory support reflects the respondent’s lack of knowledge regarding the regulatory environment with respect to the entrepreneurship intension. Due to the young age (Average 20. 58 yrs.) and less experiences may cause this situation and the career guidance officers in TVET sector should take this factor into consideration when empowering their knowledge to empower their knowledge. Similarly to this notion, Ghosh (2017) concludes there is no significant impact of business regulations towards the entrepreneurial intension upon the facts including the Global Entrepreneurship Monitor (GEM) report for 79 countries from 2001 to 2016. Since most of the individuals in developing countries are starting businesses in informal sector, they may not much concern about the government subsidies or other regulatory influences. In contrast to this, some other researchers had concluded with significant and positive influence towards the entrepreneurship intension in individuals (Urban & Kujinga, 2017).

Technical education is somewhat different from other educational areas and it stimulates the significant economic development of the country since it involves many dynamic and innovative areas (Roberts, 1991). TVET programs are specifically designed to empower the youth with entrepreneurial skills to enhance entrepreneurial intension to be self-employed (Buli & Yesuf, 2015). Consequently, the Students in Technical Education and Vocational Training institutions should display a higher intension towards the entrepreneurship. This had been confirmed by the statistical information derived from the current study. The regression model had included the hypothesis of perceived Technical & Vocational Education & Training impact towards the entrepreneurial intension, since it has a positive and significant impact towards the entrepreneurial intension of the TVET students of Sri Lanka. Therefore null hypothesis is accepted and “Perceived Technical & Vocational Education & Training is positively correlated with the entrepreneurship intention of TVET students of Sri Lanka”. TVET institutions in Sri Lanka, such as Vocational Training Authority, conducts entrepreneurship promoting programs for its students other than the TVET programs and it may have helped to enhance the entrepreneurial intension among the TVET students as the data set had confirmed. The implementation of TVET programs and Entrepreneurial promotion and training programs can foster the entrepreneurship intension among the TVET students (Sandirasegarane et al, 2016).

## **5. Conclusion**

The research problems of the current study are “What is the current level of entrepreneur intension of the TVET students of Sri Lanka and how is the impact of personal and environmental factors towards their entrepreneurial intension?” The results of the findings through the statistical analysis revealed that their intension is at a good level (Mean value of the variable of entrepreneur intension= 3.9609) and that would be a good indicator of development of entrepreneurship among the TVET students. The overall statistical analysis also revealed that personal attitudes towards the entrepreneurship is positive and significantly influences the entrepreneurship intension of the TVET students of Sri Lanka. However the other personal factors, i.e. perceived self-efficacy, social capital and demographic factors do not have a significant impact on the entrepreneurial intension of the TVET students of Sri Lanka. Perceived Technical & Vocational Education & Training is positive and significant towards the entrepreneurial intension of TVET students of Sri Lanka. Nevertheless, other environmental factors of the model of the entrepreneurial intension (Perceived financial and regulatory support) do not impact entrepreneurial intension.

## **6. Limitations of the Study**

The 173,421 students were registered in all private and public TVET institutions of Sri Lanka, with more than thousands of training centres Island wide (National Skills Development Report, 2015). However this research study has been conducted with 128 samples of students comprised with three public owned TVET institutions. This is one of the key limitations of the present study. Also, the conceptual model of this research has been limited to some selected personal variables and environmental variables due to the operational limitations of the study. This study has been carried out to assess the entrepreneurial intension of the TVET students therefore that has limited the research study to the TVET sector. Another limitation is that the gender composition and the random sample obtained in this study does not represent enough females to conclude the impact of gender on entrepreneur intension.

## **7. Suggestions for future research**

The present research has been restricted for some selected variables and therefore the future researchers can be done with empirical studies with all other important variables that have an impact on entrepreneurial intension. Also this research study was carried out with 128 samples of TVET students from 3 institutions (DTET, NAITA & VTA) in the Colombo district. Hence future researchers can conduct the study by broadening the sample with students representing other institutions in TVET sector Island wide. On the other hand, this research has been limited to assess the young entrepreneurial intension and influential factors pertaining to the TVET sector of Sri Lanka; therefore it is suggested to conduct further researches regarding the entrepreneur intension of the undergraduates of Sri Lanka.

Also it is suggested that future researches to conduct the study & compare the results of the present study with undergraduates and the students in other higher education sectors.

## References

- Acs, Z. J., & Szerb, L. (2007). Entrepreneurship, economic growth and public policy. *Small business economics*, 28(2-3), 109-122.
- Adler, P. S., & Kwon, S.-W. (2000). Social capital: the good, the bad, and the ugly. In *Knowledge and social capital* (pp. 89-115): Elsevier.
- Adler, P. S., & Kwon, S.-W. (2002). Social capital: Prospects for a new concept. *Academy of management review*, 27(1), 17-40.
- Ajzen, I. (1987). Attitudes, traits, and actions: Dispositional prediction of behavior in personality and social psychology. In *Advances in experimental social psychology* (Vol. 20, pp. 1-63). Academic Press.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- Amos, A., & Alex, K. (2014). Theory of planned behaviour, contextual elements, demographic factors and entrepreneurial intentions of students in Kenya. *European journal of Business and Management*, 6(15), 167-175.
- Atherton, A. (2007). Preparing for business start-up: "pre-start" activities in the new venture creation dynamic. *Journal of Small Business and Enterprise Development*, 14(3), 404-417.
- Audretsch, D. B., & Thurik, A. R. (2004). *A model of the entrepreneurial economy* (No. 1204). Papers on Entrepreneurship, Growth and Public Policy.
- Bae, T. J., Qian, S., Miao, C., & Fiet, J. O. (2014). The relationship between entrepreneurship education and entrepreneurial intentions: A meta-analytic review. *Entrepreneurship theory and practice*, 38(2), 217-254.
- Balasundaram, N. (2010). Entrepreneurship Development Through Business Education in Sri Lanka : A country profile.
- Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (2001). Self-efficacy beliefs as shapers of children's aspirations and career trajectories. *Child development*, 72(1), 187-206.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American psychologist*, 37(2), 122.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Macmillan.
- Bandura, A. (1999). Social cognitive theory: An agentic perspective. *Asian journal of social psychology*, 2(1), 21-41.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual review of psychology*, 52(1), 1-26.
- Becker, G. S. (1994). Human capital revisited. In *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education (3rd Edition)* (pp. 15-28): The university of Chicago press.

- Biavaschi, C., Eichhorst, W., Giuliotti, C., Kendzia, M. J., Muravyev, A. P., & Pieters, J. (2013). J., Rodríguez-Planas, N., Schmidl, R. & Zimmermann, KF (2012). *Youth Unemployment and Vocational Training*.
- Birch, D. L., & Medoff, J. (1994). Gazelles. *Labor markets, employment policy and job creation*, 159167.
- Bosma, N., Van Praag, M., Thurik, R., & De Wit, G. (2004). The value of human and social capital investments for the business performance of startups. *Small Business Economics*, 23(3), 227-236.
- Boyd, N. G., & Vozikis, G. S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship theory and practice*, 18(4), 63-77.
- Bruder, J., Neuberger, D., & Rähke-Döppner, S. (2011). Financial constraints of ethnic entrepreneurship: evidence from Germany. *International Journal of Entrepreneurial Behavior & Research*, 17(3), 296-313.
- Buli, B. M., & Yesuf, W. M. (2015). Determinants of entrepreneurial intentions: Technical-vocational education and training students in Ethiopia. *Education+ Training*, 57(8/9), 891-907.
- Burt, R. S. (1992). *Structural Holes*. Cambridge, MA: Harvard University Press.
- Business, D. (2017). *Equal opportunity for all*. Washington, The World Bank.
- Carter, S., & Rosa, P. (1998). Indigenous rural firms: farm enterprises in the UK. *International Small Business Journal*, 16(4), 15-27.
- Central Bank of Sri Lanka. (2015). *Annual report 2014*. Sri Lanka: Author.
- Chaudhary, R. (2017). Demographic factors, personality and entrepreneurial inclination: A study among Indian university students. *Education+ Training*, 59(2), 171-187.
- Chen, W. Y., Weng, C. S., & Hsu, H. Y. (2010). A study of the entrepreneurship of Taiwanese youth by the Chinese Entrepreneur Aptitude Scale. *Journal of Technology management in China*, 5(1), 26-39.
- Collis, J., & Hussey, R. (2009). *Business Research*: Palgrave Macmillan.
- Crant, J. M. (1996). The proactive personality scale as a predictor of entrepreneurial intentions. *Journal of small business management*, 34(3), 42.
- Cressy, R. (1994). *Staying with it: Some fundamental determinants of Business Startup Longevity*. Centre for Small and Medium Sized Enterprises, Warwick Business School, University of Warwick.
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of business venturing*, 18(3), 301-331.
- De Carolis, D. M., & Saporito, P. (2006). Social capital, cognition, and entrepreneurial opportunities: A theoretical framework. *Entrepreneurship theory and practice*, 30(1), 41-56.
- Department of census & Statistics. (2015) *Labour Force survey –Annual Report -2014*. Sri Lanka: Author

- Devonish, D., Alleyne, P., Charles-Soverall, W., Young Marshall, A., & Pounder, P. (2010). Explaining entrepreneurial intentions in the Caribbean. *International journal of entrepreneurial behavior & research*, 16(2), 149-171.
- Dissanayake, D. M. N. S. W. (2013). The impact of perceived desirability and perceived feasibility on entrepreneurial intention among undergraduate students in Sri Lanka: An extended model.
- Do Paço, A. M. F., Ferreira, J. M., Raposo, M., Rodrigues, R. G., & Dinis, A. (2011). Behaviours and entrepreneurial intention: Empirical findings about secondary students. *Journal of International Entrepreneurship*, 9(1), 20-38.
- Drnovsek, M., Wincent, J., & Cardon, M. S. (2010). Entrepreneurial self-efficacy and business start-up: developing a multi-dimensional definition. *International Journal of Entrepreneurial Behavior & Research*, 16(4), 329-348.
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological review*, 109(3), 573.
- Elali, W., & Al-Yacoub, B. (2016). Factors affecting entrepreneurial intentions among Kuwaitis. *World Journal of Entrepreneurship, Management and Sustainable Development*, 12(1), 18-34.
- European Commission. (2012). Policy brief on youth entrepreneurship. 2012. Author
- Fatoki, O. O. (2010). Graduate entrepreneurial intention in South Africa: motivations and obstacles. *International Journal of Business and Management*, 5(9), 87.
- Fernández-Pérez, V., Esther Alonso-Galicia, P., del Mar Fuentes-Fuentes, M., & Rodríguez-Ariza, L. (2014). Business social networks and academics' entrepreneurial intentions. *Industrial Management & Data Systems*, 114(2), 292-320.
- Gamage, A. S. (2003). Small and medium enterprise development in Sri Lanka: a review. *Meijo University, Faculty of Business Management, Nagoya, Japan*. [http://wwwbiz.meijo-u.ac.jp/SEBM/ronso/no3\\_4/aruna.pdf](http://wwwbiz.meijo-u.ac.jp/SEBM/ronso/no3_4/aruna.pdf).
- Gamage, H. R., Cameron, D., & Woods, E. (2003). Are Sri Lankan entrepreneurs motivated by the need for achievement?. In *9th International Conference on Sri Lankan Studies* (No. Full Paper No. 099, pp. 1-10). University of Ruhuna
- Ghosh, S. (2017). Regulation and entrepreneurial intention: cross-country evidence. *Journal of Entrepreneurship and Public Policy*, 6(2), 193-205.
- Gnyawali, D. R., & Fogel, D. S. (1994). Environments for entrepreneurship development: key dimensions and research implications. *Entrepreneurship theory and practice*, 18(4), 43-62.
- Guerrero, M., Rialp, J., & Urbano, D. (2008). The impact of desirability and feasibility on entrepreneurial intentions: A structural equation model. *International Entrepreneurship and Management Journal*, 4(1), 35-50.
- Gupta, V. K., & York, A. S. (2008). Attitudes toward entrepreneurship and small business: Findings from a survey of Nebraska residents and small business owners. *Journal of Enterprising Communities: People and Places in the Global Economy*, 2(4), 348-366.



- Hatak, I., Harms, R., & Fink, M. (2015). Age, job identification, and entrepreneurial intention. *Journal of Managerial Psychology*, 30(1), 38-53.
- Iakovleva, T., Kolvereid, L., & Stephan, U. (2011). Entrepreneurial intentions in developing and developed countries. *Education+ Training*, 53(5), 353-370.
- Ibrahim, M. (2016). Evaluating hotel websites as a marketing communication channel: A dialogic perspective. *Information Development*, 32(3), 718-727.
- Ismail, M., Khalid, S. A., Othman, M., Jusoff, H. K., Rahman, N. A., Kassim, K. M., et al. (2009). Entrepreneurial intention among Malaysian undergraduates. *International Journal of Business and Management*, 4(10), 54.
- Jarvis, R. (2000). Finance and the small firm. *Enterprise and small business: Principles, practice and policy*, 337-353.
- Kojo Oseifuah, E. (2010). Financial literacy and youth entrepreneurship in South Africa. *African journal of Economic and management studies*, 1(2), 164-182.
- Krueger Jr, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of business venturing*, 15(5-6), 411-432.
- Krueger, N. F., & Carsrud, A. L. (1993). Entrepreneurial intentions: applying the theory of planned behaviour. *Entrepreneurship & Regional Development*, 5(4), 315-330.
- Kuruppu, G. N. (2015). Sources of financing & difficulties of raising finance: The case of Sri Lankan Entrepreneurs.
- Lacap, J. P. G. Senior High School Students' Entrepreneurial Inclination: The Case of Accountancy, Business, and Management Track Students in Pampanga, Philippines.
- Lee, S. H., & Wong, P. K. (2004). An exploratory study of technopreneurial intentions: A career anchor perspective. *Journal of business venturing*, 19(1), 7-28.
- Liñán, F., & Chen, Y. W. (2009). Development and Cross-Cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship theory and practice*, 33(3), 593-617.
- Linan, F., & Santos, F. J. (2007). Does social capital affect entrepreneurial intentions? *International Advances in Economic Research*, 13(4), 443-453.
- Luthje, C., & Franke, N. (2003). The "making" of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT. *R&D Management*, 33(2), 135-147.
- Majumdar, S., & Varadarajan, D. (2013). Students' attitude towards entrepreneurship: does gender matter in the UAE? *Foresight*, 15(4), 278-293.
- Marlow, S., & Patton, D. (2005). All credit to men? Entrepreneurship, finance, and gender. *Entrepreneurship theory and practice*, 29(6), 717-735.
- Marques, C. S., Ferreira, J. o. J., Gomes, D. N., & Gouveia Rodrigues, R.(2012). Entrepreneurship education: How psychological, demographic and behavioural factors predict the entrepreneurial intention. *Education+ Training*, 54(8/9), 657-672.
- Merchant, K. A. (1985). Budgeting and the propensity to create budgetary slack. *Accounting, Organizations and Society*, 10(2), 201-210.

- Ministry of Youth Affairs and Skills Development. (2013). Performance Report. Sri Lanka. Author
- Misra, S., & Kumar, E. S. (2000). Resourcefulness: A proximal conceptualisation of entrepreneurial behaviour. *The Journal of Entrepreneurship*, 9(2), 135-154.
- Mitra, J., Abubakar, Y. A., & Sagagi, M. (2011). Knowledge creation and human capital for development: the role of graduate entrepreneurship. *Education+ Training*, 53(5), 462-479.
- Moriano, J. A., Gorgievski, M., Laguna, M., Stephan, U., & Zarafshani, K. (2012). A cross-cultural approach to understanding entrepreneurial intention. *Journal of career development*, 39(2), 162-185.
- Murugesan, R., & Jayavelu, R. (2015). Testing the impact of entrepreneurship education on business, engineering and arts and science students using the theory of planned behaviour: A comparative study. *Journal of Entrepreneurship in Emerging Economies*, 7(3), 256-275.
- Nabi, G., Walmsley, A., Linan, F., Akhtar, I., & Neame, C. (2016). Does entrepreneurship education in the first year of higher education develop entrepreneurial intentions? The role of learning and inspiration. *Studies in Higher Education*, 43(3), 452-467.
- Nahapiet, J., & Ghoshal, S. (2000). Social capital, intellectual capital, and the organizational advantage. In *Knowledge and social capital* (pp. 119-157): Elsevier.
- National Apprentice and Industrial Training Authority (NAITA). (2007). Entrepreneur Development. Retrieved from the NAITA web site : [http://www.naita.gov.lk/index.php?option=com\\_content&view=article&id=53&Itemid=81&lang=en](http://www.naita.gov.lk/index.php?option=com_content&view=article&id=53&Itemid=81&lang=en)
- Nelson Rolihlahla Mandela (n.d.) Nelson Rolihlahla Mandela. Retrieved from the Nelson Mandela's website: [http://www.mandela.gov.za/mandela\\_speeches/index.html](http://www.mandela.gov.za/mandela_speeches/index.html)
- Nunnally, J. C. (1978). Psychometric theory (2nd ed.). New York: McGraw-Hill.
- Onstenk, J. (2003). Entrepreneurship and vocational education. *European educational research journal*, 2(1), 74-89.
- OECD/European Union (2012). *A Policy Brief on Youth Entrepreneurship-Entrepreneurial Activities in Europe*, Publications Office of the European Union, Luxembourg.
- Othman, N., Hashim, N., & Ab Wahid, H. (2012). Readiness towards entrepreneurship education: Students and Malaysian universities. *Education+ Training*, 54(8/9), 697-708.
- Oviatt, B. M., & McDougall, P. P. (1997). Challenges for internationalization process theory: The case of international new ventures. *MIR: Management International Review*, 85-99.
- Packham, G., Jones, P., Miller, C., Pickernell, D., & Thomas, B. (2010). Attitudes towards entrepreneurship education: a comparative analysis. *Education+ Training*, 52(8/9), 568-586.
- Pennings, J. M. (1982). Organizational birth frequencies: An empirical investigation. *Administrative Science Quarterly*, 120-144.

- Piperopoulos, P. (2012). Could higher education programmes, culture and structure stifle the entrepreneurial intentions of students? *Journal of Small Business and Enterprise Development*, 19(3), 461-483.
- Premaratne, S. P. (2002). *Entrepreneurial networks and small business development: The case of small enterprises in Sri Lanka*. Eindhoven: Technische Universiteit Eindhoven.
- Roberts, E. B. (1991). *Entrepreneurs in high technology: Lessons from MIT and beyond*: Oxford University Press.
- Robson, C. (2002). *The analysis of qualitative data*. Blackwell.
- Roper, S., & Scott, J. M. (2009). Perceived financial barriers and the start-up decision: An econometric analysis of gender differences using GEM data. *International Small Business Journal*, 27(2), 149-171.
- Sandirasegarane, S., Sutermaster, S., Gill, A., Volz, J., & Mehta, K. (2016). Context-driven entrepreneurial education in vocational schools. *International Journal for Research in Vocational Education and Training*, 3(2), 106-126.
- Sara, C., & Peter, R. (1998). The financing of male—and female—owned businesses. *Entrepreneurship & Regional Development*, 10(3), 225-242.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students fifth edition* (fifth).
- Schwarz, E. J., Wdowiak, M. A., Almer-Jarz, D. A., & Breiteneker, R. J. (2009). The effects of attitudes and perceived environment conditions on students' entrepreneurial intent: An Austrian perspective. *Education+ Training*, 51(4), 272-291.
- Scott, M. G., & Twomey, D. F. (1988). The long-term supply of entrepreneurs: students' career aspirations in relation to entrepreneurship. *Journal of small business management*, 26(4), 5.
- Shapero, A., & Sokol, L. (1982). *The social dimensions of entrepreneurship*.
- SLASSCOM. (2016). Country overview of the start-up ecosystem in Sri Lanka. Retrieved from the SLASSCOM web site: <https://slasscom.lk/sites/default/files/Startup%20Sri-Lanka%20Report%202016%20%281%29.pdf>
- Steyaert, C., & Katz, J. (2004). Reclaiming the space of entrepreneurship in society: geographical, discursive and social dimensions. *Entrepreneurship & regional development*, 16(3), 179-196.
- Tertiary and Vocational Education Commission. (2017). *National Skills development report-2015*. Sri Lanka: Author
- Turker, D., & Sonmez Selçuk, S. (2009). Which factors affect entrepreneurial intention of university students? *Journal of European industrial training*, 33(2), 142-159.
- United Nations Development Program. (2015). *Sri Lanka National Human Development Report 2014*. Author.
- Urban, B., & Kujinga, L. (2017). The institutional environment and social entrepreneurship intentions. *International Journal of Entrepreneurial Behavior & Research*, 23(4), 638-655.

- Van Gelderen, M., Brand, M., van Praag, M., Bodewes, W., Poutsma, E., & Van Gils, A. (2008). Explaining entrepreneurial intentions by means of the theory of planned behaviour. *Career Development International*, 13(6), 538-559.
- Wang, C. K., & Wong, P.-K. (2004). Entrepreneurial interest of university students in Singapore. *Technovation*, 24(2), 163-172.
- Weiler, S., & Bernasek, A. (2001). Dodging the glass ceiling? Networks and the new wave of women entrepreneurs. *The Social Science Journal*, 38(1), 85-103.
- Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: implications for entrepreneurship education. *Entrepreneurship theory and practice*, 31(3), 387-406.
- Yukongdi, V., & Lopa, N. Z. (2017). Entrepreneurial intention: a study of individual, situational and gender differences. *Journal of Small Business and Enterprise Development*, 24(2), 333-352.
- Zhao, H., Seibert, S. E., & Hills, G. E. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of applied psychology*, 90(6), 1265.
- Zimmer, C. (1986). Entrepreneurship through social networks. *The art and science of entrepreneurship*. Ballinger, Cambridge, MA, 3-23.
- Zimmermann, K. F., Biavaschi, C., Eichhorst, W., Giulietti, C., Kendzia, M. J., Muravyev, A., et al. Youth unemployment and vocational training. *Foundations and Trends® in Microeconomics*, 9(1-2), 1-157.